FOUNDATION EARTH SCIENCES

DETAILED SITE INVESTIGATION

Property Address
67-75 Lords Road, Leichhardt NSW

Prepared for
Platino Properties Pty Ltd

Date

December 2023

DOCUMENT CONTROL REGISTER

Document Information	
Job Number	E2843
Document Number	0
Report Title	Detailed Site Investigation
Site Address	67-75 Lords Road, Leichhardt NSW
Prepared for	Platino Properties Pty Ltd

Document Review			
Revision Number	**Date Issued**	**Description**	**Issued By**
1	20/12/2023	Initial Issue	Ben Buckley

Distribution Register		
Distribution Method	**Custodian**	**Issued to**
Electronic	B. Buckley	Foundation Earth Sciences Office
Electronic	P. Mottek	Platino Properties Pty Ltd

Authorisation and Release			
	Signature	**Name**	**Date**
Prepare		Ray Liu	04/07/2022
Reviewed		Michael Silk B. Env Sc (CEnvP General)	05/07/2022
Authorised		Benjamin Buckley- Director B. Env Sc., BSc (Forensics)	20/12/2023

ABBREVIATIONS

AIP	*Australian Institute of Petroleum Ltd*	**QA/QC**	*Quality Assurance, Quality Control*
ANZECC	*Australian and New Zealand Environment and Conservation Council*	**RAC**	*Remediation Acceptance Criteria*
AST	*Aboveground Storage Tank*	**RAP**	*Remediation Action Plan*
BGL	*Below Ground Level*	**RPD**	*Relative Percentage Difference*
BTEX	*Benzene, Toluene, Ethyl benzene and Xylene*	**SAC**	*Site Assessment Criteria*
COC	*Chain of Custody*	**SVC**	*Site Validation Criteria*
DA	*Development Approval*	**TCLP**	*Toxicity Characteristics Leaching Procedure*
DP	*Deposited Plan*	**TPH**	*Total Petroleum Hydrocarbons*
DQOs	*Data Quality Objectives*	**UCL**	*Upper Confidence Limit*
EPA	*Environment Protection Authority*	**UST**	*Underground Storage Tank*
ESA	*Environmental Site Assessment*	**VHC**	*Volatile Halogenated Compounds*
HIL	*Health-Based Soil Investigation Level*	**VOC**	*Volatile Organic Compounds*
LGA	*Local Government Area*	**DPI**	Department of Primary Industries
NEHF	*National Environmental Health Forum*	**A1**	Detailed Site Investigation
NEPC	*National Environmental Protection Council*		
NHMRC	*National Health and Medical Research Council*		
OCP	*Organochlorine Pesticides*		
OPP	*Organophosphate Pesticides*		
PAH	*Polycyclic Aromatic Hydrocarbon*		
PCB	*Polychlorinated Biphenyl*		
PID	*Photo Ionisation Detector*		
PQL	*Practical Quantitation Limit*		

TABLE OF CONTENTS

1.0 INTRODUCTION 10
2.0 OBJECTIVE 10
3.0 SCOPE OF WORKS 12
4.0 SITE IDENTIFICATION AND SITE HISTORY REVIEW 13
4.1 SITE IDENTIFICATION 13
4.2 REVIEW OF HISTORICAL MAPS 14
4.3 UNDERGROUND SERVICES 14
4.4 REVIEW OF AERIAL PHOTOGRAPHS 15
4.5 TITLE SEARCH 16
4.6 ANECDOTAL EVIDENCE 18
4.7 NSW EPA RECORDS 18
4.8 NSW EPA POEO REGISTER 19
4.9 NSW EPA NOTIFIED CONTAMINATED SITES 19
4.10 PFAS PRELIMINARY SCREEN 20
4.11 SAFEWORK NSW 21
4.12 PREVIOUS INVESTIGATIONS 22
4.12.1 EMS DSI (DECEMBER 2006) 22
4.12.2 BENVIRON GROUP – DUE DILIGENCE LETTER (JULY 2018) 26
4.12.3 BENVIRON GROUP RAP (JULY 2018) 27
4.13 INTEGRITY ASSESSMENT 28
5.0 REVIEW OF ENVIRONMENTAL INFORMATION 29
6.0 REVIEW OF CONSTRUCTION AND SERVICE INFORMATION 32
6.1 PROPOSED DEVELOPMENT 32
7.0 SITE VISIT 33
7.1 GENERAL 33
7.2 SITE OBSERVATIONS 33
8.0 PRELIMINARY CONCEPTUAL SITE MODEL (CSM) 35
9.0 REVIEW OF DATA QUALITY OBJECTIVES 39
10.0 INTRUSIVE SOIL INVESTIGATION 44
10.1 SOIL ASSESSMENT 44
10.2 SAMPLING DENSITY AND RATIONALE 45
10.3 SAMPLING METHODOLOGY 45
11.0 GROUNDWATER INVESTIGATION 47
11.1 GROUNDWATER ASSESSMENT 47
11.2 GROUNDWATER METHODOLOGY 48
11.3 GROUNDWATER SAMPLE COLLECTION 49

11.4 GROUNDWATER OBSERVATIONS 50
11.5 CATCHMENT LOCATION....51
12.0 QUALITY ASSURANCE / QUALITY CONTROL....53
12.1 GENERAL QA/QC....53
12.2 SAMPLE CONTAINERS....53
12.3 DECONTAMINATION....54
12.4 SAMPLE TRACKING, IDENTIFICATION AND HOLDING TIMES 55
12.5 SAMPLE TRANSPORT....55
12.6 TRIP SPIKE....55
12.7 TRIP BLANK 56
12.8 FIELD DUPLICATE SAMPLES 56
12.9 TRIP SPIKE AND TRIP BLANK RESULTS....65
12.10 LABORATORY QA/QC....66
12.11 QA/QC RESULTS 67
12.12 QA/QC CONCLUSION....70
13.0 SITE ASSESSMENT CRITERIA....71
13.1 SOILS....71
13.1.1 HEALTH INVESTIGATION LEVELS (HILS) 71
13.1.2 HEALTH SCREENING LEVELS (HSLS)....73
13.1.3 (EILS) AND (ESLS)....74
13.2 ASBESTOS....78
13.3 AESTHETIC CONSIDERATIONS....78
13.4 GROUNDWATER 79
14.0 SOIL RESULTS....81
14.1 HEAVY METALS....81
14.1.1 HEATH INVESTIGATION LEVELS 81
14.1.2 ECOLOGICAL INVESTIGATION LEVELS 81
14.2 TRH, BTEX, NAPHTHALENE &/OR BENZO (A) PYRENE 82
14.2.1 HEATH SCREENING LEVELS & MANAGEMENT LIMITS....82
14.2.2 ECOLOGICAL SCREENING LEVELS....83
14.3 PAH, OCP, OPP, VOC, PFAS & PCB 83
14.3.1 HEATH INVESTIGATION LEVELS 83
14.3.2 EILS & ESLS 84
14.4 ASBESTOS....85
15.0 GROUNDWATER RESULTS....85
15.1 HEAVY METALS....85
15.2 TRH & BTEXN 86
15.3 PAH....86
15.4 VOCS IN GROUNDWATER....86
16.0 PRELIMINARY SOIL CLASSIFICATION....87

17.0 DISCUSSION 88
17.1 SOILS 88
17.2 GROUNDWATER QUALITY 88
17.3 DATA GAPS 89
17.4 DUTY TO REPORT 90
18.0 CONCLUSION 91
19.0 LIMITATIONS 92

LIST OF FIGURES AND APPENDICES

Figure 1	Site Location
Figure 2	Site Features, Borehole Location Plan & Exceedance Plan
Appendix A	DBYD Plans
Appendix B	NSW EPA Records
Appendix C	Site Photographs
Appendix D	DPI (Office of Water) Database Records
Appendix E	Bureau of Meteorology
Appendix F	Concept Development Plans
Appendix G	Borehole Logs
Appendix H	NATA Accredited Laboratory Certificates
Appendix I	Field Record Forms
Appendix J	Aerial Photographs
Appendix K	Summary Tables
Appendix L	Calibration Certificate
Appendix M	Land Title Information
Appendix N	Safework Search Records
Appendix O	Statistical Analysis

EXECUTIVE SUMMARY

Foundation Earth Sciences was appointed by Platino Properties Pty Ltd to undertake a Detailed Site Investigation for the property situated at 67-75 Lords Road, Leichhardt NSW ("the site").

The existing built form of the site consists of a series of brick warehouse style buildings with frontages to the east and west. A smaller building is located on the southeast corner of the site facing Lords Road and Davies Lane. The site is proposed to be redeveloped to provide for a mix of residential and non-residential uses over a single level basement, and public open spaces.

Soils sampled across the Site were assessed against the Site Acceptance Criteria (SAC) provided by the National Environment Protection (Assessment of Site Contamination) Measure (NEPM 2013) Table 1A - Residential B and Recreational C.

Soil

The soil data revealed the following:

- Boreholes KM08, KM12, KM13, KM17, BH4, BH6, BH10, BH13, BH15, BH18 & BH22 require remediation regarding PAH impacted fill soils.
- Borehole KM18 requires remediation regarding copper impacted fill soils.
- EMS DSI in 2006 completed Asbestos analysis on 14 soil samples, found that two contained asbestos. Sample KM01/0.1 was found to contain a fragment of Chrysotile asbestos, additionally, KM07/0.3 was found to contain loose fibre bundles of Chrysotile asbestos. Asbestos materials were found within the fill material on the Site.

The following lines of evidence support the low to medium risk conclusion in relation to groundwater and the proposed development:

- The groundwater monitoring has indicated levels of dissolved heavy metals detected above groundwater investigation levels for Cadmium, Chromium, Copper, Lead, Nickel &/or Zinc. The elevated heavy metals are considered to be related to offsite regional contaminant concentrations and/or background levels & therefore of limited concern in relation to the GILs.
- Results for groundwater samples did indicate that levels were above water quality guidelines for ecosystem protection but in compliance with guidelines related to the protection of human health.
- During construction of the proposed development, management of any water that seeps into the excavation will need to be considered as the quality of groundwater means it cannot be discharged directly to the stormwater system. It will need to be managed through treatment or via appropriate disposal techniques.
- It is noted that the groundwater at the site is likely to flow into the Parramatta River& Sydney Harbour Catchment area. This catchment is highly affected by urban development. Because of the extent of development, the waterways are affected by poor water quality and a changed flow regime. The waterways have been modified with creeks channelized or hard edged with concrete, wetland have been degraded or destroyed, infiltration of weeks and rubbish is also a significant issue. Therefore, the exceeded GILs will likely have minimal onsite and/or offsite ecological risk to the surrounding environmental and/or development.
- The inferred groundwater direction is to the west. The likely source based on current information is coming from offsite via groundwater migration.

Based on the historical review, environmental information, proposed development and laboratory results of the investigation, the site can be made ***suitable*** for the proposed rezoning and redevelopment subject to a full SEPP55 contamination assessment as part of the DA process which includes following the data gaps outlined in 17.3.

1.0 INTRODUCTION

Foundation Earth Sciences was appointed by Platino Properties Pty Ltd to undertake a Detailed Site Investigation for the property situated at 67-75 Lords Road, Leichhardt NSW ("the site").

Soils sampled across the Site were assessed against the Site Acceptance Criteria (SAC) provided by the National Environment Protection (Assessment of Site Contamination) Measure (NEPM 2013) Table 1A – Residential B & Recreational C.

2.0 OBJECTIVE

The format of this report closely follows that recommended in the NSW EPA "*Consultants Reporting on Contaminated Land* "dated 2020. The NSW Office of Environment and Heritage (OEH) indicates that an Environmental Investigation should provide comprehensive information on:

- Any issues raised in preliminary investigations;
- The type, extent and level of contamination;
- Contaminant dispersal in the air, surface water, soil and dust;
- The potential effects of contaminants on public health and the environment;
- Where applicable, off-site impacts on soil, sediment and biota; and
- The adequacy and completeness of all information available to be used in making decisions on remediation.

The project objectives of this Detailed Site Investigation (AI) are to satisfy the stated NSW EPA Detailed Site Investigation requirements in accordance with *NSW EPA, Consultants Reporting on Contaminated Land, 2020.* Specifically, this investigation will consider the potential for suspected historical activities to have caused contamination at the Site and determine land use suitability for the proposed land use.

The proposed investigation program is designed to assess the presence of any unacceptable on site or off-site risk to human health or the environment. The report will draw conclusions regarding the land use suitability of the Site for the proposed land use or provide recommendations to enable such conclusions and determine the need for a further assessment.

Another objective of the Detailed Site Investigation is to consider if the site can be made suitable for the proposed rezoning.

3.0 SCOPE OF WORKS

The scope of works for this Detailed Site Investigation (DSI) included:

- Collecting site information, review of historical information and past site practices, (site surveys, site records on waste management practices, NSW Land Titles Office records of ownership, aerial photographs obtained from the NSW Department of Lands, WorkCover NSW records and site interviews);
- A site inspection to identify areas of environmental concern, on-site waste disposal practices and location of sewers, drains, holding tanks, Underground Storage Tanks, Aboveground Storage Tanks and pits, spills and ground discolouration etc.;
- A targeted soil boring/sampling investigative study – formulating and conducting a sampling plan and borehole investigation; the soil samples are taken and submitted for analysis on particular contaminants;
- Groundwater monitoring, well installation and sampling program based on site access;
- Laboratory analysis and results from sample analysis – findings and comparison to regulatory guidelines;
- Quality Assurance/Quality Control (QA/QC) – all QA/QC procedures were undertaken in accordance with the Foundation Earth Sciences Quality Assurance/Quality Control manual;
- Interpretation of results and findings; and
- Recommendations and final conclusions drawn from interpretation of the results.

4.0 SITE IDENTIFICATION AND SITE HISTORY REVIEW

4.1 Site identification

The site is identified as follows:

Table 1: Site Identification Review

Site Identifier	Site Details	
Site Location	67-75 Lords Road, Leichhardt NSW	
Lot/DP	Lot 1 in DP940543 (67-73 Lords Road) Lot 1 in DP550608 (75 Lords Road)	
Site Coordinates #	NE Corner: Latitude -33.885088, Longitude: 151.146191	
Parish	Petersham	
County	Cumberland	
Site Area	Approximate 10,691m^2	
Local Government Area (LGA)	Inner West	
Zoning##	E4 – General Industrial	
Surrounding Land Uses	*North*	Lambert Park
	South	Lords Road then residential and commercial
	East	Laneway then residential
	West	Sydney Light Rail Corridor & Hawthorne Canal

Notes:

Six Maps

refer to NSW Planning Portal

https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address

//www.planningportal.nsw.gov.au/find-a-property

4.2 Review of Historical Maps

A review of the maps originally produced by Higinbotham & Robinson from late-nineteenth century was undertaken. No relevant information was found as part of this assessment.

4.3 Underground Services

Dial Before You Dig' plans were requested and reviewed for the Site. Plans were provided by Jemena, NBN Co, Telstra & Sydney Water. The plans did not indicate the presence of any major underground services or utility easements at the site.

The Ausgrid plan indicated services along boundary of Lords Road with increase in density in the southwestern portion of the site. The inner west council plans indicate a storm water pipe along western boundary at 75 Lords Road. It is noted that these associated underground services are considered as a potential preferential pathway.

Refer to **Appendix A** – DBYD Plans.

4.4 Review of aerial photographs

The following information regarding the aerial photographs has been obtained from six maps and/or spatial services website and the summary of this review are presented in the following table:

Table 2 Review of Aerial Photographs

Year	Site		Surrounding areas
1930	Warehouse & industrial	The site appeared to be occupied by warehouse in the southwestern portion with some area paved at the back. However, the resolution was poor.	N: Vacant then road S: Road then Residential E: Residential W: Railway then Residential
1943	Warehouse & industrial	The site appeared to be occupied by warehouse in the southwestern portion with a few sheds around the main warehouse as well as some storage	No major changes with the exception of property to the west with the north looks like become sport field/ with maintained grass/turf.
1955	Warehouse & industrial	No major changes	No major changes
1971	Commercial/ industrial	A main new big building was built at the back/north portion of the site. With some extension of small sheds as well as likely new paved car park.	No major changes
1991	Commercial/ industrial	No major changes	No major changes

2005	Commercial/ industrial	No major changes	No major changes
Current	As per inspection	The site is as inspected (section 7.1)	As per inspection.

The aerial photographs indicate the site had been occupied by warehouse type building/ light industrial from at least 1930, the entire site has been slowly developed with more buildings/ sheds and paved outdoor carpark & driveway.

The surrounding land use appears to be no major changed since 1930 that vacant land/park or sport fieldwork to the north, road then residential to the south, railway then residential to the west and residential to the east.

Refer to **Appendix J** – Aerial Photographs

4.5 Title search

A review of historical documents held by Direct Info (approved LPI NSW Information broker) and/or previous EMS report was undertaken to characterise the previous land use and occupiers of the site.

Table 3 Historical land title data

Lot 1 in DP 550608 (75 Lords Rd, Leichhardt NSW)		
Year	**Proprietor**	**Company/ Personal occupation**
24/06/2003 – Current	Lord Sixty-Seven Pty Ltd	
28/04/2003	Dodaro Holdings Pty Ltd	
30/09/1985	State Rail Authority of NSW	

4/03/1932	Railway Commissioners for NSW	
24/10/1901	The Commissioner for Railways	
Missing ownership titles		
1/01/1810	William Thomas	

Lot 1 in DP 940543 (63-73 Lords Rd, Leichhardt NSW)		
Year	**Proprietor**	**Company/ Personal occupation**
24/12/2004 – Current	Lord Sixty-Seven Pty Ltd	
28/04/2003	Dodaro Holdings Pty Ltd	
2002-2003	Clywin Pty Ltd	
1992 /2002-todate	*Various commercial Leases*	
1992-2002	Trigamist Holdings Pty Ltd	
1988-1992	Amalgamated Wireless (Australasia) Limited	
1988-1992	*Lease to Westpac banking corporation*	
1988-todate	*Lease to Sydney County Council Substation*	
1964-1988	Amalgamated Wireless (Australasia) Limited	
1986-1988	*Lease to Sydney County Council Substation*	
1983-1988	*Lease to Westpac banking corporation*	
1924-1932	*Lease to the Aeolian Company (Australia) Limited of part*	
1924-1964	F Dickin Limited	
1920-1924	Octavius Charles Beale, Merchant	

The land title information indicates that majority of the site was owned by/ leased to different companies or corporations since early 1900s.

Refer to **Appendix M** – Land Title Information.

4.6 Anecdotal Evidence

During the fieldwork a tenant of the building adjacent to GW1 informed FES staff that his building is located on top of an old asbestos tip site. This is an assumption from the tenant.

4.7 NSW EPA Records

The NSW EPA publishes records of contaminated sites under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act.

A search of the database revealed that the subject site is not listed but there are 3 sites within the suburb of Leichhardt. Two sites are within 500m of the site are summarized below:

Table 4 EPA Records

Address	Site Name	Appro Distance to Site	Notices Status
22 George St	Former Kolotex	380m SE	1 current & 8 former
30-40 George St	Former Labelcraft	315m SE	4 current & 3 former

It should be noted that the NSW EPA record of Notices for Contaminated Land does not provide a record of all contaminated land in NSW.

Refer to **Appendix B** – NSW EPA Records.

4.8 NSW EPA POEO Register

A search of the POEO Register revealed the subject site is not listed on the register. There are three registered properties within the suburb of Leichhardt, but all located more than 500m away from site.

Refer to **Appendix B** – NSW EPA Records.

4.9 NSW EPA Notified Contaminated Sites

The NSW EPA publishes a list of notified contaminated sites each month. The list of notified sites contain land that has been notified to the EPA as being potentially contaminated.

A search of the list was completed on the 28th of June 2022. The site was not listed; however, five other properties were listed within the suburb of Leichardt and two properties are located within 500m (same as NSW EPA Contaminated link searches) summarised below:

- Former Kolotex Site
    - 22 George Street
    - Other Industry
    - Contamination currently regulated under CLM Act

- Former Labelcraft Site
    - 30-40 George Street
    - Other Industry
    - Contamination currently regulated under CLM Act

Refer to **Appendix B** – NSW EPA Records.

4.10 PFAS Preliminary Screen

NSW EPA requires that PFAS is considered when investigating land contamination. The preliminary screen is based on guidelines from the PFAS National Environmental Management Plan (NEMP 2020). From this screen a decision can, be made as to whether PFAS sampling of soil and groundwater is required.

Table 4: PFAS Preliminary Screen

Preliminary Screen	Risk of Occurrence
Any past or present site activity listed in NEMP 2020 as being activity associated with PFAS contamination?	L
Any past or present off-site activity up-gradient / adjacent to the site listed in NEMP 2020 as being activity associated with PFAS contamination?	L
Did fire training involving the use of suppressants occur from 1970 to 2010?	L
Have fuel fires ever occurred on site from 1970 to 2010?	L
Have PFAS been used in manufacturing or stored on site?	L
Could PFAS have been imported to the site in fill materials from a site activity listed in NEMP 2020?	L
Could PFAS contaminated groundwater or run-off migrated to the site	No

Is the site or adjacent site listed in the NSW EPA PFAS Investigation Program	No
If the risk is medium or high in any of the above, does the inclusion of preliminary sampling / testing of PFAS in soil (including ASLP) and water need to be included?	No

- Note 1
  - Risk: L – low (all necessary documentation has been reviewed and there is no recorded instance or compelling rationale),
  - M – medium/moderate (all necessary documentation has been reviewed and there is potential evidence of a recorded instance with compelling rationale);
  - H – high (all necessary documentation has been reviewed and there is evidence of a recorded instance with compelling rationale); r
  - Risk, N/A – not applicable (or "- ")].
  - No /Yes

- Note 2 Activities listed in Appendix B of the NEMP (2020).
- Note 3 Runoff from up-gradient PFAS use may impact surface water, soil, sediment and groundwater.
- Note 4 PFAS is used wide range of industrial processes and consumer products, including in the manufacture of non-stick cookware, specialised garments and textiles, ScotchguardTM and similar products (used to protect fabric, furniture, leather and carpets from oils and stains), metal plating and in some types of fire-fighting foam.
- Note 5 https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program

The potential for PFAS to be present on-site was low and subsequently PFAS sampling / analysis of soil and water was unwarranted. However, preliminary PFAS soil sampling was completed as part of this investigation.

4.11 SafeWork NSW

Safework NSW search has been submitted, the results were received on 04/07/2022 & reviewed/ Summarized as part of this investigation.

- Three locations/ areas of dangerous goods storage found.
- Underground tank, Flammable liquids, 20,000 L maximum capacity
- Underground tank, Flammable liquids, 10,000 L maximum capacity
- Roofed store, Flammable liquids, 5,000 L maximum capacity

- The chemicals were vacated by AWA limited on 8 June 1991 and the property sold to Trigamist Holdings Pty Ltd in 1992

4.12 Previous Investigations

Three (3) previous investigations for the property are summarised below:

- Environmental Monitoring Services (2006) 'Detailed Site Investigation for proposed industrial redevelopment at 67-73 Lords Road, Leichhardt NSW", prepared for Platino Properties Pty Ltd, reference No EMS 04 3723, dated March 2006
- Benviron Group (2018), 'Due Diligence Letter for 67-73 Lords Road, Leichhardt NSW", prepared for Platino Properties Pty Ltd, reference No E1910, dated July 2018
- Benviron Group (2018), 'Remediation Action Plan for 67-73 Lords Road, Leichhardt NSW", prepared for Platino Properties Pty Ltd, reference No E1910-2, dated July 2018.

4.12.1 EMS DSI (December 2006)

Environmental Monitoring Services (EMS) was commissioned by Platino Properties Pty Limited to prepare a Detailed Site Investigation (DSI) for 67-73 Lords Rd, Leichhardt, NSW (the Site). It is understood that the DSI is required by Leichhardt Council to establish if the site is considered suitable for its proposed use.

It is understood that the current industrial site is proposed to be upgraded however the redevelopment works should have minimal impact on the underlying soils on the Site. The land-use of the Site is not proposed to change from industrial usage. Subsequently, the adopted Soil Investigation Levels (SIL) (1999) for 'Commercial or Industrial' have been adopted as the site investigation and acceptance criteria (site criteria).

The historic aerial photographic search, Sands Directory and Land Title review all indicate that the site has been under light industrial/commercial land use since at least 1923.

The walkover site inspection undertaken as part of the DSI indicated that the surface of the site, with the exception of the building, consisted primarily of a concrete slab on the western portion of the site and a bitumen layer on the eastern portion of the site. No significant cracks or staining were noted across the surface. There was no evidence of significant surficial rubbish, stains, or odours indicative of potential soil contamination across the site. An earlier report conducted by Consulting Earth Scientists in 2002 stated that two abandoned Underground Storage Tanks (USTs) are located in the south-east portion of the site; it is unknown as to whether these have since been removed.

An electrical substation is located in the south-west portion of the site. The limited vegetation on and adjacent to the site was noted to be healthy and free of phytotoxin effects.

Fill was encountered across the site to a maximum depth of 3.6m bgl and generally found to consist of a brown silt, which was mixed with various materials such as furnace slag, concrete, ash, blue metal, crushed brick, tiles, plastic, glass, and bitumen. Natural material was noted as brown, red, and grey clays with some outcrops of weathered sandstone. Groundwater was encountered in boreholes KM09 (3.6m bgl) and KM10 (2.4m bgl) during the course of this investigation.

RESULTS

Fill material at sampling location KM13/1.2 was found to have a Benzo(a)Pyrene concentration (8mg/kg) above the NSW EPA Soil Investigation Levels (1998) ‘commercial or industrial’ criteria (5mg/kg). However, the soils in this sampling location can remain onsite because the result was below 250% greater than the threshold criteria for B(a)P. The 95% Upper Confidence Limit (UCL) was also calculated for B(a)P in the fill material.

The 95% UCL defines a value that equals or exceeds the true mean, 95% of the time. It is a tool for acknowledging uncertainties and variability within an environmental data set without presenting an unacceptable risk to human health or the environment. The 95% UCL values for B(a)P was 2.87mg/kg which is below the adopted site criteria.

Fill material at sampling location KM17/1.0 was found to have a Benzo(a)Pyrene concentration (23mg/kg) which is above the adopted site criteria (5mg/kg). Furthermore, its Total PAH concentration (422mg/kg) was also above the adopted site criteria (100mg/kg). As these concentrations are greater than 250% over the adopted site criteria, statistical analysis cannot be employed to justify leaving the soils at this location in-situ.

All other chemical analysis undertaken on samples collected from the fill material including Heavy Metals, PAHs, TPH, BTEX, PCBs, and OCPs, returned results which were below the adopted site criteria.

All chemical analysis undertaken on underlying natural soils, including metals, PAHs, TPH, and BTEX were found to comply with the adopted site criteria and are thus suitable to remain onsite as part of the proposed industrial redevelopment of the site.

Asbestos analysis conducted on 14 soil samples, found that two contained asbestos. Sample KM01/0.1 was found to contain a fragment of Chrysotile asbestos, additionally, KM07/0.3 was found to contain loose fibre bundles of Chrysotile asbestos. Asbestos materials were found within the fill material on the Site.

RECOMMENDATIONS

Based on the historic desktop review, field observations, soil sampling and analysis, EMS have made the following recommendations for 67-73 Lords Rd, Leichhardt:

- The results of the DSI indicate that the imported fill material at 67-73 Lords Rd, Leichhardt has, to some extent, asbestos contamination, both in fragment and

loose fibre form. No appropriate guidelines exist for assessing asbestos levels when undertaking a soil contamination assessment under the NSW EPA guidelines. Asbestos is not known to have a detrimental effect on the environment and is therefore primarily considered to be a human health issue. It should be noted that there is currently a draft document enHealth "Guidelines for the Management of Asbestos in the Non-Occupational Environment". The basic objective of this document is to ensure that the risk of exposure to asbestos fibres, which may be entrained into the air, is minimal. It is proposed to leave the fill material contaminated with asbestos in situ because it was concluded that it does not pose a significant risk to human health or the environment. A site management plan will be prepared for the Site that will ensure that the asbestos contaminated material is not disturbed in the future or if it is disturbed it will be done so under controlled conditions by an asbestos treatment Contractor.

- Based on the laboratory results of this DSI, soils in the vicinity of borehole location KM17 are deemed to be contaminated with elevated concentrations of Benzo(a)Pyrene and Total PAHs. These elevated concentrations of B(a)P and Total PAHs are greater than 250% above the adopted site criteria, subsequently, statistical analysis cannot be employed to justify that they remain in-situ. As a result, soil surrounding borehole location KM17 should be excavated in a five-metre radius and to a depth of 1.2m. Once these soils have been excavated and removed from site, the affected area will need to be validated through sampling and analysis. All other soils are deemed suitable to remain onsite. This conclusion is based on the NEHF (1998) SILs for 'commercial or industrial' criteria and 'NSW EPA (1994) threshold criteria.' These guidelines were chosen based on the understanding that the current industrial site is to be modified and expanded upon through alterations and additions to the existing buildings.
- A Remedial Action Plan (RAP) should be prepared to ensure the removal of the PAH and B(a)P contaminated soils are managed in accordance with the NSW EPA

SEPP 55 and Leichhardt Council requirements during the proposed site redevelopment.

- In the event that any material is to be imported onsite as part of the proposed developments, validation sampling and analysis will be required to ensure that the material is Virgin Excavated Natural Material (VENM) and complies with the NEHF criteria for 'commercial or industrial' sites.
- Any material that is to be excavated and removed from the site will have to be classified in accordance with the NSW EPA (1999) Environmental Guidelines; Assessment, Classification & Management of Liquid & Non-Liquid Wastes prior to being disposed of to an NSW EPA approved landfill.
- EMS recommends that exploratory excavations are conducted to determine the presence of Underground Storage Tanks (USTs) in the southeast portion of the site. In the event that any underground storage tanks (USTs) are found to be located either in this southeastern portion and/or elsewhere beneath the site during the re-development works, they should be removed in accordance with the NSW EPA (1994) Contaminated Sites; Guidelines for Assessing Service Station Sites. Should elevated concentrations of TPH/BTEX and lead be found to be present within the backfill sands or soils, the material should be removed to an approved landfill in accordance with the NSW EPA (1999) Environmental Guidelines, Assessment, Classification & Management of Liquid & Non-liquid Wastes. Appropriate validation sampling and analysis, in accordance with current NSW EPA and SEPP 55 requirements, should be undertaken in association with these works.

4.12.2 Benviron Group – Due Diligence Letter (July 2018)

Benviron Group was engaged by Platino Properties Pty Ltd to prepare a review of the contamination status at the aforementioned site. This letter has been prepared to outline

the results of the previous report and the remediation required on the site from those results.

Based on an assessment of the previous report the following remediation works are required to render the site suitable for its current usage.

- The proposed environmental reporting will include:
    - Supplementary Investigation
    - SAQP
    - RAP
    - Council may require all reports to be reviewed by NSW EPA Auditor.

Based on a walkover of the site and a review of the previous report several issues relating to contamination were identified. These contamination areas are required to be addressed in accordance with the NSW EPA and Council Guidance.

It was noted during this inspection that several site features may impede access in undertaking any remediation works within the site and need to be addressed in order to undertake effective remedial works within the site.

4.12.3 Benviron Group RAP (July 2018)

Benviron Group (Benviron) was appointed by Platino Properties Pty Ltd, to prepare a Remediation Action Plan (RAP) for the property located at 67-73 Lords Road, Leichhardt NSW ("the site"). The site is currently occupied by multiple commercial properties. The site is proposed to be redeveloped into a multi storey residential building including a basement and commercial ground floor uses, car parking and landscape areas.

Benviron Group (Benviron) was appointed by Platino Properties Pty Ltd, to prepare a Remediation Action Plan (RAP) for the property located at 67-73 Lords Road, Leichhardt NSW ("the site"). The site is currently occupied by multiple commercial properties. The site is proposed to be redeveloped into a multi storey residential building including a basement and commercial ground floor uses, car parking and landscape areas.

Assuming appropriate permits have been granted, the remediation of the site is to take place in the following stages:

- Stage One -Site Preparation
- Stage Two – Supplementary Investigation: Data Gap Closure and Soil Classification
- Stage Three – Removal of EMS identified Hotspots areas:
- Stage Four – Soil Classification for offsite removal
- Stage Five – Validation Report Preparation

It is considered that the site will be suitable for the proposed multi-storey residential building including a level basement with commercial tenancy on the ground floor, car parking and landscape areas, subject to the implementation of remediation and validation works in accordance with this RAP.

4.13 Integrity Assessment

The information found in the historical sources has been found to be in general concurrence. It is therefore considered that accuracy of this data is acceptable for this investigation.

5.0 REVIEW OF ENVIRONMENTAL INFORMATION

Table 5: Site Condition and Surrounding Environment Review

Site Information	Descriptions
Sensitive Receivers	The nearest sensitive human receptors are the current and future users of the site, construction workers during the site redevelopment and the public. The nearest downgradient watercourse is Hawthorne Canal located approximate 60m west of the site.
Soil Landscape *Review of NSW Soil and Land Information website ESPADE.*	The Soil Landscape Map viewed on NSW ESPADE indicates that the site is Disturbed Terrain area. The soil is level plain to hummocky terrain, extensively disturbed by human activity, including complete disturbance, removal or burial of soil. Local relief <10 m, slopes <30%. Landfill includes soil, rock, building and waste materials. Original vegetation completely cleared, replaced with turf or grassland.
Topography	The topography viewed on NSW ESPADE indicated the following for the Disturbed Terrain area. Terrain disturbed by human activity. Local relief is usually <2 m, but occasionally up to 10 m. Most areas of disturbed ground have been levelled to slopes of <3%. In terraced cut and fill areas short rises may be steeper than 30%. Microtopography may be hummocky due to truck dumping of fill material.
Geological Profile	The Geological Map of Sydney (Geological Series Sheet 9130, Scale 1:100,000, 1983), published by the Department of Mineral

<table>
<tr><td></td><td>Resources indicates the site is located at the vicinity of Mf, Qha & Rwa:

Mf indicates man-made fill, dredged estuarine sand and mud, demolition rubble, industrial and household waste.

Qha indicates the residual soils within the site to be underlain by Quaternary Age soils consisting of silty to peaty quartz sand, silt and clay. Ferruginous and humic cementation in places with common shell layers.

Rwa indicates the residual soils within the site to be underlain by Triassic Age Shale of the Wianamatta Group, comprising black to dark grey shale and laminite.</td></tr>
<tr><td>Presence of Acid Sulphate Soils

Review of NSW Department of Land & Water Conservation (DLWC) Acid Sulphate Soil Risk Maps (Edition Two, December 1997, Scale 1:250,000).</td><td>A review of the “Botany Bay” map indicated that the site is located in “No known occurrences” of acid sulphate soil material within the soil profile.

However, it is noted that the site is located in the vicinity of X2 - disturbed terrain area.</td></tr>
<tr><td>Localised Hydrogeology
Review of DPI (Office of Water) Database.

Appendix D – DPI (Office of Water) Database Records.</td><td>
<table>
<tr><th>Number</th><th>Location from Site</th><th>Depth (m BGL)</th><th>SWL (m BGL)</th><th>Use</th><th>Water Bearing Zones</th></tr>
<tr><td>GW113092</td><td>620m NW</td><td>5.0</td><td>-</td><td>Monitoring Bore</td><td>-</td></tr>
<tr><td>GW113093</td><td>620m NW</td><td>5.6</td><td>-</td><td>Monitoring Bore</td><td>-</td></tr>
<tr><td>GW113094</td><td>620m NW</td><td>4.85</td><td>-</td><td>Monitoring Bore</td><td>-</td></tr>
</table>
</td></tr>
</table>

	GW113095	620m NW	5.0	-	Monitoring Bore	-
	GW113096	620m NW	5.6	-	Monitoring Bore	-
	GW113097	620m NW	6.0	-	Monitoring Bore	-
	GW113098	620m NW	6.0	-	Monitoring Bore	-
	GW113099	620m NW	6.0	-	Monitoring Bore	-
Nearest Surface Water Body	The nearest downgradient watercourse is Hawthorne Canal located approximate 60m west of the site.					
Local Meteorology (Bureau of Meteorology BOM website) **Appendix E** – BOM Data.	The monthly rainfall of the local surrounding area is represented by the data collected from the BOM rainfall gauge located in Marrickville Golf Club, which is located approximately 3.3km from Leichhardt. The records indicate that the annual mean rainfall recorded was 1010.8mm.					
Nearest Active Service Station (Google Maps Search)	335m southwest of the site.					
Nearest Dry Cleaner Shop (Google Maps Search)	430m northeast of the site					

6.0 REVIEW OF CONSTRUCTION AND SERVICE INFORMATION

6.1 Proposed Development

The existing buildings form of the site consists of a series of brick warehouse style buildings with sheds and/or extensions and paved outdoor carpark and driveway. A smaller building is located on the southeast corner of the site facing Lords Road and Davies Lane. The site is proposed to be redeveloped to provide for a mix of residential and non-residential uses over a single level basement, and public open spaces.

Refer to **Appendix F** - Concept Development Plans.

7.0 SITE VISIT

7.1 General

The site was visited on the 15th of June 2022 by Foundation Earth Sciences Environmental Scientists to inspect the site for any potential sources of contamination.

The following items were considered as part of the site visit:

- Description of the building structures;
- Site surroundings;
- Present and past industrial processes and operations at the site;
- Surface water, groundwater, stormwater and sewer;
- Present and past storage of chemicals and wastes associated with site use and their on-site location;
- Waste management practices and management of hazardous materials;
- Presence of Underground Storage Tanks or Above Ground Storage Tanks;
- Odour; and
- Occupational health and safety.

7.2 Site observations

At the time of the site visit the following observations were made as per the following table:

Table 6: Site Inspection Review

Factors Considered	Description of Sites
Buildings & Structures on Site	The existing buildings form of the site consists of a series of brick warehouse style buildings with sheds and/or extensions and paved outdoor carpark and driveway. A smaller building is located on the southeast corner of the site facing Lords Road and Davies Lane.
Percentage Hard-standing surface	Approximately 80-90 %
Concrete Condition	Average to poor
Chemical Storage	Chemical storage was not noted at the time of the site inspection in accessible areas.
Above and Underground Storage Tanks	No above storage tanks areas were noted at the time of the site inspection in accessible areas.
Trade Waste Pits	No trade waste pits were identified at the site.
Nearby Electrical Transformers	An electricity sub-station was observed within the property in the southwestern corner.
Asbestos	No fibro cement sheeting was identified within the boreholes and not observed in accessible areas during the inspection. However, one tenant mentioned the site may have been used for asbestos landfill purpose at the northwestern corner.
Site Vegetation	Appeared healthy.
Soil Staining and Odours	No odours were identified within the property. No significant soil staining was noted during the inspection.
Stormwater and Sewer	Stormwater was connected to the local utilities.

Refer to **Figure 2** - Site Features, Borehole Locations and Exceedance Plan and **Appendix C** – Site Photographs.

8.0 PRELIMINARY CONCEPTUAL SITE MODEL (CSM)

Based on the above information, site history and site walkover, the areas of potential concern and associated contaminants for the site CSM were identified. These are summarised in the following table.

Table 7: Areas and Contaminants of Concern

Known and potential contamination source	Associated Contaminants
Historical Site Uses (commercial & industrial)	Heavy Metals, TRH, BTEX, PAH, OCP, PCB, VOC & Asbestos
Surrounding Land Use (railway)	TRH, BTEX & PAH, VOC
USTs	TRH, BTEX, HM & PAH
Potential Pesticides Use	OCP, OPP
Imported Fill	Heavy Metals, TRH, BTEX, PAH, OCP, PCB & Asbestos
Car parking Areas	TRH, BTEX, PAH
Building degradation/ Demolition	Heavy Metals and Asbestos

Table 8: Potentially Contaminated Media

Known and potential contamination source	Associated Contaminants
Fill Material	There is the potential for contamination to be present in the upper fill material.
Groundwater	There is the potential for the leaching of contaminants into groundwater onsite and also migration of the contaminants.
Soil Vapour	Given the site history and surrounding land uses, soil vapour is considered to a potential contaminated media.

Potential for Migration

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

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

The potential contaminants identified as part of the site history review & site inspection are present in solid (e.g. impacted fill, asbestos), liquid (e.g. dissolved in water) and gaseous/ vapour forms.

Aerial photography has indicated that there were unsealed ground surfaces and therefore, there is the potential for migration of contaminants via wind-blown dust.

Rainfall infiltration at the site is expected to occur in unsealed areas. There is therefore the potential that soil contamination could result in impacts to groundwater.

Potential Exposure Pathways

Potential exposure pathways include:

- Dermal;
- Ingestion; and
- Inhalation.

Due to the presence of exposed potentially impacted soil/fill on ground surfaces, dermal and inhalation exposure is considered a potential exposure pathway.

The potential for ingestion of soil is considered as a potential exposure pathway. Although groundwater is not used at the site, there is the potential, for ingestion of contaminants via groundwater removed from monitoring wells.

A basement is proposed for the development. Because of this dermal and inhalation exposure pathway by potentially contaminated groundwater is considered a risk potential.

Receptors

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

- Excavation/construction/maintenance workers conducting activities at the site, who may potentially be exposed to COPCs through direct contact with impacted soils, Vapour Intrusion and/or groundwater present within excavations and/or inhalation of dusts/fibres associated with impacted soils;
- Future occupants/users of the site may potentially be exposed to COPCs through direct contact with impacted soils and/or ingestion of impacted soils and/or inhalation of dusts/fibres associated with impacted soils and/or exposure to vapour; and/or
- Offsite sensitive receptors of groundwater; and/or
- Flora species to be established on vegetated areas of the site.

- Hawthorne Canal

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 COPCs as either liquids or gases.

Man-made preferential pathways are present throughout the site, generally associated with fill materials and services present beneath existing ground surface. Fill materials and service lines are anticipated to have a higher permeability than the underlying natural soil and/or bedrock.

The Ausgrid plan indicated services along boundary of Lords Road with increase in density in the southwestern portion of the site. The inner west council plans indicate a storm water pipe along western boundary at 75 Lords Road. It is noted that these associated underground services are considered as a potential preferential pathway.

9.0 REVIEW OF DATA QUALITY OBJECTIVES

The DQOs were also prepared using Appendix IV of the Site Auditor Guidelines. These require 7 steps. The steps being.

a. State the problem.
b. Identify the decisions.
c. Identify inputs to decision.
d. Define the study boundaries.
e. Develop a decision rule.
f. Specify limits on decision errors.
g. Optimise the design for obtaining data.

9.1 State the Problem

The site requires to be confirmed suitable for the proposed development. The site is proposed to be redeveloped and has had some areas of potential concern, those being historical & current land uses, USTs, surrounding land use, possible areas of imported fill of unknown origin, degradation of the building materials and leakages from vehicles on site.

Technically defensible evidence needs to be provided so that the identified Site does not present an unacceptable risk to human health or the environment and is suitable for the intended land use.

9.2 Identify the Decisions

The decisions to be made on the contamination and the new environmental data required includes considering relevant site contamination criteria for each medium (fill, soil and sediment). A proposed use of the 95% UCL on the mean concentrations for all soil chemicals of potential concern must be less than the site criteria identified for the relevant land use suitability.

The decisions made in completing this assessment are as follows:

- Does the site or is the site likely to present a risk of harm to humans or the environment.
- Is the site currently suitable for the proposed land use including residential and recreational?
- Is there a potential for soil and groundwater contamination?
- Is there a potential for offsite migration issues?
- Do the sampling results meet the site criteria proposed?
- If not, does the site require remediation works.

9.3 Identify Inputs to Decision

This step requires the identification of the environmental variables/characteristics that need measuring, identification of which media (fill, soil etc.) need to be collected, identification of the site criteria for each medium of concern and appropriate analytical testing. Inputs include:

- Existing site information

- Site history
- Regional geology, topography and hydrogeology
- Potential contaminants
- Proposed Land Use
- Site assessment criteria
- Results as measured against criteria.

9.4 Define the Study Boundaries

Specific spatial and temporal aspects must be provided to identify the boundaries of the investigation and to identify any restrictions that may hinder the assessment process. The site is located at 67-75 Lords Road, Leichhardt NSW. The site is approximately 10,691m^2 in area.

9.5 Develop a Decision Rule

The information obtained through this assessment will be used to characterise the soils and the groundwater on the site in terms of contamination issues and risks to human health and the environment. The decision rule in characterising the site will be as follows:

- Laboratory test results will be measured against the criteria provided within this report.
- The site will be deemed suitable for the proposed use if the following criteria are fulfilled:
    - Soil and groundwater concentrations are within background levels.
    - QA/QC shows data can be relied upon
    - Results generally meet regulatory criteria.

- Results are from NATA accredited laboratories.
- Detection limits are below assessment criteria.
- Results can be shown to be of minimal concern.

9.6 Specify Limits on Decision Errors

The limits on decision errors for this assessment are as follows:

- The assessment criteria adopted from the guidelines within this report have risk probabilities already incorporated.
- The acceptable limits for inter/intra laboratory duplicate sample comparisons are laid out within our protocols.
- The acceptable limits for laboratory QA/QC parameters are based upon the laboratory reported acceptable limits and those stated within the NEPM 2013 Guidelines.

9.7 Optimise the Design for Obtaining Data

A resource-effective sampling and analysis design was undertaken for data collection that satisfies the DQO's. The sampling and analytical plan is designed to avoid Type 1 and Type 2 errors and includes defining minimum sample numbers required to detect contamination as determined with procedures provided in the NSW EPA 1995 Sampling Design Guidelines and AS 4482.1 - 2005 and appropriate quality control procedures.

Furthermore, only laboratories accredited by NATA for the analysis undertaken were used. The laboratory data was assessed from quality data calculated during this assessment. Field QA/QC protocols adopted and incorporate traceable documentation

of procedures used in the sampling and analytical program and in data verification procedures.

10.0 INTRUSIVE SOIL INVESTIGATION

The intrusive soil investigation took place on the 15th of June 2022 and was designed to meet the Data Quality Objectives.

10.1 Soil Assessment

Twenty-four (24) primary soil samples were recovered from twenty-three (23) borehole locations spread across the site and were labelled BH1 to BH23. These locations were selected to detect any contamination that may have originated from past and present activities, and due to potential excavation and future development in these areas.

Table 9: Sampling Information - Soil

Analyte / Analyte Group Sample	Depth (m)	SAMPLING DATE	DUPLICATE & SPLIT	pH/CEC/ %CLAY	HEAVY METALS (8)	TRH	BTEX	VOC	PFAS	OPP	Asbestos ID	Asbestos %w/w	TRH C6-C10 & BTEXN	OCP PCB	
FES Rem/Val 2022															
BH1	0.4-0.5	15.06.2022		x	X	X	X	X	X	X	X			X	
BH2	0.2-0.3	15.06.2022	D2/SS2	x	X	X	X	X	X	X	X			X	
BH3	0.5-0.6	15.06.2022			X	X	X	X	X	X	X			X	
BH4	0.2-0.3	15.06.2022	D1/SS1		X	X	X	X	X	X	X			X	
BH5	0.4-0.5	15.06.2022			X	X	X				X			X	
BH6	0.3-0.4	15.06.2022			X	X	X				X			X	
BH7	0.2-0.3	15.06.2022			X	X	X				X			X	
BH8	0.5-0.6	15.06.2022			X	X	X				X			X	
BH9	0.4-0.5	15.06.2022			X	X	X				X			X	
BH10	0.7-0.8	15.06.2022			X	X	X				X			X	
BH11	0.5-0.6	15.06.2022			X	X	X				X			X	
BH12	0.2-0.3	15.06.2022			X	X	X				X			X	
BH13	0.3-0.4	15.06.2022			X	X	X	X	X	X	X			X	
BH14	2.0-2.1	15.06.2022			X	X	X								
BH15	0.6-0.7	15.06.2022			X	X	X				X			X	
BH16	0.5-0.6	15.06.2022			X	X	X				X			X	
BH17	0.3-0.4	15.06.2022			X	X	X				X			X	
BH18	0.5-0.6	15.06.2022			X	X	X				X			X	
BH19	0.7-0.8	15.06.2022			X	X	X				X			X	
BH20	0.2-0.3	15.06.2022			X	X	X				X			X	
BH21	0.3-0.4	15.06.2022			X	X	X				X			X	
BH22	0.6-0.7	15.06.2022			X	X	X				X			X	
BH23	0.5-0.6	15.06.2022			X	X	X				X			X	
BH24	0.4-0.5	15.06.2022			X	X	X				X			X	
TS1	-	15.06.2022											X		
TB1	-	15.06.2022											X		

The locations of the boreholes and samples are shown in **Figure 2** and details of the boreholes are presented in **Appendix G** – Borehole Logs.

Based on information from all boreholes, the surface and sub-surface profile across the site is generalised as follows:

- Fill: Silty Gravelly Clay, Silty Gravelly Sand, Silty Sand, Sandy Clay, Clayey Sand, Road Base/ Silty gravel,
- Natural: Silty CLAY;
- Bedrock: SANDSTONE, weathered.

10.2 Sampling Density and Rationale

The NSW EPA "Sampling Design Guidelines" (September 1995) requires a minimum sampling density of twenty-two (22) sampling points for a site approximately area of 10,691m^2.

Twenty-four (24) primary soil samples were recovered from Twenty-three (23) borehole locations via drill rig and/or hand auger spread across the site and were labelled BH1 to BH23. The locations were drilled by adopting a systematic grid-based sampling pattern across the site and to provide general site coverage with consideration given to accessibility and limitations in relation to underground services & access.

10.3 Sampling Methodology

In summary:

- Soil samples were collected directly from the push tube / split spoon sampler and/or directly from the excavator bucket.
- Soil samples were collected using a hand auger, DCP and U50 to collect undisturbed samples.
- Samples were transferred directly into appropriately labelled clean laboratory supplied containers;

- Samples were transferred into chilled eskies for sample preservation;
- A Chain of Custody was completed and forwarded to the laboratory. Sampling analysis was based on field observations and were in accordance with the schedule outlined in Section 12.
- Soil samples were submitted to their respective laboratories as specified in Section 12.4.

11.0 GROUNDWATER INVESTIGATION

11.1 Groundwater Assessment

Foundation Earth Sciences installed four groundwater monitoring wells on the 15th of June 2022 as part of the Detailed Site Investigation. Samples were recovered from four (4) groundwater wells labelled as BH1/GW1 to BH4/GW4. The schedule of analysis is provided below:

Table 10: Sampling Information – Groundwater

SAMPLE ID	SAMPLING DATE	HEAVY METALS	TRH	BTEX	PAH	VOC	TRH C6-C10 & BTEXN
FES DSI							
GW1	21.06.2022	X	X	X	X	X	
GW2	21.06.2022	X	X	X	X	X	
GW3	21.06.2022	X	X	X	X	X	
GW4	21.06.2022	X	X	X	X	X	
GWD1	21.06.2022	X	X	X	X	X	
GWSS1	21.06.2022	X	X	X	X	X	
TS1	21.06.2022					X	X
TB1	21.06.2022					X	X

The location of the groundwater wells is shown in **Figure 2** – Site Features, Borehole Locations and Exceedance Plan and details of the boreholes are presented in **Appendix G** – Borehole Logs.

Refer to **Appendix I** – Field Record Forms & **Appendix L** – Calibration Certificate.

11.2 Groundwater Methodology

Groundwater monitoring wells were constructed on the 15$^{TH\ of}$ June 2022 by adopting the following methodology:

- 50mm diameter, Class 18PVC threaded and flush joined casing and 0.45 machine-slotted screens were used;
- Coarse, washed sand and gravel was placed in the annulus surrounding the piping to a height of the screen;
- Bentonite pellets were placed in the annulus to form an impermeable plug near the top of the well to prevent surface runoff from entering directly into the well;
- Bentonite pellets were placed in the annulus to form an impermeable plug near the top encountered bedrock;
- A PVC cap was placed on the casing;
- 100mm diameter stainless steel flushed covers were used for all well finishes and concreted onto the ground surface.

Table 11: Summary of Well Construction Details

Well ID	Total Depth (m)	Screening (m)	Surface Level (RL)	Water Bearing	Comment
BH1 /GW1	4.3	1.3-4.3	-	CLAY/SANDSTONE	Current
BH2 /GW2	4.9	1.9-4.9	-	CLAY/SANDSTONE	Current
BH3 /GW3	4.7	1.7-4.7	-	CLAY/SANDSTONE	Current
BH4 /GW4	4.0	1.0-4.0	-	CLAY/SANDSTONE	Current

The following works were carried out upon completion of the well installations:

- The wells were developed by removing at least three well volumes until groundwater parameters reached equilibrium and no further turbidity improvements were observed.

Drilling and installation of the monitoring wells was carried out on the 15th of June 2022, using a combination of solid stem & hollow flight auguring, under supervision of Foundation Earth Sciences.

11.3 Groundwater Sample Collection

Groundwater sampling was undertaken on the 21st of June 2022. Prior to sampling, the resting water level was recorded within the well while checking for the presence of phase separated hydrocarbon.

Sampling was completed using a low flow peristaltic pump – a low flow/minimum drawdown sampling technique used to minimise any disturbance to the aquifer.

Field measured parameters were collected using a certified and calibrated In-situ YSI water quality meter. Samples were collected when field measured parameters (pH, electrical conductivity, redox potential, dissolved oxygen and temperature) had stabilised. The samples were placed into appropriate laboratory supplied bottles and preserved on ice. The peri pump and other sampling equipment were decontaminated before and after use to avoid possible cross contamination. All samples collected were preserved on ice and couriered directly to the laboratory under COC documentation.

11.4 Groundwater Observations

Table 12: Groundwater Elevations & Observations

Well ID	Well Depth	Surface Level RL	Groundwater Depth Measured (m BGL)	Groundwater Level (RL)	PSH Depth
BH1 /GW1	4.3	-	1.0	-	None
BH2 /GW2	4.9	-	1.2	-	None
BH3 /GW3	4.7	-	4.0	-	None
BH4 /GW4	4.0	-	3.0	-	None

The inferred groundwater direction is to the southeast. The field measured parameters (pH), electrical conductivity (EC), redox potential, dissolved oxygen (DO) and temperature recorded during purging, were allowed to stabilise prior sampling. Final stabilised groundwater field parameters are summarised in below.

Table 13: Groundwater Field Results

Well ID	Date	pH	Electrical Conductivity (EC us/cm)	Redox Potential (ORP mV)	Dissolved Oxygen (mg/L)	Temperature (*C)
GW1	21.06.2022	5.43	511.7	71.8	3.98	14.0
GW2	21.06.2022	3.97	455.9	50.9	20.5	11.5
GW3	21.06.2022	7.84	892	60.6	4.25	12.8
GW4	21.06.2022	7.22	897	47.9	4.66	12.8

The results of the field parameters measured are summarised as follows:

- pH reading indicated the groundwater is acidic at GW1 & GW2 & slightly basic at GW3 & GW4;
- The EC reading indicated generally fresh water to brackish; and

- Redox reading indicated oxidised conditions.

11.5 Catchment Location

It is noted that the groundwater at the site is likely to flow into the Parramatta River & Sydney Harbour Catchment area. This catchment is highly affected by urban development. Because of the extent of development, the waterways are affected by poor water quality and a changed flow regime. The waterways have been modified, with creeks channelized or hard edged with concrete, wetlands have been degraded or destroyed, infiltration of weeds and rubbish is also a significant issue.

As the groundwater is expected to flow into Hawthorne Canal then Parramatta River, the water quality objectives that apply to the site are considered to reflect the objectives outlined in waterways affected by urban development (Upper Estuary). The WQO include:

- Maintaining healthy aquatic ecosystems and their riparian zones over the long term;
    - Some indicators include total phosphorus, total nitrogen, chlorophyll-a, turbidity, dissolved oxygen, ph., temperature, chemical toxicants, biological assessment.
- Visual amenity and aesthetics.
    - Improved by protecting aquatic ecosystems and improving stormwater management;
    - Some indicators include visual clarity and colour, surface films / debris, nuisance organisms;
- Secondary contact recreation (boating / fishing);

  - Objectives is based on maintaining / improving water quality for activities such as boating and wading, where there is a low probability of water being swallowed.
  - Some indicators include faecal coliforms, algae, chemical contaminants, surface film, visual clarity / odour & nuisance organisms.
- Primary contact recreation (swimming which is a longer-term objective)
  - Objectives is based on maintaining / improving water quality for activities where there is a high probability of water being swallowed.
  - Some indicators include faecal coliforms, algae, chemical contaminants, surface film, visual clarity / odour & nuisance organisms.
- Aquatic Foods (cooked)

As the groundwater is expected to flow into Parramatta River, the river flow objectives (RFO) that apply to the site are considered to reflect the objectives outlined in waterways affected by urban development (Upper Estuary). The RFO include:

- Manage Groundwater for Ecosystems;
- Maintain wetland and floodplain inundation;
- Minimise effects of weirs and other structures; and
- Maintain or rehabilitate estuarine processes and habitats.

It is noted that drinking water (disinfection only, or clarification & disinfection and groundwater) is not considered a water quality objective for the Sydney Harbour and Parramatta River Catchments.

12.0 QUALITY ASSURANCE / QUALITY CONTROL

12.1 General QA/QC

The frequency required for each field quality assurance / quality control (QA/QC) sample is presented in the table below.

Table 14: QA/QCs Frequencies

	Intra Lab	Inter Lab	Rinsate	Spikes	Blanks
Sampling Frequency	1 in 20	1 in 20	1/day	1/day	1/day

During the contamination assessment the integrity of data collected is considered vital. With the assessment of the site, a number of measures were taken to ensure the quality of the data. These are as follows:

12.2 Sample Containers

Soil samples collected during the investigation were placed immediately into laboratory prepared glass jars with Teflon lid inserts. Standard identification labels were adhered to each individual container and labelled according to depth, date, sampling team and media collected.

12.3 Decontamination

All equipment used in the sampling program was decontaminated prior to use and between samples to prevent cross contamination. Decontamination of equipment involved the following procedures:

- Cleaning equipment in potable water to remove gross contamination;
- Cleaning in a solution of Decon 90;
- Rinsing in clean demineralised water then wiping with clean lint free cloths;

Foundation Earth Sciences also adopted a sampling gradient of lowest to highest potential contamination to minimise the impact of cross contamination. This gradient was determined from the historical review and the on-site inspection that was carried out prior to sampling.

Although Foundation Earth Sciences maintains consistent sampling procedures, a rinsate sample is obtained to ensure false positive samples are not generated and that decontamination procedures are effective in preventing cross contamination. The Rinsate water is collected after being in contact generally with the trowel used for sampling. Analytical results that target the contaminants of concern are compared to a blank sample, which is taken directly from the rinsate water container supplied by the laboratory.

A rinsate sample was not collected as the samples were taken either directly from the excavator bucket, push tube / split spoon sampler or U50 tube and therefore the chance for cross-contamination was minimal.

12.4 Sample Tracking, Identification and Holding Times

All samples were forwarded to Envirolab and Eurofins under recognised chain of custodies with clear identification outlining the date, location, sampler and sample ID. All samples were recorded by the laboratory as meeting their respective holding times. The sample tracking system is considered adequate for the purposes of sample collection.

12.5 Sample Transport

All samples were packed into an esky with ice from the time of collection. A trip blank and trip spike are collected where appropriate. These were transported under chain of custody from the site to Envirolab Pty Ltd and SGS, both NATA registered laboratories. During the project, the laboratory reported that all the samples arrived intact and were analysed within holding times for the respective analytes.

Samples were kept below 4°C at all times, soil samples submitted for asbestos analysis are not required to be kept below 4°C.

12.6 Trip Spike

Trip Spike samples were obtained from the laboratory prior to conducting field sampling where volatile substances are suspected. Foundation Earth Sciences QA/QC procedures

for the collection of environmental samples involves the collection of trip blanks, trip spikes and duplicate samples both intra and inter laboratory.

12.7 Trip Blank

A trip blank accompanied the sampling for the sampling process and is not separated from the sample collection and transportation process. The purpose of the trip blank is to identify whether cross-contamination is occurring during the sample collection and transport process.

12.8 Field Duplicate Samples

The tables below list the duplicate soil samples collected with their corresponding primary samples.

Table 15: Soil Field Duplicate Samples

Primary Sample	Sample Depth (m BGL)	Intra Duplicate	Inter Duplicate	Date Sampled
BH4	0.2-0.3	D1	SS1	15.06.2022
BH2	0.2-0.3	D2	SS2	15.06.2022

Table 16: Groundwater Field Duplicate Samples

Primary Sample	Screen Zone (m bgl)	Intra Duplicate	Inter Duplicate	Date Sampled
BH1/GW1	1.3-4.3m	GWD1	GWSS1	21.06.2022

Field duplicate samples for soil were prepared in the field through the following process:

- A larger than normal quantity of soil is recovered from the sample location selected for duplication.
- Two Portions of the sub-sample are immediately transferred, one for an intra-laboratory duplicate and another as a sample.
- Samples are placed into a labelled, laboratory supplied 250ml glass jar and sealed with an airtight, Teflon screw top lid. The fully filled jars are labelled as the sample and duplicate and immediately placed in a chilled esky.

Soil Intra-Laboratory duplicate samples were sent to Envirolab while Inter-Laboratory duplicate samples were sent to SGS.

A summary of the test results with the Relative Percentage Difference (RPD) is presented in the following tables.

The comparisons between the duplicates and original samples indicate acceptable RPDs when they comply with criteria which are commonly set at:

- less than 30% for inorganics and 50% for organics
- greater than five (5) times the laboratory limit of recording (LOR)
- greater than 50% of the relevant health investigation level (HIL) concentration.

The tables, below, give details of intra laboratory and inter laboratory duplicates.

Table 17a: Intra-lab Soil Sample D1 RPDs

ANALYTE	BH4 0.2-0.3 mg/kg	Envriolab D1 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	5	6	18
Cadmium	0.7	1	-
Chromium	10	10	0
Copper	94	67	34
Lead	95	140	38
Mercury	<0.1	0.1	-
Nickel	5	4	22
Zinc	160	210	27
TRH			
C10-C16	<50	<50	-
C16C34	<100	<100	-
C34-C40	<100	<100	-
BTEX			
Benzene	<0.2	<0.2	-
Toulene	<0.5	<0.5	-
Ethylbenzene	<1	<1	-
Xylenes - Total	<1	<1	-
POLYCYCLIC HYDROCARBONS (PAH)			
Benzo(a)pyrene	1.1	0.97	13
Total PAH	8.7	8.2	6
ORGANOCHLORINE PESTICIDES			
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.1	<0.1	-
DDD	<0.1	<0.1	-
DDE	<0.1	<0.1	-
DDT	<0.1	<0.1	-
Chlordane (trans & cis)	<0.1	<0.1	-
POLYCHLORINATED BIPHENYLS			
Total PCB	<0.1	<0.1	-

Table 17b: Intra-lab Soil Sample D2 RPDs

ANALYTE	BH2 0.2-0.3 mg/kg	Envriolab D2 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	<4	<4	-
Cadmium	0.4	0.5	-
Chromium	12	18	40
Copper	56	76	30
Lead	7	8	13
Mercury	<0.1	<0.1	-
Nickel	41	35	16
Zinc	47	50	6
TRH			
C10-C16	<50	<50	-
C16C34	<100	<100	-
C34-C40	<100	180	-
BTEX			
Benzene	<0.2	<0.2	-
Toulene	<0.5	<0.5	-
Ethylbenzene	<1	<1	-
Xylenes - Total	<1	<1	-
POLYCYCLIC HYDROCARBONS (PAH)			
Benzo(a)pyrene	<0.05	<0.05	-
Total PAH	<0.05	<0.05	-
ORGANOCHLORINE PESTICIDES			
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.1	<0.1	-
DDD	<0.1	<0.1	-
DDE	<0.1	<0.1	-
DDT	<0.1	<0.1	-
Chlordane (trans & cis)	<0.1	<0.1	-
POLYCHLORINATED BIPHENYLS			
Total PCB	<0.1	<0.1	-

Table 18: Intra-lab Groundwater Sample GWD1 RPDs

ANALYTE	Envirolab GW1 ug/l	Duplicate GWD1 ug/l	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	<1	<1	-
Cadmium	0.5	0.5	0
Chromium	<1	<1	-
Copper	<1	120	-
Lead	<1	<1	-
Mercury	<0.05	<0.05	-
Nickel	6	6	0
Zinc	33	30	10
TRH			
C6-C10 (F1)	<10	<10	-
C10-C16 (F2)	<50	<50	-
BTEX			
Benzene	<1	<1	-
Toulene	<1	<1	-
Ethylbenzene	<1	<1	-
Xylenes - Total	<3	<3	-
POLYCYCLIC HYDROCARBONS (PAH)			
Benzo(a)pyrene	<0.1	<0.1	-
Naphthalene	<0.2	<0.2	-
VOC			
VINYL CHLORIDE	<10	<10	-
TRICHLOROETHENE	<1	<1	-
CIS-1,2-DICHLOROETHENE	<1	<1	-
Chloroform	<1	<1	-

The comparisons between the intra-laboratory duplicates and corresponding original samples for soil and groundwater indicated generally acceptable RPD.

Table 19a: Inter-lab Soil Sample SS1 RPDs

ANALYTE	BH4 0.2-0.3 mg/kg	SGS SS1 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	5	9	57
Cadmium	0.7	1.2	-
Chromium	10	9.8	2
Copper	94	91	3
Lead	95	170	57
Mercury	<0.1	0.22	-
Nickel	5	4.3	15
Zinc	160	260	48
TRH			
C10-C16	<50	<25	-
C16C34	<100	<90	-
C34-C40	<100	<120	-
BTEX			
Benzene	<0.2	<0.1	-
Toulene	<0.5	<0.1	-
Ethylbenzene	<1	<0.1	-
Xylenes - Total	<1	<0.3	-
POLYCYCLIC HYDROCARBONS (PAH)			
Benzo(a)pyrene	1.1	1.1	0
Total PAH	8.7	11	23
ORGANOCHLORINE PESTICIDES			
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.1	<0.2	-
DDD	<0.1	<0.1	-
DDE	<0.1	<0.1	-
DDT	<0.1	<0.1	-
Chlordane (trans & cis)	<0.1	<0.1	-
POLYCHLORINATED BIPHENYLS			
Total PCB	<0.1	<0.1	-

Table 19b: Inter-lab Soil Sample SS2 RPDs

ANALYTE	BH2 0.2-0.3 mg/kg	SGS SS2 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	<4	2	-
Cadmium	0.4	0.5	-
Chromium	12	10	18
Copper	56	42	29
Lead	7	7	0
Mercury	<0.1	<0.1	-
Nickel	41	35	16
Zinc	47	45	4
TRH			
C10-C16	<50	<25	-
C16C34	<100	<90	-
C34-C40	<100	<120	-
BTEX			
Benzene	<0.2	<0.1	-
Toulene	<0.5	<0.1	-
Ethylbenzene	<1	<0.1	-
Xylenes - Total	<1	<0.3	-
POLYCYCLIC HYDROCARBONS (PAH)			
Benzo(a)pyrene	<0.05	<0.1	-
Total PAH	<0.05	<0.8	-
ORGANOCHLORINE PESTICIDES			
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.1	<0.2	-
DDD	<0.1	<0.1	-
DDE	<0.1	<0.1	-
DDT	<0.1	<0.1	-
Chlordane (trans & cis)	<0.1	<0.1	-
POLYCHLORINATED BIPHENYLS			
Total PCB	<0.1	<0.1	-

Table 20: Inter-lab Groundwater Sample GWSS1 RPDs

ANALYTE	Envirolab GW1 ug/l	Split GWSS1 ug/l	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	<1	1	-
Cadmium	0.5	0.4	22
Chromium	<1	<1	-
Copper	<1	<1	-
Lead	<1	<1	-
Mercury	<0.05	<0.1	-
Nickel	6	7	15
Zinc	33	38	14
TRH			
C6-C10 (F1)	<10	<50	-
C10-C16 (F2)	<50	<60	-
BTEX			
Benzene	<1	<0.5	-
Toulene	<1	<0.5	-
Ethylbenzene	<1	<0.5	-
Xylenes - Total	<3	<1.5	-
POLYCYCLIC HYDROCARBONS (PAH)			
Benzo(a)pyrene	<0.1	<0.1	-
Naphthalene	<0.2	<0.1	-
VOC			
VINYL CHLORIDE	<10	<0.5	
TRICHLOROETHENE	<1	<0.5	
CIS-1,2-DICHLOROETHENE	<1	<0.5	-
Chloroform	<1	<0.5	-

The comparisons between the inter-laboratory duplicates and corresponding original samples for soil and groundwater indicated generally acceptable RPD with the exception of a few heavy metal analytes in soil sample SS1 which exceeded the DQOs for this project, however, these exceedances are not considered significant because they are most likely due to the heterogeneity of the sample or low concentrations within the sample.

Field duplicates provide an indication of the whole investigation process, including the sampling process, sample preparation and analysis. The accuracy of the data is considered to be adequate due to the effect on confidence intervals with low concentrations in the samples and their duplicates.

12.9 Trip Spike and Trip Blank Results

Trip Spike samples were obtained from the laboratory prior to conducting field sampling where volatile substances are suspected. Trip spike and trip blank samples were collected to assess the effect of sample handling on volatile concentrations in the samples collected and the results are listed in the tables below:

Table 21: Trip Spike

ANALYTE	TS1 Trip Spike % Soil (mg/kg) 15.06.2022	ANALYTE	TS1 Trip Spike % water (ug/L) 21.06.2022
BTEX		**BTEX**	
Benzene	96%	Benzene	94%
Toluene	98%	Toluene	87%
Ethyl Benzene	98%	Ethyl Benzene	101%
O-Xylenes	98%	O-Xylenes	100%
M & P Xylenes	98%	M & P Xylenes	100%

Results discussed in Section 12.11

Table 22: Trip Blank

ANALYTE	Trip Blank Soil (TB1) mg/kg 15.06.2022	ANALYTE	Trip Blank water (TB1) ug/L 21.06.2022
TRH		**TRH**	
C6-C10	<25	C6-C10	<10
BTEX		**BTEX**	
Naphthalene	<1	Naphthalene	<1
Benzene	<0.2	Benzene	<1
Toluene	<0.5	Toluene	<1
Ethyl Benzene	<1	Ethyl Benzene	<1
Total Xylenes	<1	Total Xylenes	<3

Results discussed in Section 12.11

12.10 Laboratory QA/QC

The integrity of analytical data provides the second step in the QA/QC process for total data compliance. The data validation techniques adopted by Foundation Earth Sciences are based upon techniques published by the US EPA and in line with methods and guidelines adopted by the NSW EPA and outlined in the NEPM, 2013.

Descriptions are provided of the specific mechanisms used in the assessment of accuracy, precision and useability of analytical data within the project.

Refer to **Appendix H**- NATA Accredited Laboratory Certificates.

12.11 QA/QC Results

The QA/QC results for soil collected at the site are summarised in the table below:

Table 23: QA/QC Results Summary

Data Quality Indicator	Results	DQI Met
Completeness		
Soil & Groundwater		
Data from critical samples is considered valid	Data is considered valid	Yes
Satisfactory frequency / result for QC samples	The QC results are considered adequate for the purpose of the investigation.	Yes
Field documentation completed	Field records are complete	Yes
Boreholes logs & COCs completed and holding times complied with	Logs, COCs and holding times have been completed and complied.	Yes
Comparability		
Soil & Groundwater		
Standard operating procedures used	Yes	Yes
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted by Foundation Earth Sciences scientists operating under the SOPs. The laboratories remained consistent throughout the investigation	Yes
Same analytical methods used	All analytical methods used between laboratories were based on the USEPA/APHA methods	Yes
Limit of reporting appropriate and consistent	The LORs were the same within each laboratory but differed between the primary and secondary laboratories. This is not considered as non-conformances.	Yes

Representativeness		
Soil & Groundwater		
Sampling appropriate for media and analytes	All sampling was conducted in accordance with Foundation Earth Sciences SOPs with the exception of • In Laboratory certificate Envirolab 298140 R00, excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to envirolab procedures. They cannot guarantee that this sub-sample is indicative of the entire sample.	Partial
Samples adequately preserved.	The majority of samples collected were received by laboratories at the correct temperature. Where relevant, samples were stored in acid-preserved containers supplied by laboratories.	Yes
Precision		
Soil & Groundwater		
SOPs appropriate and complied with in relation to field duplicates	The recovery of field duplicates was conducted in accordance with Foundation Earth Sciences SOPs s to allow for the assessment of field precision.	Yes
RPDs of the field duplicates within control limits	The RPDs were <50%, the data set was considered to be adequately precise with the exceptions of a few heavy metals analytes exceeded the DQOs for this project, however, these exceedances are not considered significant because they	Partial

	are most likely due to the heterogeneity of the sample or low concentrations within the sample.	
RPDs of the laboratory duplicates within control limits	RPDs of the laboratory duplicates within control limits with the exception of ● In Laboratory Certificate Envirolab 294140 R00, the laboratory RPD acceptance criteria have been exceeded for a few heavy metals. Therefore, the triplicate results have been issued as laboratory samples for a few samples. ● In Laboratory Certificate SGS SE233432 R0, the laboratory RPD for duplicate results is exceeded in VOCs & Petroleum Hydrocarbon due to sample heterogeneity.	Partial
Accuracy		
Soil & Groundwater		
SOPs appropriate and complied with in relation to field blanks	Yes	Yes
Rinsate Blanks, trip blanks & laboratory blanks free of contaminants	Laboratory blanks & trip blanks were free of contaminants.	Yes
Surrogate spikes within control limits	RPDs of the laboratory samples within control limits.	Yes
Laboratory control spikes within control limits	Laboratory Control Spike recoveries were within control limits with the expectation of ● In Laboratory Certificate Envirolab 294140 R00, high spike	Partial

	recovery was obtained for one sample in CEC. Sample matrix interference is suspected. However, an acceptable recovery was obtained for the LCS.	
Matrix Spike recoveries within control limits	RPDs of the laboratory samples within control limits with the exception of ● In Laboratory Certificate SGS SE233208 R0, the matrix spike for results is exceeded in HMs & TRHs due to matrix interference& sample heterogeneity.	Yes
Trip spike recoveries within control limits	Yes	Yes

12.12 QA/QC Conclusion

It is therefore considered that the data is sufficiently reliable and that the results can be used for the purpose of this project.

13.0 SITE ASSESSMENT CRITERIA

13.1 SOILS

13.1.1 Health Investigation Levels (HILs)

To assess the contamination status of soils at a site, the NSW EPA refers to the document entitled National Environmental Protection (Assessment of Site Contamination) Measure (NEPM) (Amendment 2013).

During any future soil investigations, the site will be assessed against the NEPM exposure scenario 'Residential B & Recreational C' Health Investigation Levels of the above-mentioned guidelines and specifically refers to the following:

HIL 'B' Residential with minimal opportunities for soil access: includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

Communal Open Space area will be assessed against

HIL 'C' Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths.

The soil regulatory guidelines are presented in the table below.

Table 24: Health Investigation Levels (HIL) Criteria for Soil Contaminants

FOUNDATION EARTH SCIENCES	Residential B	Recreational C	Reference
Heavy Metals			
Arsenic	500	300	NEPM 2013 - Table 1(A)1 HILs
Beryllium	90	90	NEPM 2013 - Table 1(A)1 HILs
Boron	40000	20000	NEPM 2013 - Table 1(A)1 HILs
Cadmium	150	90	NEPM 2013 - Table 1(A)1 HILs
Chromium (VI)	500	300	NEPM 2013 - Table 1(A)1 HILs
Cobalt	600	300	NEPM 2013 - Table 1(A)1 HILs
Copper	30000	17000	NEPM 2013 - Table 1(A)1 HILs
Lead	1200	600	NEPM 2013 - Table 1(A)1 HILs
Manganese	14000	19000	NEPM 2013 - Table 1(A)1 HILs
Mercury (Inorganic)	120	80	NEPM 2013 - Table 1(A)1 HILs
Methyl Mercury	30	13	NEPM 2013 - Table 1(A)1 HILs
Nickel	1200	1200	NEPM 2013 - Table 1(A)1 HILs
Selenium	1400	700	NEPM 2013 - Table 1(A)1 HILs
Zinc	60000	30000	NEPM 2013 - Table 1(A)1 HILs
Cyanide (Free)	300	240	NEPM 2013 - Table 1(A)1 HILs
Polycyclic Aromatic Hydrocarbons (PAHs)			
Carcinogenic PAHs (as Bap TEQ)	4	3	NEPM 2013 - Table 1(A)1 HILs
Total PAHs	400	300	NEPM 2013 - Table 1(A)1 HILs
Organochlorine Pesticides			
DDT + DDE + DDD	600	400	NEPM 2013 - Table 1(A)1 HILs
Aldrin + Dieldrin	10	10	NEPM 2013 - Table 1(A)1 HILs
Chlordane	90	70	NEPM 2013 - Table 1(A)1 HILs
Endosulfan	400	340	NEPM 2013 - Table 1(A)1 HILs
Heptachlor	10	10	NEPM 2013 - Table 1(A)1 HILs
HCB	15	10	NEPM 2013 - Table 1(A)1 HILs
Phenols			
Phenols	45000	40000	NEPM 2013 - Table 1(A)1 HILs
Pentachlorophenol	130	120	NEPM 2013 - Table 1(A)1 HILs
Cresols	4700	4000	NEPM 2013 - Table 1(A)1 HILs
Polychlorinated Biphenyls (PCBs)			
PCBs	1	1	NEPM 2013 - Table 1(A)1 HILs
Other Pesticides			
Atrazine	470	400	NEPM 2013 - Table 1(A)1 HILs
Chlorpyrifos	340	250	NEPM 2013 - Table 1(A)1 HILs
Bifenthrin	840	730	NEPM 2013 - Table 1(A)1 HILs
Herbicides			
2,4,5-T	900	800	NEPM 2013 - Table 1(A)1 HILs
2,4-D	1600	1300	NEPM 2013 - Table 1(A)1 HILs
MCPA	900	800	NEPM 2013 - Table 1(A)1 HILs
MCPB	900	800	NEPM 2013 - Table 1(A)1 HILs
Mecoprop	900	800	NEPM 2013 - Table 1(A)1 HILs
Picloram	6600	5700	NEPM 2013 - Table 1(A)1 HILs
Other Organics			
PDBE (Br1-Br9)	2	2	NEPM 2013 - Table 1(A)1 HILs

Note - All values are in mg/kg.

13.1.2 Health Screening Levels (HSLs)

The HSLs are applicable to generic land uses such as residential, commercial/industrial or recreational/public open space and different soil types between the ground surface and soils >4 metres below ground level. The HILs have been applied to assess human health risks via the inhalation and direct contact pathways of exposure. For selection of the health screening criteria an assessment of the in-situ soil profile should be undertaken. The soil profile consisted of predominantly ***Clay & Sand***

Table 25: Health Screening Levels (HSL) Criteria

FOUNDATION EARTH SCIENCES	HSL A & HSL B	HSL A & HSL B	HSL A & HSL B	HSL A & HSL B	HSL C	HSL C	HSL C	HSL C	Soil Saturation Concentration (Csat)	Reference
	0m to <1m	1m to <2m	2m to <4m	4m+	0m to <1m	1m to <2m	2m to <4m	4m+		
SAND										
Toluene	160	220	310	540	NL	NL	NL	NL	560	NEPM 2013 - Table 1(A) 3 HSLs
Ethylbenzene	55	NL	NL	NL	NL	NL	NL	NL	64	NEPM 2013 - Table 1(A) 3 HSLs
Xylenes	40	60	95	170	NL	NL	NL	NL	300	NEPM 2013 - Table 1(A) 3 HSLs
Naphthalene	3	NL	NL	NL	NL	NL	NL	NL	9	NEPM 2013 - Table 1(A) 3 HSLs
Benzene	0.5	0.5	0.5	0.5	NL	NL	NL	NL	360	NEPM 2013 - Table 1(A) 3 HSLs
F1	45	70	110	200	NL	NL	NL	NL	950	NEPM 2013 - Table 1(A) 3 HSLs
F2	110	240	440	NL	NL	NL	NL	NL	560	NEPM 2013 - Table 1(A) 3 HSLs
SILT										
Toluene	480	NL	NL	NL	NL	NL	NL	NL	640	NEPM 2013 - Table 1(A) 3 HSLs
Ethylbenzene	NL	NL	NL	NL	NL	NL	NL	NL	69	NEPM 2013 - Table 1(A) 3 HSLs
Xylenes	110	310	NL	NL	NL	NL	NL	NL	330	NEPM 2013 - Table 1(A) 3 HSLs
Naphthalene	5	NL	NL	NL	NL	NL	NL	NL	10	NEPM 2013 - Table 1(A) 3 HSLs
Benzene	0.7	1	2	3	NL	NL	NL	NL	440	NEPM 2013 - Table 1(A) 3 HSLs
F1	50	90	150	290	NL	NL	NL	NL	910	NEPM 2013 - Table 1(A) 3 HSLs
F2	280	NL	NL	NL	NL	NL	NL	NL	570	NEPM 2013 - Table 1(A) 3 HSLs
CLAY										
Toluene	480	NL	NL	NL	NL	NL	NL	NL	630	NEPM 2013 - Table 1(A) 3 HSLs
Ethylbenzene	NL	NL	NL	NL	NL	NL	NL	NL	68	NEPM 2013 - Table 1(A) 3 HSLs
Xylenes	110	310	NL	NL	NL	NL	NL	NL	330	NEPM 2013 - Table 1(A) 3 HSLs
Naphthalene	5	NL	NL	NL	NL	NL	NL	NL	10	NEPM 2013 - Table 1(A) 3 HSLs
Benzene	0.7	1	2	3	NL	NL	NL	NL	430	NEPM 2013 - Table 1(A) 3 HSLs
F1	50	90	150	290	NL	NL	NL	NL	850	NEPM 2013 - Table 1(A) 3 HSLs
F2	280	NL	NL	NL	NL	NL	NL	NL	560	NEPM 2013 - Table 1(A) 3 HSLs

Note - All values are in mg/kg.

HSL C will be applied to the Communal Open Space area.

13.1.3 (EILs) and (ESLs)

Ecological Investigation Levels (EILs) -

The NEPM 2013 states that "Ecological investigation levels" (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. EILs have been derived for As, Cu, CrIII, DDT, naphthalene, Ni, Pb and Zn

Insufficient data was available to derive ACLs for arsenic (As), DDT, lead (Pb) and naphthalene. As a result, the derived EILs are generic to all soils and are presented as total soil contaminant concentrations in Tables 1B (4) and 1B (5) within the NEPM 2013.

For the purposes of EIL derivation, a contaminant incorporated in soil for at least two years is considered to be aged for the purpose of EIL derivation. The majority of contaminated sites are likely to be affected by aged contamination. Fresh contamination is usually associated with current industrial activity and chemical spills.

The following process describes the method for calculation of site specific EILs.

A. EILs for Ni, Cr III, Cu, Zn and Pb aged contamination (>2 years)

Steps 1–4 below describe the process for deriving site-specific EILs for the above elements using Tables 1B (1) – 1B (4), which can be found at the end of the NEPM 2013.

1. Measure or analyse the soil properties relevant to the potential contaminant of concern (pH, CEC, organic carbon, clay content). Sufficient samples need to be taken for these determinations to obtain representative values for each soil type in which the contaminant occurs.

2. Establish the sample ACL for the appropriate land use and with consideration of the soil-specific pH, clay content or CEC. The ACL for Cu may be determined by pH or CEC and the lower of the determined values should be selected for EIL calculation. Note that the ACL for Pb is taken directly from Table 1(B) 4.

3. Calculate the contaminant ABC in soil for the particular contaminant and location from a suitable reference site measurement or other appropriate method.

4. Calculate the EIL by summing the ACL and ABC:

$$EIL = ABC + ACL$$

B. EILs for As, DDT and naphthalene

EILs for aged contamination for DDT and naphthalene are not available and the adopted EIL is based on fresh contamination taken directly from Table 1B (5). The EILs for As, DDT and naphthalene are generic i.e. they are not dependent on soil type and are taken directly from Table 1B (5). Only EILs for fresh contamination are available for As, DDT and naphthalene due to the absence of suitable data for aged contaminants.

Ecological Screening Levels (ESLs) -

Ecological screening levels (ESLs) are presented based on a review of Canadian guidance for petroleum hydrocarbons in soil and application of the Australian methodology (Schedule B5b) to derive Tier 1 ESLs for BTEX, benzo(a)pyrene and F1 and F2 (Warne 2010a, 2010b)

The Canadian Council of the Ministers of the Environment (CCME) has adopted risk-based TPH standards for human health and ecological aspects for various land uses in the *Canada-wide standard for petroleum hydrocarbons (PHC) in soil* (CCME 2008) (CWS PHC). The standards established soil values including ecologically based criteria for sites affected by TPH contamination for coarse- and fine-grained soil types.

Table 26: Ecological Investigation Levels (EIL) and Ecological Screening Levels (ESL) Criteria

FOUNDATION EARTH SCIENCES	Contaminant Age/Soil Texture	National parks and areas of high conservation value	Urban residential and open public spaces	Commercial and industrial	Reference
Ecological Investigation Levels (EILs)					
Heavy Metals					
Arsenic	**Fresh**	20	50	80	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	40	100	160	NEPM 2013 - Table 1(B) 1-5 EILs
Chromium (III)	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Copper	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Lead	**Fresh**	110	270	440	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	470	1100	1800	NEPM 2013 - Table 1(B) 1-5 EILs
Nickel	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Zinc	**Fresh**	Site Specific Calculation Required			NEPM 2013 - Table 1(B) 1-5 EILs
	Aged				NEPM 2013 - Table 1(B) 1-5 EILs
Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	**Fresh**	10	170	370	NEPM 2013 - Table 1(B) 1-5 EILs
	Aged	10	170	370	NEPM 2013 - Table 1(B) 1-5 EILs
Organochlorine Pesticides					
Ecological Screening Levels (ESLs) and Management Limits					
F1 (C_6-C_{10})	**Coarse**				NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	125*	180*	215*	NEPM 2013 - Table 1(B) 6-7 EILs
F1 (C_6-C_{10})	**Coarse**		700	700	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	800	800	NEPM 2013 - Table 1(B) 6-7 EILs
F2 (>C_{10}-C_{16})	**Coarse**				NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	25*	120*	170*	NEPM 2013 - Table 1(B) 6-7 EILs
F2 (>C_{10}-C_{16})	**Coarse**		1000	1000	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	1000	1000	NEPM 2013 - Table 1(B) 6-7 EILs
F3 (>C_{16}-C_{34})	**Coarse**	-	300	1700	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	-	1300	2500	NEPM 2013 - Table 1(B) 6-7 EILs
F3 (>C_{16}-C_{34})	**Coarse**		2500	3500	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	3500	5000	NEPM 2013 - Table 1(B) 6-7 EILs
F4 (>C_{34}-C_{40})	**Coarse**	-	2800	3300	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	-	5600	6600	NEPM 2013 - Table 1(B) 6-7 EILs
F4 (>C_{34}-C_{40})	**Coarse**		10000	10000	NEPM 2013 - Table 1(B) 6-7 EILs
(Management Limits)	**Fine**	-	10000	10000	NEPM 2013 - Table 1(B) 6-7 EILs
Benzene	**Coarse**	10	50	75	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	10	65	95	NEPM 2013 - Table 1(B) 6-7 EILs
Toluene	**Coarse**	10	85	135	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	65	105	135	NEPM 2013 - Table 1(B) 6-7 EILs
Ethylbenzene	**Coarse**	1.5	70	165	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	40	125	185	NEPM 2013 - Table 1(B) 6-7 EILs
Xylenes	**Coarse**	10	105	180	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	1.6	45	95	NEPM 2013 - Table 1(B) 6-7 EILs
Benzo(a)pyrene	**Coarse**	0.7	0.7	0.7	NEPM 2013 - Table 1(B) 6-7 EILs
	Fine	0.7	0.7	0.7	NEPM 2013 - Table 1(B) 6-7 EILs

Notes

1 Urban residential/public open space is broadly equivalent to the HIL-A, HIL-B and HIL-C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.

2 Aged values are applicable to arsenic contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3 Insufficient data was available to calculate aged values for DDT and naphthalene, consequently the values for fresh contamination should be used.

4 Insufficient data was available to calculate ACLs for As, DDT and naphthalene. The EIL should be taken directly from Table 1B(5).

5 ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

6 '-' indicates that insufficient data was available to derive a value.

7 To obtain F1, subtract the sum of BTEX concentrations from C6-C10 fraction and subtract naphthalene from >C10-C16 to obtain F2.

8 Management limits are applied after consideration of relevant ESLs and HSLs

9 Separate management limits for BTEX and naphthalene are not available hence these should not be subtracted from the relevant fractions to obtain F1 and F2.

13.2 Asbestos

Health screening for asbestos in soil, which are based on scenario-specific likely exposure levels, are adopted from the WA DoH guidelines and are referred in Table 7 in Schedule B1. The following health screening levels for asbestos can be seen below:

Table 27: Health Screening Levels for Asbestos

	Health Screening Levels (w/w)			
Form of Asbestos	Residential A	**Residential B**	**Recreational C**	Commercial/Industrial D
Bonded ACM	0.01%	**0.04%**	**0.02%**	0.05%
FA and AF (Friable Asbestos)	**0.001%**			
All forms of asbestos	**No visible asbestos for surface soil**			

Residential B, FA & AF and no visible asbestos for surface soil is the adopted criteria for the majority of the site.

Recreational C, FA & AF and no visible asbestos for surface soil is the adopted criteria for the proposed communal open space area.

13.3 Aesthetic Considerations

Schedule B1 in NEPC (2013) requires the consideration of aesthetic issues arising from soils and groundwater within the site. The following assessment criteria were adopted when considering aesthetics:

- no persistently malodourous soils or extracted groundwater;

- no persistent hydrocarbon sheen on surface water;
- no staining or discolouration in soils, taking into consideration the natural state of the soil; and
- no large or frequently occurring anthropogenic materials present (to the extent practicable).

13.4 Groundwater

The NSW DECC has endorsed the use of the Groundwater Investigation Levels (GILs) given in the 1999 NEPM '*Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater*' (Amendment 2013) and the water quality trigger levels given in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC & ARMCANZ, 2000) and recently updated to ANZG (2018). These Guidelines provide criteria for:

- Aquatic ecosystems – both marine and fresh waters

The NEPM advises that 'when assessing groundwater contamination, the GILs are to be applied at the point of extraction and as response levels at the point of use, or where there is a likelihood of an adverse environmental effect at the point of discharge'.

For assessing groundwater quality, it is first necessary to assess the potential uses of groundwater downgradient of the site being assessed.

Potential uses of groundwater downgradient of the site include:

- Discharge to water bodies sustaining aquatic ecosystems particularly Fresh Water.
- Extraction of groundwater by local users.

The threshold concentrations presented in the ANZG (2018) Fresh and Marine Waters Quality Guidelines are considered applicable for the protection of aquatic ecosystems of the receiving waters. As these guidelines apply to receiving waters, it is generally conservative to apply these to groundwater discharging to receiving waters. It is important to note that these are not threshold values at which an environmental problem is likely to occur if exceeded, rather, if the trigger values are exceeded, then further action is required which may include either further site-specific investigations to assess whether or not there is an actual problem or management / remedial action should be undertaken.

It is considered that ***Marine Water trigger*** values are applicable for investigating chemical concentrations in groundwater at the site. The nearest watercourse is Hawthorne Canal located along the western boundary of the site. It is understood that the NSW EPA policy is that the trigger values for the protection of 95% of aquatic ecosystems should be used as groundwater assessment criteria when considering moderately or highly disturbed receiving environments. The receiving waters for groundwater at the site are considered to be moderately disturbed ecosystems and the ANZG (2018) 95% protection values are therefore considered appropriate groundwater assessment criteria for the site.

14.0 SOIL RESULTS

The laboratory certificates are presented in **Appendix H** – NATA Accredited Laboratory Certificates.

A summary of the results together with the assessment criteria adopted are provided in **Appendix K** – Summary Tables.

14.1 HEAVY METALS

14.1.1 Heath Investigation Levels

As indicated in Table K1 all the heavy metals were below the respective LOR and/or the Health Investigation Level (HIL) for a residential development, that being the HIL 'B' and/or public open space, that being HIL 'C'.

14.1.2 Ecological Investigation Levels

The EILs for Copper, Zinc, Lead, Nickel and Chromium III were derived by adding the Ambient Background Concentration (ABC) to the Added Contaminant Limits (ACL), as per the following formula:

EIL = ABC + ACL

The ABC for the site has been determined by recovering a sample from an appropriate reference point, that being:

- BH1 (0.4-0.5m)

The soil samples collected from BH1 were analysed for pH, CEC & %CLAY to provide the background parameters for the soil on the site. As shown in Table K1 all of the locations were below the site derived EILs for a residential development with the exception of the following concentrations:

- In *location KM18 (0.6m) has copper value of 1291mg/kg* which exceeds the criteria of 270mg/kg & zinc value of 1200mg/kg which exceeds the EIL criteria of 1000 mg/kg
- However, as shown in Table K1, the 95% UCL of the mean concentrations of Zinc, for samples from the fill soil materials, were below the assessment criteria those being; the standard deviations were all less than 50% of the assessment criteria and no single concentration exceeded the assessment criteria by more than 250%. As such, the majority of the data set satisfies the criteria for stating that zinc contamination in fill is not likely to be an issue within the site at locations.

14.2 TRH, BTEX, NAPHTHALENE &/OR BENZO (A) PYRENE

14.2.1 Heath Screening Levels & Management Limits

As indicated in Table K1, the F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), benzene, toluene, ethyl benzene, xylenes and naphthalene concentrations were below the HSL 'B' and/or HSL 'C' for a Clay, Silt & Sand soil profile with a source depth of "0m to <4m".

As shown in Table K1, the F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), F3 (C_{16}-C_{34}), F4 (C_{34}-C_{40}), concentrations were below the Management Limits for fine-grained and/or coarse-grained soil in an urban residential and public open space development.

14.2.2 Ecological Screening Levels

As indicated in Table K1, the F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), F3 (C_{16}-C_{34}), F4 (C_{34}-C_{40}), benzene, toluene, ethyl benzene, xylenes and benzo(a)pyrene concentrations were below the ESLs for fine and coarse-grained soil in an urban residential and public open space development with the exception of the following concentrations:

- 0.9mg/kg of Benzo(a)pyrene in sample KM08 (0.8m), 1.2mg/kg of Benzo(a)pyrene in KM12 (1.2m), *8 mg/kg of Benzo(a)pyrene in KM13 (1.2m)*, 23 mg/kg of Benzo(a)pyrene in KM17 (1.0m), 5.6mg/kg of Benzo(a)pyrene in DUP05 (duplicate of KM13-1.2m), 1.1mg/kg of Benzo(a)pyrene in BH4 (0.2-0.3m), 0.85mg/kg of Benzo(a)pyrene in BH6 (0.3-0.4m) , 2.5mg/kg of Benzo(a)pyrene in BH10 (0.7-0.8m) , 2.2mg/kg of Benzo(a)pyrene in BH13 (2-2.1m), 1.5mg/kg of Benzo(a)pyrene in BH15 (0.5-0.6m) , *8.6mg/kg of Benzo(a)pyrene in BH18 (0.7-0.8m)* , 1.3mg/kg of Benzo(a)pyrene in BH22 (0.3-0.4m), and D1 (0.97mg/kg) & SS1 (1.1mg/kg) as duplicate sample of BH4 (0.2-0.3m), exceed the ESL criteria of 0.7 mg/kg.

14.3 PAH, OCP, OPP, VOC, PFAS & PCB

14.3.1 Heath Investigation Levels

As indicated in Table K1, the concentrations of the benzo(a)pyrene (as TEQ), PAH, OCP, OPP, VOC, PFAS & PCB were below the Health Investigation Level (HIL) for a residential, parkland and public open space development, that being the HIL ‘B’, HIL ‘C’ and/or the limit of reporting (LOR) with the exception of the following concentrations:

- 422mg/kg of Total PAHs in sample KM17 (1.0m) exceed the HIL B & HIL C criteria of 400 mg/kg & 300mg/kg.
    - However, as shown in Table K1, the 95% UCL of the mean concentrations of Total PAH, for samples from the fill soil materials, were below the assessment criteria those being; the standard deviations were all less than 50% of the assessment criteria and no single concentration exceeded the assessment criteria by more than 250%. As such, the majority of the data set satisfies the criteria for stating that Total PAH contamination in fill is not likely to be an issue within the site.
- 3.6mg/kg of Benzo(a)pyrene TEQ in sample BH10 (0.7-0.8m), 3.2mg/kg of Benzo(a)pyrene TEQ in BH13 (2-2.1m), *12mg/kg of Benzo(a)pyrene TEQ in BH18* (0.7-0.8m), exceed the HIL B & HIL C criteria of 4 mg/kg & 3mg/kg.
    - However, as shown in Table K1, the 95% UCL of the mean concentrations of benzo(a)pyrene TEQ, for samples from the fill soil materials, were below the assessment criteria those being; the standard deviations were all less than 50% of the assessment criteria and no single concentration exceeded the assessment criteria by more than 250%. As such, the majority of the data set satisfies the criteria for stating that benzo(a)pyrene TEQ contamination in fill is not likely to be an issue within the site. Borehole BH18 is considered a hotspot has been excluded from the data set.

14.3.2 EILs & ESLs

As indicated in Table K1, the concentrations of arsenic, naphthalene and DDT were below the EILs & ESLs for a residential, parkland and public open space development.

14.4 Asbestos

EMS DSI in 2006 completed Asbestos analysis on 14 soil samples, found that two contained asbestos. Sample KM01/0.1 was found to contain a fragment of Chrysotile asbestos, additionally, KM07/0.3 was found to contain loose fibre bundles of Chrysotile asbestos. Asbestos materials were found within the fill material on the Site.

As shown in Table K1, no asbestos was detected in the soil samples tested by Foundation Earth Sciences in 2022.

15.0 GROUNDWATER RESULTS

The laboratory certificates are presented in **Appendix H** – NATA Accredited Laboratory Certificates. A summary of the results together with the assessment criteria adopted are provided in **Appendix K** – Summary Tables.

15.1 HEAVY METALS

As indicated in Table K2, dissolved heavy metals were detected at concentrations below the laboratory limits of reporting (LOR) or their respective assessment criteria, such as the Groundwater Investigation Levels for Marine Waters with the exception of the following concentrations exceeding the criteria:

- Cadmium (3.5 ug/L), Chromium (28 ug/L), Copper (19 ug/L), Lead (3.5 ug/L), Nickel (180 ug/L) & Zinc (160 ug/L) in GW3
- Zinc in sample GW1(32 ug/L), GW2(28 ug/L), GW4(37 ug/L), and the associated duplicate sample GWD1(30 ug/L) & GWSS1(38 ug/L);
- Nickel in sample GW4 had a concentration of (62 ug/L)

15.2 TRH & BTEXN

As shown In Table K2, the BTEXN concentrations were seen to be less than the laboratory limit of reporting (LOR) and/or below the assessment criteria.

As indicated in Table K2, the TRH F1 (C_6-C_{10}), F2 (>C_{10}-C_{16}), benzene, toluene, ethyl benzene, xylenes and naphthalene concentrations were below the HSL 'B' for a Clay profile with a source depth of "2m to <4m" & "4m to <8m".

15.3 PAH

As indicated in Table K2, the PAH concentrations were either less than the laboratory limit of reporting (LOR) and/or below the assessment criteria.

15.4 VOCs in Groundwater

As indicated in Table K3, the VOC concentrations were either less than the laboratory limit of reporting (LOR) and/or below the adopted assessment criteria.

Refer to **Appendix K** – NATA Accredited Laboratory Certificates.

16.0 PRELIMINARY SOIL CLASSIFICATION

A preliminary soil classification on the sampling completed during the DSI has been completed by FES. This preliminary soil classification refers to twenty-three (23) boreholes designated as BH1 to BH23.

Based on the previous & current site uses the samples were analysed for a selection of Heavy Metals, Total Petroleum Hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAH), Organochlorine Pesticides (OC), OPP, Polychlorinated Biphenyls (PCB), VOCs, PFAS & Asbestos.

With reference to the site figures, laboratory analysis, table K4 and with reference to NSW EPA guidelines, the insitu fill soil materials found within the site have been classified as follows;

- *Soil fill material located within the vicinity of boreholes BH3, BH5, BH7, BH8, BH9, BH13, BH17, BH19, BH20, BH21 & BH23 are classified as* ***General Solid Waste (non-putrescible);***
- *Soil fill material located within the vicinity of boreholes BH1, BH2 BH4, BH6, BH10, BH11, BH12, BH14, BH15, BH16 & BH22 are classified as* ***Restricted Solid Waste.***
- *Soil fill material located within the vicinity of FES borehole location BH18 is classified as* ***Hazardous Waste.***
- This soil classification is preliminary in nature, and it is required that TCLPs and further sampling works are undertaken during the excavation phase of the building to classify soils for offsite disposal.

Refer to **Appendix K** – Summary Tables.

17.0 DISCUSSION

17.1 SOILS

The soil data revealed the following:

- Boreholes KM08, KM12, KM13, KM17, BH4, BH6, BH10, BH13, BH15, BH18 & BH22 require remediation regarding PAH impacted fill soils.
- Borehole KM18 requires remediation regarding copper impacted fill soils.
- EMS DSI in 2006 completed Asbestos analysis on 14 soil samples, found that two contained asbestos. Sample KM01/0.1 was found to contain a fragment of Chrysotile asbestos, additionally, KM07/0.3 was found to contain loose fibre bundles of Chrysotile asbestos. Asbestos materials were found within the fill material on the Site.

Reference should be made to **Figure 2** for a copy of the site plans & **Appendix F** – Concept Development Plans.

17.2 GROUNDWATER QUALITY

The following lines of evidence support the low-risk conclusion in relation to groundwater and the proposed development:

- The groundwater monitoring has indicated levels of dissolved heavy metals detected above groundwater investigation levels for Cadmium, Chromium, Copper, Lead, Nickel &/or Zinc. The elevated heavy metals are considered to be

related to offsite regional contaminant concentrations and/or background levels & therefore of limited concern in relation to the GILs.

- Results for groundwater samples did indicate that levels were above water quality guidelines for ecosystem protection but in compliance with guidelines related to the protection of human health.
- During construction of the proposed development, management of any water that seeps into the excavation will need to be considered as the quality of groundwater means it cannot be discharged directly to the stormwater system. It will need to be managed through treatment or via appropriate disposal techniques.
- It is noted that the groundwater at the site is likely to flow into the Parramatta River& Sydney Harbour Catchment area. This catchment is highly affected by urban development. Because of the extent of development, the waterways are affected by poor water quality and a changed flow regime. The waterways have been modified with creeks channelized or hard edged with concrete, wetland have been degraded or destroyed, infiltration of weeks and rubbish is also a significant issue. Therefore, the exceeded GILs will likely have minimal onsite and/or offsite ecological risk to the surrounding environmental and/or development.
- The inferred groundwater direction is to the west. The likely source based on current information is coming from offsite via groundwater migration.

17.3 DATA GAPS

The following data gaps are noted:

- A supplementary assessment is recommended to be completed as part of the SEPP55 DA process to further assess the quality of the fill material across the site at depth. The results can be compiled with this investigation and compared to the DA approved plans to provide site specific conclusions.

- Following the supplementary assessment, it is considered that the site would be deemed suitable for the proposed redevelopment subject to completion of a Remediation Action Plan (RAP) in order to manage the abovementioned environmental concerns, USTs and data gaps.

17.4 DUTY TO REPORT

Under Section 60 of the Contaminated Land Management Act 1997, the owner of the land is required to notify contamination in circumstances as indicated in the NSW EPA (2015) *Guidelines on Duty to Report Contamination under the Contaminated Land Management Act 1997*.

Sites that are significantly impacted by soil, groundwater and ground gases are likely to require notification to the NSW EPA under section 60 of the CLM Act. A decision process for use by site owners or responsible persons considering reporting contamination under section 60 is provided in Appendix 1 (Figure 1) of the aforementioned guidelines.

No notification to NSW EPA is recommended based on the sampling and investigation to date.

18.0 CONCLUSION

Based on the historical review, environmental information, proposed development and laboratory results of the investigation, the site can be made ***suitable*** for the proposed rezoning and redevelopment subject to a full SEPP55 contamination assessment as part of the DA process which includes following the data gaps outlined in 17.3.

Thank you for the opportunity of undertaking this work. We would be pleased to provide further information on any aspects of this report.

19.0 LIMITATIONS

To the best of our knowledge information contained in this report is accurate at the date of issue, however, subsurface conditions, including groundwater levels and contaminant concentrations, can change in a limited time. This should be borne in mind if the report is used after a protracted delay.

There is always some disparity in subsurface conditions across a site that cannot be fully defined by investigation. Hence it is unlikely that measurements and values obtained from sampling and testing during environmental works carried out at a site will characterise the extremes of conditions that exist within the site.

There is no investigation that is thorough enough to preclude the presence of material that presently or in the future, may be considered hazardous at the site. Since regulatory criteria are constantly changing, concentrations of contaminants presently considered low may, in the future, fall under different regulatory standards that require remediation.

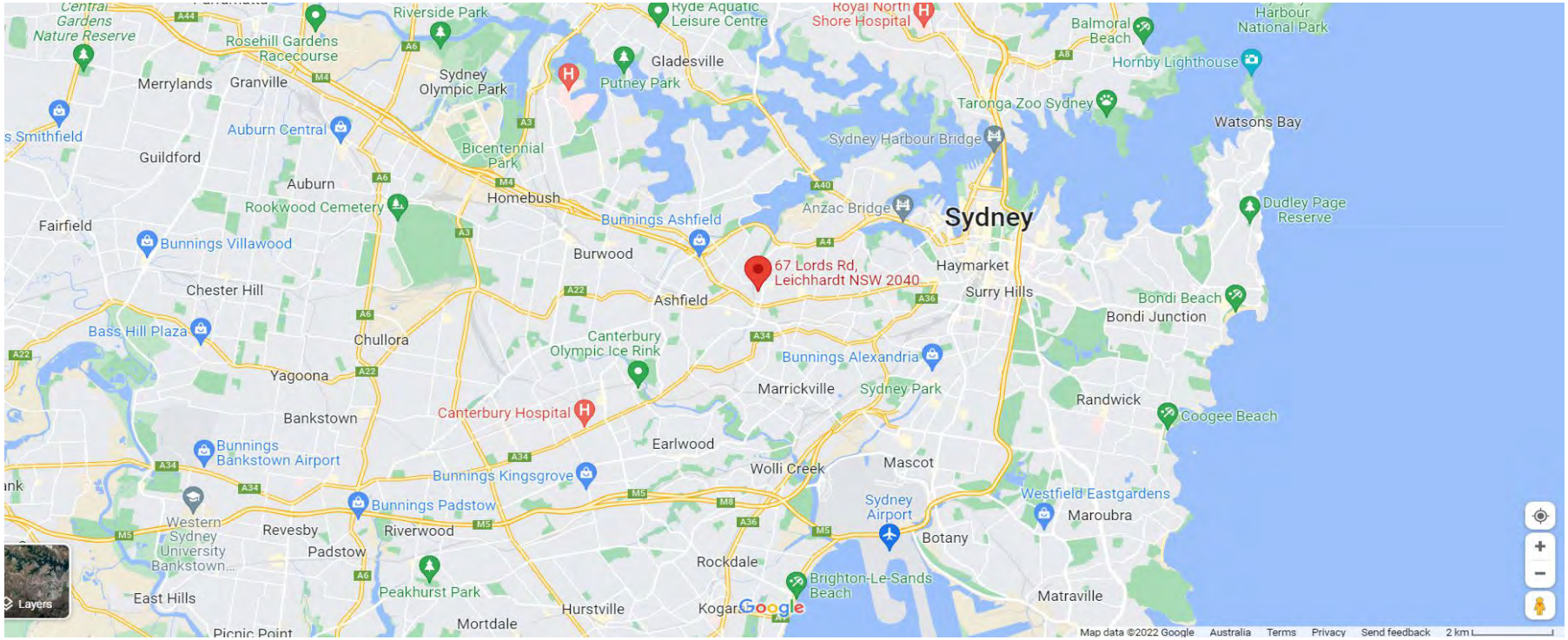
Opinions expressed herein are judgements and are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions.

REFERENCES

- ANZG (2018) "Australian and New Zealand Guidelines for Fresh and Marine Water Quality", Australian and New Zealand Governments and Australian State and Territory Governments, Canberra ACT.
- Department of Urban Affairs and Planning – EPA (1998) "*Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land*".
- National Environmental Protection Council (NEPC) (1999) – *National Environmental Protection (Assessment of Site Contamination) Measure. Amendment 2013*
- National Health and Medical Research Council (NHMRC) & National Resource Management Ministerial Council (NRMMC) "National Water Quality Management Strategy, Australian Drinking Water Guidelines" (2011)
- NSW EPA (2014) "*Technical Note: Investigation of Service Station Sites*".
- NSW EPA (2020), "Consultants Reporting on Contaminated Land". NSW Environment Protection Authority, Parramatta
- NSW DEC "Guidelines for the NSW Site Auditor Scheme" (2017, 3rd edition). NSW Environment Protection Authority, Sydney.
- NSW EPA (2014) – "Waste Classification Guidelines, Part 1: Classifying Waste";
- NSW EPA (2015) "Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997";
- NSW EPA "Sampling Design Guidelines" (1995). NSW Environment Protection Authority, Sydney.
- US EPA "Regional Screening Level (RSL) Summary Tables" (2016). United States Environment Protection Authority.

FIGURE 1: SITE LOCATION

N



Key Site Location	FOUNDATION EARTH SCIENCES	**DRAWN** RL	**SITE LOCATION**
		FIGURE 1	Platino Properties
		Job # E2843	67-75 Lords Road, Leichhardt NSW 2040

FIGURE 2: SITE FEATURES, BOREHOLE LOCATIONS & EXCEEDANCE PLAN

Feature No	Details
a	Warehouse
b	Office
c	Gym
d	Outdoor Car Park

Soil Exceedance (mg/Kg)

GW Exceedance (ug/L)

Key

- Site Location
- FES Soil Location 2022
- FES Soil& GW Location 2022
- EMS DSI Location
- Approx UST area
- Infreed GW Direction

FOUNDATION EARTH SCIENCES

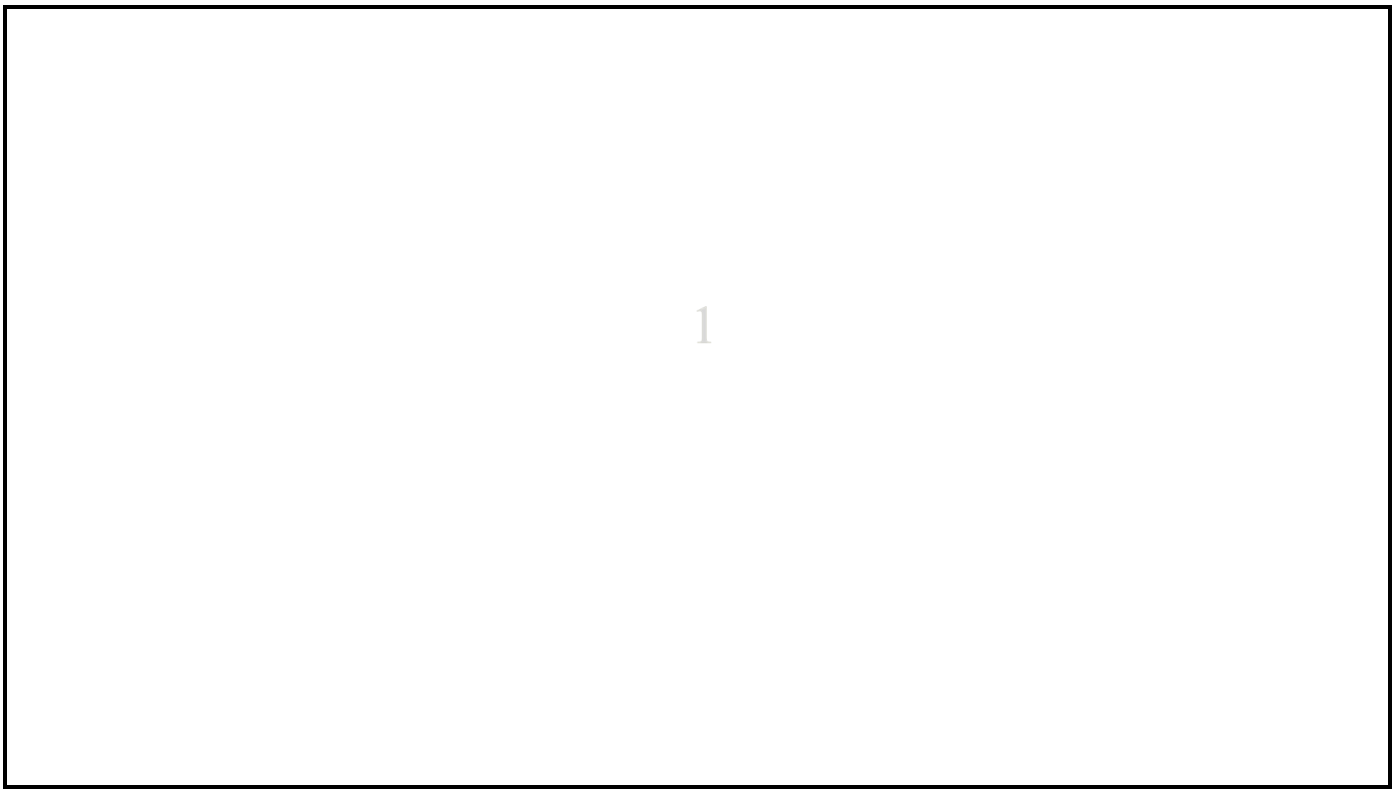
DRAWN RL	**Site Features, Borehole Locations & Exceedance Plan**
Figure 2	Platino Properties
Job # E2843	67-75 Lords Road, Leichhardt NSW 2040

APPENDIX A: DBYD PLANS

To:	Ray Liu
Phone:	Not Supplied
Fax:	Not Supplied
Email:	ray@foundationes.com.au

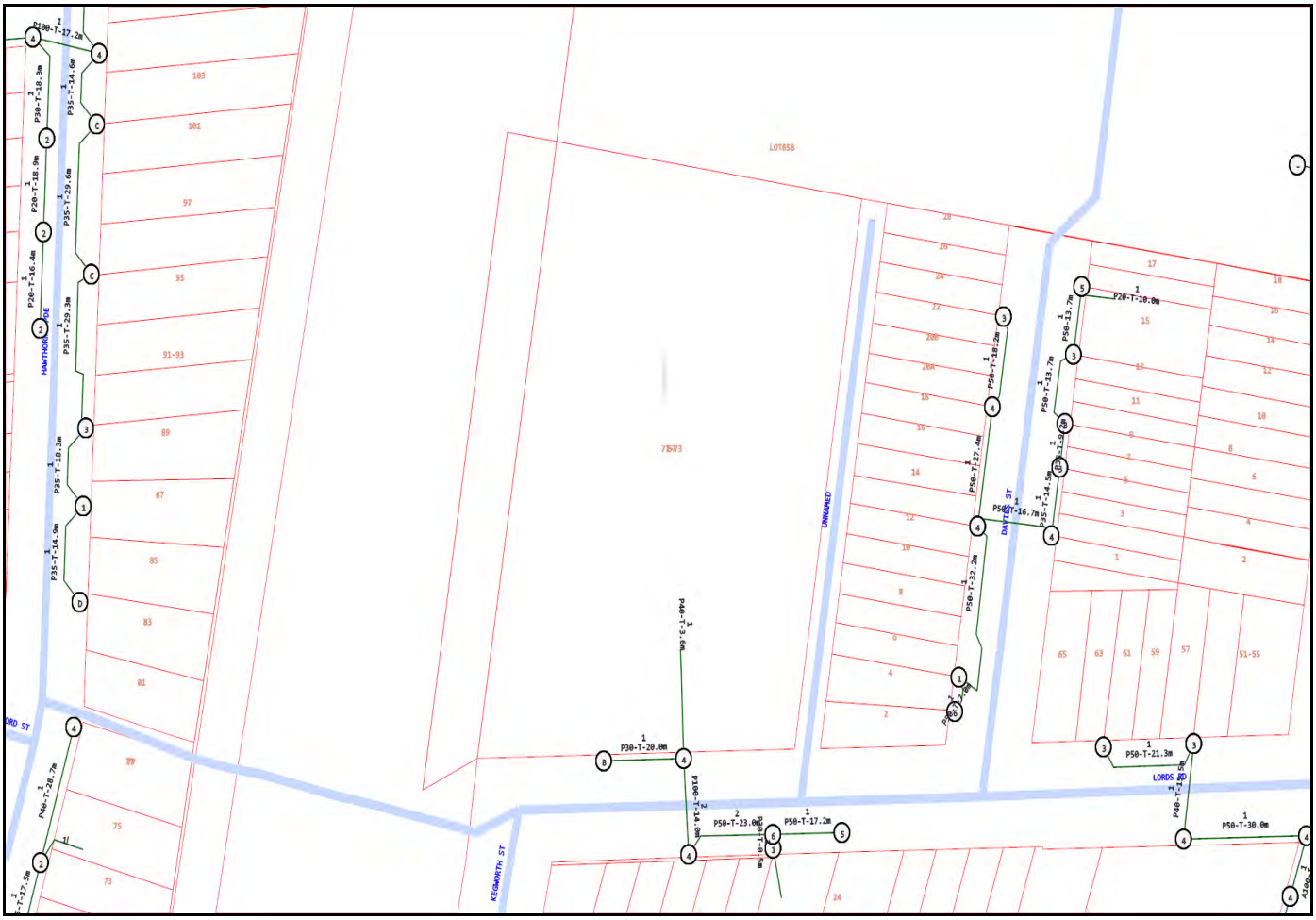
Dial before you dig Job #:	32094598
Sequence #	212260931
Issue Date:	07/06/2022
Location:	67 Lords Road , Leichhardt , NSW , 2040

Indicative Plans



LEGEND

44	Parcel and the location
5	Pit with size "5"
2E	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
2 PO – T- 25.0m P40 – 20.0m 5 9	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
2 10.0m 5 9	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
5 9	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

Cable Plan

Telstra

For all Telstra DBYD plan enquiries -
email - Telstra.Plans@team.telstra.com
For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 07/06/2022 11:24:01

Sequence Number: 212260932

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

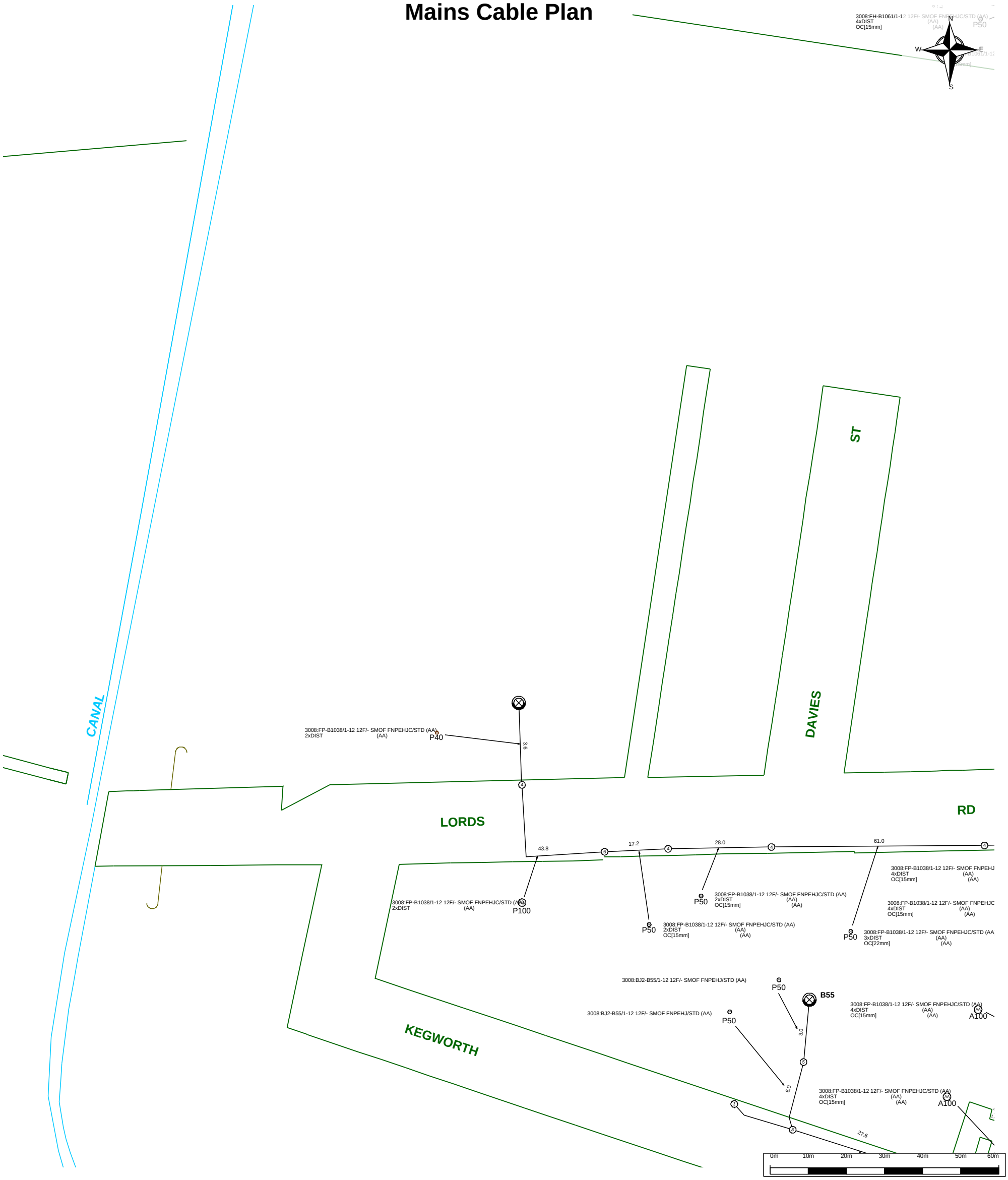
WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

Mains Cable Plan



Telstra	For all Telstra DBYD plan enquiries - email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)
TELSTRA CORPORATION LIMITED A.C.N. 051 775 556	
Generated On 07/06/2022 11:24:03	Sequence Number: 212260932
	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

INNER WEST

Sequence No: 212260933
Job No: 32094598
Location: 67 Lords Road, Leichhardt, NSW 2040

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.

Legend

- SW Pit
- SW Pipe
- Footpath
- Kerb
- Light Rail
- Roads
- Property
- Suburb
- Park
- River

N

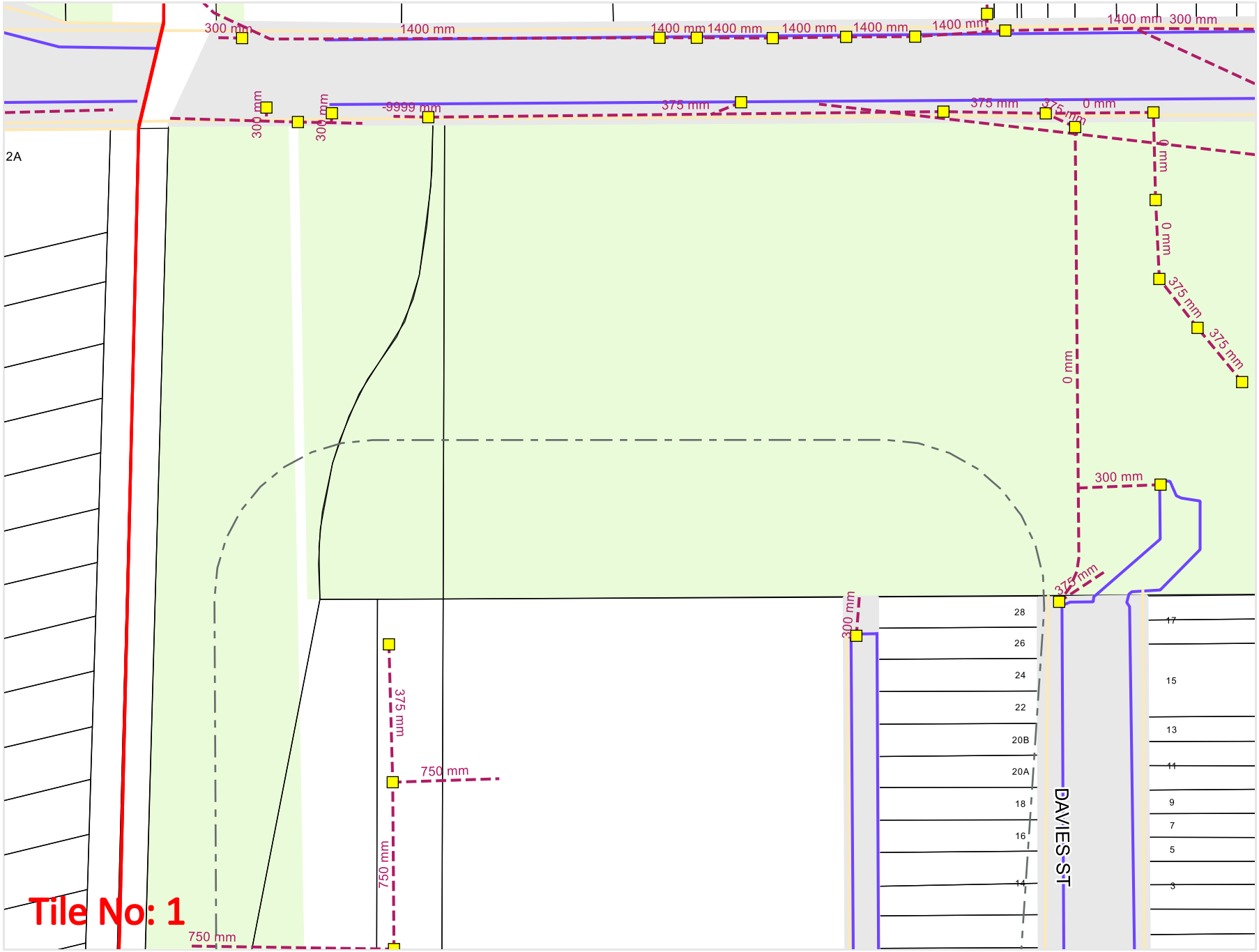
Scale: 1:2050
Expires: 05 Jul 2022

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Inner West Council nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

INNER WEST

Sequence No: 212260933
Job No: 32094598
Location: 67 Lords Road, Leichhardt, NSW 2040

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend

- SW Pit
- SW Pipe
- Footpath
- Kerb
- Light Rail
- Roads
- Property
- Suburb
- Park
- River

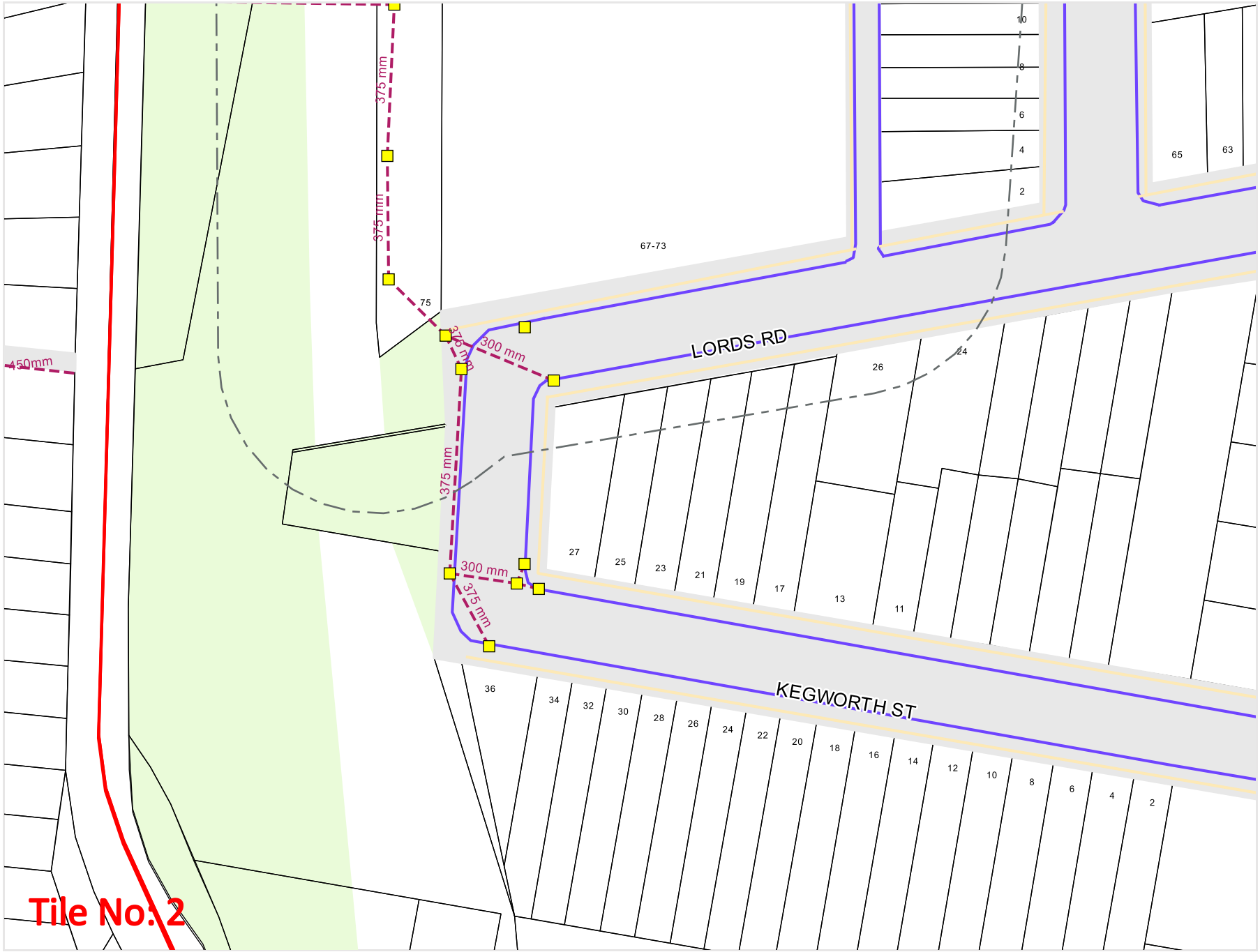
N

Scale: 1:1000
Expires: 05 Jul 2022

INNER WEST

Sequence No: 212260933
Job No: 32094598
Location: 67 Lords Road, Leichhardt, NSW 2040

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend

- SW Pit
- SW Pipe
- Footpath
- Kerb
- Light Rail
- Roads
- Property
- Suburb
- Park
- River

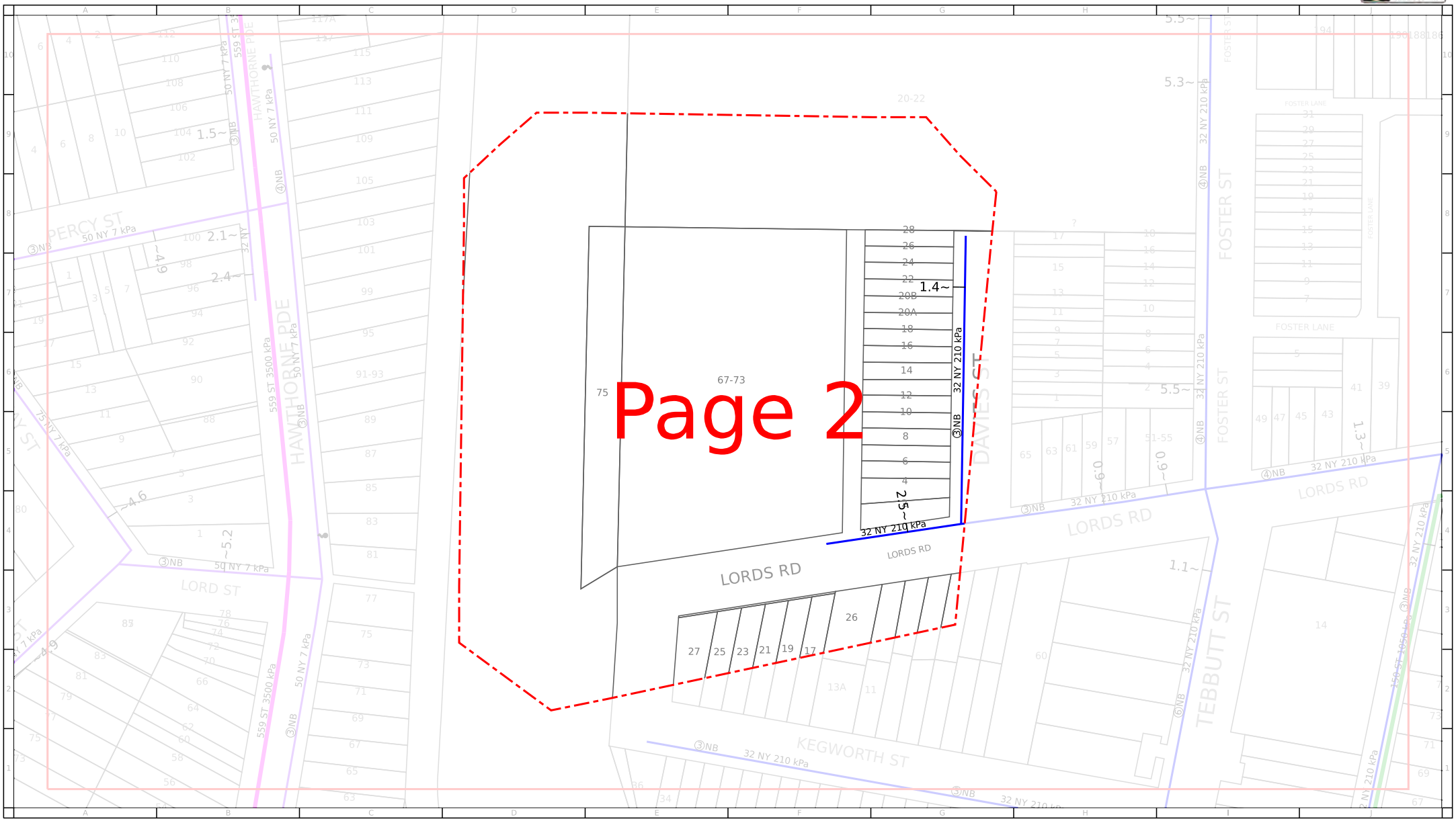
N

Scale: 1:1000
Expires: 05 Jul 2022

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Inner West Council nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

DBYD Authority: Jemena Gas Networks (NSW)

DBYD Location: 67 Lords Road Leichhardt NSW, 2040



Jemena
ABN 87 003 004 322

For legend details, please refer to the Coversheet attachment provided as part of this DBYD response.

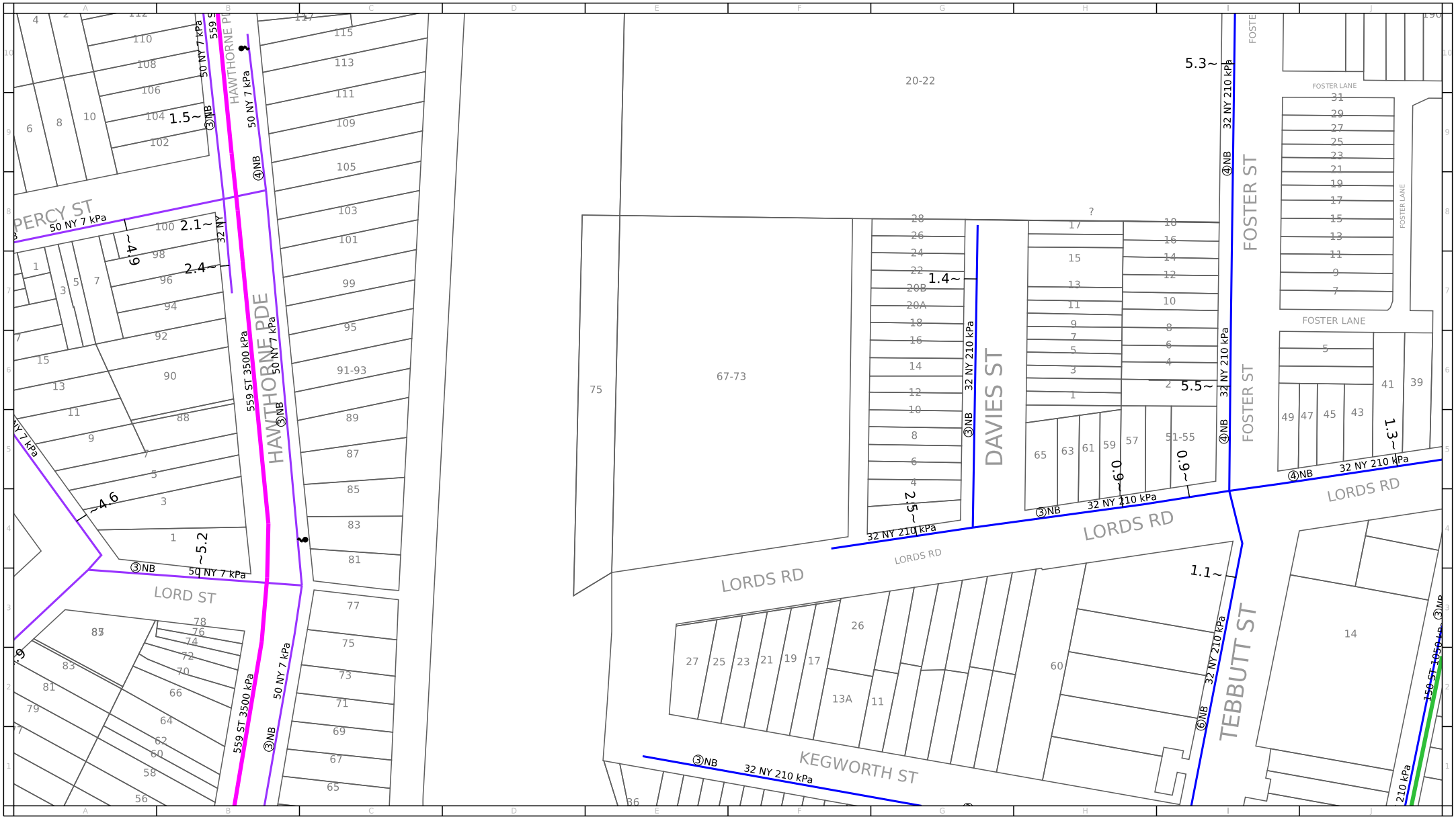
N W E S

Scale: 1:2101

Issue Date: 07/06/2022
DBYD Seq No: 212260935
DBYD Job No: 32094598
Overview Page:

DBYD Authority: Jemena Gas Networks (NSW)

DBYD Location: 67 Lords Road Leichhardt NSW, 2040



Jemena
ABN 87 003 004 322

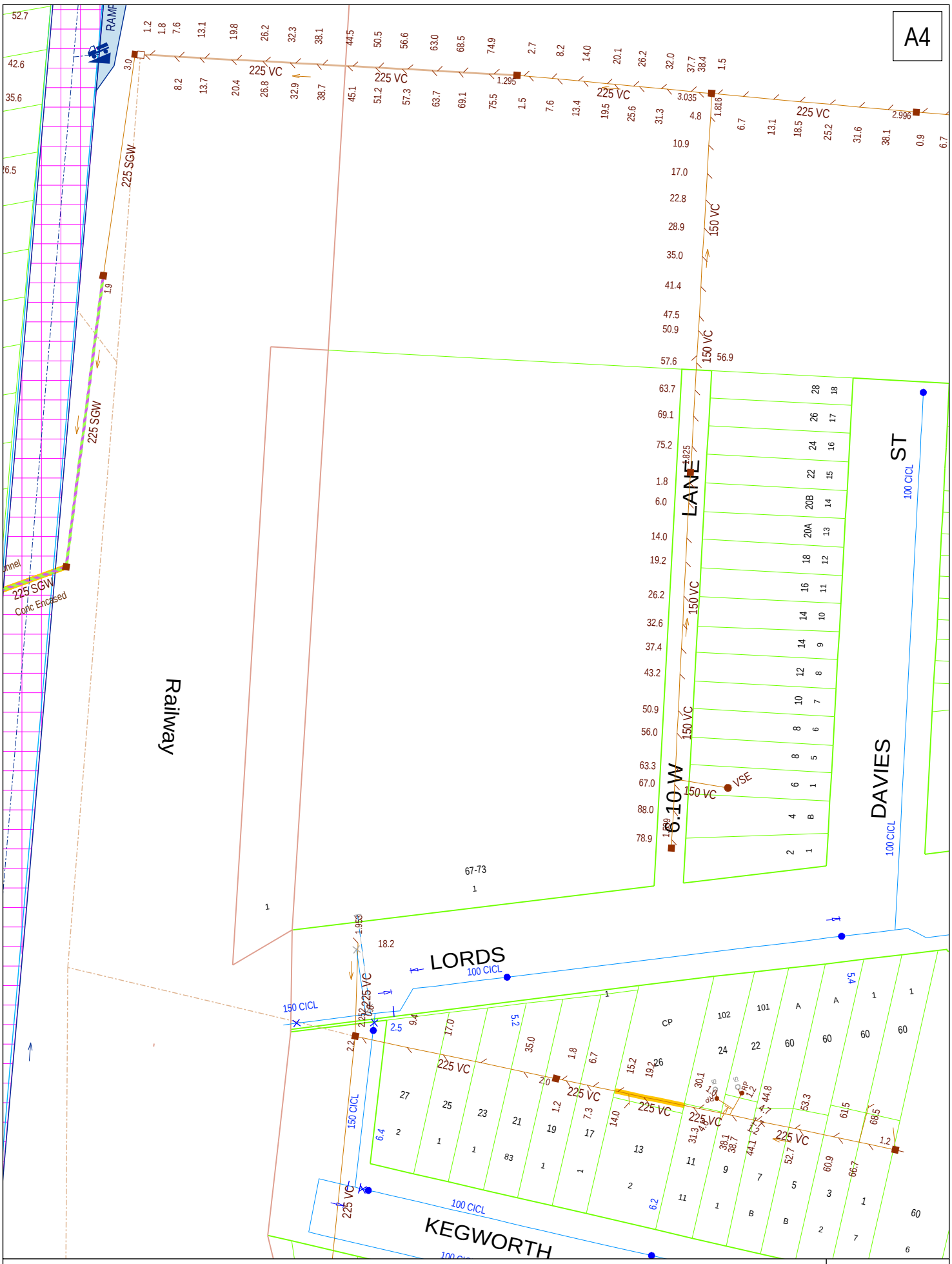
For legend details, please refer to the Coversheet attachment provided as part of this DBYD response.

Issue Date: 07/06/2022
DBYD Seq No: 212260935
DBYD Job No: 32094598

Scale: 1:2000

0m 10m 20m 30m 40m 50m 60m 70m 80m

WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. This plan is diagramatic only, and distances scaled from this plan may not be accurate. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.



DBYD Address:
67 Lords Road
Leichhardt NSW 2040

DBYD Job No: 32094598
DBYD Sequence No: 212260936

SYDNEY WATER CORPORATION

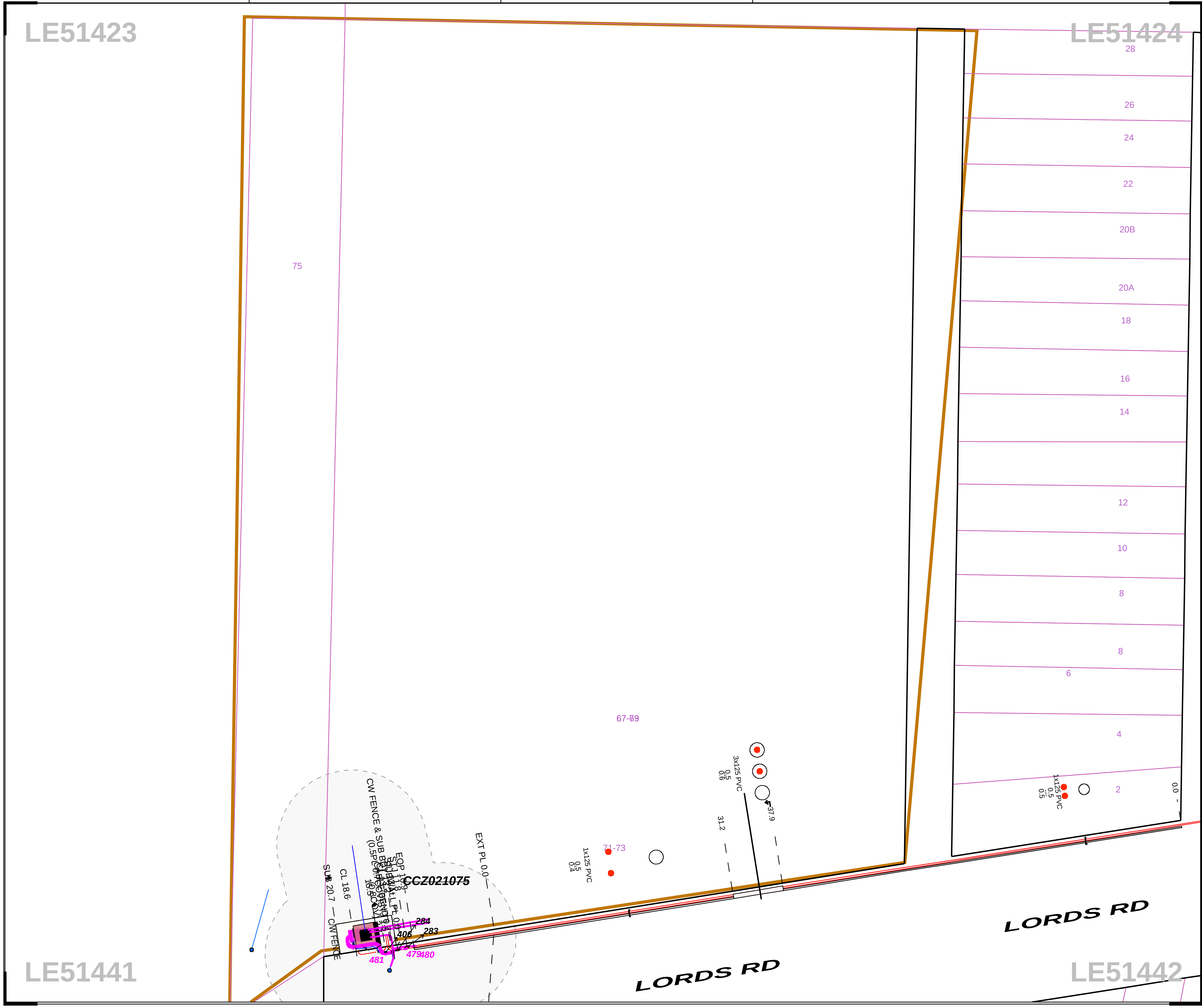
Scale: 1:1000

Date of Production: 07/06/2022

Plan 1 of 1

N

0m 5m 10m 15m 20m



ISG GRID

LE51423	LE51424	LE52313
LE51441	LE51442	LE52331
LE51443	LE51444	LE52333

Page 1 of 1

Scale 1:528

0 15 metres

N

Distribution - 212260934
GMLA3

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE:

7 Jun 2022

Ausgrid

W A R N I N G : Ausgrid's plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street. Persons working near electricity networks must exercise care and will be held responsible for any damage caused. You must excavate by hand or use vacuum excavation to establish the location of Ausgrid underground cables and associated assets.Underground: Working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in Safework NSW Code of Practice for Excavation and Safework NSW Guide for Work Near Underground Assets as well as recommendations of Ausgrid's Network Standard NS156. Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers. Workers must maintain safe approach distances and follow applicable Safework NSW Codes of Practice. NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information (c) 2016, used under Creative Commons licence version 4.0.

APPENDIX B: NSW EPA RECORDS

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
LAVENDER BAY	SRA Land	French STREET	Unclassified	Regulation under CLM Act not required	-33.84560621	151.2030148
LAVINGTON	Former Caltex Service Station	373-375 Wagga ROAD	Service Station	Regulation under CLM Act not required	-36.04797551	146.9385325
LAVINGTON	Caltex Service Station	436 Wagga (corner Dick Road) ROAD	Service Station	Regulation under CLM Act not required	-36.04500034	146.9444932
LAVINGTON	Former ERS liquid waste treatment and storage facility	819 Knights ROAD	Other Industry	Regulation under CLM Act not required	-36.06763885	146.942143
LEETON	Former Mobil Depot	108 Calrose STREET	Other Petroleum	Regulation under CLM Act not required	-34.55813326	146.3921296
LEETON	Caltex Service Station	1 Belah STREET	Service Station	Regulation under CLM Act not required	-34.55421752	146.3998431
LEETON	Yenda Producers (formerly Incitec) Leeton	1 - 2 Canal STREET	Other Petroleum	Regulation under CLM Act not required	-34.55184684	146.3862573
LEETON	Former Fuel Depot, Leeton	1-3 Short STREET	Other Petroleum	Regulation under CLM Act not required	-34.55253237	146.3864507
LEETON	United Leeton Service Station	110 Kurrajong AVENUE	Service Station	Regulation under CLM Act not required	-34.55573364	146.4099077
LEICHHARDT	SRA Land	10-11 Balmain ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.8776803	151.1591041
LEICHHARDT	Former Kolotex site	22 George STREET	Other Industry	Contamination currently regulated under CLM Act	-33.88855307	151.1482106
LEICHHARDT	Former Labelcraft Site	30-40 George STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.88778798	151.1484773
LEICHHARDT	Leichhardt Bus Depot Area E	240 Balmain Road, corner City West LINK	Other Industry	Regulation under CLM Act not required	-33.87589727	151.1598073
LEICHHARDT	RailCorp Leichhardt	7 Darley ROAD	Other Industry	Regulation under CLM Act not required	-33.87520846	151.1539012
LENNOX HEAD	Former Caltex Lennox Head	Byron STREET	Service Station	Regulation under CLM Act not required	-28.79189328	153.5883225

Search results

Your search for:Suburb: LEICHHARDT

Matched 21 notices relating to 3 sites.

Search Again

Refine Search

Suburb	Address	Site Name	Notices related to this site
LEICHHARDT	22 George STREET	Former Kolotex site	1 current and 8 former
LEICHHARDT	30-40 George STREET	Former Labelcraft Site	4 current and 3 former
LEICHHARDT	10-11 Balmain ROAD	SRA Land	5 former

Page 1 of 1

28 June 2022

Search results

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

Suburb - leichhardt

returned 7 results

Export to excel 1 of 1 Pages Search Again

Number	Name	Location	Type	Status	Issued date
7244	APPAREL FITTINGS AUSTRALASIA PTY LTD C/- STAR DEAN-WILLCOCKS	67 JOHN STREET, LEICHHARDT, NSW 2040	POEO licence	No longer in force	11 Sep 2000
1044271	APPAREL FITTINGS AUSTRALASIA PTY LTD C/- STAR DEAN-WILLCOCKS	67 JOHN STREET, LEICHHARDT, NSW 2040	s.58 Licence Variation	Issued	08 Feb 2005
11495	STATE TRANSIT AUTHORITY OF NSW	Cnr William & Derbyshire Streets, LEICHHARDT, NSW 2040	POEO licence	No longer in force	20 Aug 2001
1038760	STATE TRANSIT AUTHORITY OF NSW	Cnr William & Derbyshire Streets, LEICHHARDT, NSW 2040	s.58 Licence Variation	Issued	05 Jul 2004
7125	SYDNEY SOUTH WEST AREA HEALTH SERVICE	CNR GLOVER & CHURCH STREETS, LEICHHARDT, NSW 2040	POEO licence	No longer in force	27 Mar 2000
1019144	SYDNEY SOUTH WEST AREA HEALTH SERVICE	CNR GLOVER & CHURCH STREETS, LEICHHARDT, NSW 2040	s.58 Licence Variation	Issued	25 Jul 2002
1044267	SYDNEY SOUTH WEST AREA HEALTH SERVICE	CNR GLOVER & CHURCH STREETS, LEICHHARDT, NSW 2040	s.58 Licence Variation	Issued	21 Sep 2005

28 June 2022

The NSW Government PFAS Investigation Program

View a map of the sites in NSW that may be contaminated with PFAS, learn how to reduce your exposure to these dangerous chemicals, and read about our investigation of the issue.

The EPA is leading an investigation program to assess the legacy of PFAS use across NSW. With the assistance of the NSW PFAS Technical Advisory Group, which includes NSW Health, Department of Primary Industries and the Office of Environment and Heritage, we provide impacted residents with tailored, precautionary dietary advice to help them reduce any exposure to PFAS.

Current investigations are focused on sites where it is likely that large quantities of PFAS have been used. The EPA is currently investigating PFAS at these sites:

Map view | List view

Clear filters ☐ **Only show sites within current map view** Showing 0 of 49 sites

	Organisation	Address	Status
	filter by organisation	Leichhardt	☑ PFAS investigation site

Sampling and analysis

The EPA is collecting samples of soils and/or waters for analysis for PFAS. The EPA is also looking for exposure pathways that may increase people's contact with the chemicals, such as bore and surface water usage.

If significant levels are detected and human or ecological exposure is likely, a more detailed assessment will be undertaken.

The EPA will work with the occupiers and owners of these sites, or the responsible parties, to clean-up the site, where necessary.

Timeframes for the investigation

The initial investigations can take approximately six months, with further testing undertaken where required.

Test findings are made available throughout the investigations.

More information is available on the NSW EPA PFAS investigation process (/your-environment/contaminated-land/pfas-investigation-program/pfas-investigation-process) page.

Release of the National Environmental Management Plan for PFAS version 2

The PFAS National Environmental Management Plan version 2 (https://www.environment.gov.au/protection/chemicals-management/pfas) has now been released by the Commonwealth Department of Agriculture Water and Environment. This is the current version of the PFAS NEMP. It was agreed by Heads of EPAs in October 2019. It has been endorsed by Environment Ministers and has been endorsed for implementation in NSW.

In those jurisdictions that have endorsed it, this version supersedes the first version of the NEMP published in 2018.

The PFAS NEMP establishes a practical basis for nationally consistent environmental guidance and standards for managing PFAS contamination. The plan has been developed by all jurisdictions and recognises the need for implementation of best practice regulation through individual jurisdictional mechanisms. It represents a how-to guide for the investigation and management of PFAS contamination and waste management.

The PFAS NEMP 2.0 provides new and revised guidance on four of the areas that were identified as urgent priorities in the first version of the NEMP

- Environmental guideline values
- Soil reuse
- Wastewater management
- On-site containment

This new guidance, as well as important clarifications regarding the intent of some of the PFAS NEMP 1.0 material, was developed by the National Chemicals Working Group across 2018 and considered by Heads of EPAs and Environment Ministers in late 2018.

Consultation on version 2 of NEMP

The Heads of EPAs Australia and New Zealand (HEPA) and the Australian Government Department of Agriculture, Water and the Environment (DAWE) worked together to develop the PFAS NEMP 2.0. HEPA's National Chemicals Working Group led the development and consultation process.

The draft PFAS NEMP 2.0 was published on 28 February 2019 with comments due by Friday 21 June 2019. Environmental regulators in all states and territories hosted public consultation sessions in all capital cities across March and April 2019, with the Commonwealth presenting the work on behalf of the National Chemicals Working Group. Around 550 people attended the sessions.

All feedback received was considered by the National Chemicals Working Group and further changes were made in response to that feedback before the document was finalised in late 2019. An ancillary document summarising the feedback and the responses made is expected to be published soon by the Commonwealth Department of Agriculture Water and Environment.

Working with our stakeholders

The NSW Government is committed to working closely with all relevant government agencies, to closely monitor the progress of investigations, and to keep local communities informed. Government agencies include local councils, NSW Department of Primary Industries, NSW Health, NSW Food Authority, and where necessary the Commonwealth Department of Defence, and Commonwealth Department of Health.

In NSW the polluter pays for and manages any clean-up required. Although the NSW Government cannot regulate Defence sites, it has outlined expectations that Defence will carry out investigations in a timely manner that is consistent with the EPA's requirements and processes.

More information

PFAS investigation program fact sheet (PDF 213KB) (/-/media/epa/corporate-site/resources/community/factsheet-state-wide-pfas-investigation.pdf?la=en&hash=004EE1C28CEC9F16730FBFF322305DA0DDF1A3ED)

PFAS investigation program FAQs (/your-environment/contaminated-land/pfas-investigation-program/pfas-investigation-faqs) page

NSW Department of Health (https://www.health.nsw.gov.au/environment/factsheets/Pages/pfos.aspx)

For specific health inquiries call the NSW Department of Health on **1300 066 055**

If you have any questions about the EPA's PFAS investigation program, please call the Environment Line on **131 555** or email[info@environment.nsw.gov.au (mailto:info@environment.nsw.gov.au)](mailto:info@environment.nsw.gov.au)

Page last updated 14 July 2021

APPENDIX C: SITE PHOTOGRAPHS

SITE PHOTOGRAPHS

Client:	Platino Properties Pty ltd
Project:	Detailed Site Investigation
Site Location:	67-75 Lords Road, Leichhardt NSW
Job No.:	E2843

FOUNDATION EARTH SCIENCES

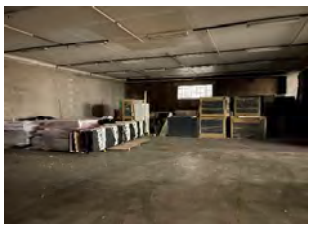
Photo 1

View of electricity substation
Looking Southwest
Inspected 15.06.2022

Photo 2

View of the outdoor carpark/driveway
Looking North
Inspected 15.06.2022

Photo 3



View of inside the warehouse
Inspected 15.06.2022

Photo 4

View of monitoring well BH2/GW2
Looking South
Inspected 15.06.2022

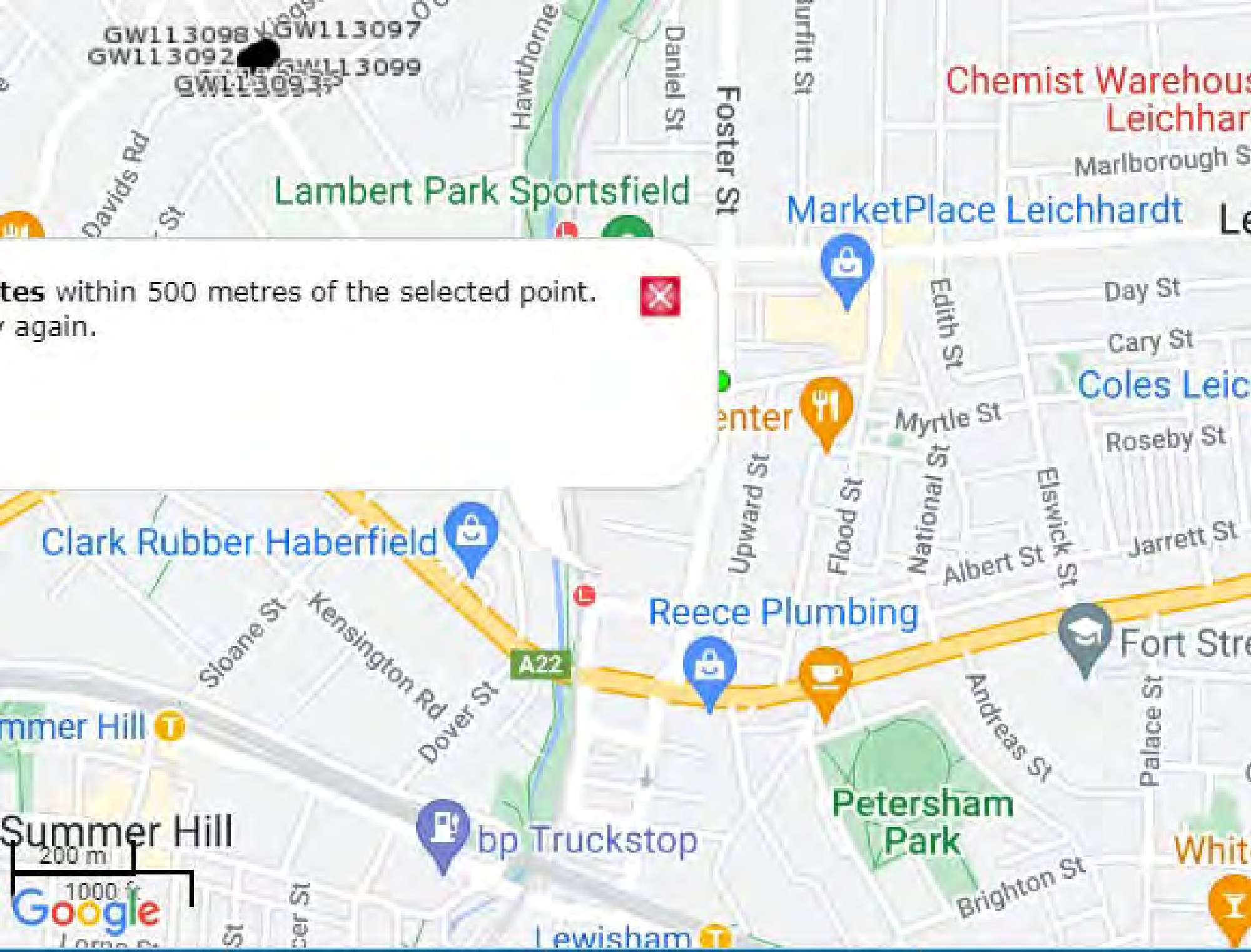
Photo 5

View of possible UST area
Looking west
Inspected 15.06.2022

Photo 6

View of location at BH1/GW1
Looking west
Inspected 15.06.2022

APPENDIX D: DPI (OFFICE OF WATER) DATABASE RECORDS



tes within 500 metres of the selected point.
r again.

WaterNSW
Work Summary

GW113092

Licence: 10BL604579
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: 12/04/2011
Final Depth: 5.00 m
Drilled Depth: 5.00 m

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

Property: B P HABERFIELD 95-97 Ramsay St HABERFIELD 2045 NSW
GWMA: -
GW Zone: -
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
Licensed:	CUMBERLAND	CONCORD	Whole Lot 1//180212

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: 6249414.000
Easting: 327981.000
Latitude: 33°52'53.8"S
Longitude: 151°08'23.9"E

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

Remarks

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

***** End of GW113092 *****

WaterNSW
Work Summary

GW113093

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 12/04/2011
Final Depth: 5.60 m
Drilled Depth: 5.60 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249407.000
Easting: 327981.000
Latitude: 33°52'54.0"S
Longitude: 151°08'23.9"E

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

Remarks

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

***** End of GW113093 *****

WaterNSW
Work Summary

GW113094

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 12/04/2011
Final Depth: 4.85 m
Drilled Depth: 4.85 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249401.000
Easting: 327988.000
Latitude: 33°52'54.2"S
Longitude: 151°08'24.2"E

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

Remarks

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

***** End of GW113094 *****

WaterNSW
Work Summary

GW113095

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 13/04/2011
Final Depth: 5.00 m
Drilled Depth: 5.00 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249404.000
Easting: 327997.000
Latitude: 33°52'54.1"S
Longitude: 151°08'24.5"E

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

Remarks

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

***** End of GW113095 *****

WaterNSW
Work Summary

GW113096

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 13/04/2011
Final Depth: 5.60 m
Drilled Depth: 5.60 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249415.000
Easting: 328012.000
Latitude: 33°52'53.8"S
Longitude: 151°08'25.1"E

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

Remarks

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

***** End of GW113096 *****

WaterNSW
Work Summary

GW113097

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 11/04/2011
Final Depth: 6.00 m
Drilled Depth: 6.00 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249428.000
Easting: 328008.000
Latitude: 33°52'53.4"S
Longitude: 151°08'25.0"E

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

Remarks

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

***** End of GW113097 *****

WaterNSW
Work Summary

GW113098

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 12/04/2011
Final Depth: 6.00 m
Drilled Depth: 6.00 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249422.000
Easting: 327992.000
Latitude: 33°52'53.5"S
Longitude: 151°08'24.3"E

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

Remarks

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

***** End of GW113098 *****

WaterNSW
Work Summary

GW113099

Licence:
Licence Status:

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

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

Commenced Date:
Completion Date: 13/04/2011
Final Depth: 6.00 m
Drilled Depth: 6.00 m

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

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

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	CONCORD	1//180212
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: 6249424.000
Easting: 328013.000
Latitude: 33°52'53.5"S
Longitude: 151°08'25.2"E

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

Remarks

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

***** End of GW113099 *****

APPENDIX E: BUREAU OF METEOROLOGY

Monthly Rainfall (millimetres)

MARRICKVILLE GOLF CLUB

Station Number: 066036 · State: NSW · Opened: 1904 · Status: Open · Latitude: 33.92°S · Longitude: 151.14°E · Elevation: 6 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1904					87.3	0.5	303.1	37.3	26.7	38.6	0.0	25.4	
1905	42.0	68.1	227.2	151.1	162.3	52.6	9.1	7.6	35.5	46.3	6.4	77.9	886.1
1906	46.1	7.0	134.5	8.9	115.3	28.0	3.8	121.7	35.2	41.2	93.4	59.7	694.8
1907	67.9	84.5	192.6	29.7	31.8	195.5	4.5	6.3	5.1	7.2	26.6	50.7	702.4
1908	25.8	191.5	31.0	55.0	46.4	10.6	212.7	219.3	53.0	17.0	2.0	15.2	879.5
1909	17.8	148.0	19.1	30.5	20.6	110.0	15.1	29.6	104.0	35.8	72.8	91.5	694.8
1910	135.2	16.6	156.4	73.2	107.5	61.9	224.8	5.6	48.2	53.3	19.1	149.9	1051.7
1911	348.0	121.3	55.9	61.0	38.1	2.5	163.8	164.4	46.2	19.5	39.3	53.4	1113.4
1912	27.9	158.6	112.1	139.7	80.1	43.2	218.3	54.6	14.0	21.1	74.6	44.1	988.3
1913	13.8	34.3	257.1	173.1	411.2	303.0	199.7	0.0	42.6	34.3	10.9	8.9	1488.9
1914	14.4	25.0	203.7	40.1	96.8	131.1	220.8	54.4	97.1	148.9	76.1	157.6	1266.0
1915	23.4	26.8	92.2	222.6	96.8	26.2	122.0	26.7	28.6	16.7	0.0	63.8	745.8
1916	21.8	54.3	52.6	120.1	38.4	42.4	70.6	97.0	123.5	312.4	69.7	78.9	1081.7
1917	56.5	169.9	8.7	319.0	82.8	131.8	9.0	39.6	101.4	97.7	186.4	40.6	1243.4
1918	229.5	90.8	29.0	161.9	7.4	3.9	211.0	46.9	69.9	19.2	20.7	11.4	901.6
1919	28.9	96.1	84.8	57.4	416.7	32.4	31.7	4.6	79.8	46.6	80.1	63.6	1022.7
1920	137.5	32.3	27.7	59.3	5.1	57.4	125.9	24.7	29.4	24.3	42.2	341.0	906.8
1921	67.4	23.9	75.6	154.3	145.6	17.1	152.0	24.4	84.1	55.4	73.3	145.0	1018.1
1922	133.5	75.1	41.4	29.2	89.0	25.0	243.1	41.0	99.5	49.3	14.6	40.7	881.4
1923	51.6	13.8	20.0	150.7	26.7	101.2	174.2	139.4	42.5	33.2	26.7	41.4	821.4
1924	111.9	58.5	95.8	134.3	49.3	48.2	38.4	57.1	74.9	25.9	79.6	67.4	841.3
1925	70.7	41.3	44.1	29.4	430.8	154.0	4.1	86.4	18.0	16.3	99.7	16.0	1010.8
1926	84.6	9.1	247.4	75.4	71.9	31.5	57.7	27.4	41.7	5.6	1.0	142.2	795.5
1927	105.7	16.3	93.5	370.6	40.6	86.6	6.1	10.7	45.5	83.8	154.2	62.0	1075.6
1928	46.7	198.9	109.0	87.9	65.8	157.5	102.1	31.2	3.6	42.7	3.8	19.3	868.5
1929	3.8	254.8	107.7	121.9	175.3	77.7	65.0	75.2	41.7	185.2	75.4	31.8	1215.5
1930	105.9	16.5	101.6	172.5	95.0	194.1	77.7	18.3	7.4	53.6	10.4	125.0	978.0
1931	33.5	47.8	145.8	170.7	95.5	39.1	282.4	6.6	110.2	17.0	81.5	88.9	1119.0
1932	7.6	149.6	68.1	113.8	42.9	16.5	44.5	61.7	195.8	26.7	80.8	88.1	896.1
1933	218.4	3.3	48.0	195.1	132.1	44.5	71.4	3.3	70.1	74.2	99.3	70.1	1029.8
1934	44.5	227.1	48.5	191.8	134.9	85.1	194.8	125.7	223.8	46.5	81.5	55.1	1459.3
1935	53.8	91.7	41.1	23.4	54.9	89.4	40.9	3.3	69.9	74.9	35.6	114.6	693.5
1936	80.8	126.0	80.8	42.9	53.8	62.7	15.7	27.9	30.0	16.5	9.7	81.0	627.8
1937	68.6	31.8	204.7	123.7	22.4	342.9	62.7	89.9	7.9	73.2	114.0	39.4	1181.2
1938	189.7	75.4	25.9	33.5	92.5	5.6	87.6	204.0	33.5	68.1	28.2	6.1	850.1
1939	67.3	2.5	185.4	112.3	59.2	12.4	25.7	73.2	58.2	53.1	44.2	14.7	708.2
1940	13.2	7.4	12.2	145.0	98.8	43.4	72.6	27.7	77.0	44.5	58.4	202.7	802.9
1941	112.8	41.1	29.2	90.9	26.9	40.1	40.9	59.9	43.7	52.1	13.7	18.3	569.6
1942	4.8	37.1	384.3	14.2	38.6	121.7	28.2	16.5	21.8	140.2	112.5	92.5	1012.4
1943	42.2	14.2	40.4	44.7	411.7	26.9	6.9	191.8	117.3	46.0	149.1	57.4	1148.6
1944	55.4	65.8	48.8	62.0	62.0	53.8	67.1	86.6	37.1	19.8	11.4	19.6	589.4
1945	68.8	54.6	26.9	281.4	154.9	166.1	71.4	40.6	8.4	24.9	58.2	50.5	1006.7
1946	15.2	57.2	137.7	235.2	53.1	147.6	1.3	2.8	14.5	50.5	75.7	19.8	810.6
1947	42.7	87.6	61.0	126.7	92.7	40.6	12.2	35.8	12.2	46.2	103.4	213.9	875.0
1948	175.3	44.7	125.5	27.2	157.7	171.7	17.3	26.9	50.8	19.8	17.8	58.8	893.5
1949	228.3	113.3	101.6	27.2	83.8	312.7	48.0	117.9	197.4	38.6	90.2	41.1	1400.1
1950	100.1	151.6	142.2	146.8	140.0	573.5	290.3	78.0	99.3	107.2	94.7	21.8	1945.5
1951	267.7	46.7	116.3	40.6	135.1	293.4	19.8	172.0	83.3	55.9	9.1	28.4	1268.3

Quality control: 12.3 Done & acceptable, *12.3* Not completed or unknown

Monthly Rainfall (millimetres)

MARRICKVILLE GOLF CLUB

Station Number: 066036 · State: NSW · Opened: 1904 · Status: Open · Latitude: 33.92°S · Longitude: 151.14°E · Elevation: 6 m

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1952	30.0	40.9	73.7	309.4	43.4	181.4	185.7	229.9	10.4	148.6	67.1	36.6	1357.1
1953	66.8	167.1	98.0	17.3	284.5	21.3	47.5	36.8	27.7	63.5	30.2	7.4	868.1
1954	98.0	274.6	19.6	16.3	27.4	8.6	90.9	42.7	67.6	188.2	86.9	103.9	1024.7
1955	222.3	287.0	221.2	100.8	297.4	93.0	27.2	10.7	30.5	39.1	260.6	188.0	1777.8
1956	100.1	543.3	323.3	21.8	104.6	200.9	46.2	79.2	24.1	48.8	5.8	25.7	1523.8
1957	57.4	85.9	167.9	23.6	3.3	33.0	146.8	148.8	15.0	9.7	21.3	44.7	757.4
1958	111.0	267.7	337.3	38.9	11.9	209.0	29.7	83.8	26.4	52.1	12.2	96.0	1276.0
1959	119.4	199.1	119.9	54.9	40.4	108.2	157.0	59.7	63.0	304.0	102.4	59.7	1387.7
1960	70.4	69.6	54.6	26.2	110.5	65.3	90.9	53.6	62.7	223.5	66.3	198.6	1092.2
1961	68.8	65.5	42.2	79.5	20.6	46.5	42.2	168.9	36.8	47.2	423.2	93.5	1134.9
1962	113.3	113.0	55.4	69.3	248.7	2.8	71.1	106.4	75.2	23.9	7.6	160.5	1047.2
1963	126.2	63.0	375.7	190.8	192.0	231.1	53.3	274.6	25.7	58.4	35.1	290.8	1916.7
1964	18.5	34.3	168.1	135.6	46.7	341.6	8.6	22.4	16.5	71.1	71.1	55.4	989.9
1965	24.9	12.4	15.0	131.3	33.5	193.8	97.3	23.4	87.9	157.2	13.7	48.0	838.4
1966	18.8	113.9	203.3	183.7	50.1	113.3	11.4	67.6	50.6	38.0	140.2	68.2	1059.1
1967	153.1	164.4	101.8	46.8	31.0	214.0	20.8	211.9	68.3	55.4	78.6	18.8	1164.9
1968	109.5	15.0	86.1	11.2	85.8	20.3	47.8	22.2	3.1	4.2	17.5	76.1	498.8
1969	51.7	195.6	104.0	169.7	44.2	149.3	29.8	155.4	45.0	49.0	255.5	37.4	1286.6
1970	94.1	60.4	140.1	58.7	15.2	27.2	0.0	31.9	132.9	18.1			
2001								*39.0*	*57.0*	*29.0*	*74.0*	*18.0*	
2002	*67.0*	*313.0*	*33.0*	*26.0*	*75.0*	*18.0*	*9.0*	*13.0*	*20.0*	*19.0*	*19.0*	*88.0*	*700.0*
2003	*5.0*	*53.0*	*70.0*	*242.0*	*335.0*	*57.0*	*42.0*	*34.0*	*8.0*	*61.0*	*81.0*	*52.0*	*1040.0*
2004	*51.0*	*43.0*	*4.0*	*2.0*	*8.0*	*27.0*	*28.0*	*86.0*	*54.0*	*200.0*	*42.0*	*71.0*	*616.0*
2005	*60.0*	*95.0*	*45.0*	*17.0*	*29.0*	*64.0*	*61.0*	*0.0*	*40.0*	*56.0*	*92.0*	*37.0*	*596.0*
2006	*61.0*	*33.0*	*29.0*	*2.0*	*20.0*	*157.0*	*98.0*	*68.0*	*147.0*	*8.0*	*22.0*	*13.0*	*658.0*
2007	*10.0*	*105.0*	*49.0*	*113.0*	*12.0*	*333.0*	*31.0*	*99.0*	*48.0*	*33.0*	*122.0*	*77.0*	*1032.0*
2008	*53.0*	*325.0*	*64.0*	*155.0*	*4.0*	*109.0*	*55.0*	*34.0*	*73.0*	*44.0*	*44.0*	*73.0*	*1033.0*
2009	*18.0*	*125.0*	*17.0*	*50.0*	*115.0*	*75.0*	*48.0*	*4.0*	*17.0*	*158.0*	*24.0*	*54.0*	*705.0*
2010	*24.0*	*164.0*	*50.0*	*32.0*	*149.0*	*93.0*	*30.0*	*18.0*	*46.0*	*79.0*	*165.0*	*75.0*	*925.0*
2011	*29.0*	*16.0*	*153.0*	*216.0*	*112.0*	*63.0*	*264.0*	*38.0*	*71.0*	*32.0*	*169.0*	*154.0*	*1317.0*
2012	*112.0*	*140.0*	*221.0*	*163.0*	*23.0*	*211.0*	*52.0*	*8.0*	*20.0*	*24.0*	*48.0*	*38.0*	*1060.0*
2013	*133.0*	*169.0*	*71.0*	*109.0*	*2.0*	*308.0*	*30.0*	*14.0*	*47.0*	*18.0*	*183.0*	*31.0*	*1115.0*
2014	*7.0*		*117.0*	*61.0*	*9.0*	*84.0*	*12.0*	*243.0*	*48.0*	*131.0*	*18.0*	*161.0*	
2015	*159.0*	*101.0*	*49.0*	*413.0*	*102.0*	*90.0*	*54.0*	*60.0*	*56.0*	*31.0*	*81.0*	*69.0*	*1265.0*
2016	*251.0*	*29.0*	*117.0*	*86.0*	*13.0*	*300.0*	*108.0*	*82.0*		*27.0*	*34.0*	*66.0*	
2017	*48.0*	*177.0*	*267.0*	*71.0*	*19.0*	*116.0*	*11.0*	*21.0*	*0.0*	*59.0*	*40.0*	*52.0*	*881.0*
2018	*25.0*	*116.0*	*77.0*	*15.0*	*14.0*	*146.0*	*8.0*	*6.0*	*80.0*	*181.0*	*110.0*	*93.0*	*871.0*
2019	*69.0*	*88.0*	*170.0*	*16.0*	*9.0*	*146.0*	*43.0*	*53.0*	*103.0*	*27.0*	*25.0*	*1.0*	*750.0*
2020	*66.0*	*435.0*	*138.0*	*25.0*	*99.0*	*82.0*	*140.0*	*60.0*	*6.0*		*45.0*	*89.0*	
2021	*71.0*	*108.0*	*407.0*	*27.0*	*99.0*	*70.0*	*32.0*	*80.0*	*52.0*	*61.0*	*160.0*	*91.0*	*1258.0*
2022	*91.0*	*394.0*	*626.0*	*221.0*	*178.0*	*4.0*							

Quality control: 12.3 Done & acceptable, *12.3* Not completed or unknown

Monthly Rainfall (millimetres)

MARRICKVILLE GOLF CLUB

Station Number: 066036 · State: NSW · Opened: 1904 · Status: Open · Latitude: 33.92°S · Longitude: 151.14°E · Elevation: 6 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	80.2	108.3	117.0	103.7	94.3	109.4	79.6	65.8	55.4	63.3	69.2	73.8	1010.8
Lowest	3.8	2.5	4.0	2.0	2.0	0.5	0.0	0.0	0.0	4.2	0.0	1.0	498.8
5th percentile	8.3	9.9	17.6	14.4	7.6	4.6	5.0	3.5	6.4	11.7	4.4	11.9	616.6
10th percentile	14.9	15.5	26.5	17.2	12.0	15.3	8.8	6.2	9.6	17.0	9.5	17.2	694.8
Median	66.8	79.9	92.2	75.4	68.8	79.8	48.0	41.8	46.2	46.3	58.4	59.7	1008.8
90th percentile	165.5	240.9	235.3	218.0	182.2	249.8	211.7	165.8	103.4	152.2	151.1	155.4	1353.1
95th percentile	226.5	306.5	333.1	269.6	321.8	311.1	237.6	209.1	130.1	187.3	178.8	195.4	1487.4
Highest	348.0	543.3	626.0	413.0	430.8	573.5	303.1	274.6	223.8	312.4	423.2	341.0	1945.5

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml.

APPENDIX F: CONCEPT DEVELPOMENT PLANS

SJB Urban

67-75 Lords Road Masterplan
Urban Design Report

Prepared for
Platino

Issued
21 November 2023

Level 2, 490 Crown Street
Surry Hills NSW 2010
Australia
T. 61 2 9380 9911
architects@sjb.com.au
sjb.com.au

We create amazing places

At SJB we believe that the future of the city is in generating a rich urban experience through the delivery of density and activity, facilitated by land uses, at various scales, designed for everyone.

Version: 08
Prepared by: JM, MH
Checked by: FL, JK

Contact Details:

SJB Urban
Level 2, 490 Crown Street
Surry Hills NSW 2010
Australia

T. 61 2 9380 9911
architects@sjb.com.au
sjb.com.au

SJB Architecture (NSW) Pty Ltd
ABN 20 310 373 425
ACN 081 094 724
Adam Haddow 7188 John Pradel 7004

SJB would like to acknowledge the traditional custodians of the land on which we live and practice and pay our respects to elders, past, present and future. In particular, we would like to acknowledge the 60,000+ years of continuous engagement of this land by Aboriginal and Torres Strait culture.

The journey of Aboriginal and Torres Strait Islander people and their knowledge of this land is incredibly rich – its importance to the future of our country should never be underestimated.

Issued

01 - Draft for Review	02.06.2022
02 - Revision	24.06.2022
03 - Revision	01.07.2022
04 - Revision	04.07.2022
05 - Revision	15.07.2022
06 - Revision	26.07.2022
07 - Gateway Revision	29.09.2023
08 - Gateway Revision	21.11.2023

Certified Management Systems

ISO 9001:2015 Quality Management System
ISO 45001:2018 Occupational Health & Safety Management System
ISO 14001:2015 Environmental Management System

Contents

1 Introduction 4

1.1 Connecting to Country 4
1.2 Executive Summary 5

2 Strategic Policy Review 12

2.1 Policies, Guides & Plans 13
2.2 Existing Planning Framework (IWC LEP 2022) 15
2.3 Design Excellence 16
2.4 Strategic Priorities 17

3 Contextual Analysis 18

3.1 Amenity & Land Use 19
3.2 Open Space & Public Domain 21
3.3 Transport & Movement 24
3.4 Built Form 27
3.5 Local Character 28
3.6 Constraints and Considerations 29
3.7 Opportunities 30

4 Previous Scheme & Recommendations 31

4.1 Urban Design Proposal 32
4.2 Peer Review & Recommendations 33

5 Design Principles 34

5.1 Development of Principles 35
5.2 Design Response 36

6 Urban Design Scheme 44

6.1 Vision 45
6.2 Concept Plan 46
6.3 Massing 47
6.4 Sections 49
6.5 View Impact Analysis 51
6.6 Shadow Analysis 54
6.7 Solar Studies 55
6.8 Recommendations Response 57

7 Landscape Plan 59

7.1 Vision 60
7.2 Concept 61
7.3 Landscape Characteristics 62
7.4 Precedent and planting scheme 63

8 Reference Scheme 67

8.1 Basement Plan 68
8.2 Ground Floor Plan (WEST) 69
8.3 Ground Floor Plan (EAST) + Level 1 Plan (WEST) 70
8.4 Typical Lower Floor Plan 71
8.5 Typical Upper Floor Plan 72
8.6 Level 8 Floor Plan (WEST) + Roof Plan (EAST) 73
8.7 ADG Compliance 74
8.8 Yield schedule 75

9 Planning Diagrams 76

9.1 Proposed LEP Maps 77
9.2 Proposed DCP 78

Introduction

1

1.1 Connecting to Country

Australia's First Nations peoples have lived and shaped this country for thousands of years. SJB adopts the maxim of the NSW Government Architect that 'if we care for Country, it will care for us.' We are committed to fulfilling our obligations under the NSW EP&A Act 1979 which requires development to promote the sustainable management of built and cultural heritage, including Aboriginal cultural heritage.

We believe that identifying the value of First Nations leadership and knowledge necessitates a shared responsibility between designers, planners, government, our clients, stakeholder groups and the communities we serve, to build the trust, friendships and relationships that lead to more considered outcomes.

Our approach is guided by the NSW Government Architect's Connecting with Country draft framework for understanding the value of Aboriginal knowledge in the design and planning of places. Its successful implementation will result from a collaborative mindset and therefore we seek to foster partnerships that work towards the common goal of delivering a built environment that contributes to the wellbeing of Country, and which respects the oldest living culture.

The Sydney basin is the Country of the Eora Nation and its twenty nine Clans. The map below illustrates recorded fragments of language, clan and other named groups in Sydney which have emerged over thousands of years of interaction with Country. This overlooked and deep connection between indigenous people and the Country of Sydney continues today and should help shape its future.

The project team acknowledge this site at Leichhardt is on Gadigal and Wangal Country.

1788 Clans along the Parramatta River
Source: Wallumedegal: An Aboriginal History of Ryde, Keith Vincent Smith, 2005

Clan name	Historical spelling(s)	Name or description of Country
Gadigal	*Cadigal* *Cadigàl* *Càd-i-gal* *Cadi-gal*	*Cadi was on the south side of Port Jackson, extending from South Head to Long Cove (Darling Harbour) (King in Hunter 1793). Càdi, the bay of Cadi, is probably 'Kutti' which is the Aboriginal place name for Watsons Bay.*
Wangal	*Wangal* *Wanngal* *Won-gal*	*Wann (Phillip 1790). Wanne (King in Hunter 1793) extended along the south side of the harbour from Long Cove (Darling Harbour) to Rose Hill, which the local inhabitants called Parramatta.*

Clan name chart
Source: Australian Musuem

1.2 Executive Summary

This urban design report has been prepared to support a planning proposal for the site at 67-75 Lords Road, Leichhardt. The proposal seeks to align the Local Environmental Plan (LEP) with the recommended controls in the Parramatta Road Corridor Urban Transformation Scheme (PRCUTS). A Floor Space Ratio of 2.4:1, a Height of Building of 30m, and Land Zoning of R3 Medium Density Residential is proposed.

The project has been a collaborative engagement between SJB, Platino Properties, FDP, Matthew Pullinger Architect, and multiple additional specialist consultants.

The urban design proposal results from an extensive process of peer review of previous design work, reports and feedback received from Inner West Council and the community, a thorough analysis of the site and its context and consideration of the prevailing strategic planning framework.

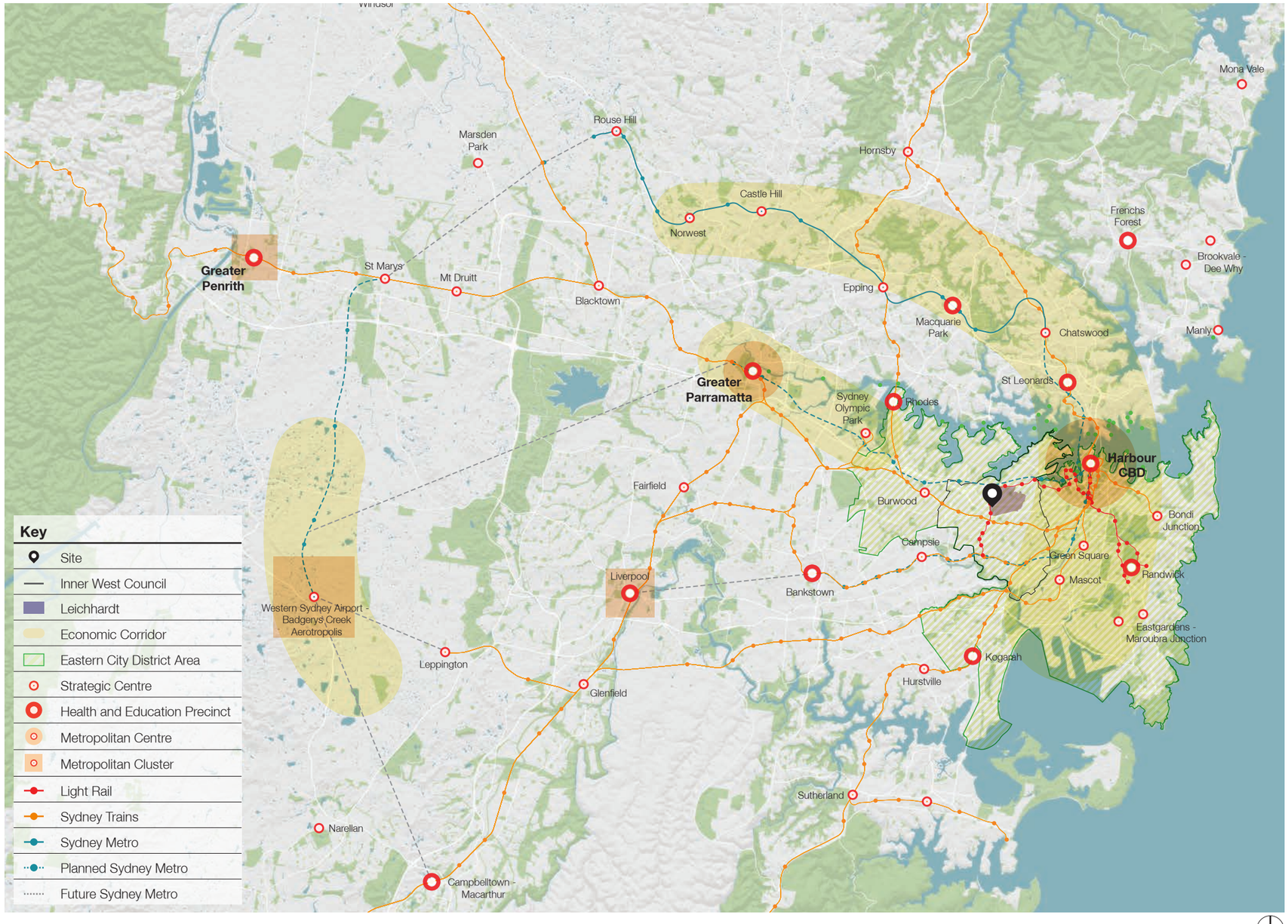
The outcome is a series of proposed controls, a massing envelope and a set of robust design principles that guide the future built form. An indicative reference scheme has been developed to demonstrate how future development on the site can be achieved in compliance with the proposal as well as being compliant with the relevant ADG provisions to ensure high quality design.

Strategic Context

The site is within the suburb of Leichhardt which is part of the Inner West Council Local Government Area. Within the Greater Sydney Region Plan - A Metropolis of Three Cities, it is part of the Eastern City District that covers areas south of the Parramatta River and east of Sydney Olympic Park.

Multiple strategic centres, as defined within the district plan, surround Leichhardt including Burwood, Campsie, Green Square and Sydney CBD. Leichhardt is also west of a major economic corridor that stretches from Sydney Airport to Sydney, North Sydney, Macquarie Park and culminating in Norwest.

The site is along the L1 Light Rail line that connects from Dulwich Hill to Central traversing through Lilyfield, Glebe, Pyrmont and Haymarket.



NTS

Introduction

Local Context

The site is located west of Leichhardt and Marion Street Town Centres and north of Parramatta Road, adjacent the L1 Light Rail line, with two stations servicing the site, and The Greenway, green infrastructure corridor, providing ample green connections. The site is serviced by additional key amenities such as Kegworth Public School and Leichhardt Marketplace Shopping Centre.

Parramatta Road is a key east-west connection between Sydney CBD and Parramatta whilst additional primary roads service the site north and south.

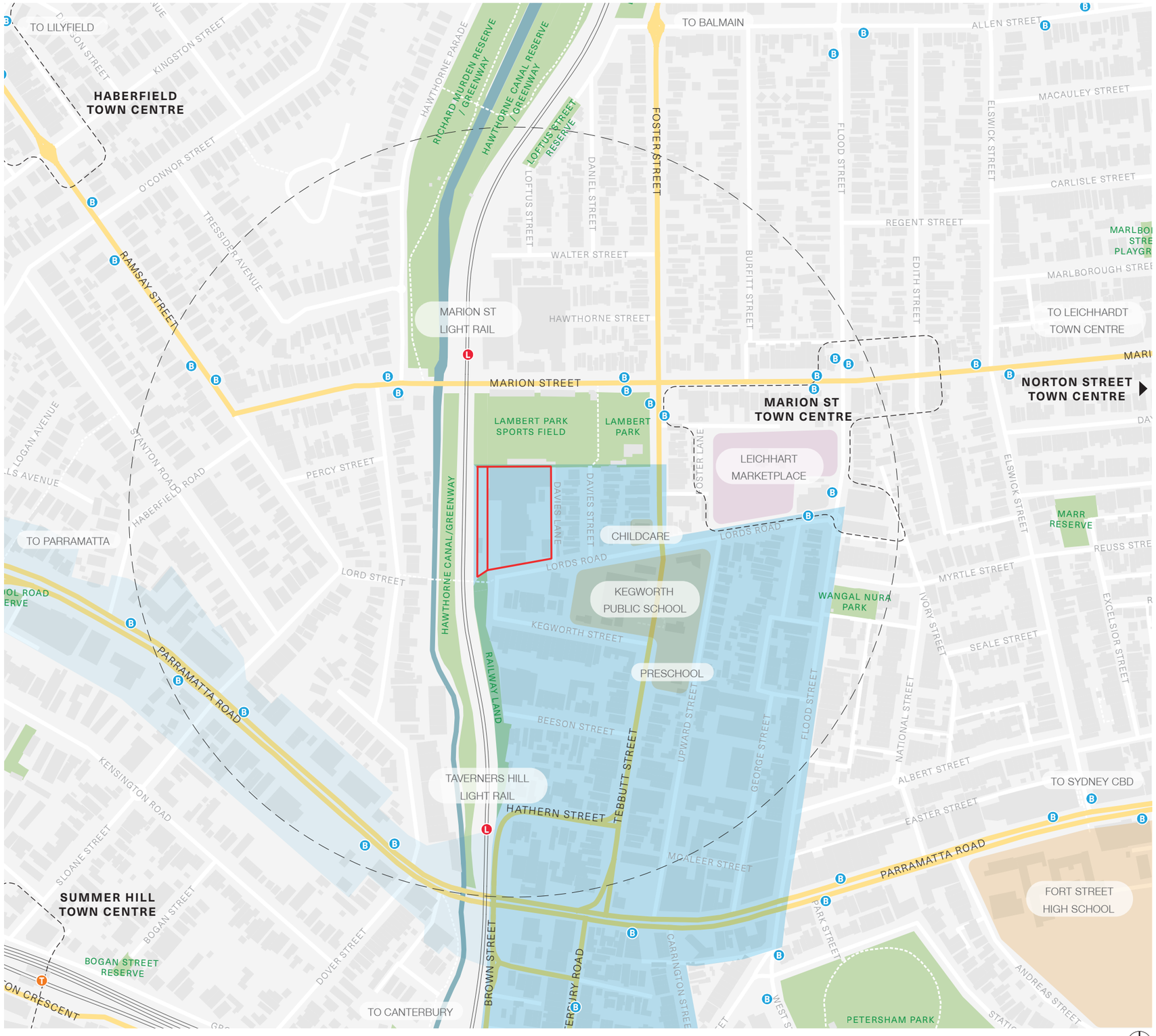
The site is also within the PRCUTS Taverners Hill precinct core area which has recommended changes to height of building, land zoning and floor space ratio. It also has recommendations about existing local character and appropriate development outcomes within the area.

Key Places Within 400m

- 1 School + 2 Child Care - 100m
- 1 Town Centre incl. 1 Shopping Centre - 250m
- 2 Light Rail Stops + Multiple Bus Stops - 300m
- 5 Open Spaces - 50m

KEY

- Site Boundary
- 400m Buffer
- Primary Road
- Canal
- Open Space
- Taverners Hill PRCUTS Frame Area
- Taverners Hill PRCUTS Core Area



1:5000 @ A3

Introduction

The Site

The site has an area of 10,607sqm and currently zoned (and used) for general industrial. The existing buildings are a mix of styles and qualities. There is a large amount of hardstand used for parking and loading along both the eastern and western interfaces. The site is accessed in two location, both along Lords Road. There are few trees within the site boundary, primarily along the eastern edge and south-eastern corner.

The site is adjacent to Davies Lane which is primarily used for parking and rear lane access for properties with an address to Davies Street. These properties and those to the south are predominantly low-density residential townhouses and terraces of diverse quality and character.

Lambert Park Sportfields to the north is mostly used by APIA (Leichhardt Football Club) throughout the day and night. There is no immediate access to the park from the site, with access only from Davies Street or Marion Street. Access to the Greenway is adjacent the site, with a tunnel running under the light rail corridor exiting along the sites south-west corner. The Greenway provides a 5.8km north-south active transport link from Cooks River to Iron Cove.

The site is split between two parcels, 67-73 Lords Road (DP940543) and 75 Lords Road (DP550608). The latter is to be provided as RE1 open space as per the PRCUTS recommendations.

Key Figures

	52% Site Coverage
	<5% Deep Soil
	5,500sqm Non-Residential
	<10% Tree Canopy Cover
	0sqm Publicly Accessible Open Space

KEY

- Site Boundary
- Land for RE1 Open Space

Aerial Image: Source - MetroMap 2022

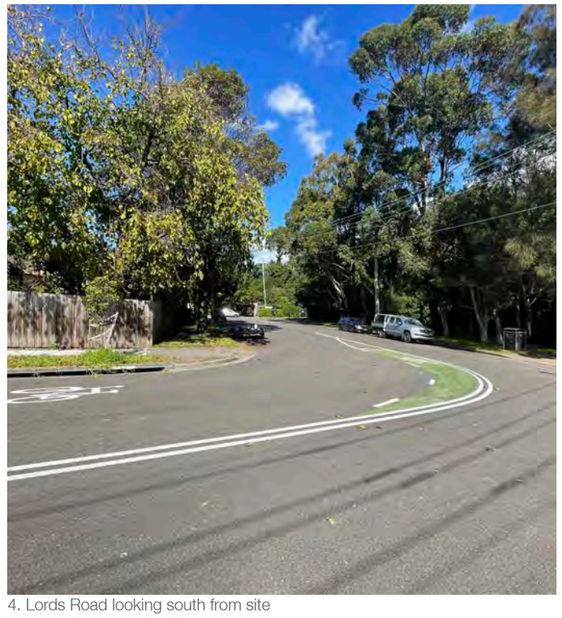
1:1000 @ A3

Introduction


1. The Greenway

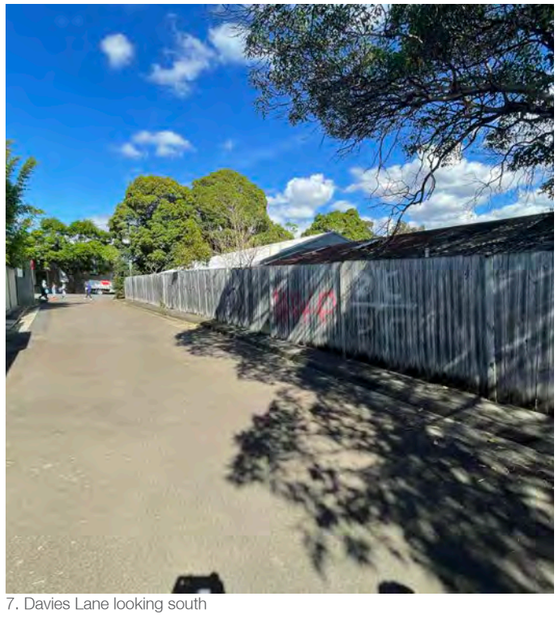

2. North-western corner looking south


3. Western facade and forecourt


4. Lords Road looking south from site


5. Eastern entrance from Lords Road


6. Eastern Facade and forecourt


7. Davies Lane looking south


8. Davies Lane looking north

Introduction

Process

The design process has been developed based on the unification of three separate streams into a singular design response. Drawing on three separate streams has enabled the proposed urban design scheme to be more reflective of the current strategic and spatial requirements of the site.

1. Strategic Policy
Developing an understanding of the current strategic thinking towards the broader and local context of the site. This includes reviewing state and local policy and appropriate guide and approaches to design excellence. The outcome of this is a series of Strategic Priorities that the urban design response is to respond to.

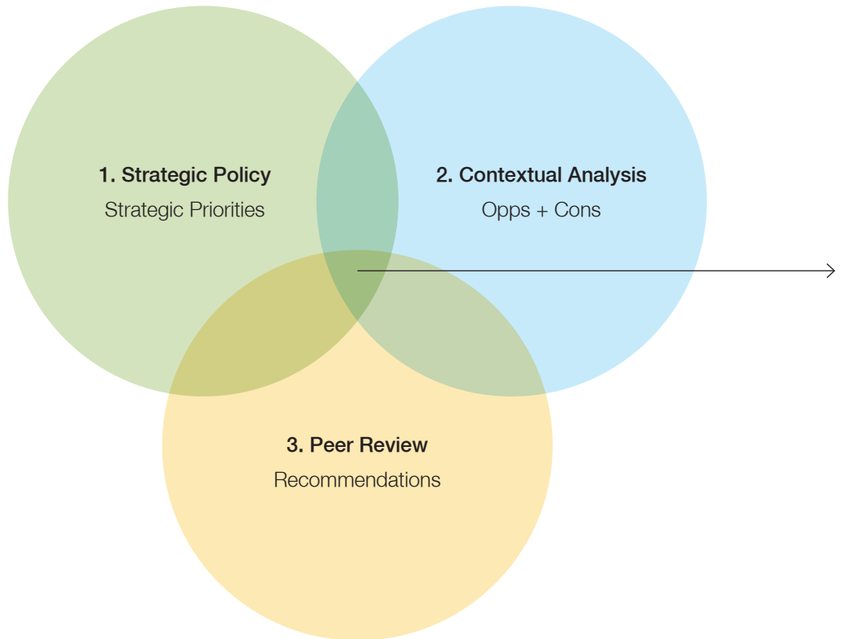
2. Contextual Analysis
Mapping the current spatial requirements of the site including open space, built form and land use, along with consultant recommendations regarding meeting minimum criteria of assessment. The result of this is a number of opportunities and constraints which will be reflected on in the urban design scheme.

3. Peer Review
The previous PP was peer reviewed and a series of recommendations were made. Understanding the position of the peer review and the Planning Panel will be key to creating a new urban design scheme that aligns with the desires for the site. The result is a list of recommendations that will be used as a checklist for the urban design scheme.

Principles

The design principles have been generated through the combination and consolidation of all the criteria of assessment that was discovered through the strategic policy review, context analysis and previous urban design scheme review. The intent is that these principles will guide future built form and design across the site.
Each design principle responds to a number of the factors from each of the priorities, constraints, opportunities or recommendations. Collectively, they respond to all of these, creating a holistic response to the site that the urban design scheme can use to build a fully responsive proposal.

Three Streams



Principles

Introduction

Vision

Envisioned as a mixed-use intergenerational precinct, the proposal would generate vitality and activation for the site and to Lords Road and demonstrates Platino's commitment to the local community. It features improved pedestrian connectivity, permeability, streetscape, presence, open space and non-residential floorspace.

The ground floor would be activated by approximately 1,700sqm of non-residential floor space, providing for the local economy and encouraging movement within and through the site. Large non-residential spaces with high ceiling heights will be able to accommodate a diversity of uses to renew employment opportunities on the site. Activation could come from potential uses such as workshops, cafes, co-working spaces, creative outlets, wellness centres and boutique offices.

Approximately 210 dwellings will help generate long-term activation and help establish a strong community. An intergenerational approach has been envisioned that allows individuals, families, empty nesters, and key workers to coexist within the site. Co-working spaces will allow residents to work from home, whilst common areas, cafes and a playground will encourage socialisation and activity for young and old.

A publicly accessibly central courtyard supports the ground floor activation and residents. Fronting Lords Road, the courtyard aims to draw movement into the site and create a meeting place for the community. The courtyard is connected to the surrounding context via a series of public through-site links with the intent to connect to the Greenway, Davies Lane, a new RE1 public recreation open space along the western interface. This new open space could provide a potential future connection to Marion Street Light Rail via Lambert Park Sports Field to the north.

The design represents a holistic vision for the site that has been grounded in its response to strategic, local and place-specific requirements. A reference scheme has been prepared that demonstrates alignment with the proposed outcomes, controls and vision.

Key Features

- Approx. 1,700sqm non-residential floor space primarily directed towards Lords Road
- Approx. 210 dwellings with a strong diversity of typology and dwelling mix
- 1,500sqm RE1 public recreation open space provided adjacent to Light Rail
- Approx. 700sqm public open space at the centre of the site
- Approx. 1,400sqm private communal open space for residents
- Minimum 15% deep soil (+10% on existing)
- Minimum 22% tree canopy coverage overall (+12% on existing) with min. 15% on R3 zone
- Height transition and above podium setbacks to create human scale interface
- Low street wall in internal courtyard to create fine grain interface with public open space
- No use of Davies Lane for vehicle servicing/movement related to site

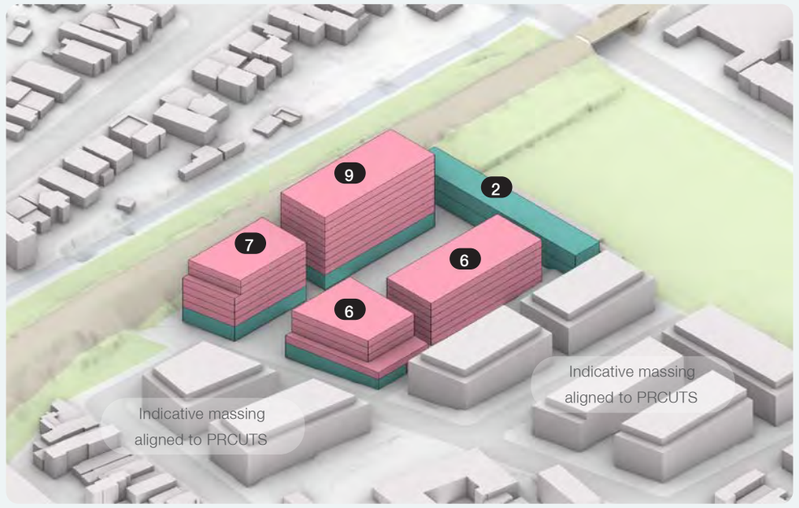
Existing Permissible Height	**-**
Existing Permissible FSR	**1:1** (LEP)
Existing Permissible Land Zoning	**E4 General Industrial** (LEP)
Proposed Height	**30m (8st)** (PRCUTs - 67-73 Lords Rd only)
Proposed FSR	**2.4:1** (PRCUTs - 67-73 Lords Rd only)
Proposed Land Zone	**R3 Medium Density Resi. & RE1 Public Rec.** (PRCUTs)
Potential Dwelling Yield	**Approx. 210**
Potential Deep Soil	**Min. 15%**

Introduction

Scheme Comparison

An urban design framework based on the previous planning proposal was prepared by Stewart Hollenstein and Matthew Pullinger Architect in 2018. This planning proposal was not progressed, however many of the key guiding principles and built form approaches remain relevant and have been carried through to the proposed scheme.

This comparison shows the proposed controls and key metrics of each scheme along with key elements that define their built form outcomes.

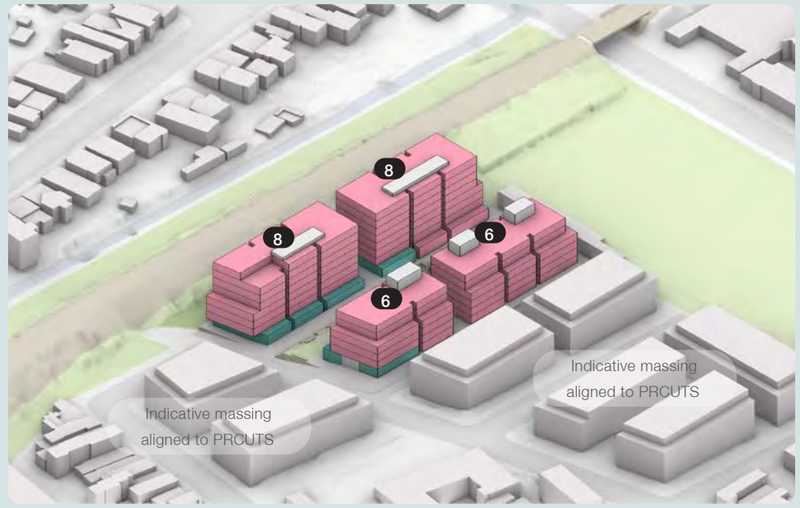


Planning Proposal 2018

Site Area	**10,607sqm**
Developable Site Area	**10,607sqm**
Total GFA	**25,457sqm**
FSR	**2.4:1**
Height	**RL 35m - 9st**
Land Zone	**R3 Medium Density Residential**
Dwelling Yield	**235**
Non-Residential	**min. 3,000sqm**

Key Elements

- Open space centrally located within the site
- One-way shared road enters the site from Lords Road and then exits along Davies Lane
- Two-storey non-residential building along the northern boundary to deal with interface with Lambert Sportsfield
- Stepped height transition from 6 storeys (east) to 9storeys (west)
- Zero metre setback to corner of Lords Road and Davies Lane
- Double height spaces for non-residential at ground
- No residential at ground except for lobby and VT access



Proposed Scheme

Site Area	**10,607sqm**
Developable Site Area	**9,018sqm**
Total GFA	**21,643sqm**
FSR	**2.4:1**
Height	**30m - 8st**
Land Zone	**R3 Medium Density Residential** and **RE1 Public Recreation**
Dwelling Yield	**Approx. 210**
Non-Residential	**Approx. 1,700sqm**

Key Elements

- Central courtyard located towards Lords Road with full visibility
- RE1 open space along western interface with Light Rail
- Shared road enters and exits from Lords Road
- Northern interface is used as a private connection for residents and space for private terraces for ground floor dwellings
- Stepped height transition from 6 storeys (east) to 8 storeys (west) with max. 4 storeys street wall along the eastern boundary
- 6m setback to the corner of Lords Road and for the full extent of Davies Lane. A setback above 4 storeys for the western interface with Lords Road
- Mixed residential and non-residential at ground with non-residential fronting Lords Road and residential provided at the rear of the site

KEY

- Residential
- Non-Residential
- Service/Parking/VT

Strategic Policy Review

2

2.1 Policies, Guides & Plans

Key Takeaways

- Four key themes to the vision are Infrastructure and Collaboration, Liveability, Productivity, and Sustainability
- Key objectives include housing choice, designing places for people, developing a more accessible and walkable city, valuing green spaces and landscape plus more
- The plan is to help identify pathways to building the future of city that responds to the housing needs of its population

Greater Sydney Region Plan

Greater Sydney Commission 2018

In March 2018, the Greater Sydney Commission (GSC) released the Greater Sydney Region Plan, A Metropolis of Three Cities ('the Plan'). The Plan is built on a vision of three cities where most residents live within 30 minutes of their place of work, education, health facilities and services. This vision seeks to bring together land use and transport planning to boost Greater Sydney's liveability, productivity and sustainability by spreading the benefits of growth.

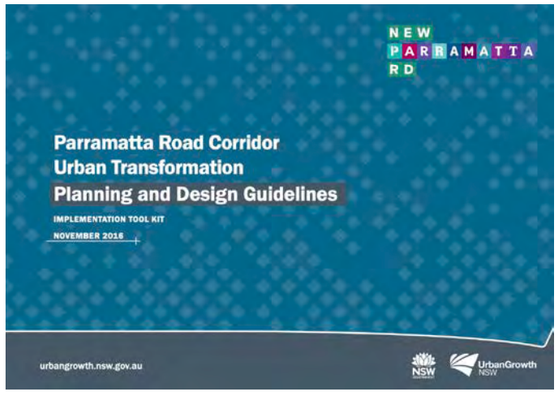
Key Takeaways

- Reflects the same four key themes and vision objectives as the Greater Sydney Region Plan
- Leichhardt Marketplace is highlighted as a local centre alongside Leichhardt
- The Greenway is highlighted as a priority green grid corridor and recommended for improvements
- Leichhardt is mentioned as being a highly diverse neighbourhood through identity and distinctive character

Eastern Harbour City District Plan

Greater Sydney Commission 2018

The Eastern City District Plan was approved in March 2018 and guides the transition of the District within the context of greater Sydney's Three Cities. Its objective is to improve the District's social, economic and environmental assets. The District Plan identifies that growth in the Eastern City will be supported by previously unparalleled levels of city-scale infrastructure investment including transport, public realm and sporting and cultural institutions, which will attract and retain new and existing businesses in the Harbour City.



Key Takeaways

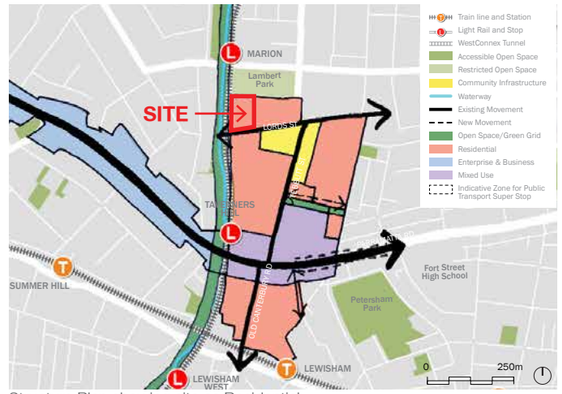
- Site proposed as Residential (R3) + Open Space (RE1)
- Site proposed as 30m max HOB
- Site proposed as 2.4:1 FSR
- Lords Road is a 'Local Street' that should be pedestrian prioritised
- Character objectives state opportunity for development to step up in height towards the Greenway

PRCUTS

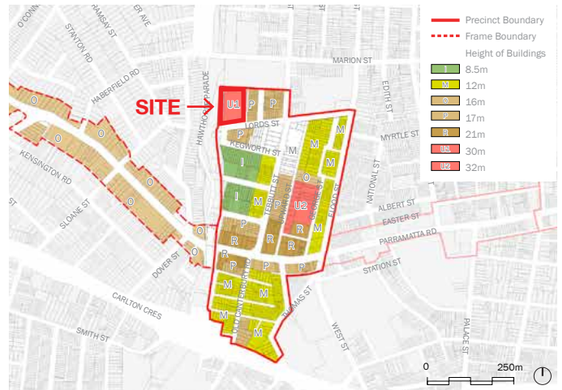
UrbanGrowth NSW 2016 (updated 2021)

The Parramatta Road Corridor Urban Transformation Strategy (PRCUTS) is made up of several documents that aim to provide direction for future development along Parramatta Road. It was initially developed in 2016 by the now disbanded UrbanGrowth NSW.

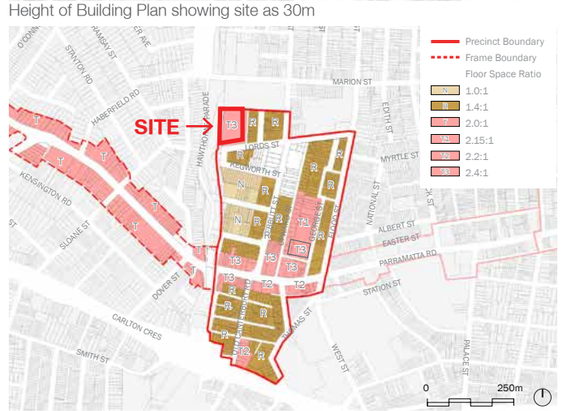
An implementation update to PRCUTS was issued by DPIE July 2021. This update supplemented PRCUTS with additional actions and reflects the changes to the strategic context of the Parramatta Road corridor since PRCUTS was released in 2016. The update encourages the progression of planning proposals, notwithstanding the state of precinct-wide traffic studies.



Structure Plan showing site as Residential



Height of Building Plan showing site as 30m



Floor Space Ratio Plan showing site as 2.4:1

Key Takeaways

- The site identified as ‘Key Employment Lands’ and ‘Urban Services’ land in the plans
- Objectives relating to employment lands are drawn from the Employment and Retail Lands Strategy
- States it is important to retain employment space that can be adapted and re-purposed in the future
- Councils position is to retain all currently zoned industrial lands including that identified for rezoning in PRCUTS
- Analysis shows housing growth in line with PRCUTS can be managed without rezoning industrial lands

LSPS

Inner West Council 2020

The Local Strategic Planning Statement (LSPS) is Council’s approach to the future structure of the Inner West and includes principles and objectives that align to broader strategic frameworks such as the Greater Sydney Region Plan.

It is noted that Council’s policy on retention of all employment lands within the Parramatta road Corridor is inconsistent with the Greater Sydney Region Plan, the North District Plan and PRCUTS.

Key Takeaways

- Lords Road is specifically noted as being considered previously for residential however is to be retained industrial as valuable local urban services
- Key action to prepare a place-based study for the Marion Street Precinct
- Reiterates desire to retain industrial lands in the Taverners Hill Precinct of PRCUTS as residential targets can be met without them

Local Housing Strategy

Elton for Inner West Council 2020

The Local Housing Strategy is another supporting document to the LSPS that aims to provide guidance on where housing supply can be met across the LGA and the principles surrounding future development. It includes provisions for the supply of affordable housing and breaks down potential dwelling yield per precinct. The Strategy has been adopted by Council.

It is noted that the Local Housing Strategy has been endorsed by DPIE subject to amendments that would align with PRCUTS.

Key Takeaways

- Urban services land is to be retained to accommodate affordable and diverse opportunities for business
- States there is a loss of urban service land at a subregional level placing pressure on availability of space and hence affordability
- More or less reflects the same sentiment as the LSPS

Employment and Retail Lands Strategy

Inner West Council 2020

The strategy is Councils position on their current employment lands and how they manage them into the future to accommodate local business floor space that is diverse and affordable. It includes four (4) principles regarding industrial and urban services lands that all revolve around the same premise that employment lands are to be retained. The Strategy has been adopted by Council.

It is noted, as per other previous comments, that the strategy is inconsistent with other state policy.

Key Takeaways

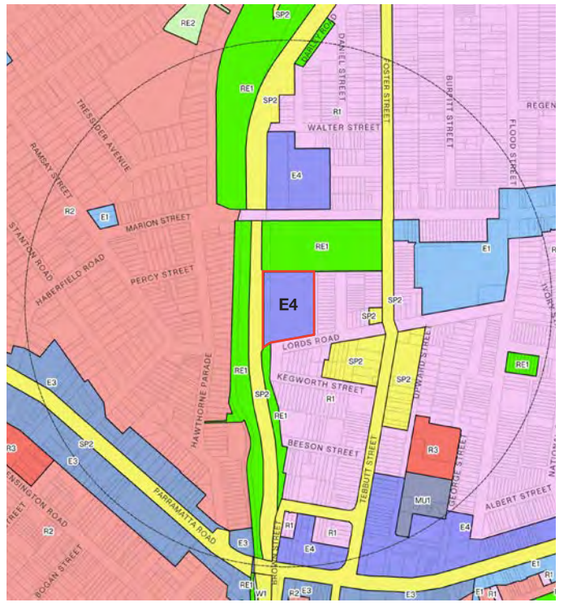
- Plans for the Greenway show no impact on the site
- Plans for the Greenway also show no change to the existing conditions of the current connections immediately adjacent the site
- Lords Road (and the underpass) is considered a good connection from the Greenway to the east

The Greenway

Inner West Council 2018

The Greenway is a masterplan for a long stretch of connected green infrastructure that aims to fill missing links and create a continuous active transport route from Cooks River to Iron Cove. The subject site is immediately adjacent to the Greenway which includes a connection under the light-rail from Lords Road to the Greenway.

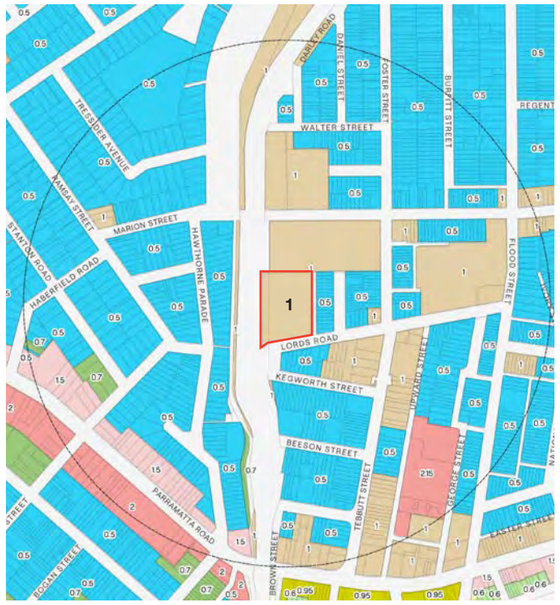
2.2 Existing Planning Framework (IWC LEP 2022)



Land Zoning

E4 General Industrial

Lambert Park to the north is RE1 Public Recreation, residential areas to the east and south are R1 General Residential and the Light Rail line to the west is SP2 Infrastructure Railway.



Floor Space Ratio

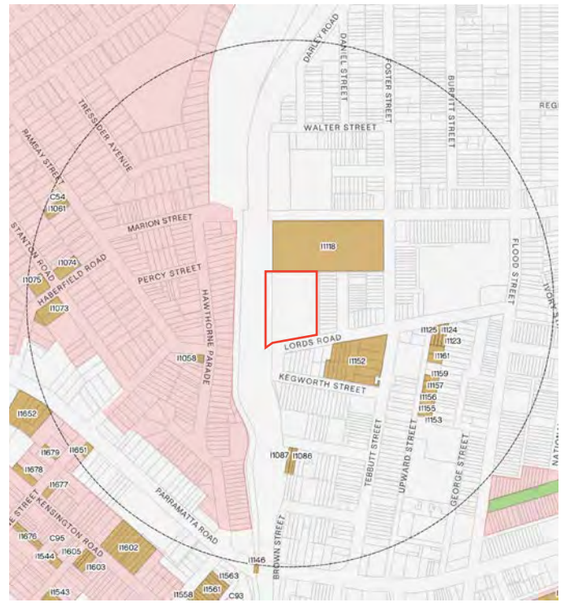
1:1

Residential areas surrounding the site are labelled as 0.5:1 while other areas such as Kegworth Public School and Leichhardt Marketplace are 1:1.

Height of Building

N/A

The site and the majority of areas within Leichhardt do not have a Height of Building classification.



Heritage

N/A

The site has no heritage items and is not in a conservation area. Lambert Park to the north and Kegworth Public School to the south-east are both labelled as heritage items. The Haberfield Conservation Area is located approximately 80m to the west, beyond the light rail embankment.

KEY

Site Boundary

2.3 Design Excellence

The policies referenced below have been prepared by Government Architect NSW (GANSW) to guide and improve the design process from the outset. Both the overriding intent and the specific principles within them have been considered for the proposal for the site.

Better Placed is the overarching policy by GANSW. It establishes seven criteria which define a ‘good built environment’;

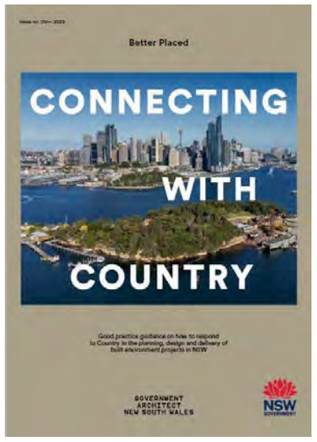
Implementing Good Design is the complementary policy to Better Placed and outlines the approach for measuring places and spaces to assess whether they meet the expectations and requirements of GANSW policy.

The draft Greener Places policy outlines the importance of green spaces in towns and cities and the approach to integrating them into broader connected networks which support recreation for people and biodiversity in the urban environment.

The Design Guide for Heritage is a guideline for preserving, restoring and integrating heritage into spaces, buildings and precincts. Formulated in collaboration with the Heritage Council of NSW it defines heritage places and thematically unpacks key practical considerations for design.

The Good Urban Design Guidance note builds on the Draft Urban Design Guide which is currently being updated. It builds on the objectives in Better Placed and focuses on the strategic scale and design process for running masterplanning projects.

Aligning Movement and Place seeks to outlay the functional, aesthetic and communal importance of roads and streets. It has been produced in collaboration with Transport for NSW and provides advice and a toolkit for approaching transit oriented development at many scales.



The Connecting with Country framework provides a guidance on creating a culturally sensitive foundation for urban design. Embracing indigenous ways of designing fosters a harmonious integration of cultural values, environmental sustainability, and community engagement, ensuring that projects resonate authentically with the rich tapestry of local and cultural heritage.

- Better fit
- Better performance
- Better for community
- Better for people
- Better working
- Better value
- Better look and feel

2.4 Strategic Priorities

The following priorities summarise the key findings of the policy review. These priorities have been used to guide the proposal and visioning for the site to develop a solution that is balances strategic opportunities across all levels.

Supporting local businesses with employment uses

The ability to support local economies through employment generating uses is a key part of Councils local strategies. Preserving jobs and ensuring local businesses can operate successfully enables strong place-making practice and communicates keen interest in supporting communities.

Things to consider:

- Job potential of the site
- Alternative forms of employment uses
- Place-making opportunities

Prioritise diverse residential development in transit-oriented locations

State policy highly advocates for transit-oriented development as it allows density to increase in areas of high accessibility, thereby removing need from other areas to meet housing targets. It also advocates for a diverse mix of dwelling typologies to cater to multiple occupiers such as families, individuals or seniors.

Things to consider:

- Leveraging sites access to Light Rail
- Flexibility to create diverse dwellings
- Future development on neighbouring sites

Build on and enhance local character through integrated development

Local character is a big part of state and local policy. Understanding the current local character allows places to utilise that as a target to maintain for future developments. It also allows a more refined approach to urbanism where you can change or enhance certain qualities through good urban design

Things to consider:

- Appropriate scale and bulk
- Edge interfaces with existing residential
- Materiality and architectural expression

Access to open space and embracing existing natural assets

Providing good access to open spaces for more people helps reduce health issues experienced by the community and creates safer and more active places to live. Embracing these places and enhancing existing assets such as tree canopy create more comfortable spaces that are more resilient to urban heat island effects

Things to consider:

- Increasing connectivity to existing open space
- Provision of a new local open space
- Preservation of existing trees and enhances landscaping, canopy cove and street trees

Connect communities with public amenity and activation

Strong public amenity such as shops, retail, schools, child care, and open spaces facilitate regions with greater populations and help drive growth whilst building on local character. Creating connections between these places helps build a community and supports local businesses with economic stability

Things to consider:

- Providing the right kind of amenity on site
- Not detracting from nearby shops
- Need for community infrastructure

Improve walkability and active transport connections

Walkability is a key factor of creating a good place that people want to live. With good walkability and access to active transport opportunities such as walking trails and cycleways, places often see a reduction in car use, thus reducing pollution and creating safer and more welcoming environments

Things to consider:

- Leverage existing active transport links
- Encourage walkability and healthy lifestyles
- Pedestrian prioritisation and reduced car use

Contextual Analysis

3

3.1 Amenity & Land Use

The site is serviced by a high level amenity including schools, childcare, town centres, shopping villages and public transport options (including two light rail stops).

Leichhardt Marketplace within the Marion Street Town Centre provides multiple shops and supermarkets. The town centre also provides additional amenity including boutique shops, cafés and restaurants.

Kegworth Public School and Preschool is on Lords Road and supports students from kindergarten to year 6. Fort Street High School located on Parramatta Road to the south-east is a 20 min. walk from the site.

The site is north of Parramatta Road and it's associated adjacent land uses. This area is subject to the PRCUTS framework which also includes this site. This land is predominantly industrial and business related uses with some hotels/motels and shop-top housing.

There is also multiple open spaces including the Hawthorne Canal section of the Greenway corridor, Lambert Park (and sports field) and Haberfield Tennis Courts. Details of the sports field have been provided on the following page.

Constraints

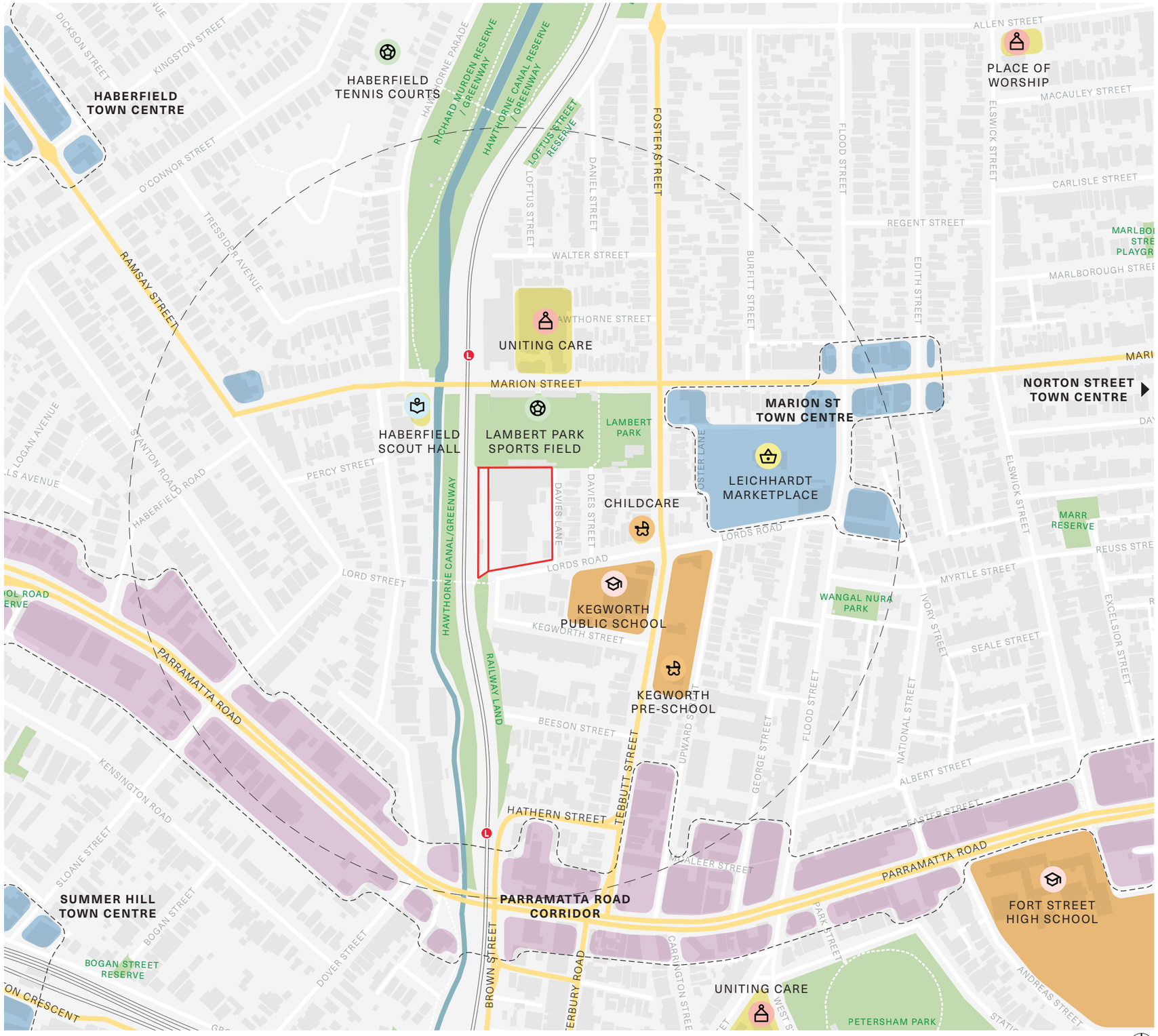
- Sports field to north may impact amenity (see next page)

Opportunities

- Walking distance to shops/shopping centre
- Walking distance to local school and childcare
- Close to multiple additional town centres
- Close to two light rail stops

KEY

- Site Boundary
- 400m Buffer
- Open Space
- Town Centre
- Corridor
- Education
- Community & Services



1:5000 @ A3

Contextual Analysis

Lambert Park Sports Field

The sports field is a purpose built soccer stadium used by APIA Leichhardt Tigers FC as their home ground since inception in 1954. There are several key opportunities and constraints regarding the sports fields.

1. Light towers at each corner of the field provide lighting for night-time sports events. A note provided by Ecolight from September 2018 highlights that the older form of lighting is prone to light spill and glare which can have an impact on the site at night. The previous PP included a VPA to provide new, low-spill lighting for the field to minimise issues.
2. There are two main stands. The stand to the south contains dressing room facilities, a social club, and press and media facilities. The stand is two-storeys and contains no apertures facing the site.
3. Access to the field is via Lords Road, Davies Street, through Lambert Park and through the entrance located on Marion Street. This is also one of the most direct routes to the Marion Street Light Rail station.
4. A potential alternative link to the Light Rail could be accommodated along the western edge of the sports field in a piece of land that is mostly unused by the club.

Noise from the field and additional acoustic sources was considered in a noise assessment prepared by Acoustic Logic in 2022. The conclusion states no serious concerns but a detailed examination of building constructions and treatment should be undertaken during detailed design to ensure compliance.

Constraints

- Light spill and glare from light towers
- Noise from events day and night
- Interface with southern grandstand

Opportunities

- Potential direct connection to Marion Street

KEY

▭	Site Boundary
▭	Lambert Park Sports Field
▭	Lambert Park
→	Existing Pedestrian Connection
--→	Potential Connection

Aerial Image - Source: MetroMap 2016

Light spill on Davies Street

Light glare within the sports field

Light spill on Davies Lane

Images - Source: Ecolight note September 2018

3.2 Open Space & Public Domain

Open Space Catchment

The GANSW Greener Places Design Guide recommends that low density residential areas be serviced by open space of minimum size 3000sqm and within 400m. For high density areas this becomes 1500sqm and 200m. For the purpose of this analysis we have shown a buffer of both 200m and 300m from open spaces that are a minimum of 3000sqm. Lambert Park Sports Field has been excluded from this analysis as it is predominantly a private facility.

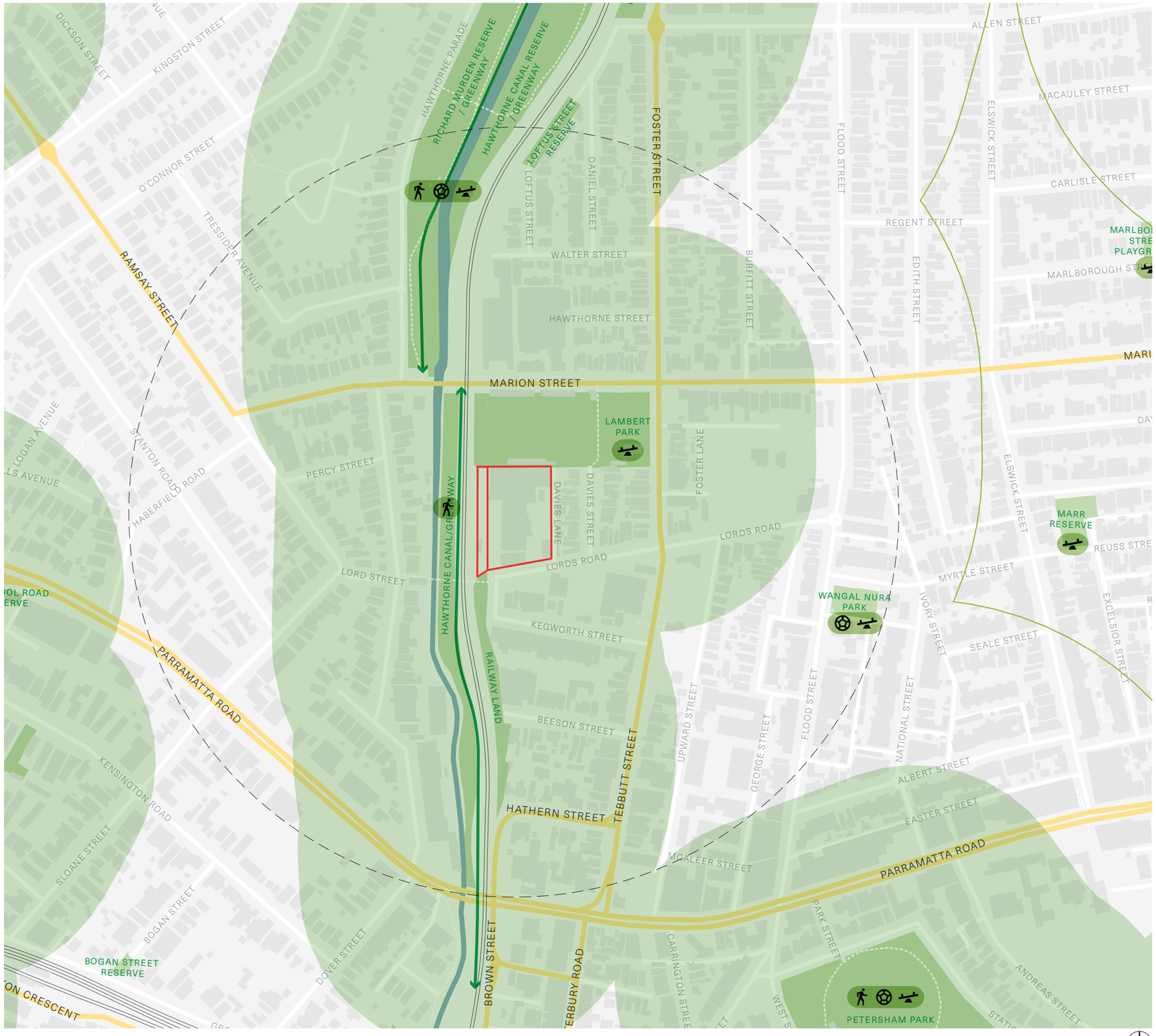
The site is shown to be well serviced by with entrances to over 10ha of open space accessible within 200m. A connection to Hawthorne Canal provides direct access to the Greenway which connects north-south between several open spaces. These open spaces provide key amenity such as walking trails, passive open spaces, sports courts and playgrounds. This is a very valuable connection to promote healthy lifestyles and a key part of Inner West Council open space policy.

Constraints

- N/A

Opportunities

- Direct access to Greenway corridor
- Choice of multiple open spaces within walking distance
- Increase connectivity to open space



KEY

	Site Boundary
	400m Site Buffer
	Open Space
	The Greenway
	200m from Open Space
	400m from Open Space
	Playground
	Sports
	Walking Trails

1:5000 @ A3

Contextual Analysis

Tree Canopy Cover & Arborist Input

The site exhibits a very low tree canopy cover (<10%) which is commonly representative of industrial uses and dense areas. The Marion Street Town Centre also demonstrates a generally low tree canopy coverage whilst residential areas have increased cover.

State policy aims to increase general tree canopy coverage to 40% by 2030.

The trees on the site have also been assessed for quality by an arborist in 2022. The trees show a mix of low, medium and high qualities. There are 17 trees on the site with the below qualities and recommendations:

Low - consider removal - 5
Medium - consider retention - 9
High - priority retention - 3

The low amount of trees is most likely due to the existing uses that typically prohibit large tree planting zones and deep soil. To accommodate the tree minimum root protection zones a minimum offset of 10.5m along the south-eastern and eastern boundary would be necessary. Tree replacement was recommended as opposed to retention due to the quality issues and value of new planting.

Constraints

- Trees of varying quality may limit development along the eastern boundary
- Health of trees is questionable due to level changes and materiality around the tree footings

Opportunities

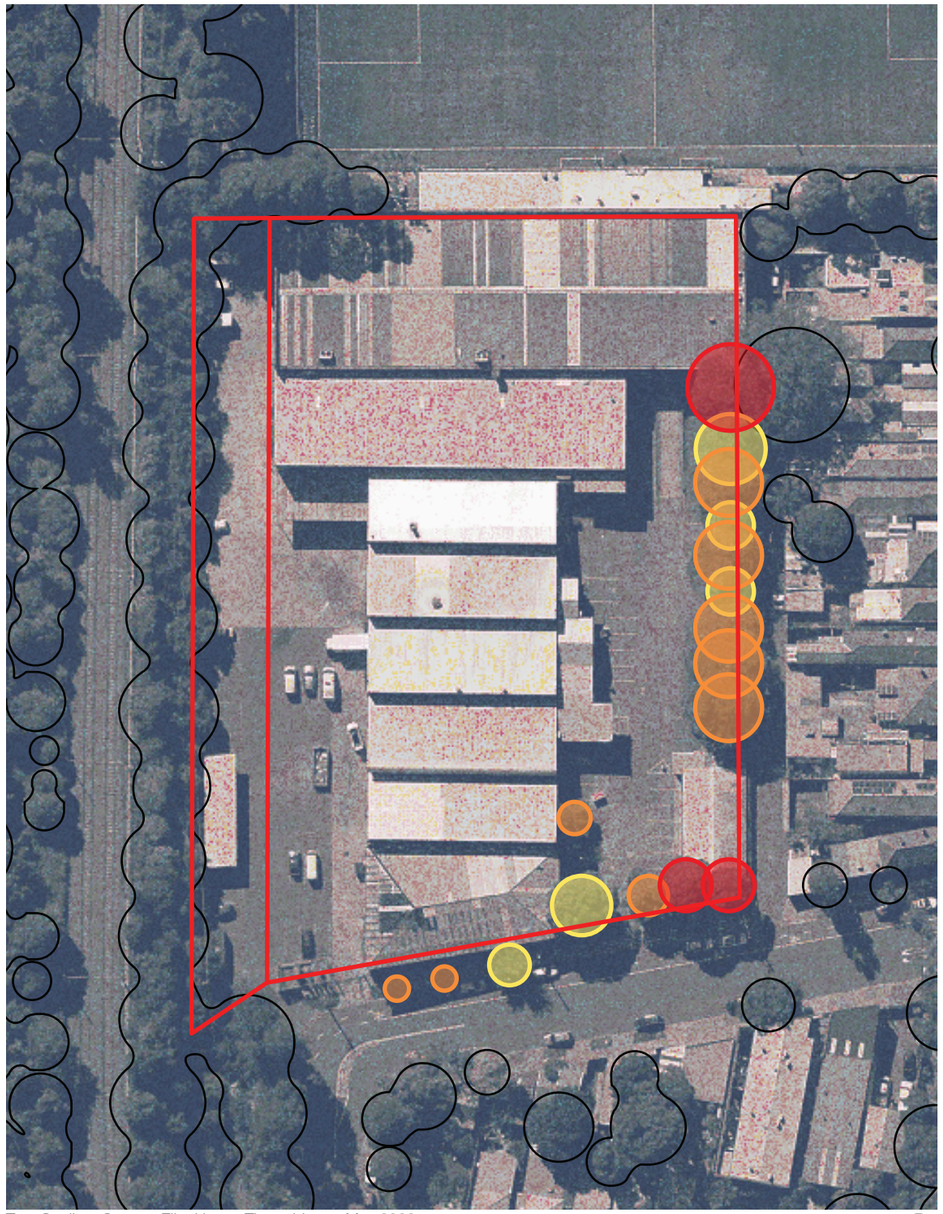
- Increase tree canopy coverage within the site
- Increase deep soil zones within the site
- New tree planting would improve street character
- Ability to plant 2:1 trees to align with council aspirations
- Recommended tree replacement allows for more trees and better quality outcomes

Tree Canopy Cover 2019 - Source: DPE

NTS

KEY ^

	Site Boundary
	400m Site Buffer
	Less than 10%
	10% to 20%
	20% to 30%
	30% to 40%
	More than 40%



KEY >

	Site Boundary
	Trees outside site
	Low Quality (remove)
	Medium Quality (consider)
	High Quality (retain)

Tree Quality - Source: Elke Haege Thorvaldson - May 2022
Aerial Image - Source: MetroMap 2022

1:1000 @ A3

Contextual Analysis

Topography & Flooding

The site has a highly varied topography with the low end of the site to the west at ~3m and the high end at the east from ~6m (NE) to ~8.5m (SE). Internally the site is relatively flat due to the existing hard stand areas on either side of the building. Lords Road exhibits a slope of approximately 1:18 - 1:14 whilst Davies Lane is relatively flat but sloping down to the north.

A flood study prepared for Inner West Council (formerly Leichhardt) by Cardno in 2014 demonstrates a 100yr and PMF flood hazard area within the site. This is primarily along the western boundary.

Flood advice obtained in 2022 by Tooker and Associates advised that a minimum finished floor level of RL 4.60 would be required for the site and a minimum level of RL 6.80 for a carpark entry. This would result in raising the levels ~1.5m along the western boundary and limiting carpark entrance to the east of the site to avoid significant up ramping.

Constraints

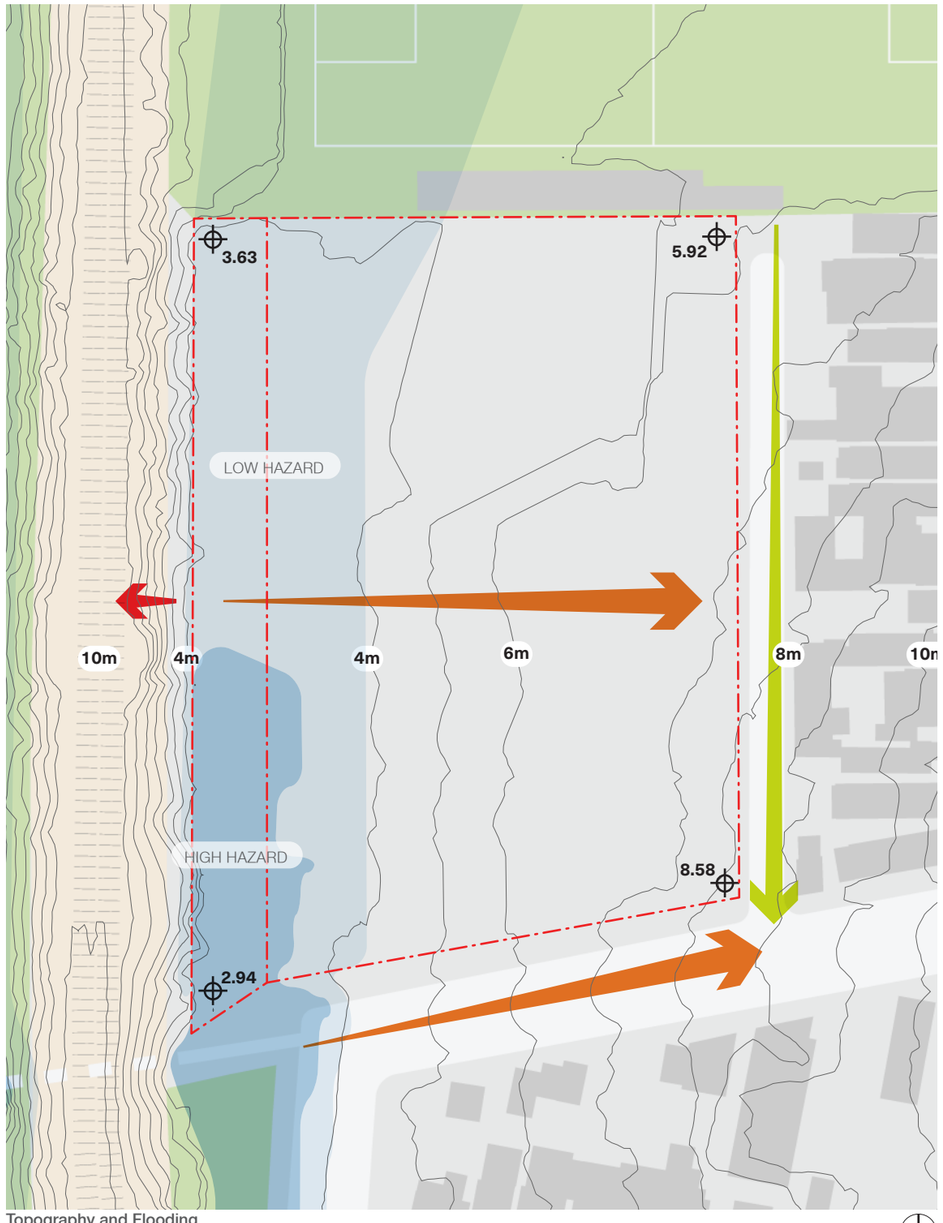
- A minimum RL 4.60m is required for typical buildings
- A minimum RL 6.80m for carpark is required, limiting entrance location to the east
- Slope along Lords Road and internally will need to managed effectively to aid in accessibility

Opportunities

- N/A

KEY

- Site Boundary
- High Hazard
- Low Hazard
- > 1:33
- 1:8 - 1:14
- < 1:8



Topography and Flooding
1m Contours - Source: ELVIS https://elevation.fsdf.org.au/
Spot Height - Source: Survey

1:1000 @ A3

100 yr Flood Hazard
Slope - Source: Leichhardt Flood Study 2014

PMF Flood Hazard
Slope - Source: Leichhardt Flood Study 2014

KEY

- Site Boundary
- High Hazard
- Low Hazard

3.3 Transport & Movement

Public Transport & Vehicular

The site is located along Lords Road which is a local road, connected to a secondary roads, Foster/Tebutt Streets, which aid in vehicular connectivity to the north and south. Marion Street is also to the north which helps connectivity east and west more locally. Parramatta road to the south also helps in more regional east-west connectivity as it is a primary road.

Several bus routes run near the site along Foster, Tebutt and Marion Streets. There are also some school bus routes servicing the area.

The light rail, which runs immediately adjacent the site to the west, has stops at Marion Street and on Parramatta Road. due to the close proximity to the light rail line, acoustics and vibrations will need to be considered in the design scheme.

Constraints

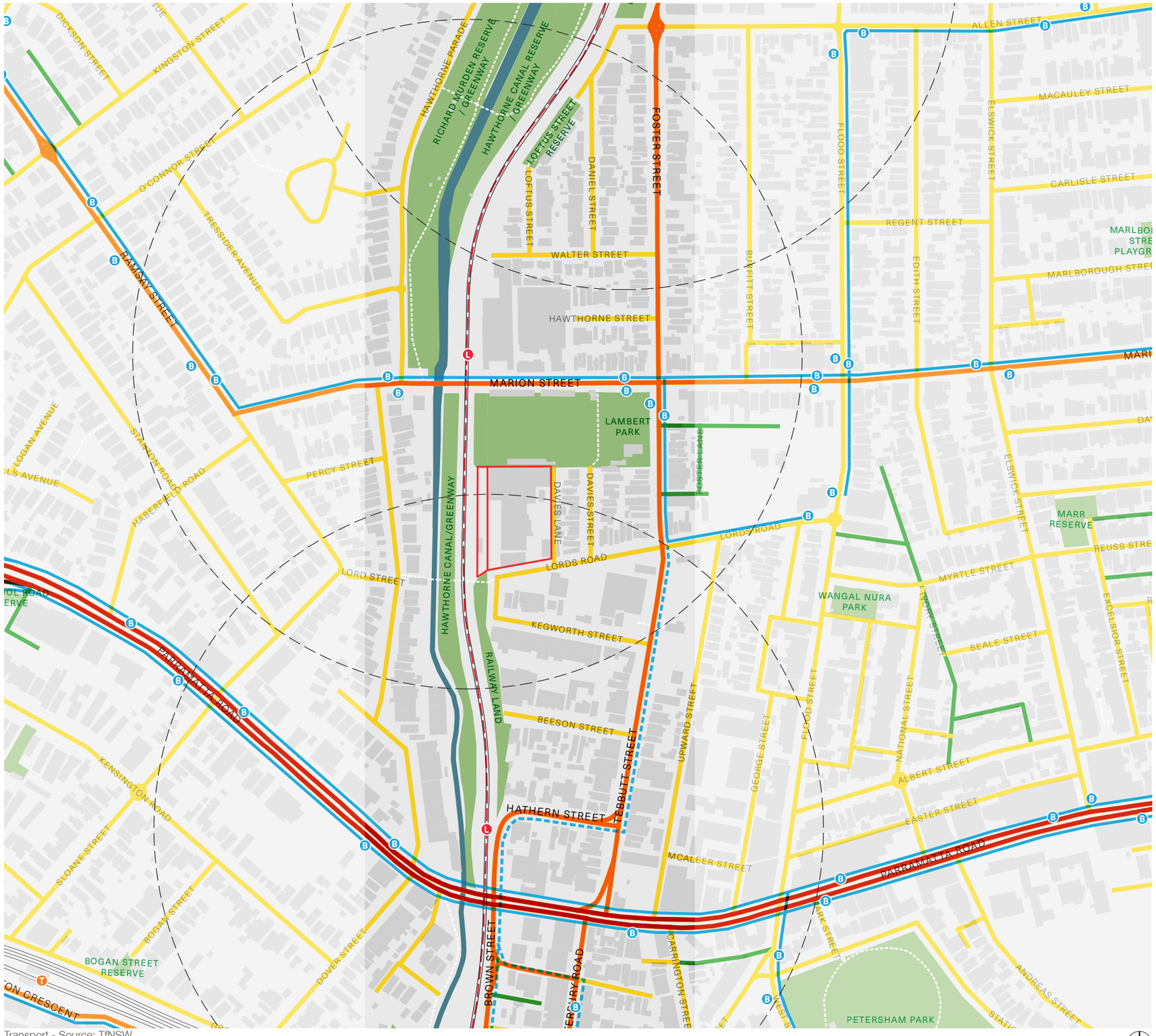
- Acoustics/vibrations from the light rail will need to be considered to mitigate impacts

Opportunities

- Well connected to local and regional areas via a strong network of secondary and primary roads nearby
- Good public transport access with light rail and bus routes

KEY

	Site Boundary
	400m Buffer from Light Rail
	Primary Road
	Secondary Road
	Local Road
	Service Lane
	Bus Route
	School Bus Route
	Light Rail
L	Light Rail Stop
B	Bus Stop



Transport - Source: TfNSW
Road Hierarchy - Source: Spatial Services NSW

1:5000 @ A3

Contextual Analysis

Active Transport

The site is well connected to an active transport network, particularly given an on-surface bike lane that runs adjacent the site on Lords Road, connecting east-west towards Leichhardt and under the light rail.

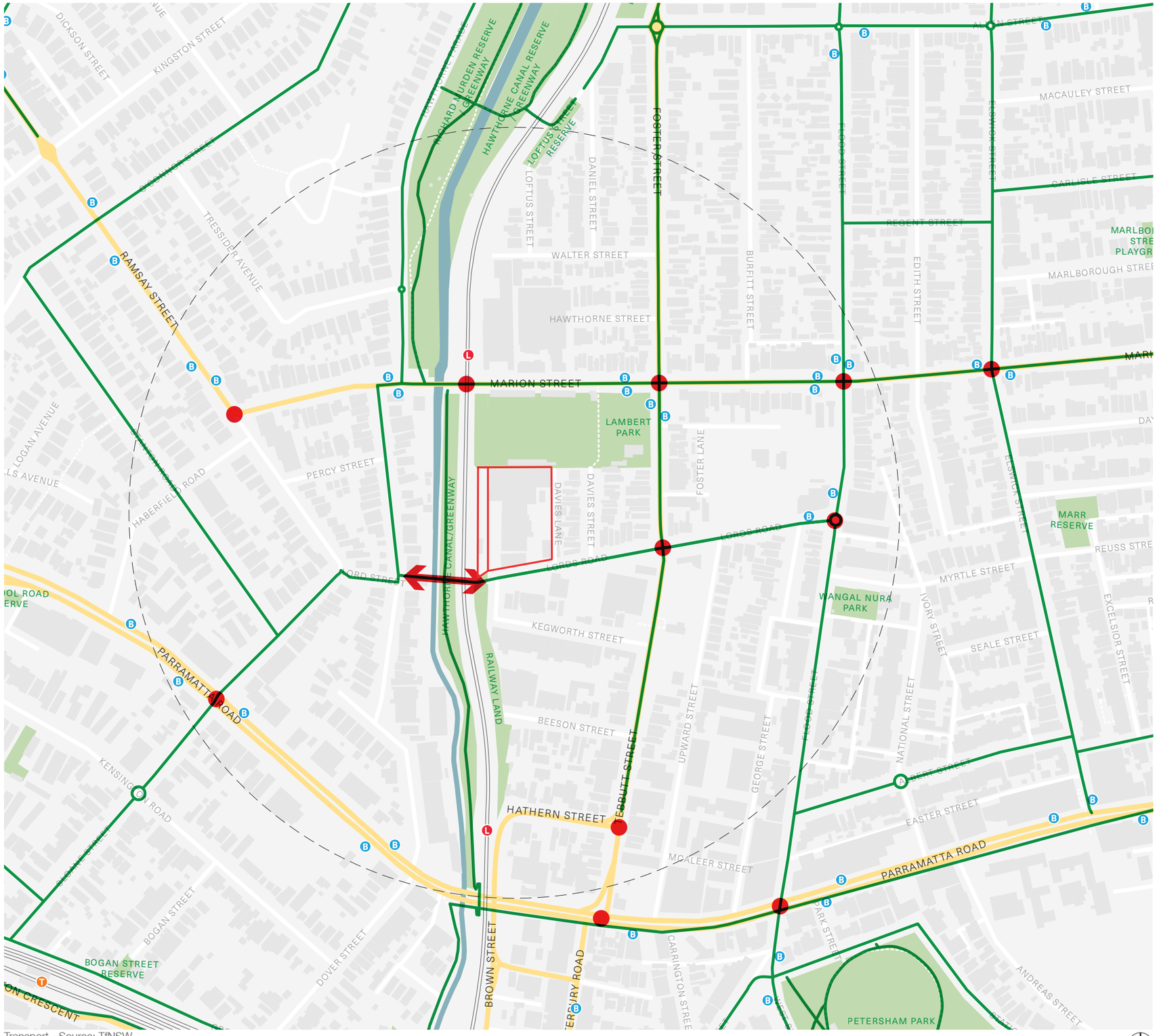
There are several pedestrian crossings around the area that aid in pedestrian accessibility across busy roads. A key pedestrian link immediately adjacent the site connects Lords Road to Haberfield and the Greenway under the light rail. This link is a strong pedestrian connections that is used throughout for the day for passive and active recreation and for commuters, particularly school children whom attend Kegworth Public School.

Constraints

- N/A

Opportunities

- Direct access to active transport network via Lords Rd cycleway that connects east-west
- Key east-west pedestrian link under light rail is immediately adjacent site. Ability to activate this more and provide internal amenity would increase walkability



KEY

▭	Site Boundary
◌	400m Site Buffer
▬	Cycleway
●	Pedestrian Crossing
↔	Key Pedestrian Link

Transport - Source: TfNSW
Road Hierarchy - Source: Spatial Services NSW

1:5000 @ A3

Contextual Analysis

Existing Street Sections

The existing streetscape of Davies Lane is predominantly characterised as a thin laneway with limited mobility. The laneway abuts the sites eastern boundary on one side whilst the other side is the rear boundary line and garages etc. for the neighbouring properties.

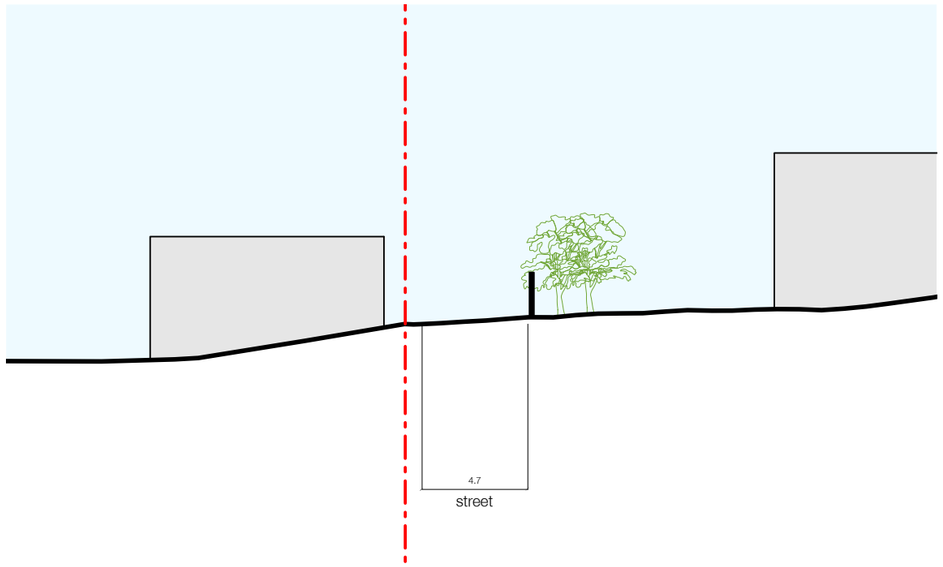
Lords Road is a very wide local road with varied setbacks to properties and typical street landscaping with grass verges and footpaths. There is some street tree planting along Lords Road however it is not consistent.

Constraints

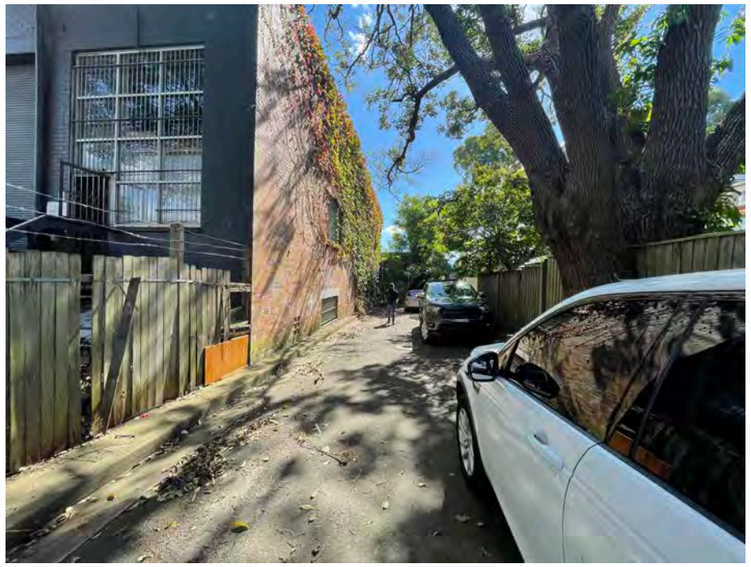
- Tight width of Davies Lane and backing onto rear of properties will need to be considered

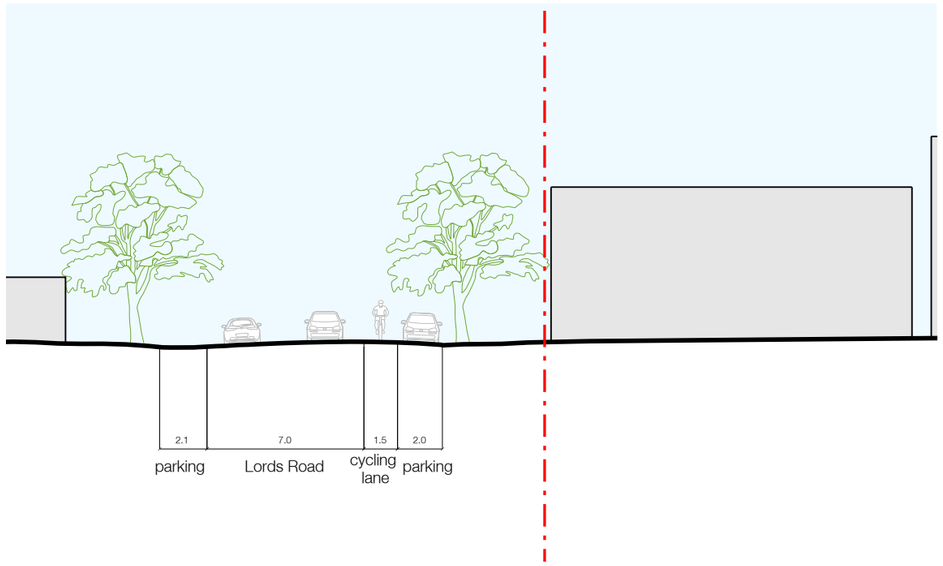
Opportunities

- Davies Lane is poorly activated and could be improved with streetscape interventions
- Width of Lords Road will aid in reducing impact on neighbouring properties and streetscape
- Additional street trees on Lords Road



Davies Lane





Lords Road

3.4 Built Form

The existing surrounding context is predominantly 1-2 storey residential dwellings with some 3-4 storeys buildings in scattered locations.

The site contains a mix of buildings of varying architectural styles within an industrial setting. Brick walls and metal roofs feature heavily on these buildings. None of the buildings or the site have any associated heritage elements however do have some redeeming qualities which may be renewed or recycled within a new development.

There is one nearby high density residential development that showcases a height range of 6-10 storeys spanning a large block close to Parramatta Road. This development demonstrates a good approach to height transition, architectural expression and materiality that aids in maintaining the existing local character and minimises impact on neighbouring properties.

The PRCUTS recommended controls see uplift to the neighbouring blocks from the existing 1-2 storeys to 3-5 storeys. This aids in establishing a height transition from the east to the west. The character principles for Lords Road in the PRCUTS Fine Grain Study also suggest that height can transition up to the Greenway which would include this site.

Constraints

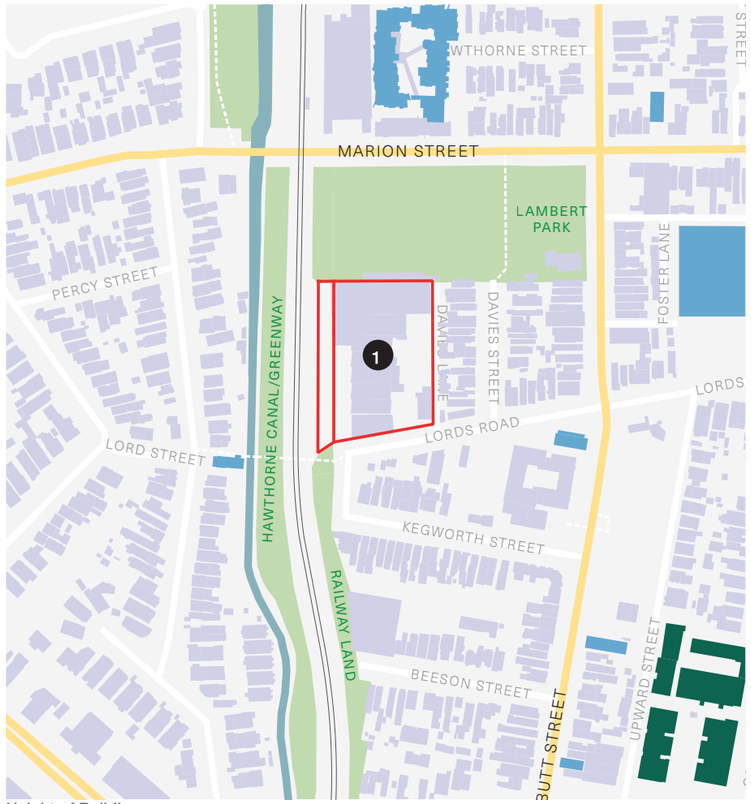
- Existing surrounds is predominantly 1-2 storeys. Approach to height and transition will need to be considered
- Heritage Conservation Area to west needs particular consideration to reduce visual impact

Opportunities

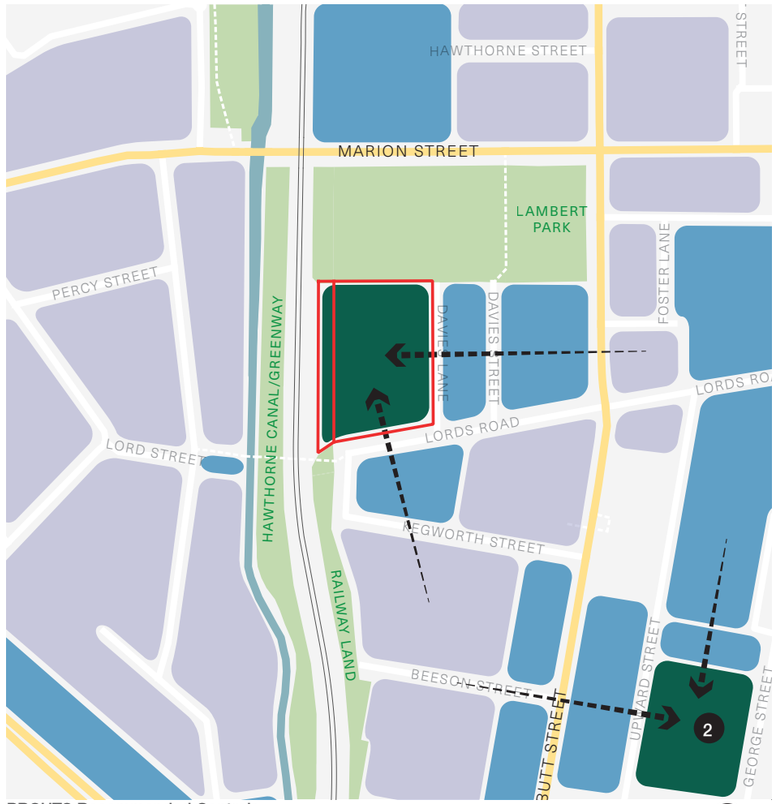
- Nearby high density development demonstrates a good example of height transition and materiality that responds well to the local character
- PRCUTS recommends height increases to neighbouring blocks to establish a height transition

KEY

- Site Boundary
- 1-2 Storeys
- 3-5 Storeys
- 6+ Storeys



Height of Buildings
Buildings - Source: Geoscape 2022



PRCUTS Recommended Controls
Buildings - Source: PRCUTS

NTS

Existing Site Buildings
Image - Source: MetroMap 2016

Nearby High Density Development
Image - Source: MetroMap 2016

3.5 Local Character

The existing local character is diverse but well established. Along Lords Road, there is a mix of medium to high quality dwellings with various styles and materiality. Brick tends to feature heavily across the local area but with no particular colour. There is one recent development on Lords Road, a dual occupancy adjacent to Kegworth Public School. Most dwellings have a 3-4m front setback and are predominantly single-storey.

Kegworth Public School is the largest building in the area with a 2-storey (but a tall as 3) structure on the corner of Lords Road and Tebbutt Street. The school has an older style and aesthetic with painted brick/stone on some buildings and a more recent red brick building towards the site.

Davies Lane is a rear lane providing garage parking and entrances to private open space for properties with an address to Davies Road. The materials and style here are very diverse with a range of brick and metal colours that appear to have been completely developed adhoc. They have a 0m setback along the laneway, directly fronting onto the road surface.

The landscape character along streets is typical with a green verge and established tree planting in most places. A small green space alongside the light rail, directly adjacent the site has no embellishment. The Greenway is a more tropical atmosphere with large overhanging trees and various low-scale planting.

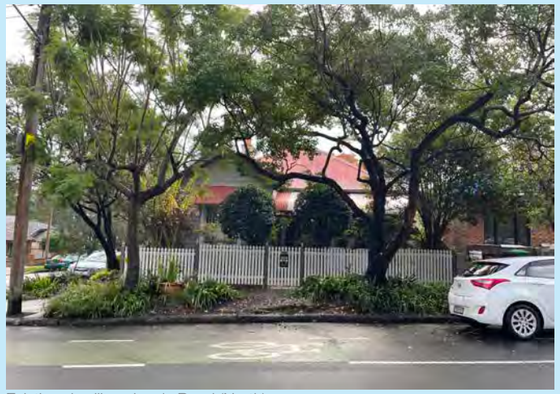
Constraints

- Established character will need to be considered in the short-term to mitigate impacts

Opportunities

- Davies Lane frontage is generally poorer quality and could be improved with increased setbacks and replacement trees

Built Form


Existing dwellings Lords Road (North)


Existing dwellings Lords Road (North)


New dual occupancy development on Lords Road (South)


Corner of Lords Road and Davies Street (looking towards site)


Kegworth Public School on Lords Road (South)


Garages and rear access on Davies Lane

Landscape


Corner of Lords Road and Davies Street (looking towards site)


Kegworth Public School on Lords Road (South)


Garages and rear access on Davies Lane

3.6 Constraints and Considerations

The following constraints have been formed through the contextual analysis. They have been consolidated to a series of categories that will carry through to the urban design principles.

Amenity Impacts from Lambert Sports Field

1	Light spill and glare from light towers
2	Noise from events, both day and night
3	2-storey blank facade of grandstand immediately abuts the northern boundary

Existing Trees

4	If trees are to be retained, setbacks along Davies Lane and Lords Rd will have to substantially increase

Topography and Flooding

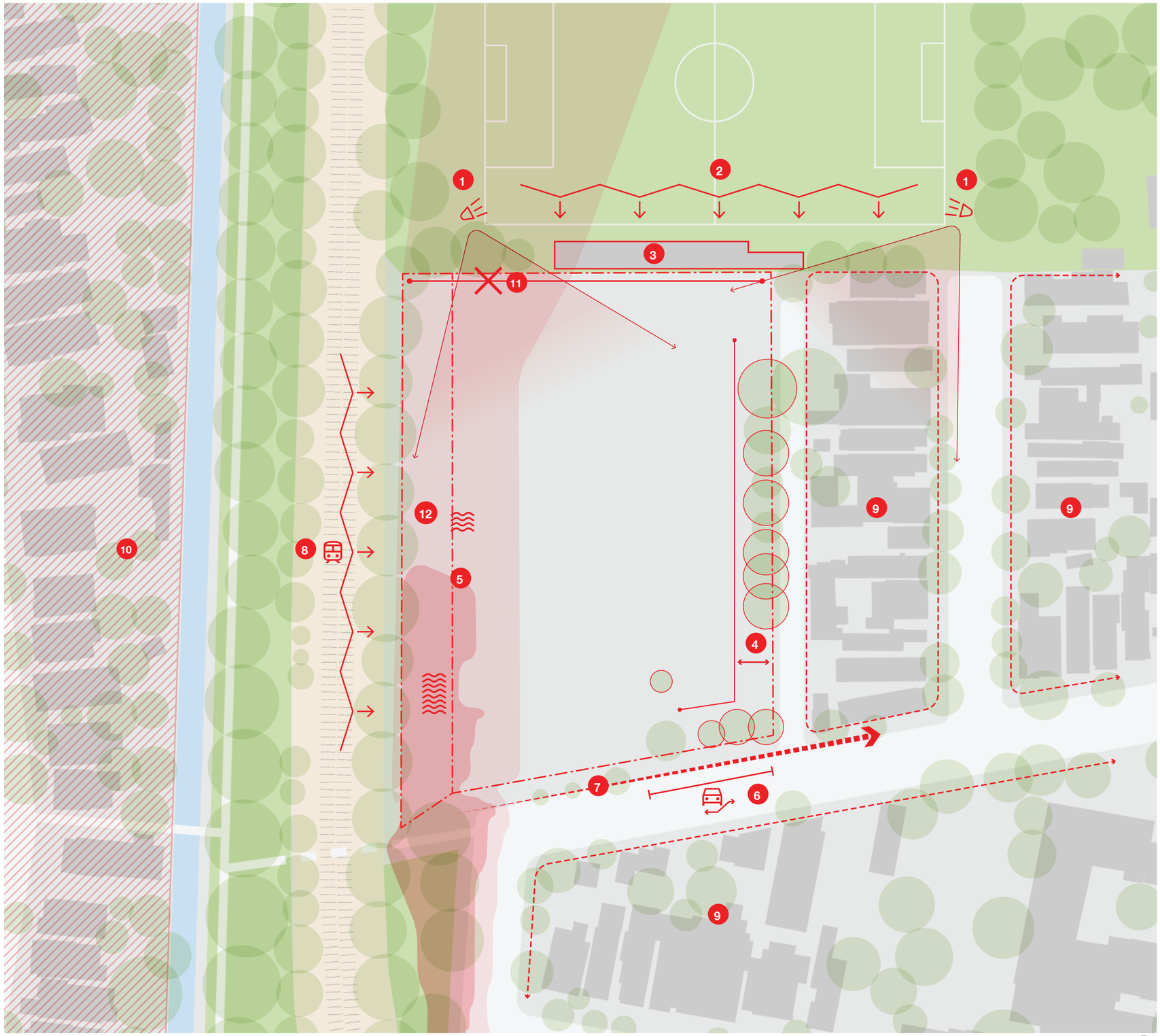
5	Flood hazard areas require a minimum FFL of 4.55 (~1.5m above min. existing level)
6	Flood hazard requires carpark entrance t a minimum RL 6.75 thus limiting entrance to the south-east corner of the site
7	Steep slope along Lords Road and internally will need to be managed to aid in accessibility

Light Rail Noise and Vibrations

8	Noise and vibrations along the western boundary will need to be mitigated with the proposed built form

Interface with Surrounding Areas

9	Existing surrounds are predominantly 1-2 storeys and will need to be considered for solar/visual impacts in the short-term
10	Heritage Conservation Area to the west will require particular attention to limit overshadowing and visual impact
11	Current hard edge to northern boundary lacks permeability
12	Lot 1 / DP550608 which forms the western edge of the site is required to be provided as RE1 Public Recreation



1:1000 @ A3

3.7 Opportunities

The following opportunities have been formed through the contextual analysis. They have been consolidated to a series of categories that will carry through to the urban design principles.

Strong Amenity and Connectivity

1 Within walking distance of shops and shopping centre at Flood/Marion Streets and Leichhardt Marketplace. Also within short drive of other town centres

2 Within walking distance to local school and childcare

3 Within walking distance of multiple public transport options including bus and light rail

4 Direct access to dedicated bike lane

Potential New Connections

5 Lambert Park Sports Field could accommodate a extension of the through-site link to be provided as RE1 Public Recreation along the western edge of the site

Access to Open Space

6 Direct access to the Greenway open space corridor which connects directly to multiple additional open spaces

Ability to Increase Local Streetscape

7 Reducing hard stand can help increase tree canopy and deep soil within the site

8 Ability to replace existing trees with improved planting will create better outcomes

Built Form Controls Respond to Character

9 There are some redeeming qualities of the existing buildings that may be incorporated as architectural expression in a new scheme, even without explicitly keeping the existing building

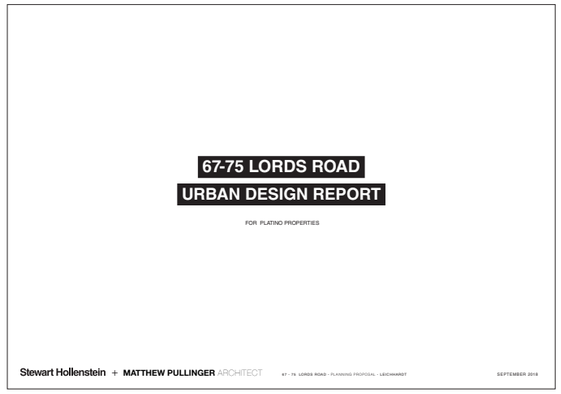
10 PRCUTS recommended heights for surrounding blocks will enable an adequate height transition

1:1000 @ A3

Previous Scheme & Recommendations

4

4.1 Urban Design Proposal

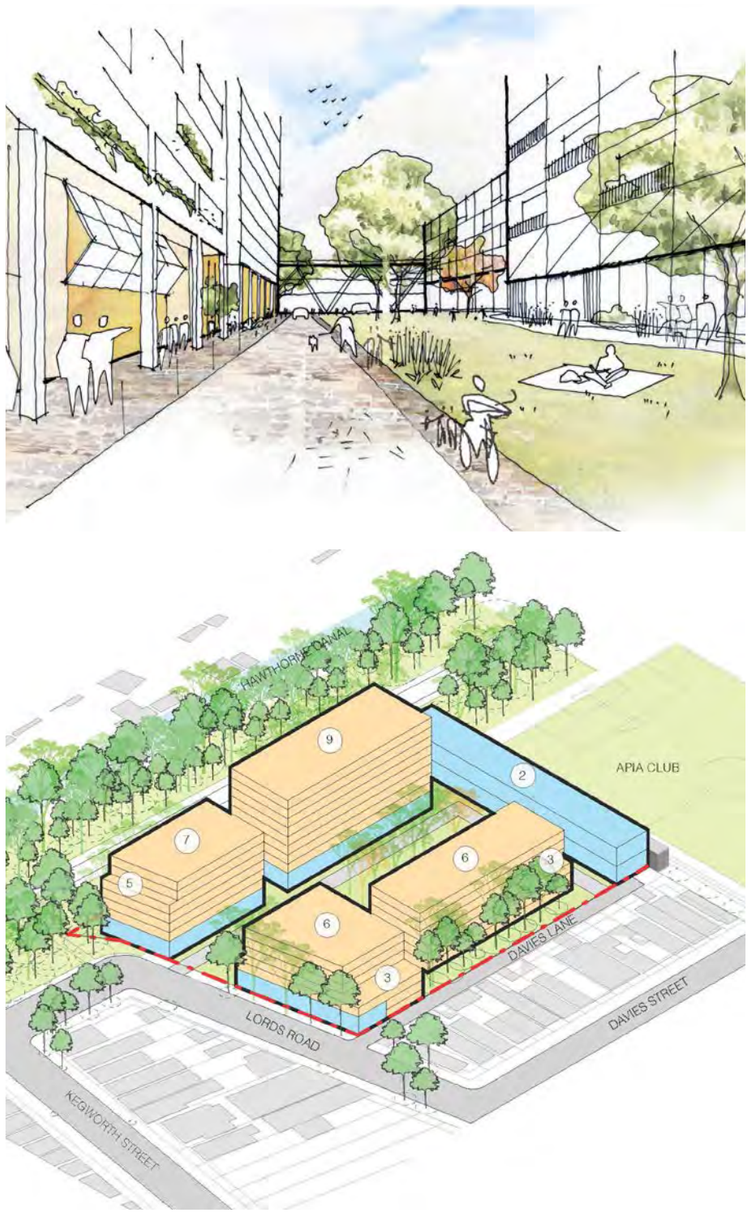


67-75 Lords Road Urban Design Report

Stewart Hollenstein + Metthew Pullinger Architect 2018

The previous urban design scheme for the site was prepared in 2018. It featured predominantly non-residential uses at ground floor with an internal public open space with multiple through-site links and proposed connections. The maximum building height was 9 storeys with a proposed maximum building height of 35m AHD - different to the PRCUTS height of 30m (above ground). The scheme exhibited an FSR of 2.4:1 in accordance with PRCUTS.

The proposal included a minimum of 3,000sqm non residential uses and approx. 235 dwellings.



4.2 Peer Review & Recommendations

Urban Design Peer Review

Conybeare Morrison (CM+) 2018

As part of Council's assessment of the Planning Proposal, Council enlisted an Urban Design Peer Review to provide input to the quality and intended outcomes of the scheme and provide recommendation for creating a an outcome more aligned to Councils desires.

The review provides a mixed review of the scheme with both positive comments and also recommendations for changes. It notes that the recommended changes would substantially alter the scheme and most likely cause it to be incapable of meeting the desired FSR of 2.4:1.

Some of the review recommendations included such things as the schemes retention of employment uses at ground floor, improved connectivity and permeability and the addition of residential.

The Peer Review provided a series of recommendations primarily targeted at the proponent to clarify and alter the urban design scheme and proposal. These have been consolidated within similar categories. These recommendations and categories have been listed to the right (yellow). These will be used to assess the proposed urban design scheme to ensure it meets the peer review expectations for the site.

Key Takeaways

The proposed height of 35m AHD is not aligned to the PRCUTS height of 30m.
2.4:1 FSR not achievable with the recommended changes to setbacks/height etc.
The suggested use of the central open space as public is not the likely outcome and will seem more privatised than community oriented
Suggests retention of trees on corner of Davies and Lords
Suggests view impact study be undertaken. Provides view locations.

Conclusion states pros

- Retention of employment uses
- Improved site permeability
- New residential offering
- Landscape and access initiatives

6M Setbacks

1	Further setbacks are to be introduced for the proposed building at the corner of Lords Road and Davies Lane; to mitigate the scale and to protect the existing mature trees along the Lords Road frontage (6m for Davies Lane & 3m For Lords Road)
2	A further ground level setback between 3m and 7m to Davies Lane is recommended to accommodate a minimum 3m footpath and landscaping

Residential Amenity

5	Review ADG building separation to ensure buildings and DCP reflect the minimum required. Also ensure all buildings achieve appropriate ADG cross ventilation and solar access
6	Minimise overshadowing of the central open space
7	Draft DCP should reflect individual residential dwellings at ground along Davies Lane

Open Space & Public Domain

6	Proponent to clarify traffic circulation strategy and confirm minimum clearance requirements
7	Confirm if a connection along the western boundary is in line with the Greenway masterplan
8	Proponent to clarify intended users of the central open space and extent of roof top gardens and communal open space for residents
9	Proponent should not present the open space as serving the wider community, but rather as the benefit for residents, commercial tenancies and community users of the site
10	Retain the row of trees at the Lords Road and Davies Lane corner to provide screening of the new development. Arborist advice should be sought to confirm conditions for longevity

Interfaces

11	Draft DCP should provide development controls that address roof form and building materiality, in line with the PRCUTS guideline
12	Before and after photo montages are to be prepared to assess visual impact. Eight vantage points have been identified
13	Provide articulation for long buildings to reduce scale

Proposed Controls

14	It is recommended to retain the maximum height limit for the site at eight storeys. A 30m height limit as indicated in the PRCUTS would provide adequate height
15	Test if an FSR is still appropriate for the site given the proposed built form recommendations
16	The proposal is to be reviewed from a socioeconomic viewpoint, as Criteria 1 of the PRCUTS Out of Sequence Checklist requires that the planning proposal demonstrate significant net community, economic and environmental benefits

Design Principles

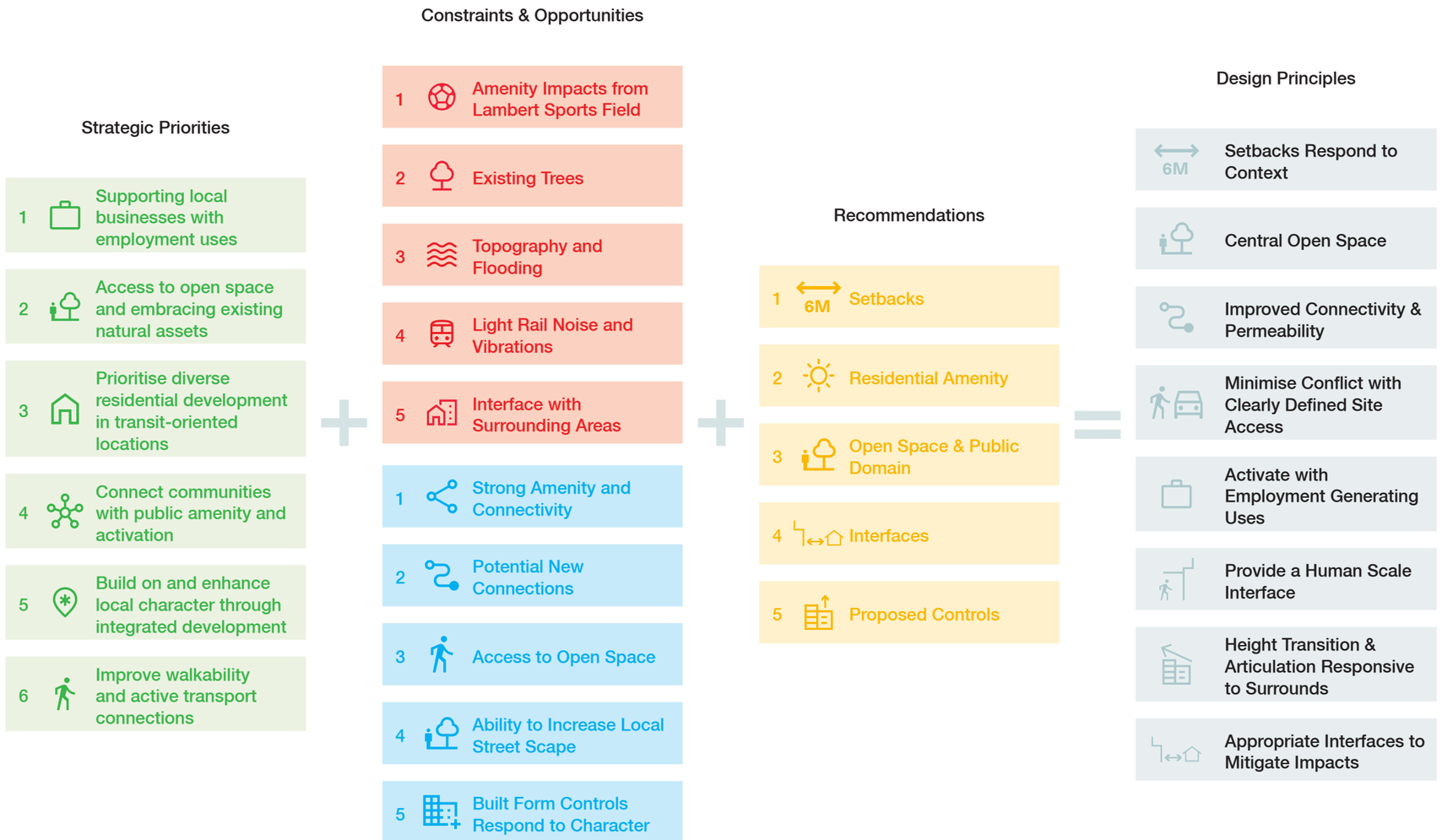
5

5.1 Development of Principles

The design principles have been generated through the combination and consolidation of all the criteria of assessment that was discovered through the strategic policy review, context analysis and previous urban design scheme review. The intent is that these principles will guide future built form and design across the site.

Each design principle responds to a number of the factors from each of the priorities, constraints, opportunities or recommendations. Collectively, they respond to all of these, creating a holistic response to the site that the urban design scheme can use to build a fully responsive proposal.

The following pages expand on the design principles and show which of each criteria they respond to and how.



5.2 Design Response

Principle

Setbacks Respond to Context

The edge conditions of the site require setbacks that are responsive to each individual requirement. Various environmental and spatial impacts such as the light rail, noise and light from the sports field, trees and prevailing setbacks will need to be taken into account within the proposal. Utilising setbacks will help reduce bulk and scale of development and respond to the existing neighbours.

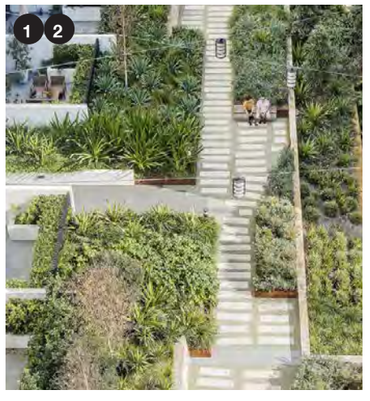
Design Response

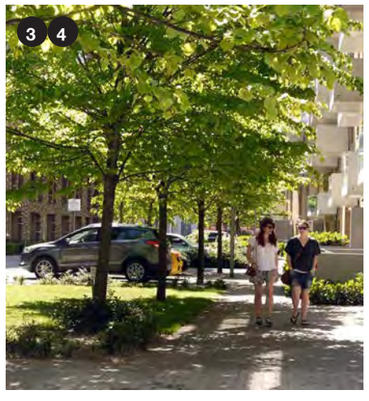
1. A 3m articulation zone is provided along the western boundary to interface with the open space
2. Min. 6m setback along the northern boundary to provide space for a private through-site link and to buffer from the noise of the sports field and the back of the grand stand. A 3m upper level setback also helps to reduce visual bulk along that edge and impacts on the sports field
3. Min. 6m setback along the eastern boundary to accommodate trees, footpath and landscaping. A 3m upper level setback also provides good separation to reduce bulk and scale along Davies Lane, reducing impact on neighbouring low density properties
4. Min. 6m setback along the south-eastern corner to provide for trees and landscaping and to reduce bulk on the corner creating an inviting presence at street level
5. 0m setback to the south-west corner to provide a strong street presence along Lords Road that is aligned to the existing front setback. An upper level setback of 6m brings the building in line with the eastern corner and reduces street scale along Lords Road.

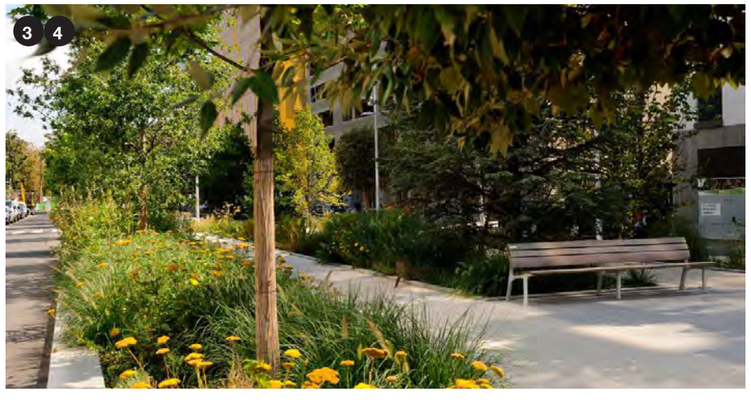
Responds to:

Strategic Priorities	Constraints	Opportunities	Recommendations
1	1 ✓	1	1 6M ✓
2 ✓	2 ✓	2 ✓	2
3	3	3	3 ✓
4	4 ✓	4 ✓	4 ✓
5 ✓	5 ✓	5 ✓	5
6			

Examples







KEY

- Site Boundary
- Open Space
- Connection
- Setback
- Upper Level Setback
- Noise

Design Principles

Principle

Central Open Space

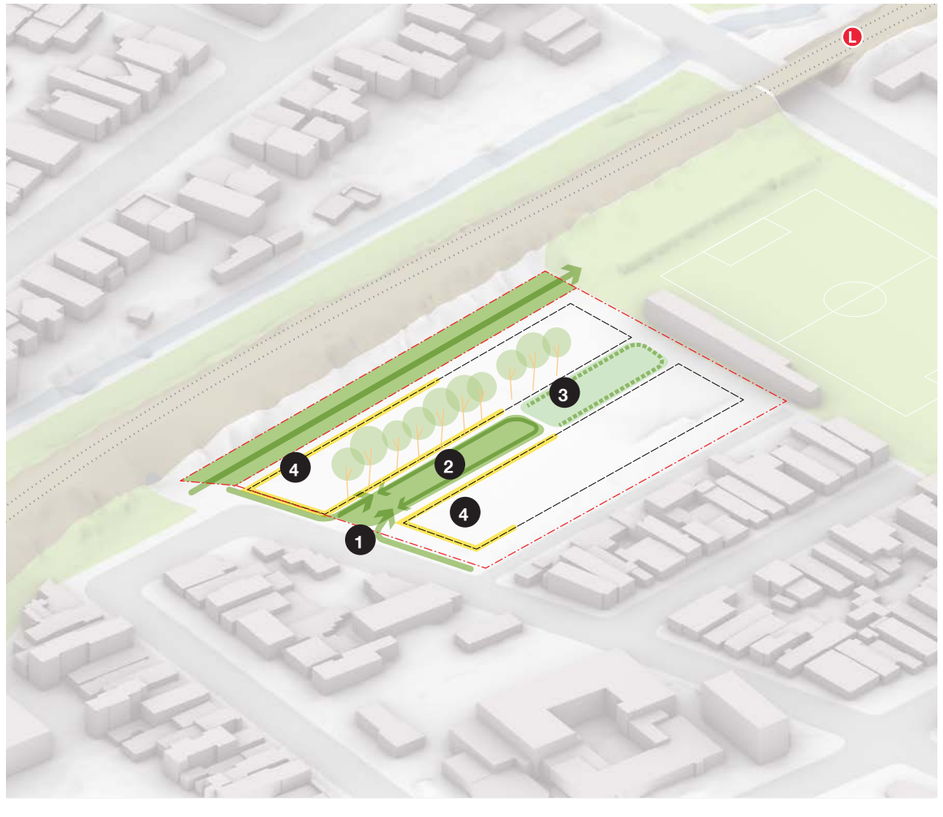
A central open space should be created to enhance the local street scape and provide deep soil and tree canopy. This open space would be oriented towards Lords Road to create a sense of openness and inviting nature. The perception of this space should be public with a mix of active uses such as a playground and passive spaces for people to relax.

Design Response

1. The open space fronts directly onto Lords Road with it's full width to draw movement into the site. The increased setback on the south-east corner allows a strong visual link from that direction.
2. A primary area will be a publicly accessible private open space with adequate deep soil and tree canopy to create a safe and welcoming environment. It will host passive and active (childs play) spaces.
3. Deeper into the site a secondary open space will provide communal open space for residents at ground floor. This will also host deep soil and tree canopy
4. The edges of the primary open space will be activated at ground with active uses, particularly at corners to draw movement, and supported with passive surveillance from residential dwellings above ground. These building pads will be used to mitigate flood impacts and the open space will handle level change between them

Responds to:

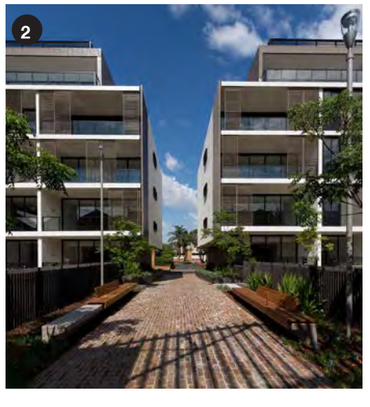
Strategic Priorities	Constraints	Opportunities	Recommendations
1	1	1 ✓	1 6M
2 ✓	2	2	2
3	3 ✓	3 ✓	3 ✓
4 ✓	4	4 ✓	4
5	5	5	5
6 ✓			



KEY

- Site Boundary
- Primary Open Space
- Secondary Open Space
- Footprint Zone
- Active Edge

Examples



Design Principles

Principle

Improved Connectivity & Permeability

Improved permeability through the site and connectivity with surrounding places will allow the proposal to stitch into the existing neighbourhood and improve access to key local amenity. Connections through and beyond the site will draw people in, creating activity and a central gathering space.

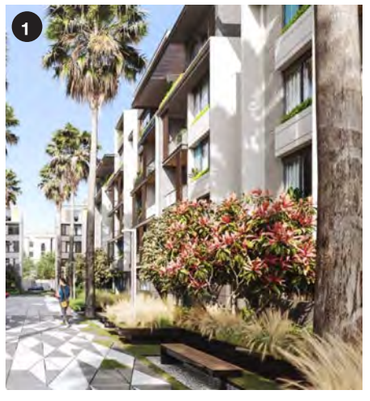
Design Response

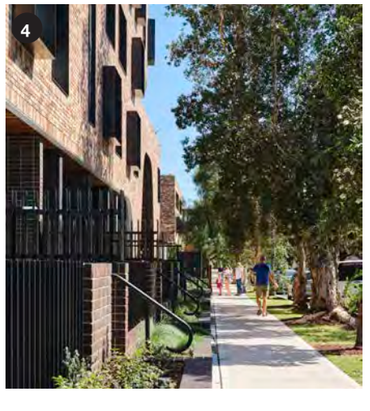
1. Proposed potential future connection along the western boundary and through Lambert Park Sports Field connecting to Marion Street Light Rail. The new RE1 land within the site will facilitate the start of this connection
2. Min. 9m through-site link mid-way through the block to create a connection east-west and additional entry points. This laneway would be activated with non-residential uses at ground
3. Draw movement in from the Lords Road frontage at a central point of the site. Either side of this space is flanked by buildings to create enclosure
4. Provide a secondary connection along the eastern boundary to provide more room for Davies Lane and creating a setback to protect existing and future trees along this edge
5. Provide private through-site links along the north to provide direct access to residential at ground and communal open space

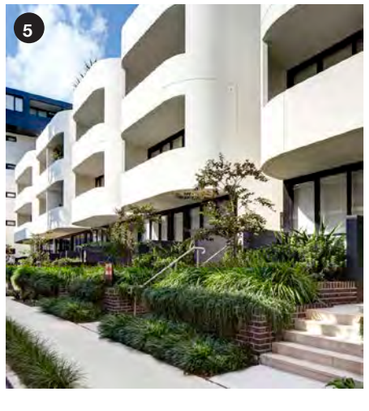
Responds to:

Strategic Priorities	Constraints	Opportunities	Recommendations
1	1	1 ✓	1 6M ✓
2 ✓	2	2 ✓	2
3 ✓	3	3 ✓	3 ✓
4 ✓	4	4	4 ✓
5	5 ✓	5	5
6 ✓			

Examples







KEY

- Site Boundary
- Primary Connection
- Secondary Connection
- Private Connection
- Footprint Zone
- Active Edge

Design Principles

Principle

Minimise Conflict with Clearly Defined Site Access

Vehicular access should be minimal and clearly legible to reduce conflict with pedestrian, prioritising active transport movement over car use. Car park entry/entrance should be from a singular point, most likely along the south-east corner due to flood requirements. The carpark should also have the height clearance to allow servicing in basement rather than at ground floor. A separate shared road may enter and exit the site from Lords Road only, providing an address to all properties and also reducing car use of Davies Lane for servicing the site.

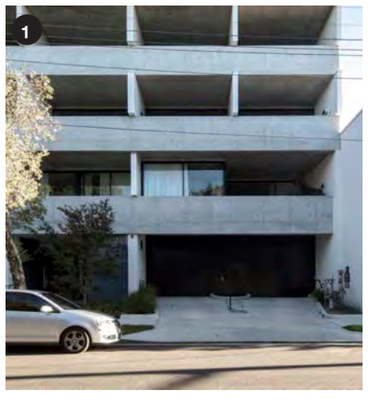
Design Response

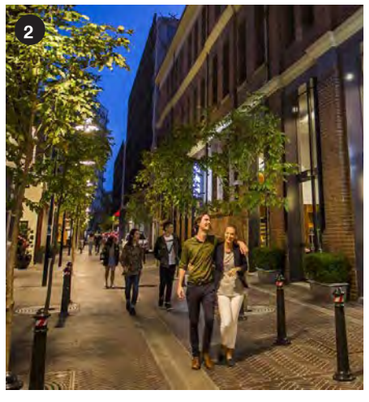
1. A singular carpark entry on Lords Road with clear height for servicing in a single level of below-ground basement parking. This provides for both residential move in day and for non-residential services, negating the need to use Davies Lane for servicing entirely. The entrance would be concealed, setback and activated on either side and the crossing would be a shared path to reduce impacts on pedestrian movement
2. A shared zone enters the central open space from Lords Road and terminates in a turning bay and few short-term parking spaces. This provides an address to the rear dwellings and provides space for pick-up/drop-off that is closer than Lords Road. The shared zone will be fully accessible and prioritised for pedestrians to create a safe and welcoming environment.
3. Residential lobbies are accentuated to provide clear legibility. These are located towards the east and west providing residents with dual access.

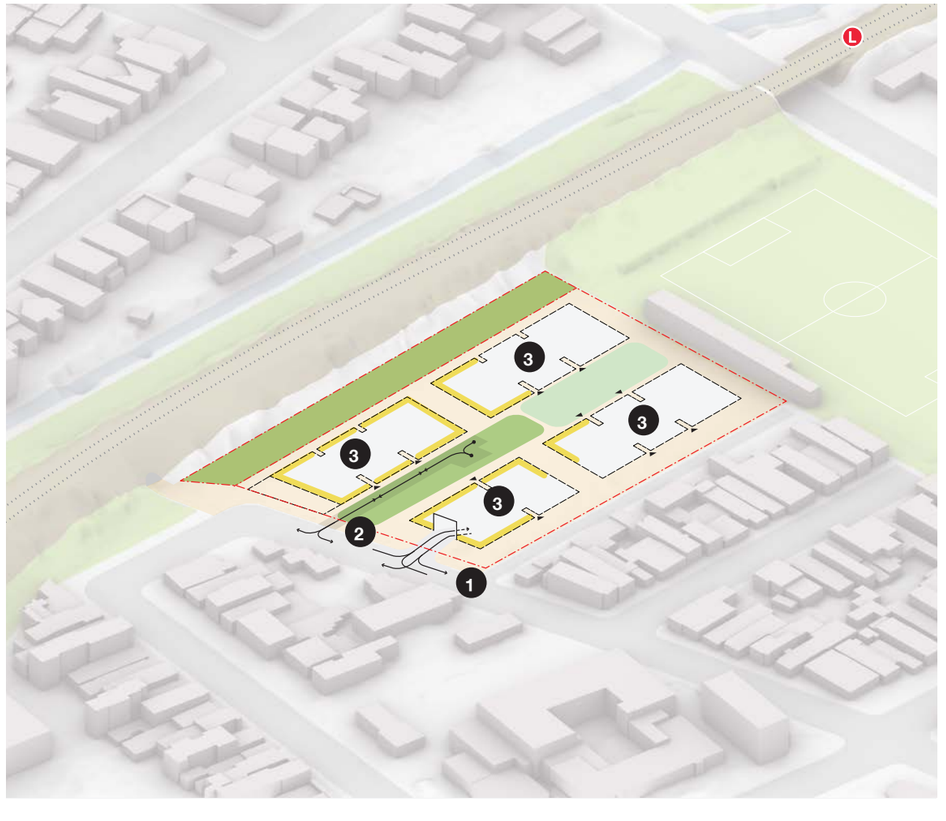
Responds to:

Strategic Priorities	Constraints	Opportunities	Recommendations
1	1	1	1 6M
2	2	2	2
3	3 ✓	3	3 ✓
4	4	4 ✓	4
5 ✓	5 ✓	5	5
6 ✓			

Examples







KEY

- Site Boundary
- Vehicular Movement
- Footprint Zone
- Residential Entrance
- Active Edge

Design Principles

Principle

Activate with Employment Generating Uses

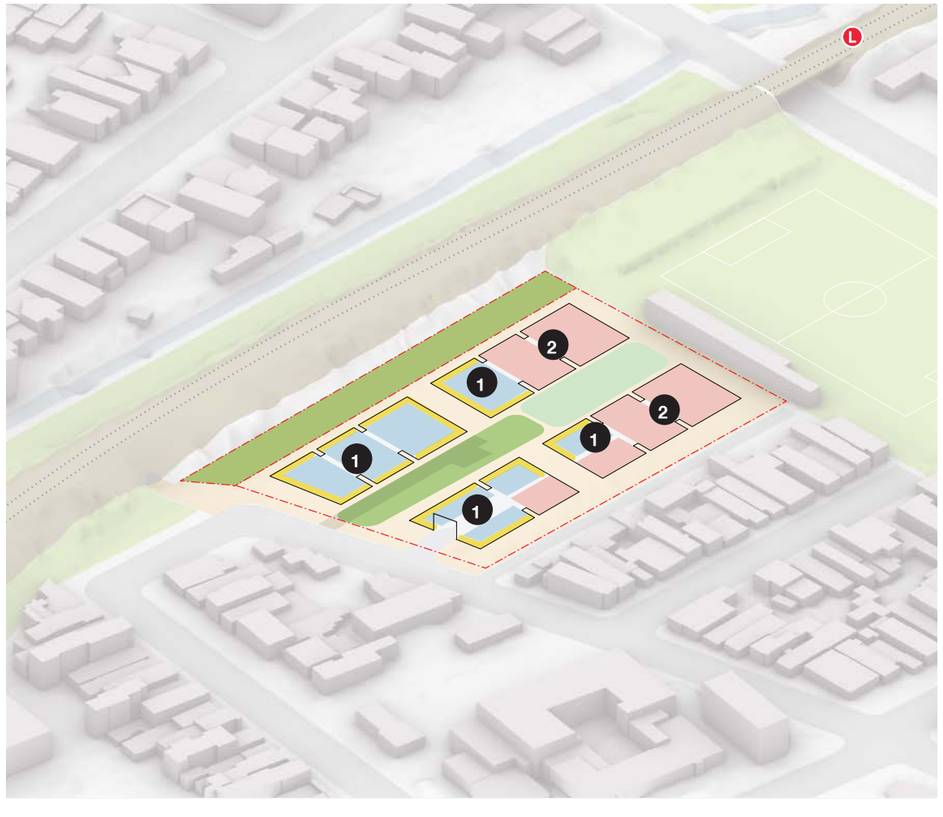
The central open space should be activated through the establishment of employment generating uses. These will provide strong public activation of that space, drawing people in and supporting local businesses. These non-residential units will be connected around the open space to create a community. The rear of the site should be maintained for residential uses to provide alternate activation at ground floor and limit depth of non-residential uses.

Design Response

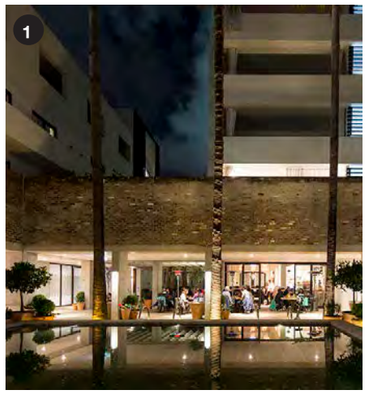
1. Non-residential uses are provided towards Lords Road and surrounding the courtyard. These uses would activate the central open space and RE1 Public Recreation area, and provide employment generating uses that support local business. Active frontages to these uses ensure that they are appropriately perceived as non-residential and create movement within the site. These non-residential tenancies will be designed as fully adaptable and flexible to accomodate a wide rnage of potential future uses.
2. Residential uses are maintained at the rear of the site, circulating the communal open space. These ground floor units have larger private terrace open spaces that provide articulation and scale to the buildings. They help activate the through-site links towards the outside of the site particularly at night, creating a safer environment.

Responds to:

Strategic Priorities	Constraints	Opportunities	Recommendations
1 ✓	1	1	1 6M
2	2	2	2
3 ✓	3	3	3
4 ✓	4	4 ✓	4 ✓
5 ✓	5 ✓	5	5
6			



Examples



KEY

- Site Boundary
- Non-Residential
- Residential
- Non-Resi Active Edge

Design Principles

Principle

Provide a Human Scale Interface

Making the site more pedestrian friendly means creating a human scale interface to any built form. Centrally, the built form should have a very low scale facing the courtyard to increase sky view and openness. Outward facing edges should respond to the street scale and aim to reduce bulk through upper level setbacks that respond to neighbouring areas that are existing and also any future potential developments.

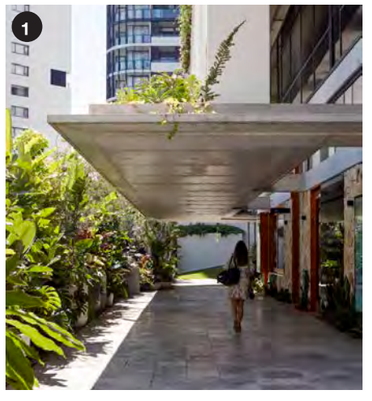
Design Response

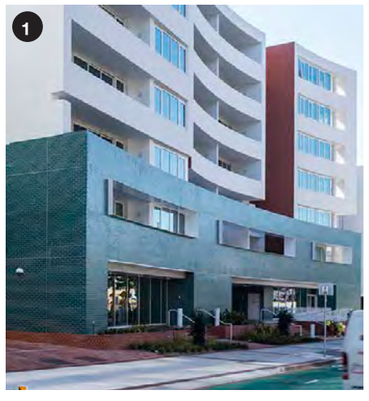
1. A 1-2 storey street wall that faces internally towards the open space provides a finer-grain human scale at ground floor. This would be facilitated through a 2-3m above ground setback that provides deeper residential terraces for further activation. The use of street canopies at ground will also aid in reducing scale whilst providing shade and reducing wind down wash, creating a more comfortable environment.
2. A 4 storey street wall for externally facing façades will be used to reduce street scale and bulk. An upper level setback of 3-6m along these edges will further reduce scale. This also helps to reduce visual impact and provide adequate articulation to satisfy ADG requirements.

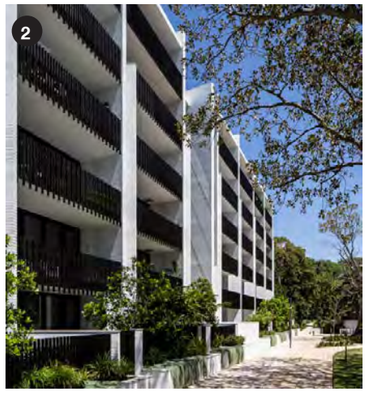
Responds to:

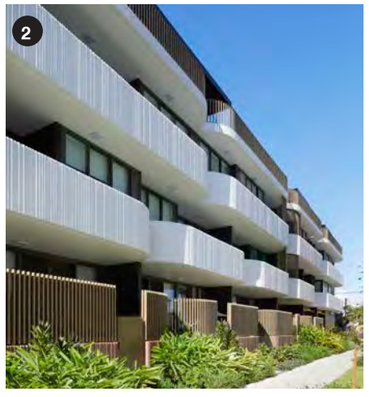
Strategic Priorities	Constraints	Opportunities	Recommendations
1	1 ✓	1	1 6M
2	2	2	2 ✓
3	3	3	3 ✓
4	4	4 ✓	4 ✓
5 ✓	5 ✓	5 ✓	5
6			

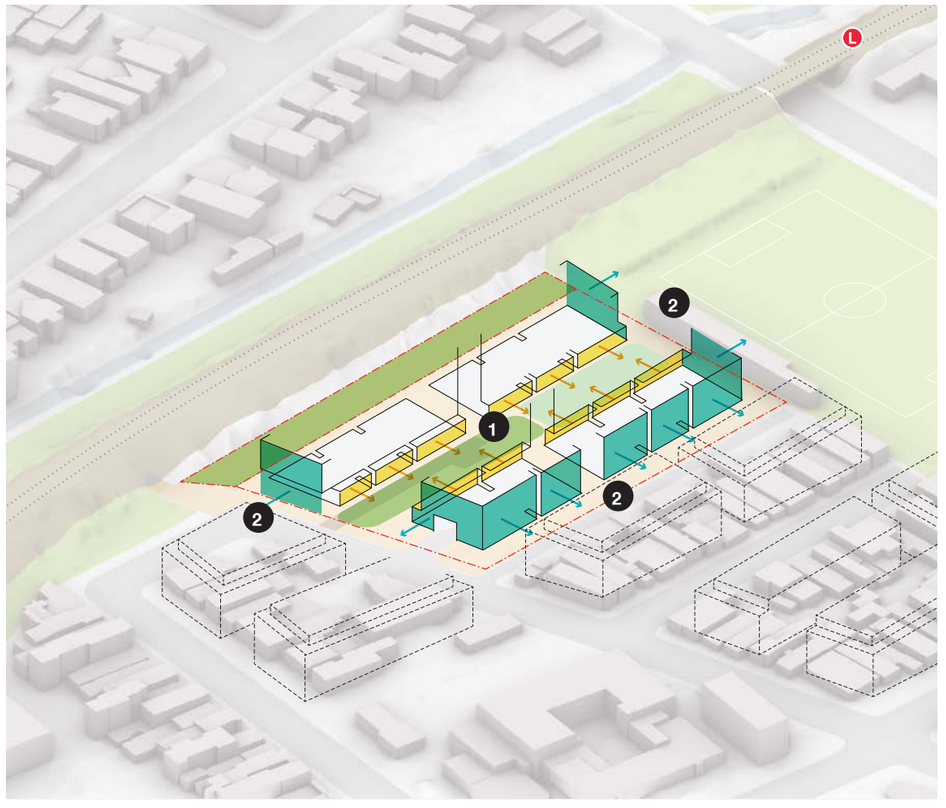
Examples











KEY

- Site Boundary
- 1-2 storey street wall
- 4 storey street wall

Design Principles

Principle

Height Transition and Articulation Responsive to Surrounds

Height should step up from the east to the west and provide stepped forms and setback from the south to the north to mitigate bulk and scale and to be responsive to surrounding areas. This should take into account additional proposed height for the surrounding blocks as advised in PRCUTS so that the built form is well placed within a future planning framework.

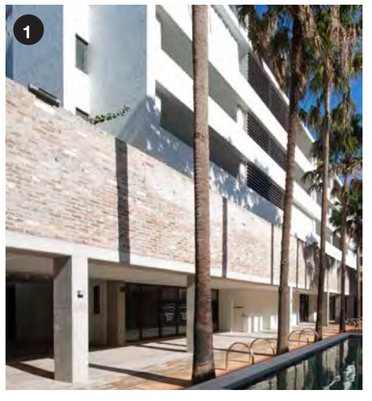
Design Response

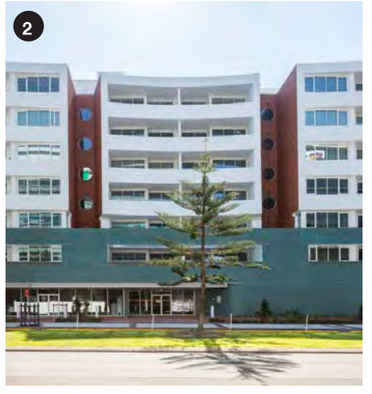
1. The 4 storey street wall would be accentuated through a material/style change, providing a heavier base to the building thereby reducing visual bulk and setting the street wall to match the surrounding heights that PRCUTS has recommended.
2. Vertical articulation would be emphasised to reduce horizontal scale and provide verticality to long building edges. This would allow the buildings to be momentarily perceived as individual blocks rather than one continuous frontage and the building would be more responsive to the fine-grain existing character of neighbouring properties
3. Combined, these architectural expression elements would reduce the bulk of the building and aid in creating a appropriate height transition in the short-term before neighbouring lots can develop. In the long-term, a maximum height of 8 storeys aligns with PRCUTS recommended height control of 30m and is only utilised along the western boundary, reducing scale in other areas of the site. A 6 storey limit to the east provides the height transition to neighbouring properties and a 4 storey street wall to the south provides transition in that direction.

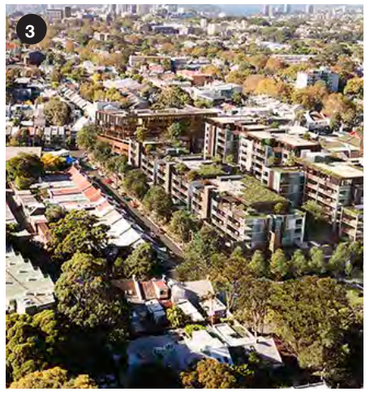
Responds to:

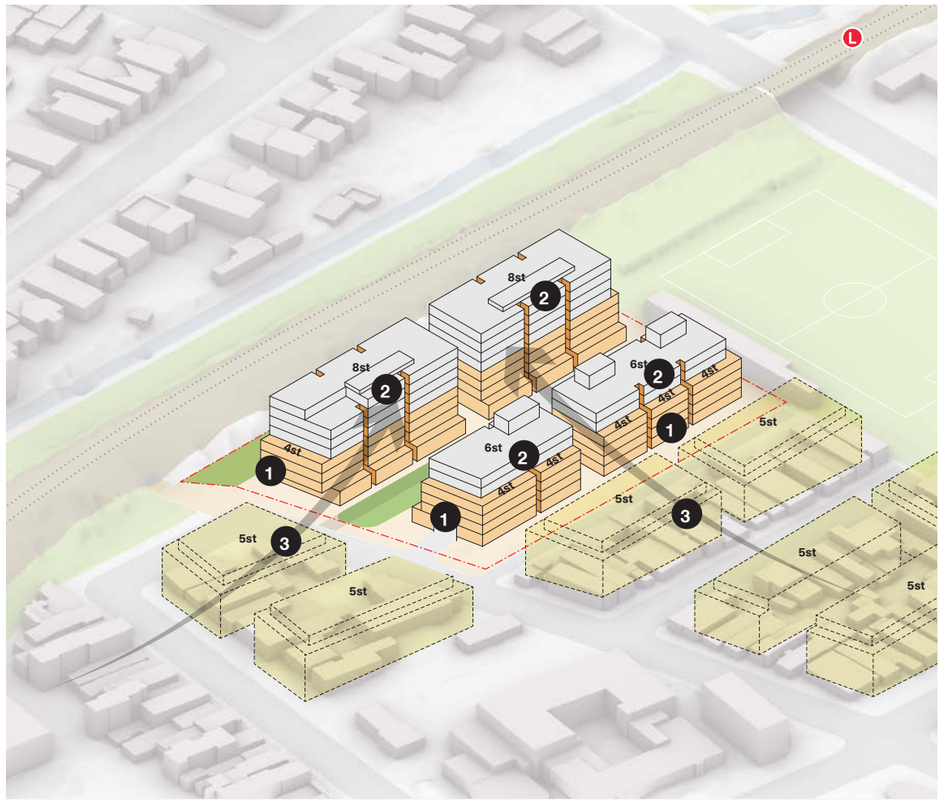
Strategic Priorities	Constraints	Opportunities	Recommendations
1	1	1	1 6M
2	2	2	2 ✓
3	3	3	3
4	4	4 ✓	4 ✓
5 ✓	5 ✓	5 ✓	5 ✓
6			

Examples









KEY

- Site Boundary
- Height Transition
- 4 storey Street Wall
- Vertical Articulation
- PRCUTS recommended buildings for surrounds

Design Principles

Principle

Appropriate Interfaces to Mitigate Impacts

Various edge conditions will need to be considered to appropriately respond to existing constraints imposed across the site. The northern interface will have to be designed to mitigate impacts of noise and light from the sports field, the west will need to mitigate noise from the light rail, and façades within close proximity to each other will need to be considered for internal and external building separation ADG compliance

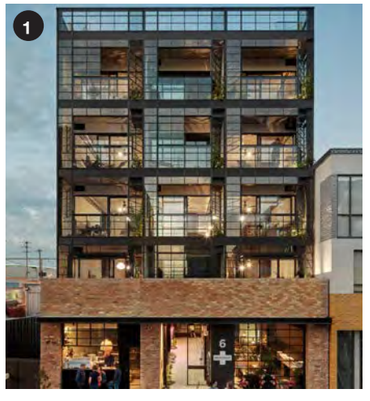
Design Response

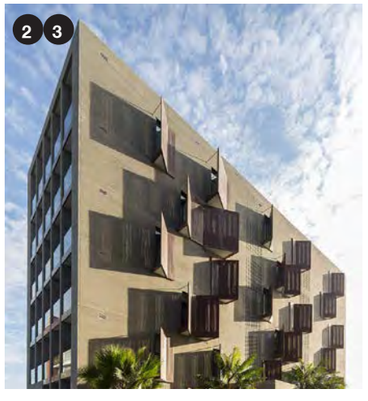
1. Façades facing the light rail will employ articulation to provide a noise buffer to the rail corridor. The raised rail corridor and trees along the site edge and the Greenway will help reduce visual impact of the largest facade in the development.
2. Northern facing walls will use architectural expression and articulation to direct views and openings away from the sports field. This is to reduce over-looking of the sports field and to mitigate noise and light spill from the field, particularly at night.
3. The internal façades along the mid-block through site link have a min. separation of 9m, thus requiring either non-habitable uses or articulation that limits direct views into opposing dwellings. There are various methods such as directional window slots and louvres that can be used to create a strong facade whilst still enabling habitable rooms.
4. Dwellings facing east along Davies Lane would be designed with balconies that reduce direct views into neighbouring private open spaces. This can be done via deep balcony setbacks and more solid elements that direct views whilst still maintaining internal residential amenity.

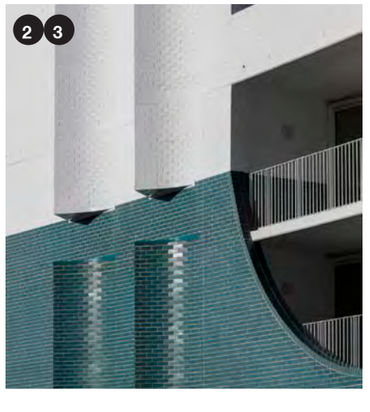
Responds to:

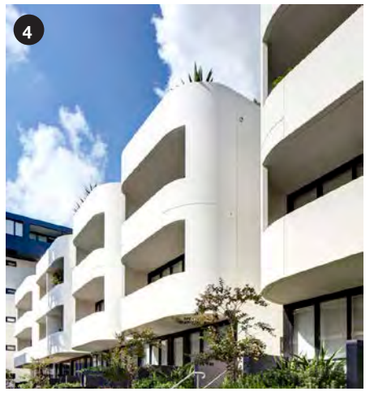
Strategic Priorities	Constraints	Opportunities	Recommendations
1	1 ✓	1	1 6M
2	2	2	2 ✓
3	3	3	3
4	4 ✓	4 ✓	4 ✓
5 ✓	5 ✓	5 ✓	5
6			

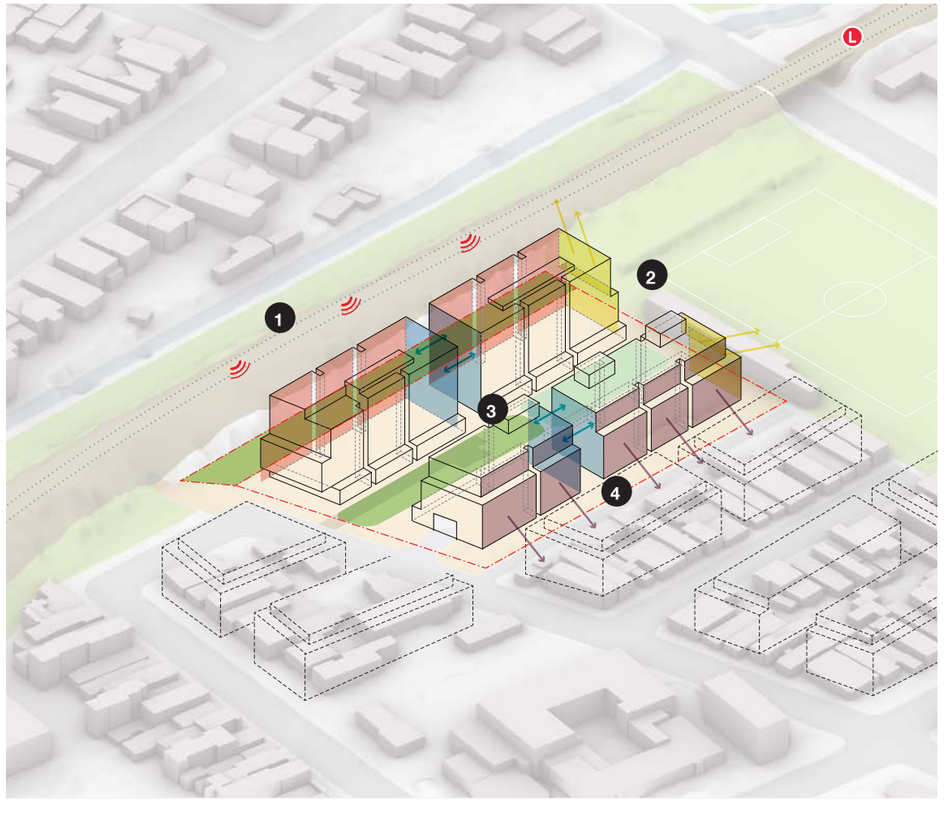
Examples











KEY

- Site Boundary
- Winter Garden Edge
- Directional Edge
- Enclosed Edge
- Non-Habitable Edge

Urban Design Scheme

6

6.1 Vision

Envisioned as a mixed-use intergenerational precinct, the proposal would generate vitality and activation for the site and to Lords Road and demonstrates Platino's commitment to the local community. It features improved pedestrian connectivity, permeability, streetscape, presence, open space and non-residential floorspace.

The ground floor would be activated by approximately 1,700sqm of non-residential floor space, providing for the local economy and encouraging movement within and through the site. Large non-residential spaces with high ceiling heights will be able to accommodate a diversity of uses to renew employment opportunities on the site. Activation could come from potential uses such as workshops, cafes, co-working spaces, creative outlets, wellness centres and boutique offices.

Approximately 210 dwellings will help generate long-term activation and help establish a strong community. An intergenerational approach has been envisioned that allows individuals, families, empty nesters, and key workers to coexist within the site. Co-working spaces will allow residents to work from home, whilst common areas, cafes and a playground will encourage socialisation and activity for young and old.

A publicly accessibly central courtyard supports the ground floor activation and residents. Fronting Lords Road, the courtyard aims to draw movement into the site and create a meeting place for the community. The courtyard is connected to the surrounding context via a series of public through-site links with the intent to connect to the Greenway, Davies Lane, a new RE1 public recreation open space along the western interface. This new open space could provide a potential future connection to Marion Street Light Rail via Lambert Park Sports Field to the north.

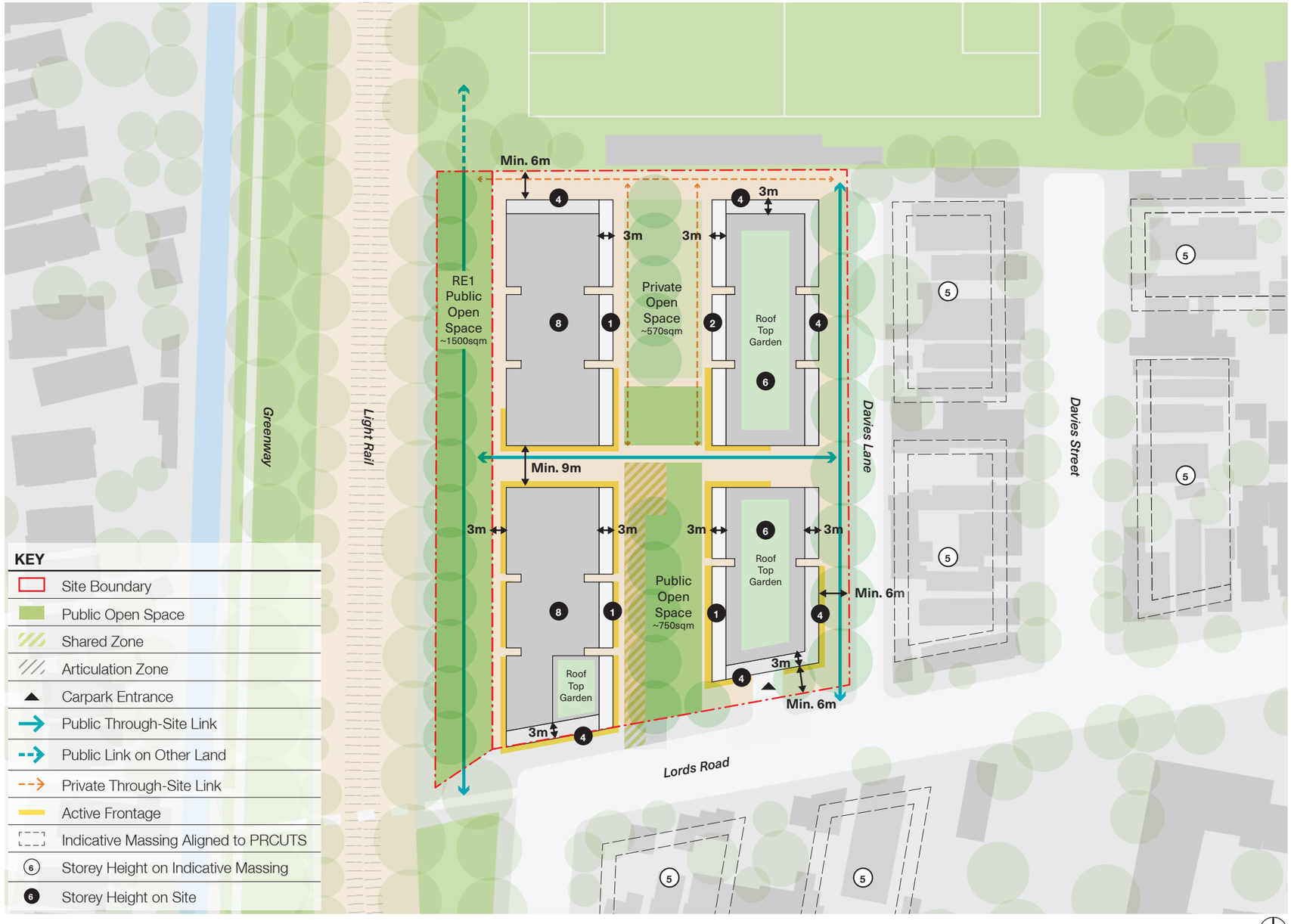
The design represents a holistic vision for the site that has been grounded in its response to strategic, local and place-specific requirements. A reference scheme has been prepared that demonstrates alignment with the proposed outcomes, controls and vision.

6.2 Concept Plan

The concept presents a scheme with 4 primary buildings. The central courtyard runs almost the full length of the site changing from public to private as it progress north. This open space is directly accessible from Lords Road and manages the level changes in the site whilst providing a diversity of spaces for relaxation and play.

The four primary buildings increase in height from 6 storeys to 8 storeys and each contain various levels of articulation at their edges to reduce bulk and scale and create a better interface with surrounding areas and landscape. Several through site links are provided enabling a much more permeable structure than currently existing on the site and providing potential connections to Marion Street and the Light Rail stop.

Existing		Proposed
52%	Site Coverage	42%
<5%	Deep Soil	min. 15%
5,500sqm	Non-Resi	1,700sqm
<10%	Tree Cover	min. 22% (15% in R3 zone)
0sqm	Open Space	2,200sqm

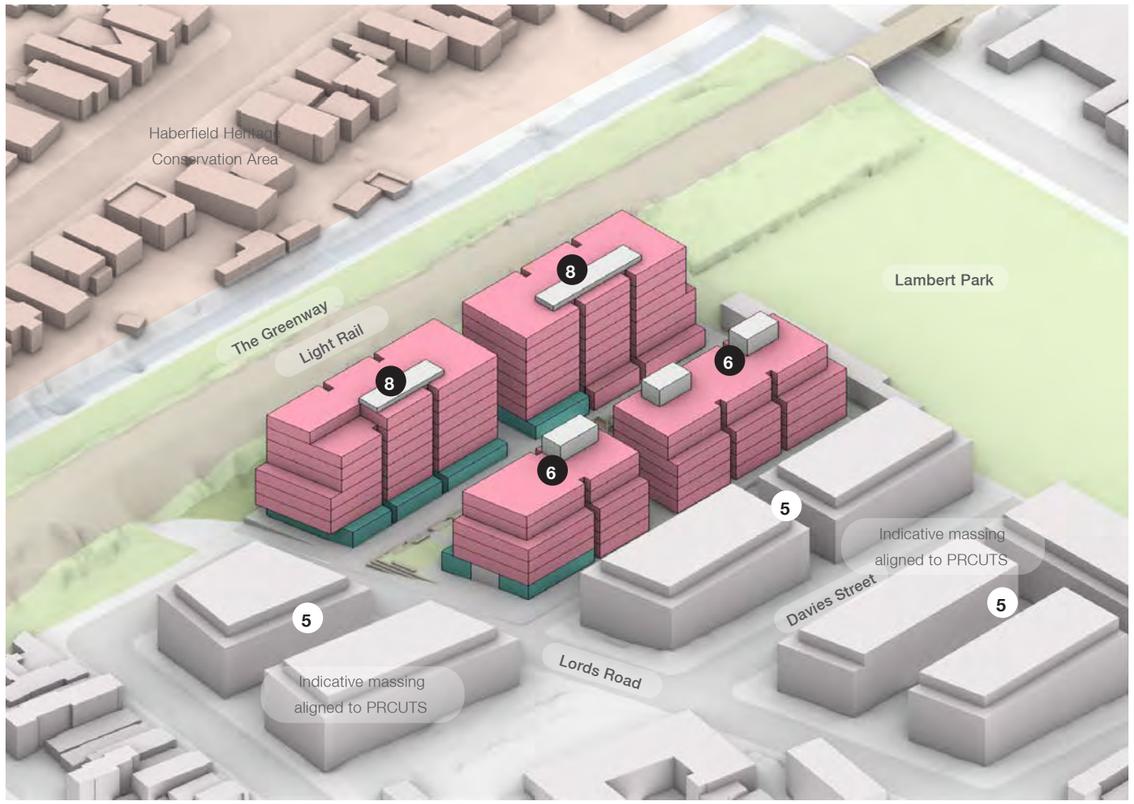


1:1000 @ A3

6.3 Massing

The scheme steps up from 6 storeys at the east to 8 storeys at the west. The below represents the scheme within the existing context and also within a future context that assumes indicative PRCUTS building massing up to 5 storeys on neighbouring sites.

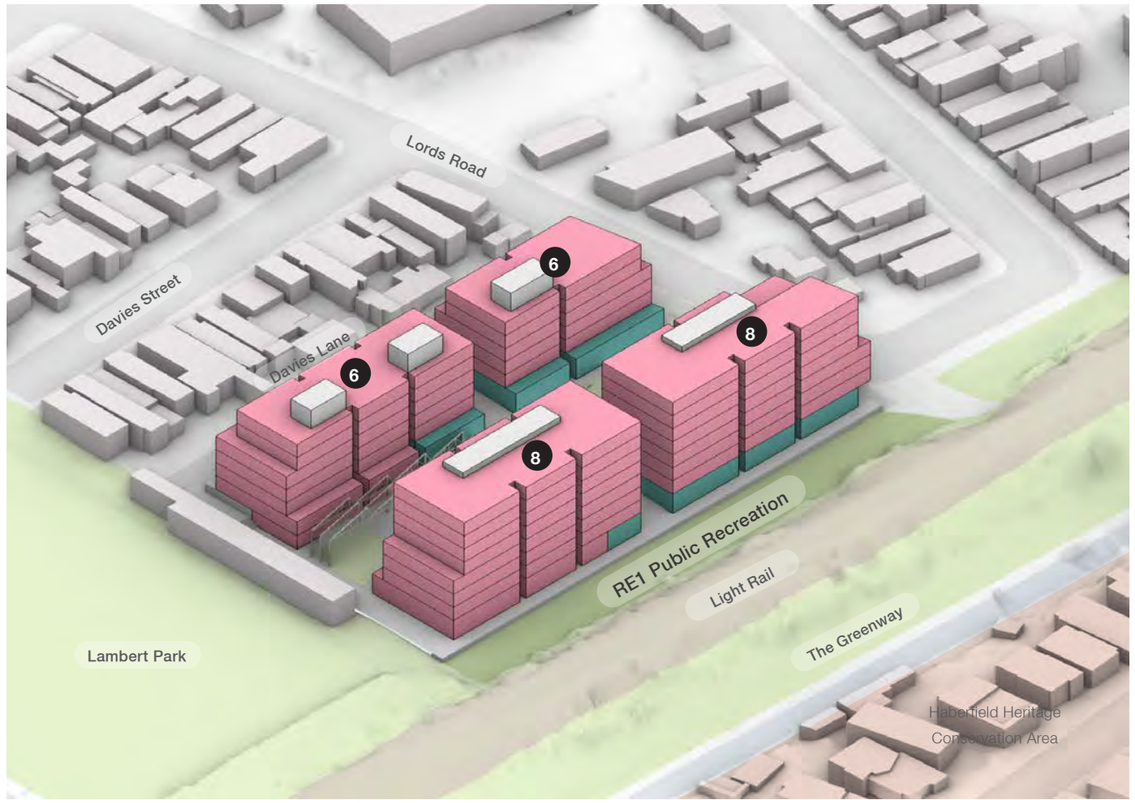
View from South-East - Existing Context



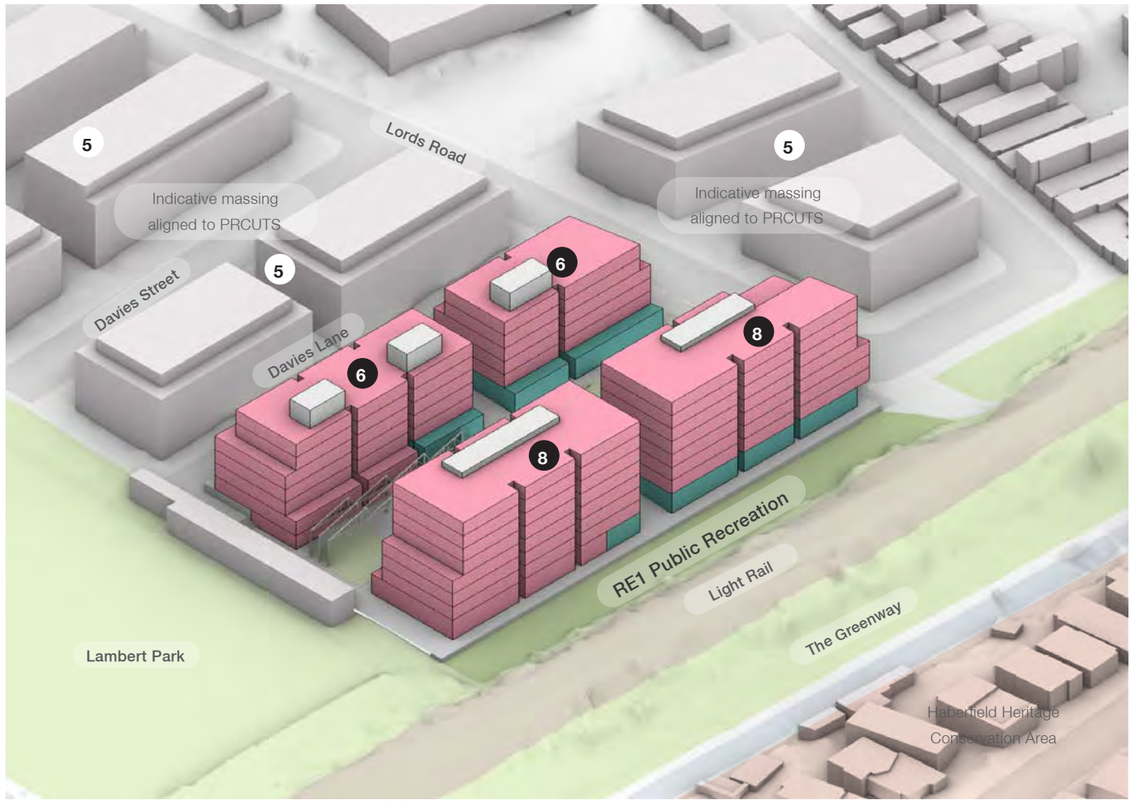
View from South-East - Future Context (PRCUTS)

KEY

- Site Boundary
- Residential
- Non-Residential
- 6 Storey Height



View from North-West - Existing Context

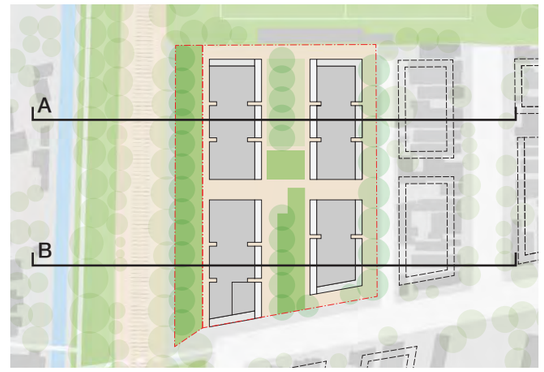


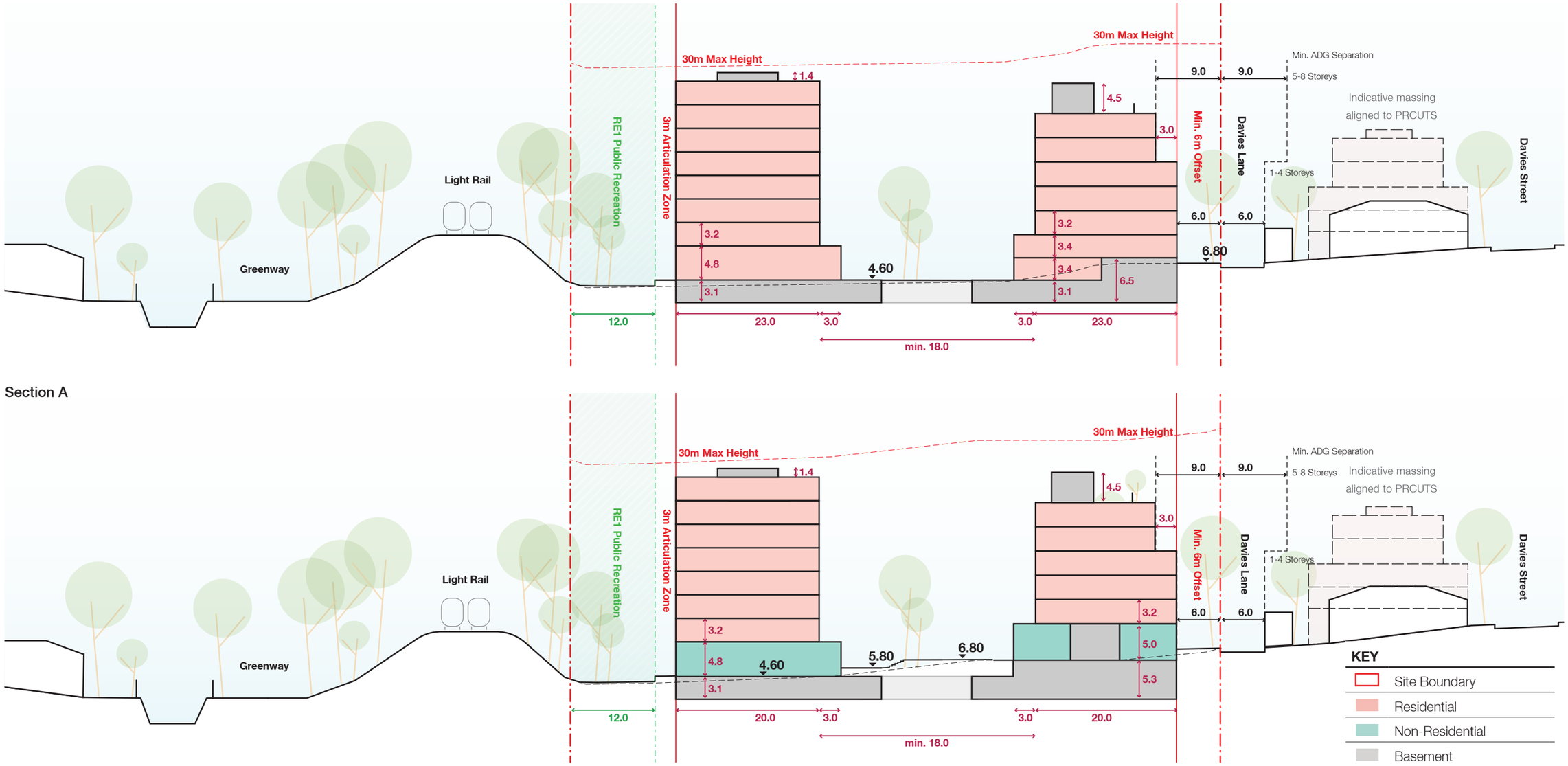
View from North-West - Future Context (PRCUTS)

KEY

- Site Boundary
- Residential
- Non-Residential
- 6 Storey Height

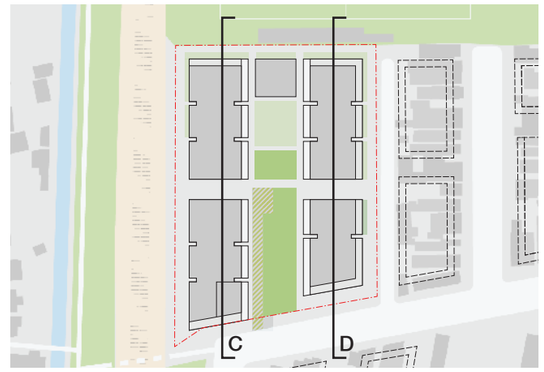
6.4 Sections

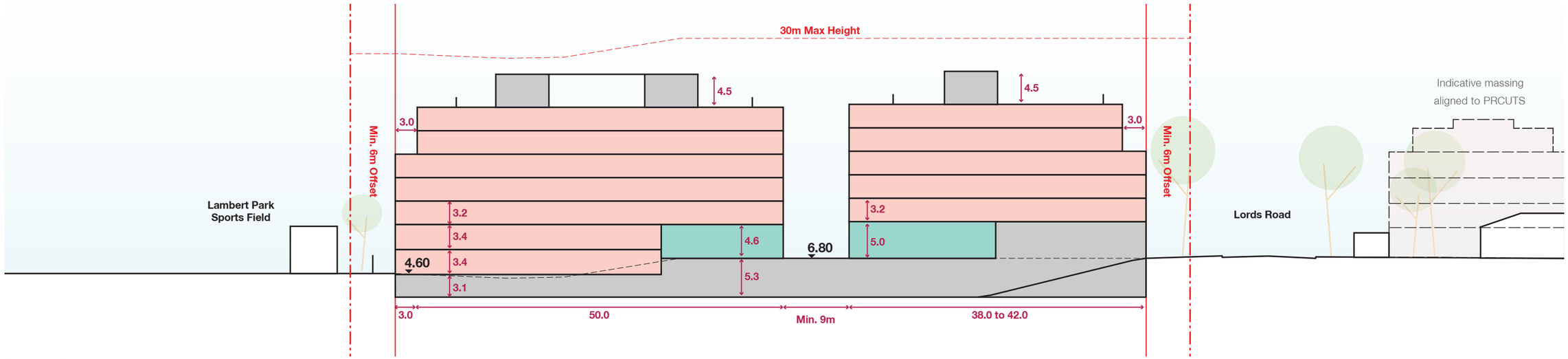




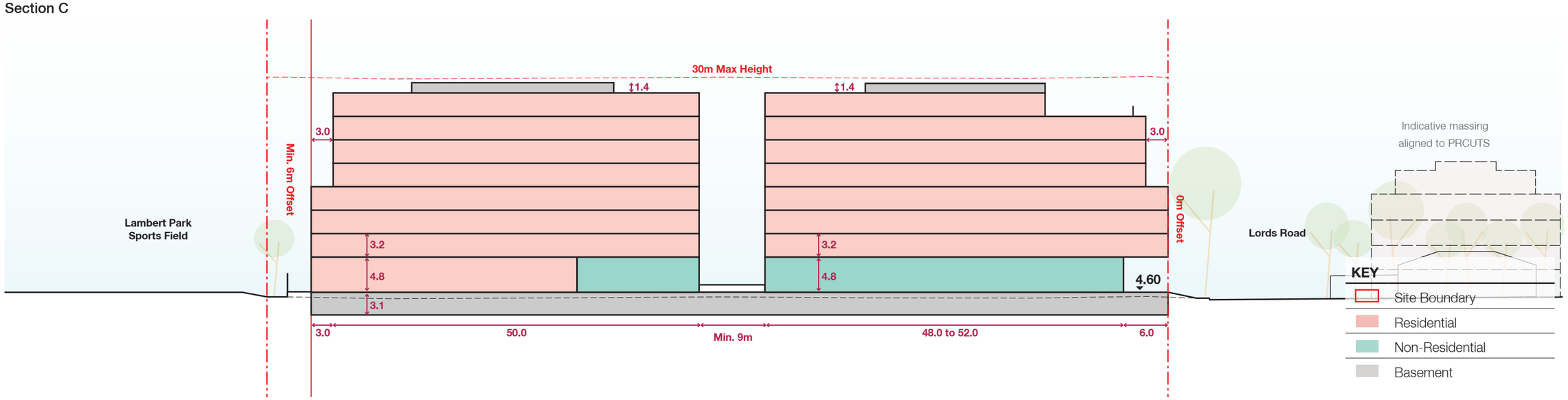
NTS

Urban Design Scheme





Section C



Section D

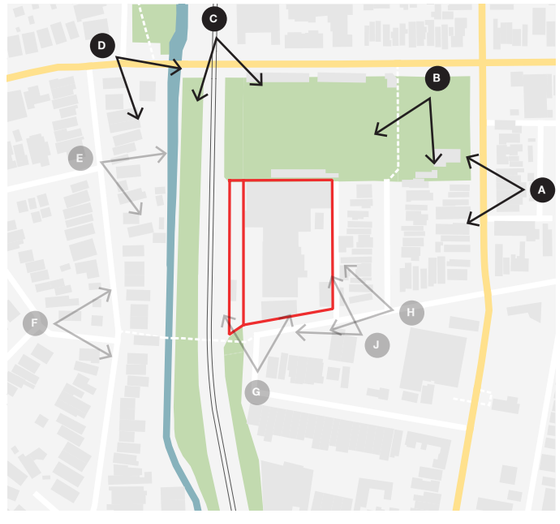
NTS

6.5 View Impact Analysis

Select vantage points have been used to determine view impact of the scheme to surrounding areas. The majority of these views were highlighted in the previous planning proposal peer review as recommended locations for analysis.

View A - Leichhardt Marketplace rooftop carpark

View B - Lambert Park

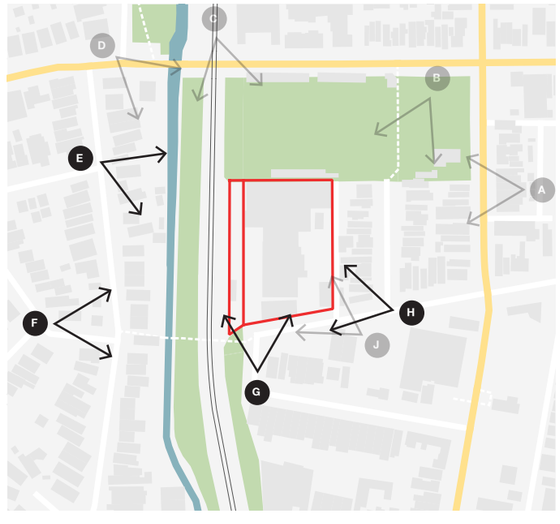


View C - Marion Street Light Rail

View D - Corner Marion Street / Hawthorne Parade

View E - Corner Hawthorne Parade / Percy Street

View F - Corner Lord Street / Ramsay Street



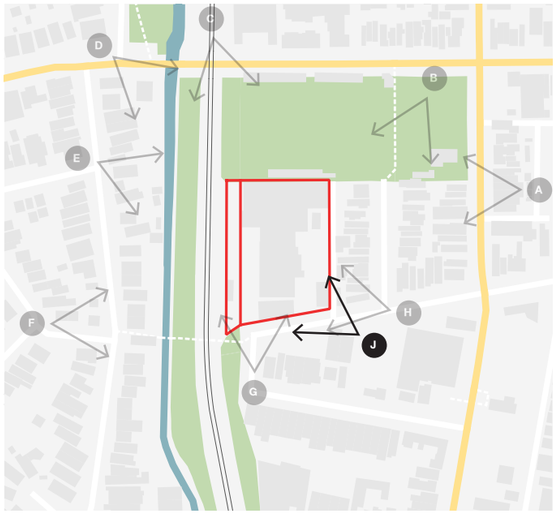
View G - Corner Lords Road / Kegworth Street

View H - Corner Lords Road / Davies Street

Urban Design Scheme

A more detailed view analysis along Lords Road has been prepared to demonstrate a potential approach to the site in terms of scale and materiality and to situate this within it's surrounding context. An indicative outline of potential massing on neighbouring sites has been shown based on PRCUTS recommended controls to demonstrate the proposal within a future scenario.

View J - Lords Road



6.6 Shadow Analysis

Overshadowing analysis of the surrounding context has been modelled based on the proposed scheme.

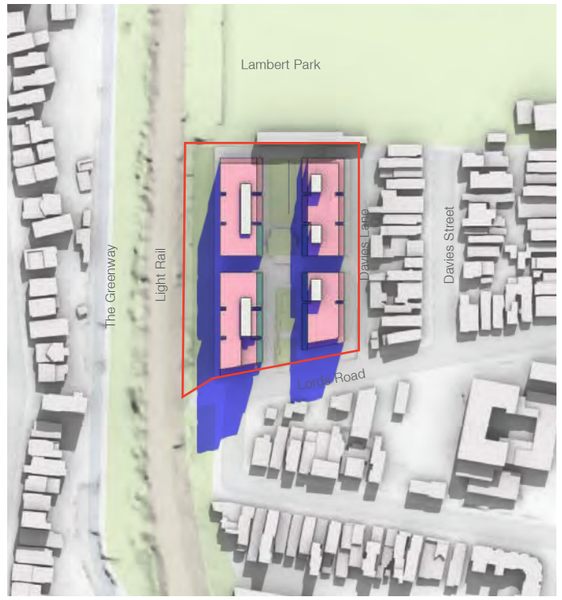
Solar compliance for neighbouring properties along Davies Lane and Lords Road have been tested based on relevant DCP controls. The scheme would be compliant with these controls, primarily by maintaining at least 3 hours of direct sunlight to 50% of the primary open space and into living rooms between 9am and 3pm on June 21st.

KEY

- Site Boundary
- Existing Shadow
- Proposed Shadow

9am

10am



11am

12pm

1pm

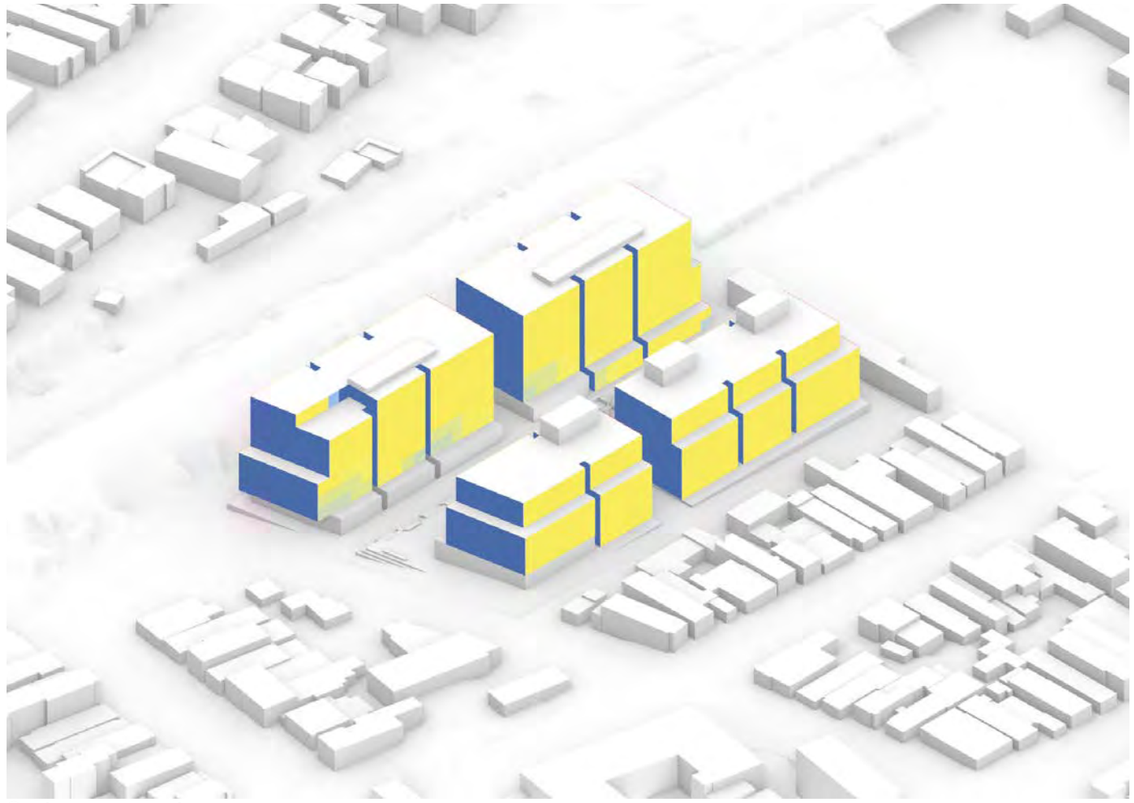
2pm

3pm

6.7 Solar Studies

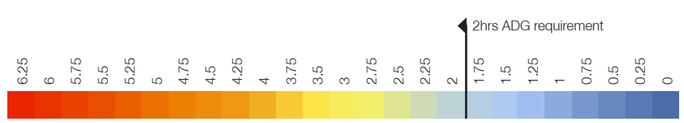
Residential Facades

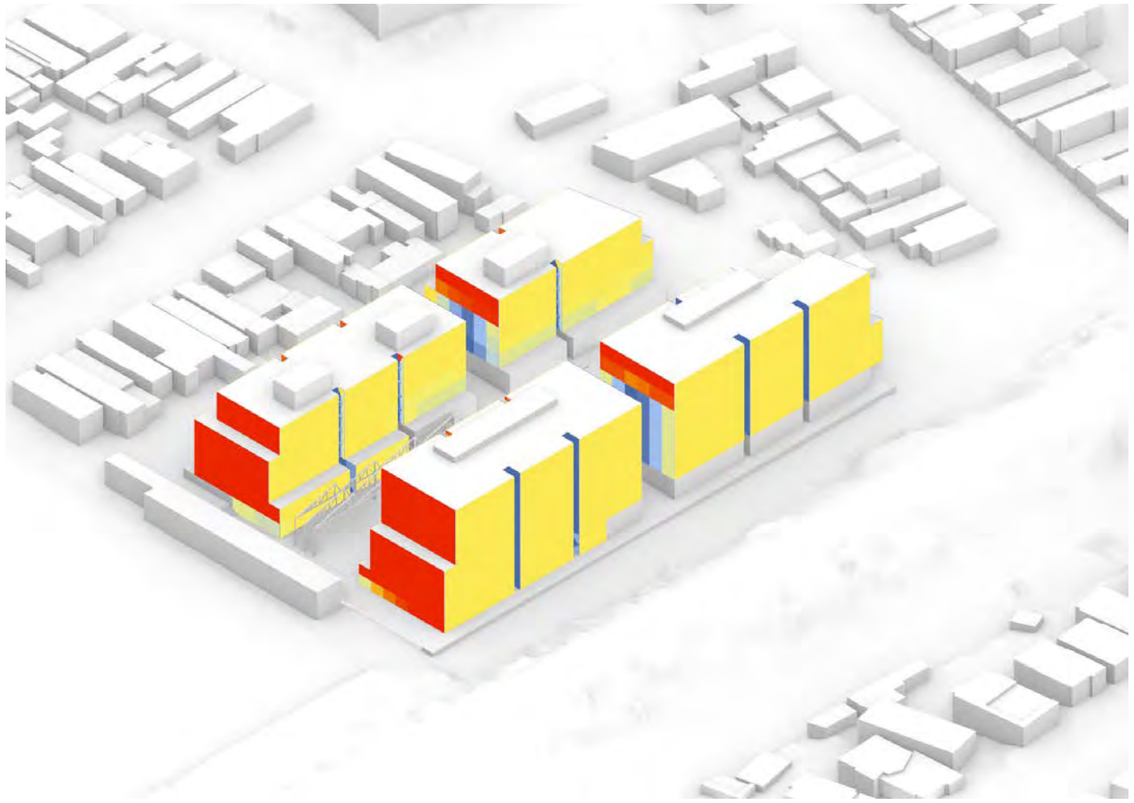
Measurements of the amount of direct sun the facade of any residential use receives between 9am and 3pm on 21st June (Winter Solstice) has been calculated. The intent is to demonstrate a high level understanding that the scheme would achieve ADG solar access compliance which is >= 2 hours.



Southern and Eastern

All eastern facing facades achieve are compliant. Dwellings on southern facades will prioritise living spaces to the east and west.





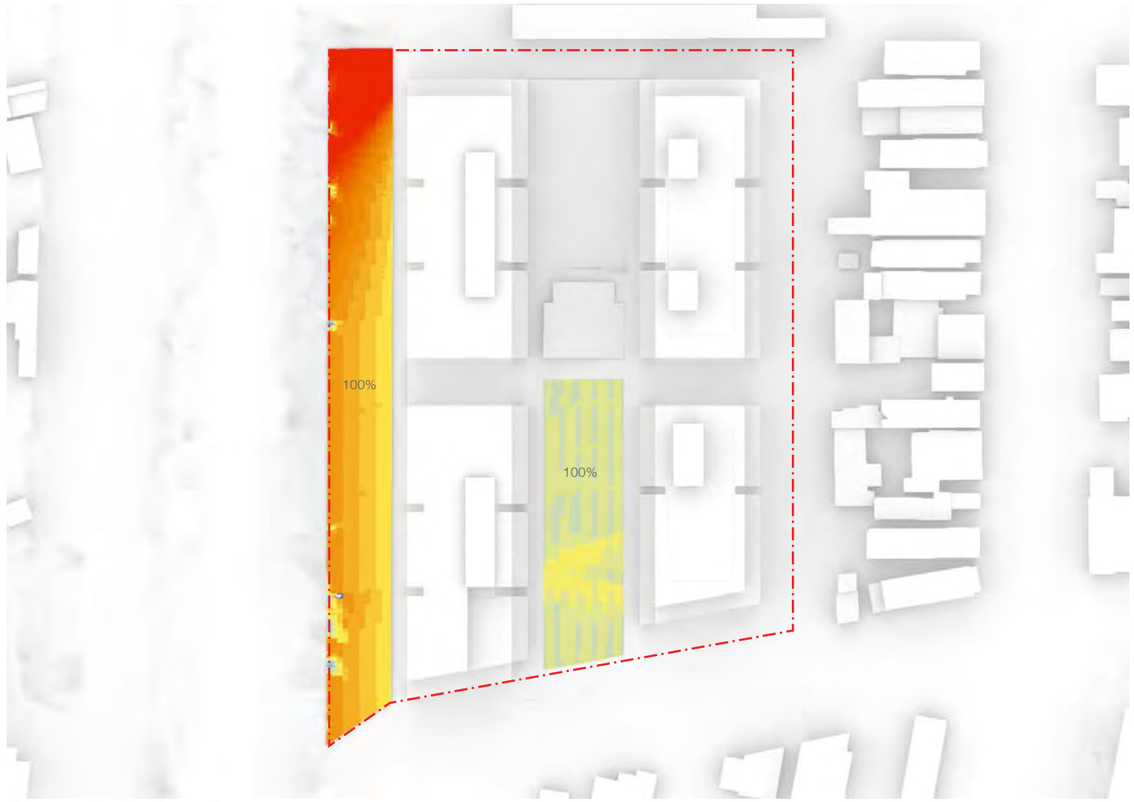
Northern and Western

All facades are compliant except for those between buildings. These facades will be non-habitable and dwellings here will prioritise living spaces to the east and west.

Urban Design Scheme

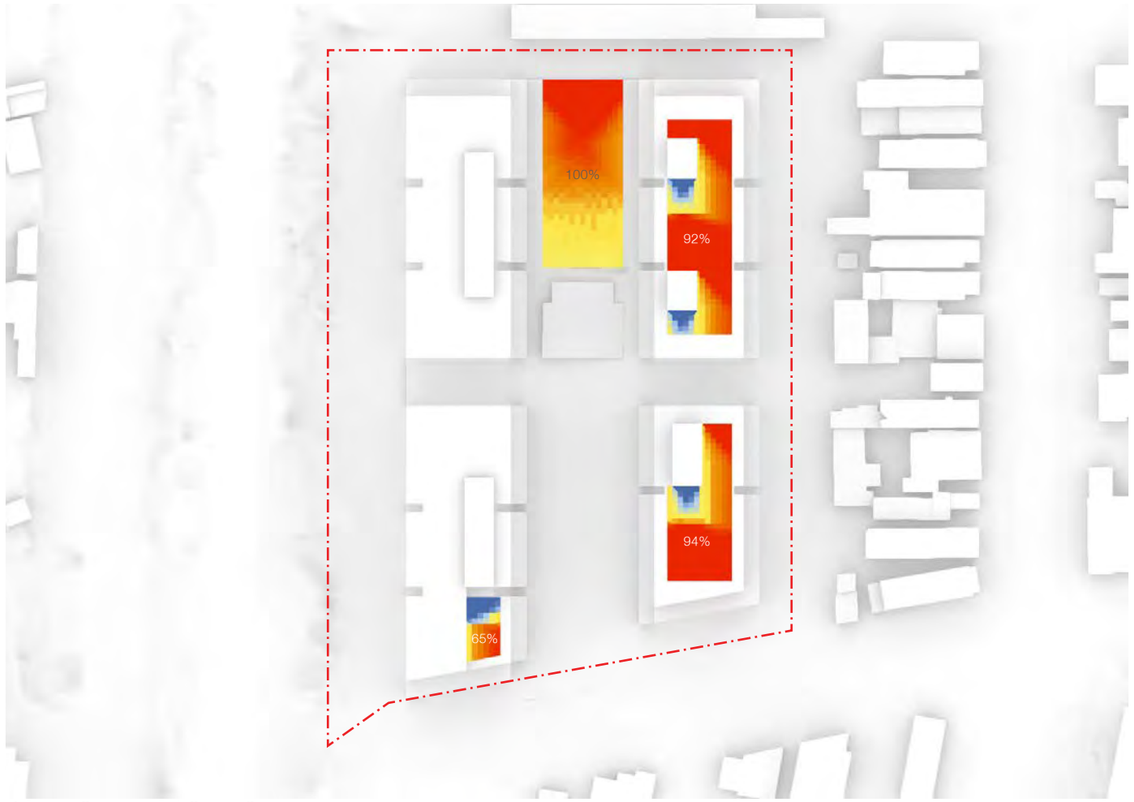
Open Space

Solar access has also been calculated for the public open space and private communal open spaces. The Apartment Design Guide requires 50% of the communal open space achieve greater than 2 hours sunlight between 9am and 3pm.



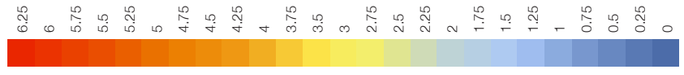
Primary Public Open Space

Both spaces achieve 100% > 2 hrs



Private Communal Open Space

Each space independently meets criteria and collectively achieves 94% > 2 hrs



6.8 Recommendations Response

The following responses are in regards to the recommendations from the previous planning proposal peer review process. This allows for a clearer understanding of the outcomes of the urban design scheme in response to previous concerns for the site.

	Recommendation	Response
6M	**Setbacks**	
1	Further setbacks are to be introduced for the proposed building at the corner of Lords Road and Davies Lane; to mitigate the scale and to protect the existing mature trees along the Lords Road frontage (6m for Davies Lane & 3m For Lords Road)	Arborist advice has been sought and the recommendation was to consider the removal of all existing trees due to poor ground quality and substantial impacts on the scheme. The advice also recognised that removal of the trees and planting of new trees would improve the streetscape quality by allowing better quality trees to grow and the ability to increase the amount of trees along Davies Lane. Therefore, setbacks at the corner of Lords Road and Davies Lane and through the length of Davies Lane have been recommended for a minimum 6m setback.
2	A further ground level setback between 3m and 7m to Davies Lane is recommended to accommodate a minimum 3m footpath and landscaping	As per above, a minimum 6m setback has been provided along Davies Lane which would be sufficient to accommodate a 3m footpath, landscaping and private open space for ground level dwellings.
	Residential Amenity	
5	Review ADG building separation to ensure buildings and DCP reflect the minimum required. Also ensure all buildings achieve appropriate ADG cross ventilation and solar access	The ADG requirements for building separation have been considered and appropriately implemented within the scheme. The reference scheme in section 8 highlights the ability to achieve the required separation distances and to allow cross ventilation and solar access requirements. In some places, non-habitable façades are required, however these can be articulated to allow diffuse light and directional views without imposing on visual privacy of opposing dwellings.
6	Minimise overshadowing of the central open space	The scheme has been designed to limit overshadowing of the central open space by prioritising taller buildings to the east and west and maintaining a low scale building to the north. Internally facing the open space a 1 storey street wall has been introduced that limits bulk and increases solar access. In the reference scheme, 100% of the primary public open space achieves greater than 2 hours direct sunlight between 9am and 3pm. Communal open spaces achieve a minimum of 65% and collectively 94%.
7	Draft DCP should reflect individual residential dwellings at ground along Davies Lane	The DRAFT DCP diagrams in section 9 of this report have reflected this.
	Open Space & Public Domain	
6	Proponent to clarify traffic circulation strategy and confirm minimum clearance requirements	Traffic circulation is highlighted in the principles as a key factor of the scheme. A singular carpark entrance/exit is provided along Lords Road at the south-east corner of the site. The carpark would provide sufficient clearance (min. 4.5m) for a truck to service the site. A shared zone, also providing an entrance and exit on Lords Road allows for low-speed vehicular movement within the central open space to provide kiss-n-ride facilities closer to the buildings to the north. Davies Lane has not been considered for additional vehicular use in this scheme.
7	Confirm if a connection along the western boundary is in line with the Greenway masterplan	The Greenway Masterplan shows a secondary path along the eastern side of the Light Rail embankment adjacent the site and through the Lambert Park Sports Field. Refer to pp.111-114 of the Masterplan Report and pp.63-64 of the Route Options Assessment Report. This area of the site is to be provided as RE1 Public Recreation which can facilitate this connection.

	Recommendation	Response
8	Proponent to clarify intended users of the central open space and extent of roof top gardens and communal open space for residents	The central open space is to be a privately owned - publicly accessible open space. The southern portion will be public, whilst the rear portion will be a communal open space for residential tenants. The public component may be used by anyone - however it is expected that activation will occur from the non-residential tenancies that surround this space. Rooftop gardens have been provided on buildings A, C and D. Please refer to the reference scheme in the section 8 for clarification.
9	Proponent should not present the open space as serving the wider community, but rather as the benefit for residents, commercial tenancies and community users of the site	Noted. However, it is expected that the open space would be of benefit to the local community as it is accessible and highly visible from Lords Road and will be designed to appear public rather than private. The Western portion of the site will however be totally public access.
10	Retain the row of trees at the Lords Road and Davies Lane corner to provide screening of the new development. Arborist advice should be sought to confirm conditions for longevity	As noted on point 1, arborist advice has been sought and tree removal was recommended. New tree planting at this corner will provide screening of the new development.
	Interfaces	
11	Draft DCP should provide development controls that address roof form and building materiality, in line with the PRCUTS guideline	Noted.
12	Before and after photo montages are to be prepared to assess visual impact. Eight vantage points have been identified	View impact analysis has been prepared in the previous section of this report. The majority of these view locations were chosen based on the recommended vantage points.
13	Provide articulation for long buildings to reduce scale	Articulation is a key principle of the urban design scheme and has been demonstrated across this report. The reference scheme in the section 8 details how this could occur, primarily being used as light-well for reisdential corridors and to provide expressive entrances at ground floor lobbies. For the longest buildings in the site (50m+) articulation has been provided at two points along each facade, effectively splitting the mass into three seperate pieces. These slots may also be further articualted through material differences and architectural expression.
	Proposed Controls	
14	It is recommended to retain the maximum height limit for the site at eight storeys. A 30m height limit as indicated in the PRCUTS would provide adequate height	Noted. The maximum building height within PRCUTS (30m) has been used within this scheme. This includes lift overruns and rooftop gardens and a maximum storey height of 8.
15	Test if an FSR is still appropriate for the site given the proposed built form recommendations	This urban design scheme demonstrates an ability to achieve up to 2.4:1 as recommended in PRCUTS. The reference scheme in the section 8 demonstrates a compliant scheme at 2.38:1.
16	The proposal is to be reviewed from a socioeconomic viewpoint, as Criteria 1 of the PRCUTS Out of Sequence Checklist requires that the planning proposal demonstrate significant net community, economic and environmental benefits	Noted. Socio-economic advice has been sought and addressed in the social impact report and EIA submitted with the planning proposal.

Landscape Plan

7

Landscape Plan

7.1 Vision

A generous landscape interface with Lords Road will invite people passing by to stop and enjoy a moment on the lawns or to sit on the sandstone blocks that create an inviting edge to the proposed development. The dining opportunities that spill out into the public domain will activate the edges and create a vibrancy to the local area.

The communal spaces will be verdant, green landscapes with opportunities for the resident community to gather and enjoy a BBQ in their hidden garden. The history of the site will be celebrated by recycling the frame of the sawtooth roof to create a structure for vines to grow across.

Added permeability and new public access through the site will encourage greater activity, and allow people to traverse between key local attractions through the site. The public nature of these links will ensure that the wider site is accessible and welcoming to the broader community.

The network of spaces created across the site will cater for a range of users and allow everyone to find a space for outdoor activities and gathering. It will foster intergenerational activity and interaction, strengthening social ties in the broader neighbourhood.

The western portion of the site will be delivered as RE1 Public Recreation, to be used 100% by the community for open space. This space will serve as a buffer between the development and the light rail corridor and can facilitate the start of a connection north to Marion Street and the light rail stop.

Landscape Plan

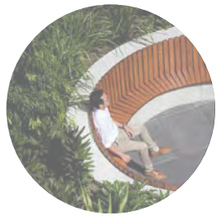
7.2 Concept

01 - Rear access lane and fire escape

03 - Public Recreation Space

03 - Peaceful Sunken Garden - Private communal open space

04 - Belvedere - Elevated platform with seating and outlook space



05 - Lawn and Terraced seating with shared street - Public open space

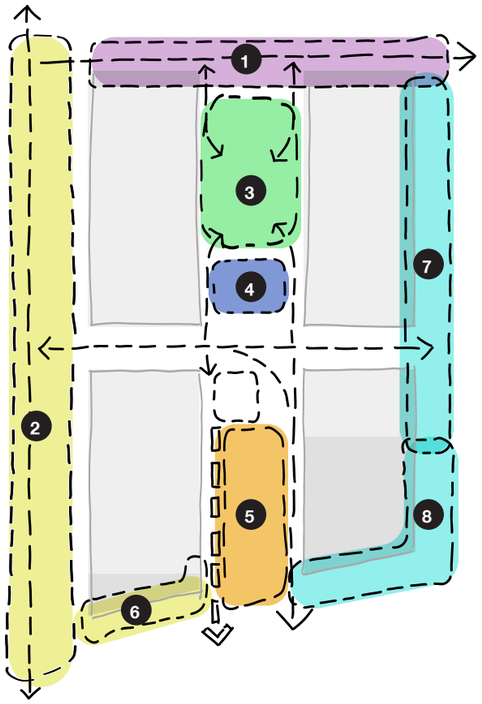
06 - Cafe Terrace

07 - Residential terraces with setback for tree canopy - Davies Lane

08 - Active frontage with setback

NTS

7.3 Landscape Characteristics



01 - Rear access lane and fire escape

The access lane will be a six meter wide easement with landscaped amenity and tree planting to minimise the light spill and acoustic impacts of the sports field to the North.

03 - Public Recreation Space

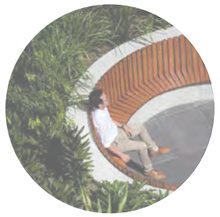
The RE1 Public Recreation interface will be a meandering pathway with dense planting that creates intimate spaces for people to spill out from the commercial and residential spaces and enjoy and quiet place to sit.

03 - Peaceful Sunken Garden - Private communal open space

The sunken garden will be a peaceful, resident-only space that is brought to life by a curtain of planting that appears suspended over the garden. Industrial trusses that have been reinstated as a unique place based feature will reference the industrial history of the site and celebrate the sawtooth roof that was once on the site.

04 - Belvedere - Elevated platform with seating and outlook space

The belvedere will be a pavilion situated at the centre of the site. The platform will be slightly elevated and separate the public and private communal space. Deep planting will frame an informal seating arrangement that allows people to work outdoors, share a coffee or take a break in a dedicated un-programmed space.



05 - Lawn and Terraced seating with shared street - Public open space

The public open space will be a generous landscape that offers significant community benefit by catering for a range of local users. There will be a lawn for people to spill out from the neighbouring commercial tenancies, space for children to play, and sandstone block seating where people can linger in the public domain. Deep soils that permeate into the middle of the site will allow for trees with wide canopies to establish at the heart of the site.

06 - Cafe Terrace

The terrace will be an elevated verandah that overlooks Lords Road - it will be activated by retail interfaces, making it a prime location for a future cafe and community gathering point where different paths intersect.

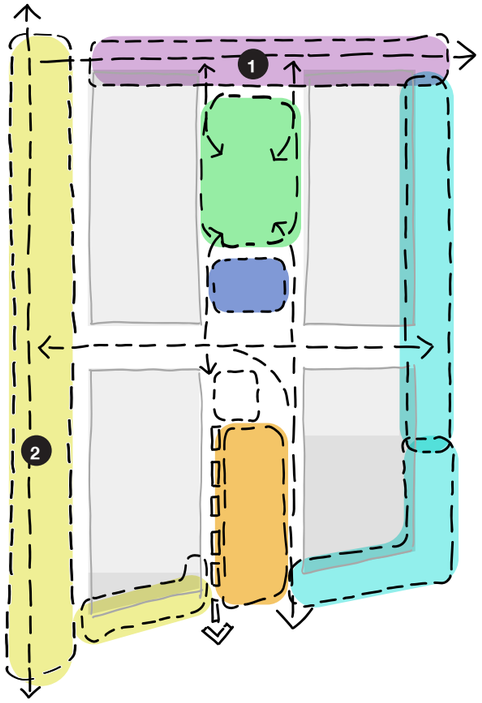
07 - Residential terraces with setback for tree canopy - Davies Lane

Davies lane will be enhanced with high quality streetscaping and pedestrian environment. Passive surveillance will be provided by resident that open out onto the lane. Replacement brush box trees will grow to form an avenue of trees.

08 - Active frontage with setback

The corner of Davies Lane and Lords Road will be setback from the street to allow for street tree planting and to widen the pedestrian interface with the commercial/retail uses at ground floor.

7.4 Precedent and planting scheme



Linear boardwalk that connects the dwellings on the western facade and provides a through site link

A meandering space with opportunities for people linger

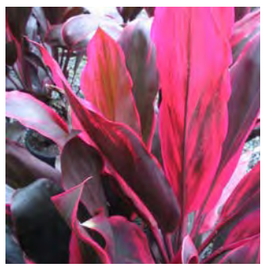
Native Australian rainforest style planting that leverages the moisture of the overland flow and established tree canopy

STROMANTHE TRICOLOUR
stromanthe sanguinea

CORDYLINE MANNERSSUTTONII
palm lily

LICUALA GRANDIS -
Fan Palm

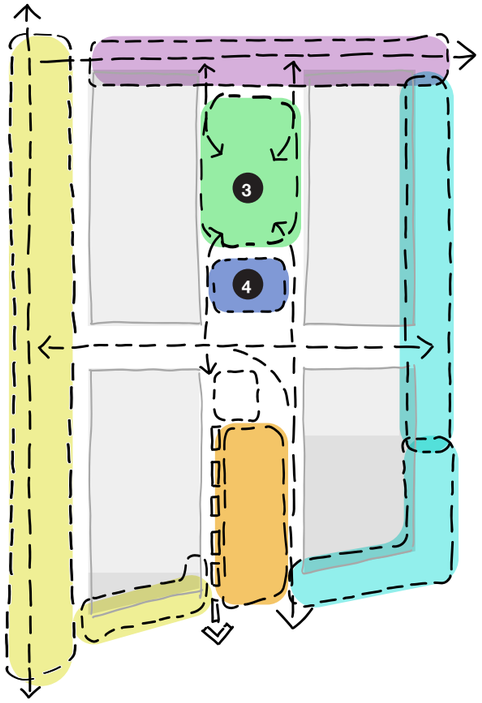
ALPINIA ZERUMBET
shell ginger



CORDYLINE RUBRA
cordyline fruticosa

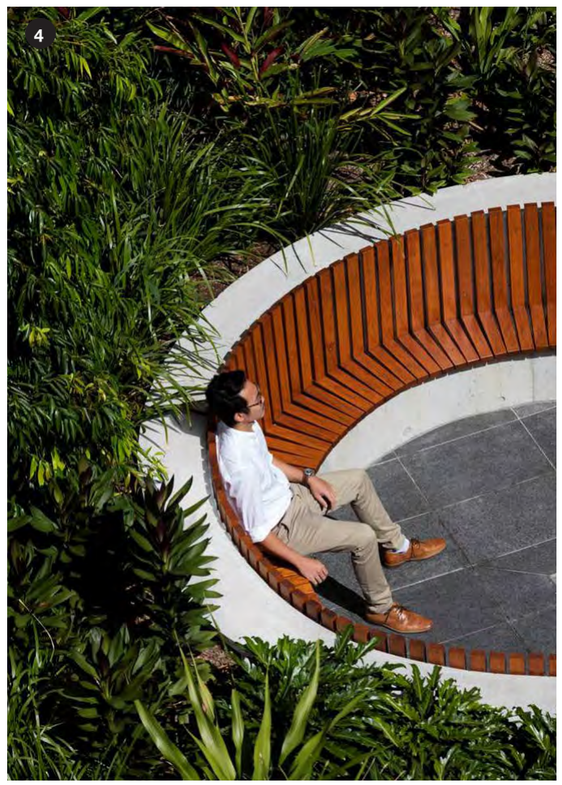
ASPLENIUM NIDUS
Birds Nest Fern

Landscape Plan



A curtain of planting that appears suspended over the garden by the trusses above

Reference the industrial history of the site and celebrate the sawtooth roof that was once on the site.



The belvedere will be a pavilion situated at the centre of the site - there with be dense planting around the edge

PYROSTEGIA
orange trumpet vine

CARDBOARD PALM
zamia furfuracea

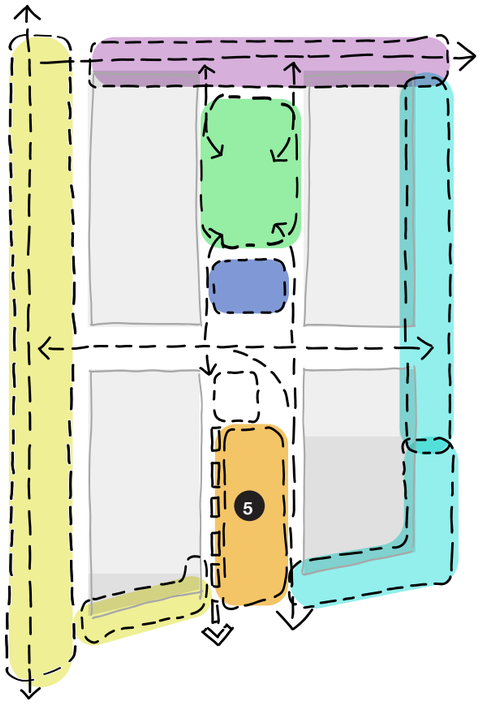
PHILODENDRON XANADU

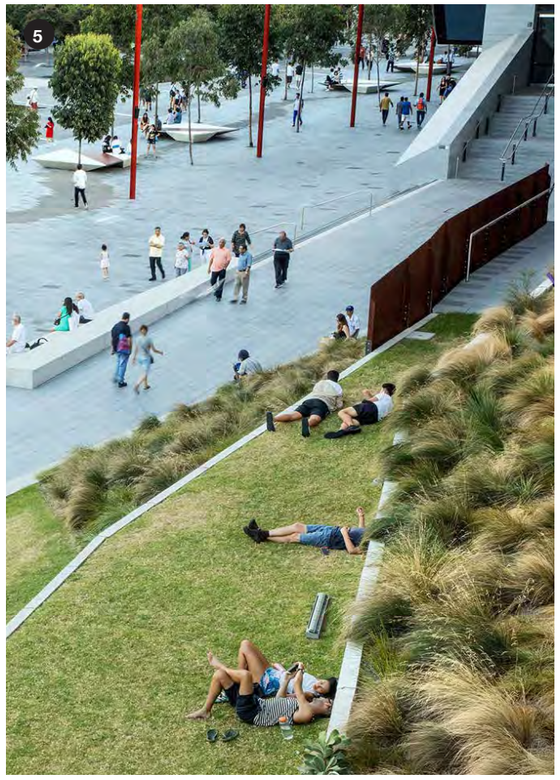
PHILODENDRON GOLD BULLION

CYCAS REVOLUTA
sago palm

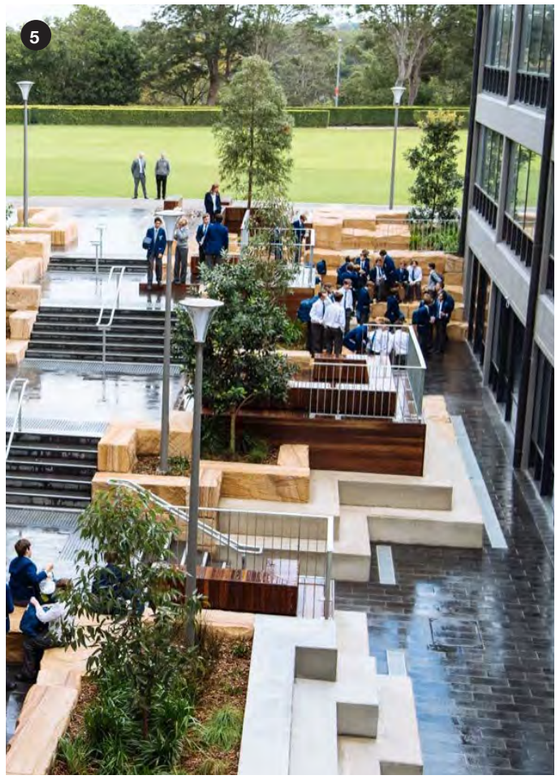
GLOCHIDION FERDINANDI
Cheese Tree

Landscape Plan





Generous grassy lawns where people can sit and linger



Teired seating to accomodate transition in tography and informal seating spaces

A sculptural piece at the heart that doubles as a childrens play space

DICHONDRA ARGENTEA
silver falls

LEUCADENDRON SALIGNUM
Blush Conebush

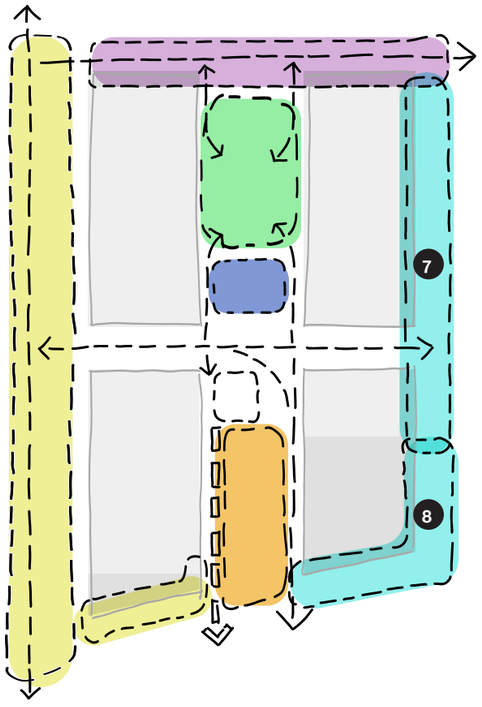
AGONIS FLEXUOSA
'after dark' - purple-leafed willow myrtle

EUPHORBIA CHARACIAS SSP. WULFENII
silver swan

BORONIA MEGASTIGMA

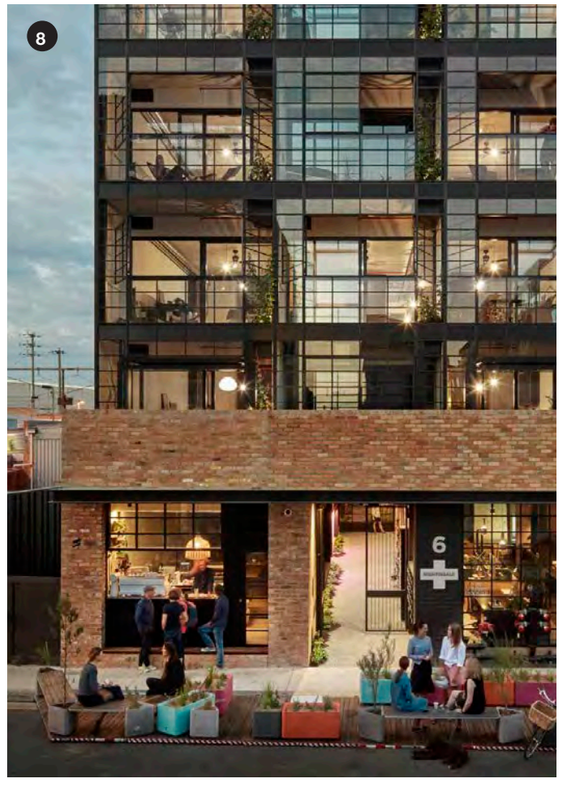
ANGOPHORA COSTATA
Sydney red gum

Landscape Plan

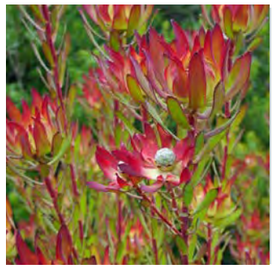


Landscaped interface with residential dwellings

Parking between avenue of brush box trees. Water sensitive urban design will enable passive watering of garden beds.



Active interface with retail tenancies that activates the street



LEUCADENDRON SALIGNUM
Blush Conebush

CARDBOARD PALM
zamia furfuracea

CYCAS REVOLUTA
sago palm

BORONIA MEGASTIGMA

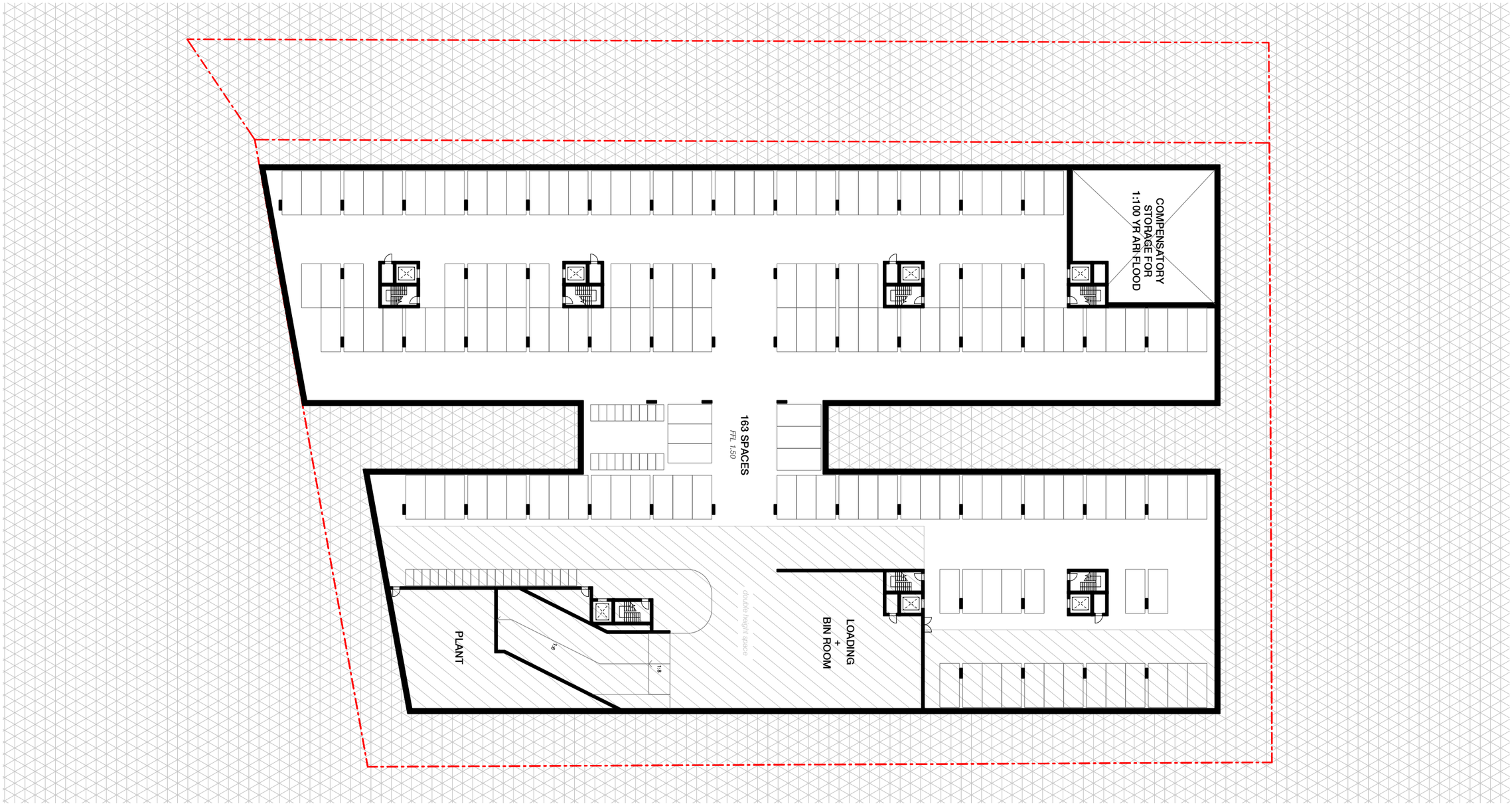
LILLY PILLY

ANGOPHORA COSTATA
Brush Box

Reference Scheme

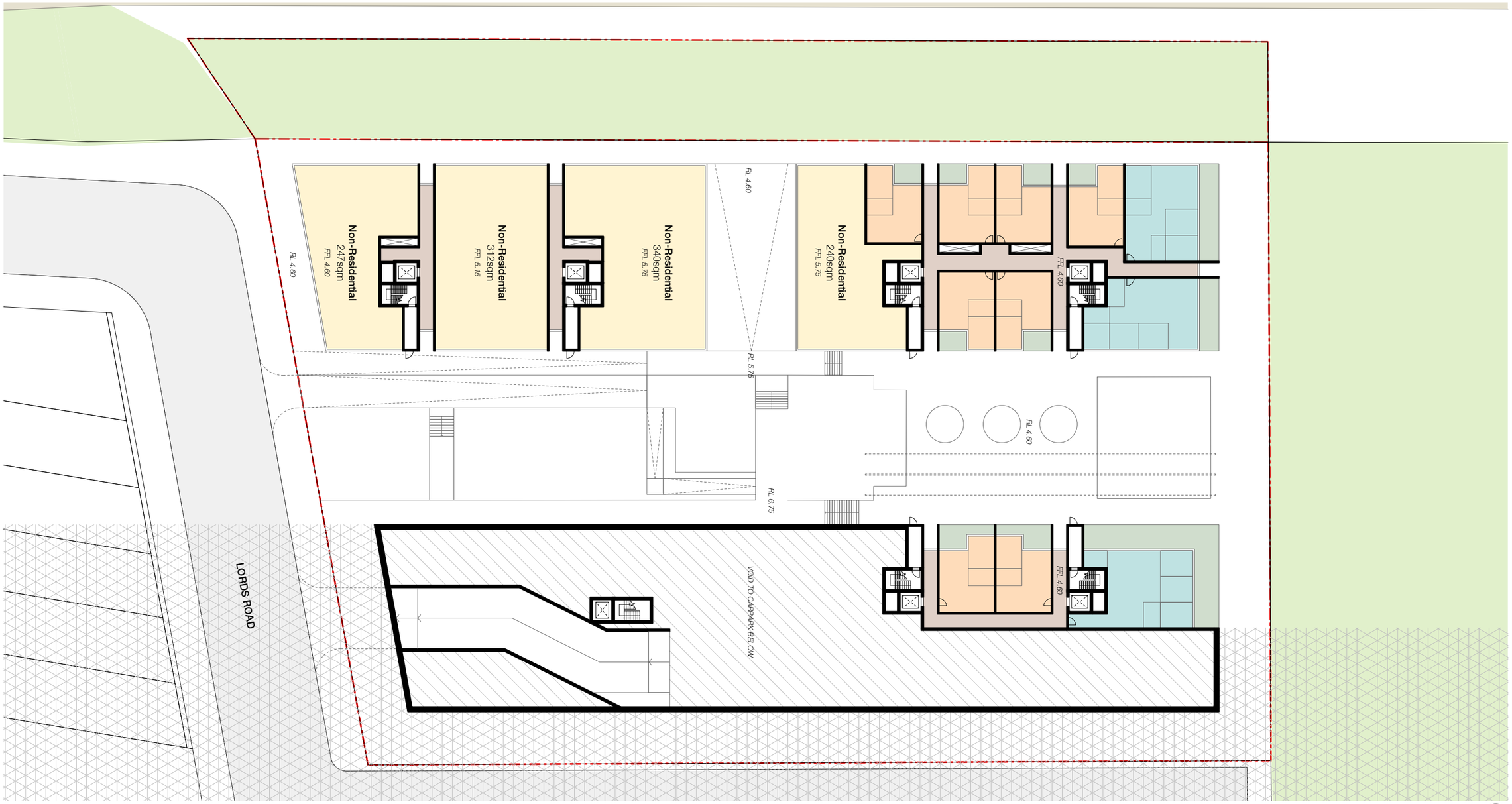
8

8.1 Basement Plan



1:500 @ A3

8.2 Ground Floor Plan (WEST)

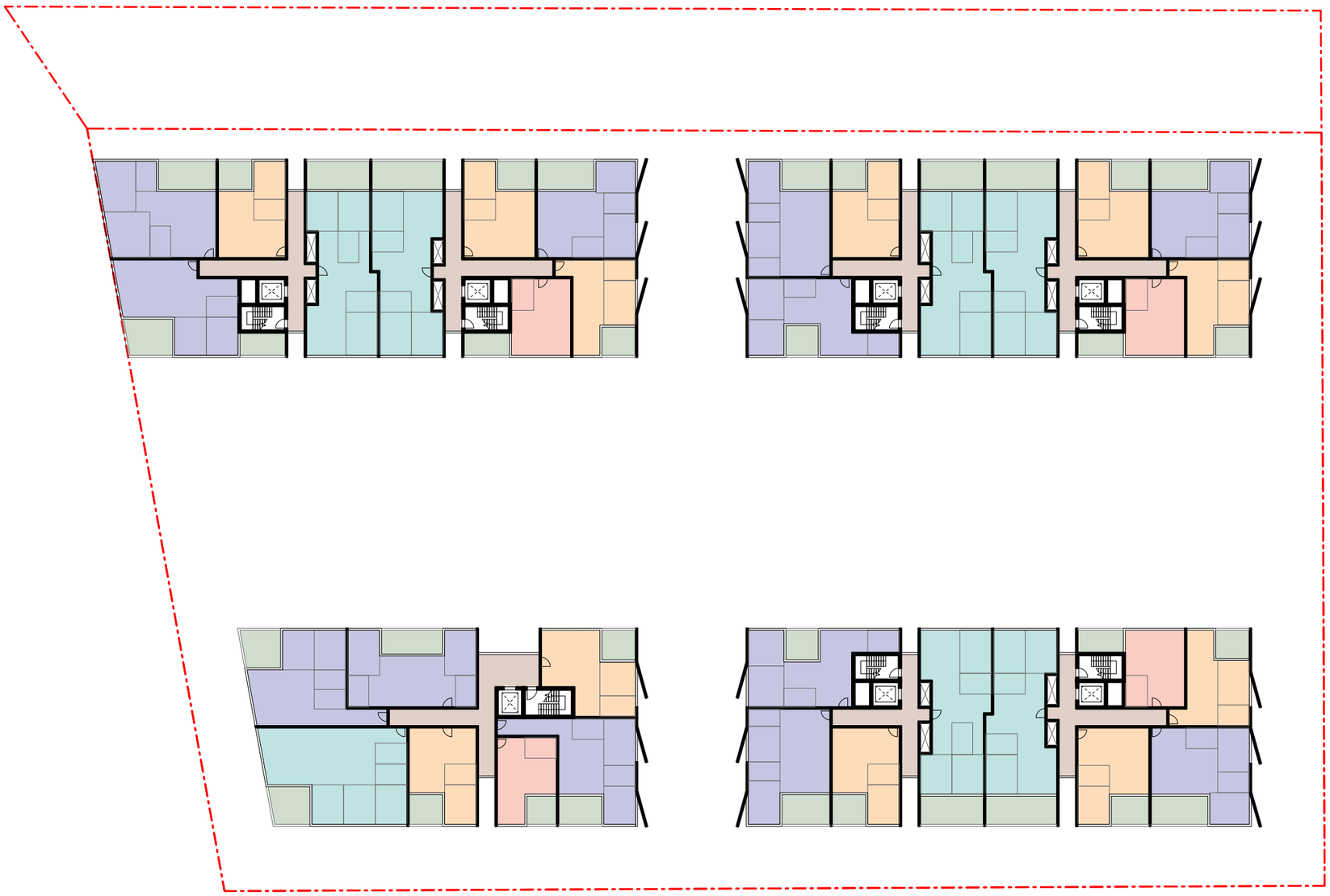


1:500 @ A3

8.3 Ground Floor Plan (EAST) + Level 1 Plan (WEST)

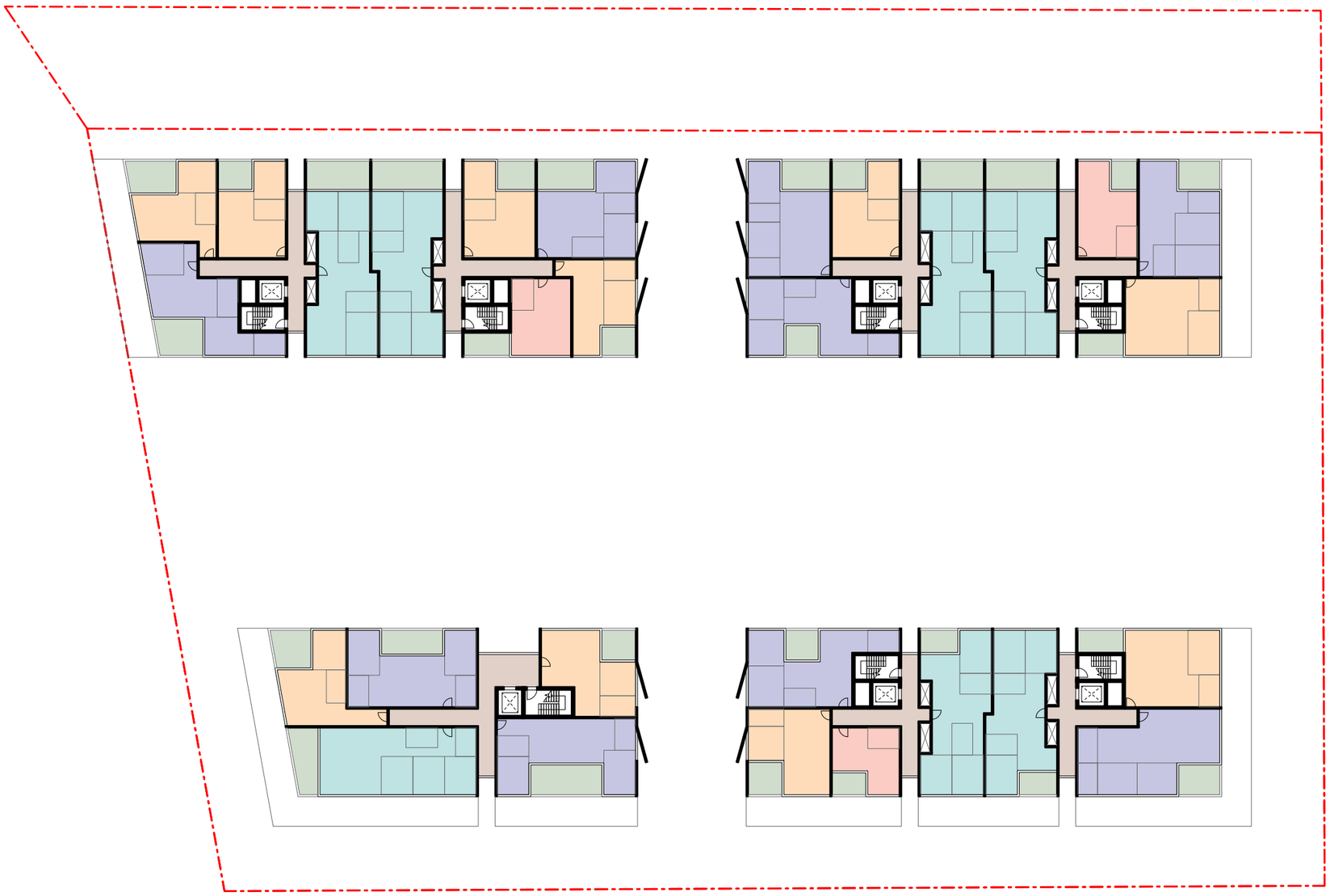
1:500 @ A3

8.4 Typical Lower Floor Plan



1:500 @ A3

8.5 Typical Upper Floor Plan



1:500 @ A3

8.6 Level 8 Floor Plan (WEST) + Roof Plan (EAST)

1:500 @ A3

8.7 ADG Compliance

Cross ventilation and solar access compliance has been tested for the reference scheme. To achieve compliance the site would require 60% of dwellings to allow appropriate cross ventilation and 70% to have adequate solar access.

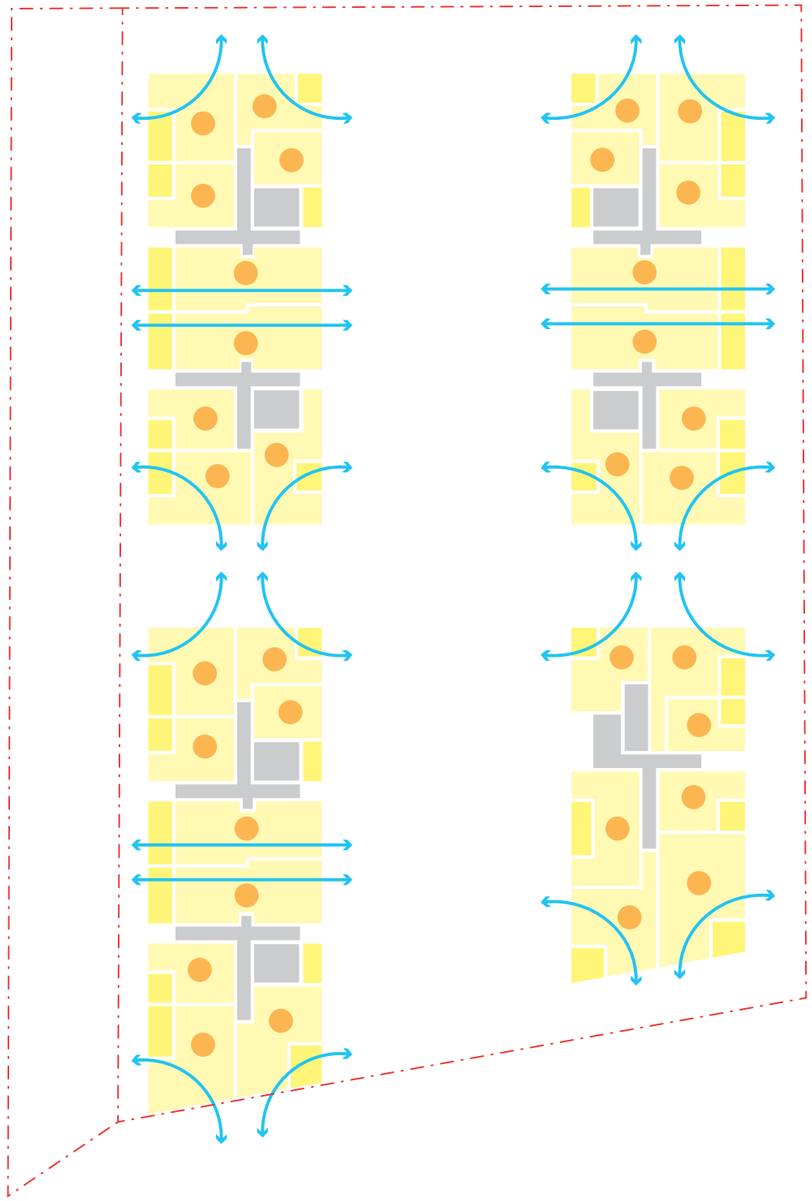
The floor plan to the right shows that any typical floor in the scheme is fully compliant with cross ventilation and solar access on a whole of site basis and per individual building. The following page contains a schedule that provides a detailed breakdown of each buildings compliance.

Building B

Cross vent: 6/9 = 66%
Solar: 9/9 = 100%

Building C

Cross vent: 6/9 = 66%
Solar: 9/9 = 100%



Building A

Cross vent: 6/9 = 66%
Solar: 10/9 = 100%

Building D

Cross vent: 4/7 = 57% *
Solar: 7/7 = 100%
** reduced yield at upper levels offsets results positively*

KEY

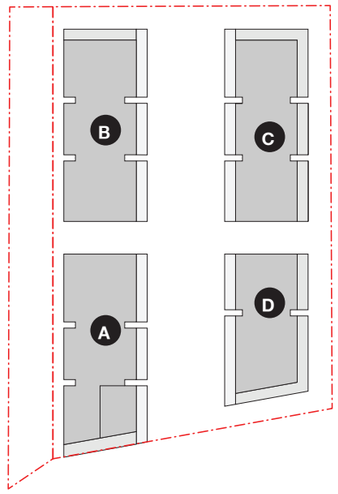
- Site Boundary
- Dwelling
- Balcony
- Cross Ventilation
- Solar Compliant

Typical floor plan ADG compliance

NTS

Reference Scheme

8.8 Yield schedule



Notes:

- Basement included in schedule for Building D

BUILDING A

	ALL	RESI	NON-RES	SERVICING	TOTAL		Dwellings					Compliance	
	GBA	GFA	GFA	GBA	GBA	GFA	Studio	1 bed	2 bed	3 bed	Total	CV	Solar
LVL 7	870	783			870	783	1	2	1		4	2	4
LVL 6	986	783			986	783	1	4	2	2	9	6	9
LVL 5	986	783			986	783	1	4	2	2	9	6	9
LVL 4	986	783			986	783	1	4	2	2	9	6	9
LVL 3	1,047	832			1,047	832	1	3	3	2	9	6	9
LVL 2	1,047	832			1,047	832	1	3	3	2	9	6	9
LVL 1	1,190	886			1,190	886	1	4	3	2	10	6	10
GROUND	1,109	80	900		1,109	980					-		
BASEMENT											-		
TOTAL	8,221	5,763	900	-	8,221	6,663	7	24	16	12	59	38	59

BUILDING B

	ALL	RESI	NON-RES	SERVICING	TOTAL		Dwellings					Compliance	
	GBA	GFA	GFA	GBA	GBA	GFA	Studio	1 bed	2 bed	3 bed	Total	CV	Solar
LVL 7	943	768			943	768	1	2	3	2	8	6	8
LVL 6	943	768			943	768	1	2	3	2	8	6	8
LVL 5	943	768			943	768	1	2	3	2	8	6	8
LVL 4	943	768			943	768	1	2	3	2	8	6	8
LVL 3	1,005	809			1,005	809	1	3	3	2	9	6	9
LVL 2	1,005	809			1,005	809	1	3	3	2	9	6	9
LVL 1	1,148	843			1,148	843	1	3	3	2	9	6	9
GROUND	1,175	750	240		1,175	990		6		2	8	2	8
BASEMENT											-		
TOTAL	8,105	6,282	240	-	8,105	6,522	7	23	21	16	67	44	67

BUILDING C

	ALL	RESI	NON-RES	SERVICING	TOTAL		Dwellings					Compliance	
	GBA	GFA	GFA	GBA	GBA	GFA	Studio	1 bed	2 bed	3 bed	Total	CV	Solar
LVL 5	802	662			802	662	1	2	2	3	8	6	8
LVL 4	802	662			802	662	1	2	2	3	8	6	8
LVL 3	999	809			999	809	1	3	3	2	9	6	9
LVL 2	999	809			999	809	1	3	3	2	9	6	9
LVL 1	999	809			999	809	1	3	3	2	9	6	9
GROUND	1,141	736	138		1,141	874	1	2	3	2	8	5	8
LOWER GROUND	502	305			502	305		2		1	3	1	3
BASEMENT											-		
TOTAL	6,244	4,793	138	-	6,244	4,931	6	17	16	15	54	36	54

BUILDING D

	ALL	RESI	NON-RES	SERVICING	TOTAL		Dwellings					Compliance	
	GBA	GFA	GFA	GBA	GBA	GFA	Studio	1 bed	2 bed	3 bed	Total	CV	Solar
LVL 5	591	472			591	472		2	2	1	5	4	5
LVL 4	591	472			591	472		2	2	1	5	4	5
LVL 3	750	622			750	622	1	2	3	1	7	4	7
LVL 2	750	622			750	622	1	2	3	1	7	4	7
LVL 1	750	622			750	622	1	2	3	1	7	4	7
GROUND	861	165	414	176	1,037	579		2			2	1	2
LOWER GROUND											-		
BASEMENT				6,722							-		
TOTAL	4,293	2,975	414	6,898	4,469	3,389	3	12	13	5	33	21	33

TOTAL

	ALL	RESI	NON-RES	SERVICING	TOTAL		Dwellings					Compliance	
	GBA	GFA	GFA	GBA	GBA	GFA	Studio	1 bed	2 bed	3 bed	Total	CV	Solar
TOTAL	26,863	19,813	1,692	6,898	27,039	21,505	23	76	66	48	213	139	213
							10.8%	35.7%	31.0%	22.5%		65.3%	100.0%

SITE	9,018
FSR	2.38

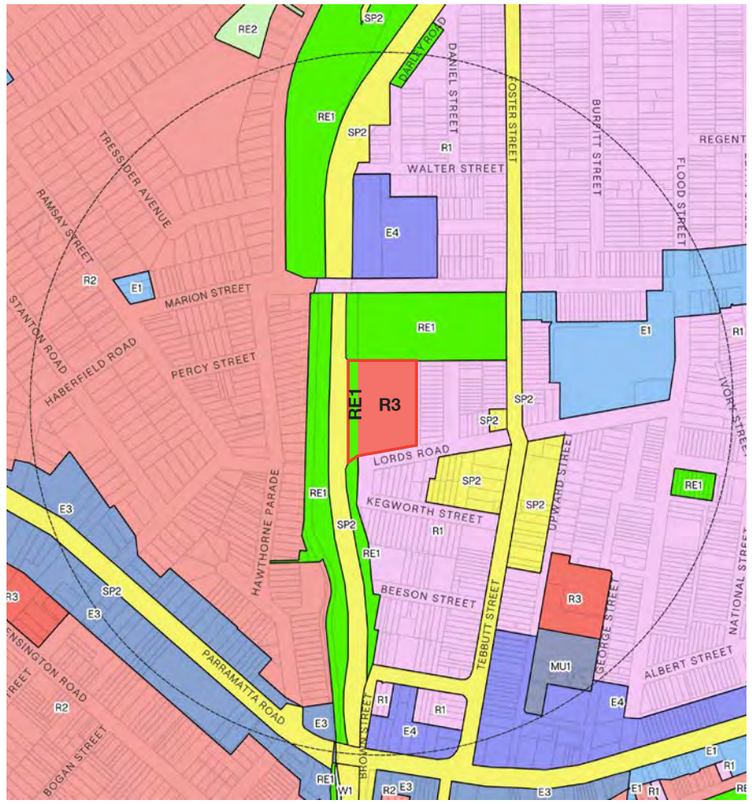
	Min. DCP Parking Rates						
	Studio	1 bed	2 bed	3 bed	Visitor	Non-Res	Total
Rate	-	3	2	1	11	100	
Required		25	33	48	19	22	148

	Max. DCP Parking Rates						
	Studio	1 bed	2 bed	3 bed	Visitor	Non-Res	Total
Rate	0.5	0.5	1.0	1.2	0.1	60	
Required	12	38	66	58	21	37	231

Planning Diagrams

9

9.1 Proposed LEP Maps

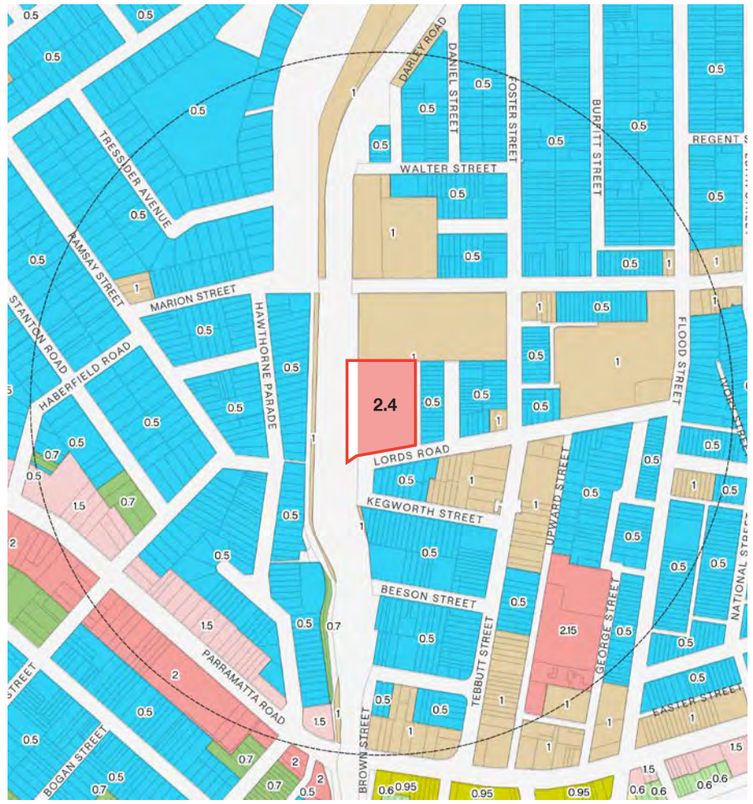


Land Zoning

RE1 Public Recreation
R3 Medium Density Residential

Height of Building

30m



Floor Space Ratio

2.4:1

9.2 Proposed DCP

Land Application Map

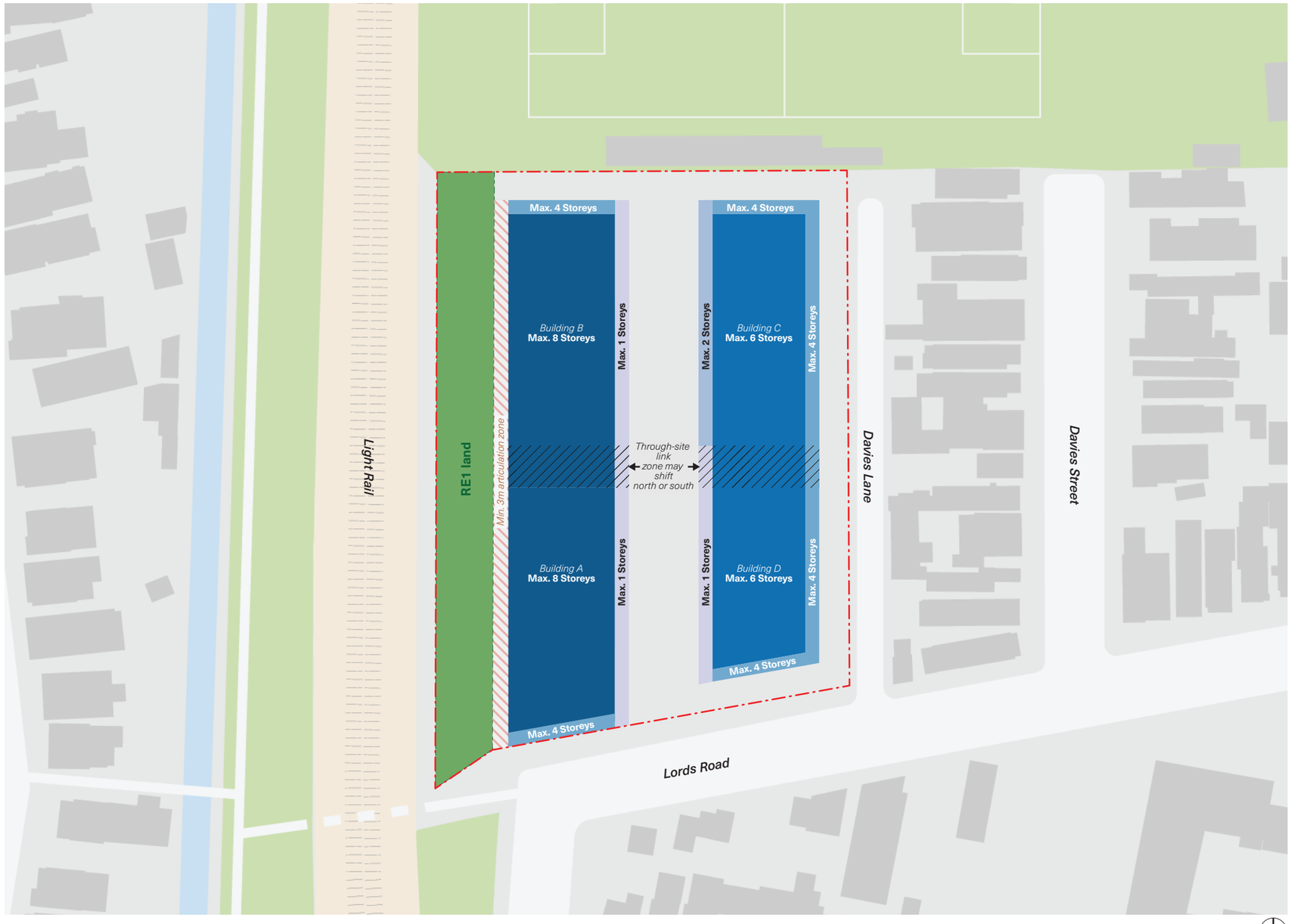
KEY

- Site Boundary
- RE1 land

1:1000 @ A3

Planning Diagrams

Building Heights



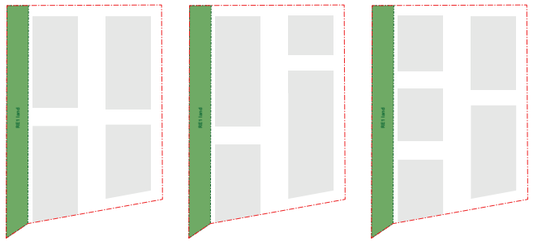
KEY

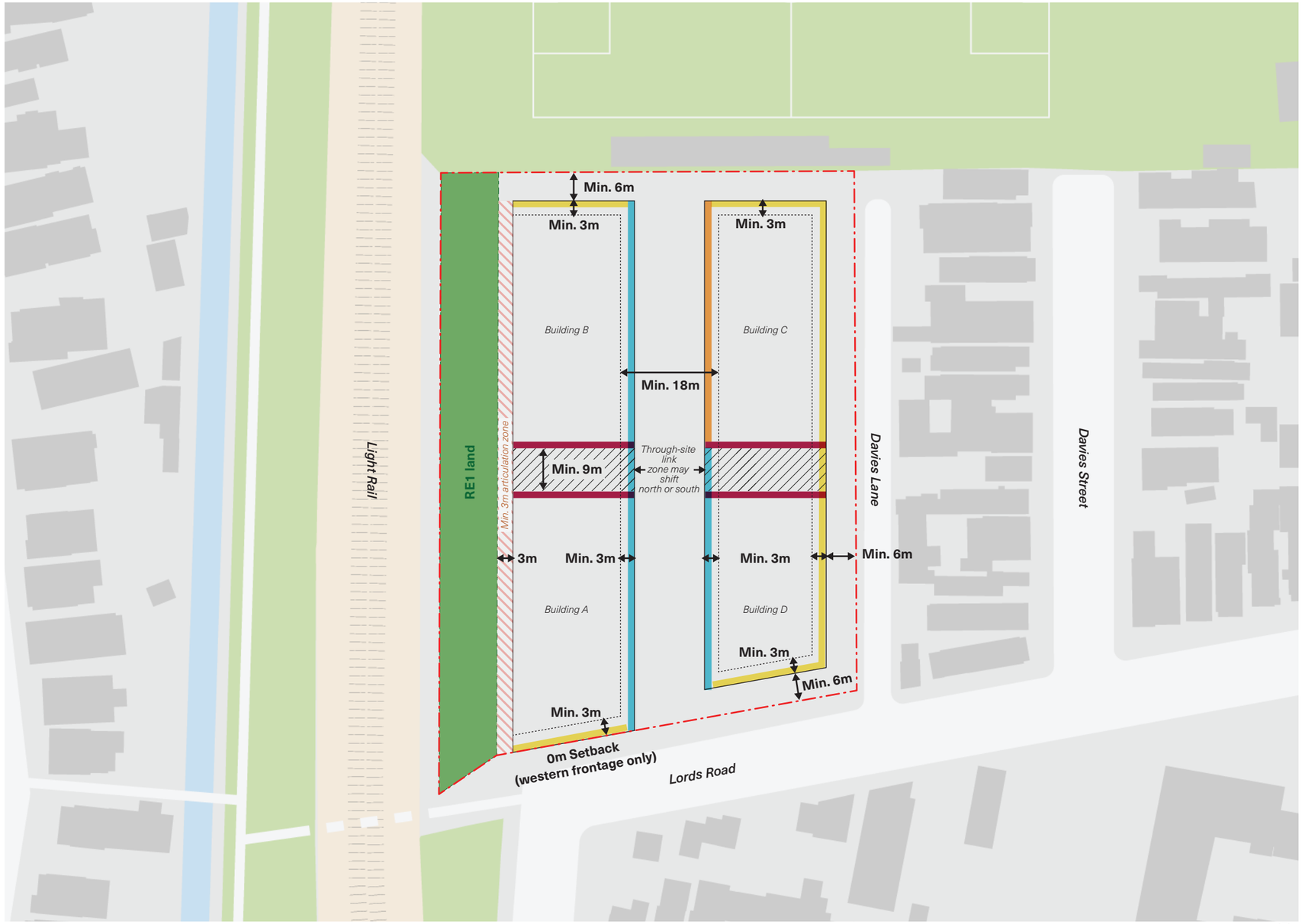
- Site Boundary
- 8 Storeys
- 6 Storeys
- 4 Storeys
- 2 Storeys
- 1 Storeys
- RE1 land
- Min. 3m Articulation zone
- Flexible Through-Site Link Zone

1:1000 @ A3

Setbacks & Separation

The following series of diagrams represent various ways in which the built form controls, in particular the through-site link, may be interpreted. Flexibility has been instilled in these controls to allow any future development application/ architectural scheme to approach the site without strict limitations. The below diagrams represent various ways in which the controls may be applied to the site.





KEY

- Site Boundary
- Non-Habitable Facade
- Max 1-Storey Street Wall
- Max 2-Storey Street Wall
- Max 4-Storey Street Wall
- RE1 land
- Flexible Through-Site Link Zone
- Min. 3m Articulation zone
- Above Street Wall Setback

1:1000 @ A3

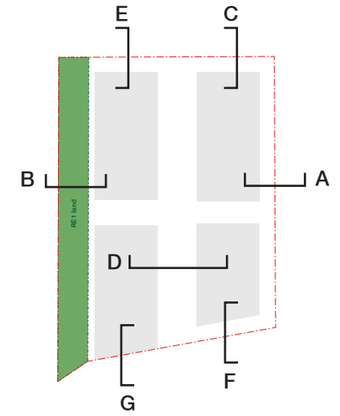
Open Space & Public Domain

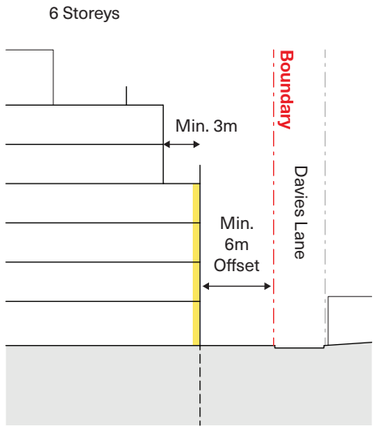
KEY

- Site Boundary
- Publicly Accessible Area
- Privately Accessible Communal Open Space
- RE1 land
- Shared Zone
- Flexible Through-Site Link Zone
- Min. 3m Articulation zone
- Building with Rooftop Communal Open Space
- Non-Residential Active Edge At Ground
- Residential Edge At Ground with Private Entrance
- Residential Private Open Space At Ground
- Residential Lobby Entrance
- Carpark Entrance
- Vehicular Movement (within Shared Zone only)

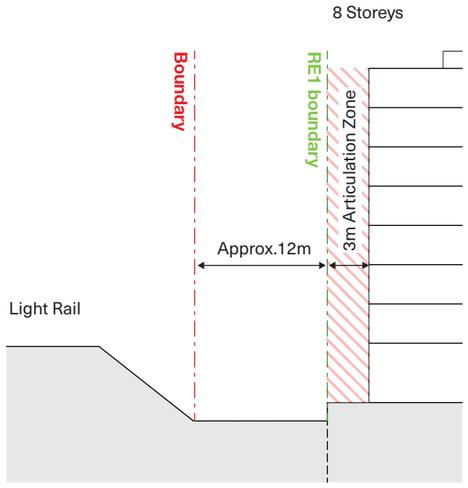
1:1000 @ A3

Planning Diagrams

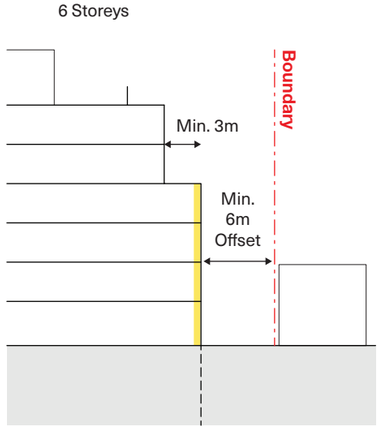




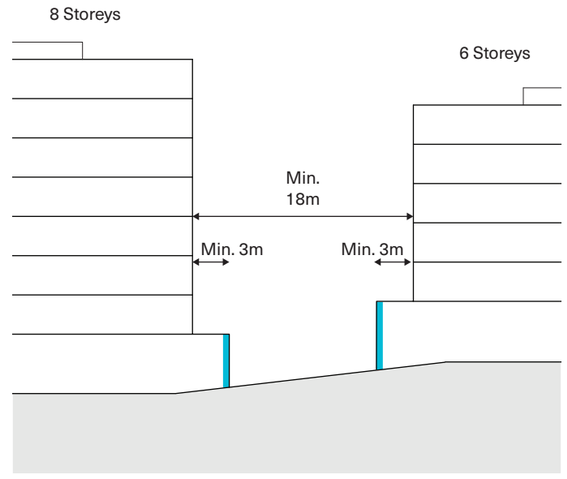
Section A - Davies Lane



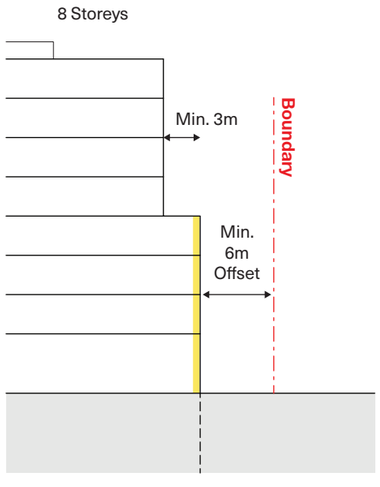
Section B - Western Boundary



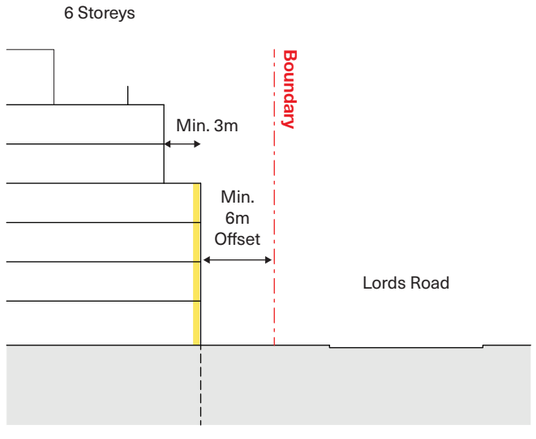
Section C - North-East



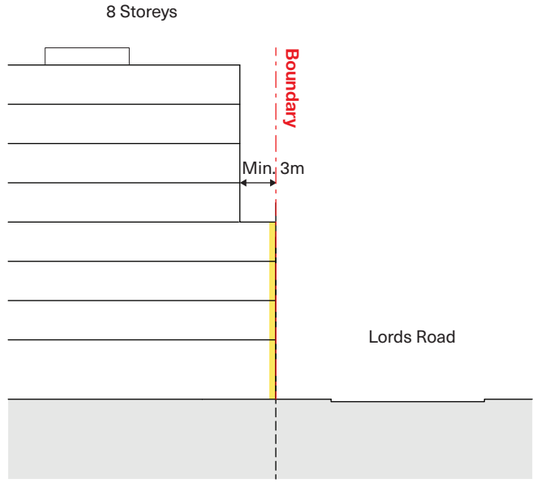
Section D - South Central



Section E - North-West



Section F - South-East



Section G - South-West

KEY

- Site Boundary
- Max 4-Storey Street Wall
- Max 1-Storey Street Wall

1:500 @ A3

SJB Urban

sjb.com.au

We create spaces people love.
SJB is passionate about the possibilities of architecture, interiors, urban design and planning.

Let's collaborate.

Level 2, 490 Crown Street
Surry Hills NSW 2010
Australia
T. 61 2 9380 9911
architects@sjb.com.au
sjb.com.au

APPENDIX G: BOREHOLE LOGS

TEST BOREHOLE LOG
KM01

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 3.1m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10 asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 06/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen			
	Fill: Brown silt. Coal waste @ 0.2. Concrete fragments throughout. Crushed brick and tile	0.2	0.1	
1.0	Fill: Old bitumen road	0.9		
	Fill: Fine grain brown silt, loose structure			
	Natural: Clayey brown silt. Very compact and friable. Ironstone	1.3		
	Natural: Weathered sandstone orange (fine-medium grain)			
2.0		2.4 +Dup01		
	Natural: Silty white clay			
3.0				
	EOH @ 3.1 metres			
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 03/03/05

TEST BOREHOLE LOG
KM02

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.4m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10 asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 06/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen			
	Fill: Brown clayey silt. Blue metal, Concrete fragments. Coal waste throughout. Crushed brick, tile and terracotta	0.2	0.3	
	Natural: Silt, brown; lighter with depth, loose structure	0.7		
1.0				
	Natural: Clayey silt. Compact and fragile. Ironstone Light yellow to dark red in column, less ironstone with depth			
2.0		2.0		
	EOH @ 2.4 metres Refusal on red sandstone			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 23/03/05

TEST BOREHOLE LOG
KM03

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.2m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 06/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Fill: Brown silt fine – medium grain. Light to dark in colour. Coal waste and ash throughout. Crushed brick and concrete pieces.	0.2 0.6	0.6	
1.0	Natural: Clayey silt - fine grain Some ironstone. Light brown in colour Loose structure, friable	0.9		
	Natural: Hand compact clays, yellow and red, friable. Ironstone fragments, friable			
2.0	Natural: White silt, fine grain, grey in colour	1.8 +Dup02		
	EOH @ 2.2 metres Refusal on natural orange sandstone			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED:
DATE: 03/03/05

TEST BOREHOLE LOG
KM04

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.2m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 08/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen Fill: Brown silt and aggregate Clays and furnace slag @ 0.1	0.1		
		0.5		
	Fill: Light brown slay with sandstone fragments - plastic			
	Natural: Red/yellow clay, very friable, weathered sands (fine-medium grain)	0.8		
1.0				
	Natural: Mottled clayey sands, very friable (fine-medium grain) Lighter with depth			
2.0		2.0		
	EOH @ 2.2 Refusal on natural red sandstone			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED: ...
DATE: 23/3/05

TEST BOREHOLE LOG
KM05

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 3.3m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 08/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen Fill: Brown silt and bitumen Aggregate and displaced clay	0.1		
	Fill: Displaced clay and ash @ 0.8	0.8		
1.0	Natural: Light brown sandy clay, darker with depth. Ironstone fragments	1.2		
2.0	Natural: Ironstone deposit	2.0		
	Natural: Light grey sandy clay, friable	3.0		
3.0	EOH @ 3.3 metres Refusal on natural sandstone			
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 6/3/05

TEST BOREHOLE LOG
KM06

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 0.5m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 08/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen Fill: Brown silt and aggregate	0.1		
	Fill: Ironstone fragments (red) and displaced clay	0.5		
	EOH @ 0.5 Refusal on natural orange sandstone No natural sample			
1.0				
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 23/12/05

TEST BOREHOLE LOG
KM07

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 1.8m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 08/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen Fill: Brown silt/sand (fine-medium grain) Rock fragments Concrete fragments Broken tile	0.2	0.3	
	Fill: Brown clayey sands and rock fragments	0.8		
1.0	Natural: Ironstone and brown clays friable	1.2		
2.0	EOH @ 1.8 Refusal on natural sandstone			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED: ...
DATE: 03/11/05

TEST BOREHOLE LOG
KM08

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.4m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 08/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete Fill: Brown silt and aggregate Rock fragments Crushed bricks	0.2		
	Fill: Ash and coal waste @ 0.8	0.8		
1.0	Fill: Crushed sandstone and displaced mottled clays, very plastic	1.4		
2.0	Natural: Pink weathered sands (medium grain)	2.0		
	EOH @ 2.4 metres			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS

CHECKED:

DATE: 03/03/05

TEST BOREHOLE LOG
KM09

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 3.6m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: 3.6m
CONTRACT: C04 3460	DATE: 08/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete Fill: Brown silt/sand and aggregate Mottled displaced clays with rock fragments, plastic	0.2		
	Fill: Crushed sandstone and clay Rock fragments	0.8		
1.0	Fill: Grey clay (plastic) and displaced ironstone	1.5		
	Fill: Grey clay Organic odour Ash, coal waste and glass	2.0		
2.0				
	Fill: Grey silt, moist debris Demolition waste Porcelain and glass	3.0		
3.0	Fill: Black organic silt, very moist Strong odour Rock fragments, organic material Glass fragments	3.6		
	EOH @ 3.6 metres Unable to extend sample further No natural sample			
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings
HA - Hand auger
T - Test pit
S - SPT sample
W - Water sample
D – Duplicate
U – Undisturbed tube sample
C - Composite sample
B – Bag sample only
PID - Photoionisation detector result
Groundwater level (static)
Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 03/03/05

TEST BOREHOLE LOG
KM10

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.4m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: 2.4m
CONTRACT: C04 3460	DATE: 09/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete Airspace (0.0-0.4)			
	Fill: sand (fine-medium grain), light brown Ironstone Metal fragments Rocks	0.4	0.4	
1.0	Fill: Displaced clays, ash & glass	1.0		
2.0	Fill: Light brown plastic clays, rocks, very moist/sloppy	2.4		
	EOH @ 2.4 No natural sample Sample very sloppy – failing at end of sample tube			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED: .....
DATE: 03/03/05

TEST BOREHOLE LOG
KM11

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 3.6m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete slab			
	Fill: Concrete fragments Brown/black sands (fine-medium grain) Ash & coal waste Glass fragments	0.4		
1.0	Fill: Mottled displaced clays (plastic) Ash Ironstone fragments	0.8 +Dup03	0.8	
2.0	Fill: Mottled clays and ash Light brown sands (fine-medium grain) No odour Minimal moisture	2.0		
3.0	Fill: Displaced clays, strong organic odour Glass and porcelain fragments Ash, very dark in colour Pebbles, sands and organic material	3.0		
	Natural: Mottled clays (organic odour)	3.6		
	EOH @ 3.6 metres			
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 03/03/05

TEST BOREHOLE LOG
KM12

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.4m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete slab			
	Fill: Displaced clays (friable Slate fragments Rocks, glass and electrical wire	0.3	0.4	
	Fill: Bitumen layer Organic material Ash Ironstone fragments	0.8		
1.0	Fill: Displaced mottled friable clays Ash & ironstone	1.2		
	Natural: Grey clays (fine grain & plastic) with organic material and organic odour	2.0 +Dup04		
2.0	EOH @ 2.4 metres			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED:
DATE: 03/12/05

TEST BOREHOLE LOG
KM13

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.4m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen Fill: Brown silt and aggregate and glass	0.2		
	Fill: Mottled weathered sands (fine-medium grain) Rocks & ironstone (friable)	0.6		
1.0	Fill: Crushed white sandstone and brown clay, Ash and concrete	1.0		
	Natural: Dark grey/brown silty clay, slight organic odour, plastic, some small rocks mixed in clay	1.2 +Dup05		
2.0	Natural: Light grey sandy clay plastic – no odour	2.0		
	EOH @ 2.4			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED:
DATE: 23/03/05

TEST BOREHOLE LOG
KM14

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 2.4m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/11/2004
DRILLING: Ute Mounted Hydraulic Push Tube	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Bitumen	0.2		
	Fill: Brown silt Aggregate and rock fragments		0.4	
	Fill: Crushed sandstone Weathered sands (fine-medium grain) Displaced clays (plastic, grey in colour)	0.6		
1.0	Natural: Dark grey sandy clay, plastic Slight organic odour Organic material	1.0		
2.0	Natural: Light grey sandy clay (plastic) Organic material	2.0		
	EOH @ 2.4 metres			
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED:
DATE: 03/12/04

TEST BOREHOLE LOG
KM15

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 0.8m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/3/2004
DRILLING: Stainless Steel Hand Auger	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete 150mm			
	Fill: Brown builder sand, loose (medium grain) underlain by soft red sandy clay. Ironstone present	0.2	0.2	
	Natural: White weathered sandy clay. Mottled orange. Loose	0.5 +Dup06	0.5	
	EOH @ 0.8			
1.0				
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS

CHECKED:

DATE: 30/03/05

TEST BOREHOLE LOG
KM16

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 1.0m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/3/2004
DRILLING: Stainless Steel Hand Auger	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete 550mm			
	Fill: Brown weathered clay sands; rock fragments and road base	0.6	0.6	
	Natural: Weathered sandy clay, soft, brown/orange in colour. Ironstone	0.8	0.8	
1.0	EOH @ 1.0			
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS

CHECKED: .....

DATE: 30/03/05

TEST BOREHOLE LOG
KM17

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 1.2m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/03/2004
DRILLING: Stainless Steel Hand Auger	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete			
	Fill: Weathered sandy clay. Mottled orange. Small rock fragments.	0.2	0.2	
		0.5	0.5	
	Fill: As above. Ash present			
1.0		1.0	1.0	
	Fill: Black silt (fine grain) with brown medium plasticity clays. Ash present. Ceramic			
	Natural: Clay, white, high plasticity, moist.	1.2 +Dup07		
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static)
S - SPT sample	C - Composite sample	Groundwater seepage

LOGGED BY: CC/AS
CHECKED: .....
DATE: 30/03/05

TEST BOREHOLE LOG
KM18

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 0.6m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/03/2004
DRILLING: Stainless Steel Hand Auger	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete 550mm			
	Fill: Brick fragments, brown sandy fill with ash	0.6	0.6	
	EOH @ 0.6 Refusal on fill material No natural sample			
1.0				
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings
HA - Hand auger
T - Test pit
S - SPT sample
W - Water sample
D – Duplicate
U – Undisturbed tube sample
C - Composite sample
B – Bag sample only
PID - Photoionisation detector result
Groundwater level (static)
Groundwater seepage

LOGGED BY: CC/AS
CHECKED:
DATE: 30/03/05

TEST BOREHOLE LOG
KM18

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 0.7m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/03/2004
DRILLING: Stainless Steel Hand Auger	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete			
	Fill: Friable light brown clay. coal waste	0.4	0.4	
	Natural: Yellow clay sand mottled red in colour, weathered	0.7 +Dup08	0.7	
	EOH @ 0.7			
1.0				
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photolonisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED: .....
DATE: 30/03/05

TEST BOREHOLE LOG
KM20

PROJECT: Detailed Site Investigation	BOREHOLE DEPTH: 0.8m
LOCATION: 67-73 Lords Road , Leichhardt	ELEVATION: ~10m asl
CLIENT: Platino Properties Pty Ltd	WATER LEVEL: n/a
CONTRACT: C04 3460	DATE: 09/3/2004
DRILLING: Stainless Steel Hand Auger	SHEET: 1 of 1

Depth (m)	Material Description & Observations	Sample	Asbestos sample	Well Construction Details
0.0	Concrete			
	Fill: Brown clay, sand mix with ceramics	0.4	0.4	
	Natural: Yellow/brown mottled clay with weathered sand	0.6		
	EOH @ 0.8			
1.0				
2.0				
3.0				
4.0				
5.0				

SAMPLING LEGEND

A - Auger drillings	W - Water sample	B – Bag sample only
HA - Hand auger	D – Duplicate	PID - Photoionisation detector result
T - Test pit	U – Undisturbed tube sample	Groundwater level (static) ▼
S - SPT sample	C - Composite sample	Groundwater seepage ◀

LOGGED BY: CC/AS
CHECKED: ....
DATE: 30/3/05

FOUNDATION EARTH SCIENCES

BOREHOLE : BH1

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT	▶			0.00			Concrete Slab, approximately 200mm thick					0.0
				0.20			FILL, silty gravelly sand, fine to medium grained, dark brown-dark grey, with gravels	M	L-MD			
				0.5						0.4-0.5	No HC smell, No Staining or No fibro fragments observed, PID = 0.6ppm	0.5
				1.0								1.0
				1.20		CH	Sandy CLAY, medium to high plasticity, brown-grey, with orange mottling, trace of gravel	M-W	F-St			
				1.5								1.5
				2.0								2.0
				2.5								2.5
				3.0								3.0
				3.30			SANDSTONE, fine to medium grained, extremely weathered, extremely low to low strength, brown-yellow	M				
				3.5								3.5
				4.0								4.0
				4.30			Borehole BH1 terminated at 4.30m					
				4.5								4.5
				5.0								5.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH2

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT				0.02			Ashphalt Concrete, approximateky 20mm thick	M	F			
				0.5			FILL, silty gravelly clay, low to medium plasticity, dark brown, with gravel			0.2-0.3	D2/SS2, No HC smell, No Staining or No fibro fragments observed, PID = 1.1ppm	0.5
				0.80		CH	Silty CLAY, medium to high plasticity, brown, trace of gravel	M	F-St			
				1.0								1.0
				1.20			becoming reddish brown, trace of gravel					
				1.5								1.5
				2.0								2.0
				2.00			becoming pale grey-yellow, trace of sand	M	VSt			
				2.5								2.5
	▼			3.0								3.0
				3.00			SANDSTONE, fine to medium grained, extremely weathered, extremely low to low strength, grey-yellow	M				
				3.5								3.5
				4.0								4.0
				4.5								4.5
				4.90 5.0			Borehole BH2 terminated at 4.90m					5.0
				5.5								5.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH3

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT				0.02			Asphalt Concrete, approximately 20mm thick	M	D			
							FILL, silty sand, fine to medium grained, brown-yellow, with gravel					
				0.5						0.5-0.6	No HC smell, No Staining or No fibro fragments observed, PID = 0.5ppm	0.5
				1.0								1.0
				1.5								1.5
				1.50		CH	Sandy CLAY, medium to high plasticity, brown-light brown, with ironstaining rock band	M	VSt			
				2.0								2.0
				2.30			becoming reddish brown					
				2.5								2.5
				2.80			SANDSTONE, fine to medium grained, extremely weathered, extremely low to low strength, grey-brown-reddish brown	M				
				3.0								3.0
				3.5								3.5
				4.0								4.0
				4.5								4.5
				4.70			Borehole BH3 terminated at 4.70m					
				5.0								5.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH4

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	Well Details	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT				0.02			Ashphalt Concrete, approxmately 20mm thick	M	MD			
				0.5			FILL, silty sand, fine grained, dark brown, with gravel			0.2-0.3	D1/SS1, No HC smell, No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
				0.50		CH	Silty CLAY, medium to high plasticity, brown-yellow	M	St			
				1.0								1.0
				1.5								1.5
				1.90 2.0			with ironstaining rock band					2.0
				2.30			SANDSTONE, fine to medium grained, extremely weathered, extremely low strength to low strength, brown-grey, with ironstaining rock band					
				2.5								2.5
				3.0								3.0
				3.5								3.5
				4.0								4.0
				4.00			Borehole BH4 terminated at 4.00m					
				4.5								4.5
				5.0								5.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH5

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 200mm thick					
			0.20								
HA						FILL, sandy clay, medium plasticity, light brown, with sandstone rocks, trace of sand	M	MD			
			0.5						0.4-0.5	No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
			0.50			Borehole BH5 terminated at 0.50m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry
M - Moist
W - Wet

VS - Very Soft
S - Soft
F - Firm
St - Stiff
VSt - Very Stiff
H - Hard

VL - Very Loose
L - Loose
MD - Medium Dense
D - Dense
VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH6

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 200mm thick					
			0.20			FILL, sandy clay, medium to high plasticity, brown	M	F-St			
									0.3-0.4	No Staining or No fibro fragments observed, PID = 0.2ppm	
			0.5								0.5
HA			*0.50*			becoming dark brown, with gravels					
			0.90			Borehole BH6 terminated at 0.90m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH7

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 200mm thick	M				
HA			*0.20*			FILL, sandy clay, medium plasticity, dark brown	M	S-F	0.2-0.3	No Staining or No fibro fragments observed, PID = 0.2ppm	
			0.40			Borehole BH7 terminated at 0.40m					
			0.5								0.5
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH8

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 180mm thick	M				
			0.18			FILL, sandy clay, medium plasticity, light brown-red	M	S-F			
HA			0.5						0.5-0.6	No Staining or No fibro fragments observed, PID = 0.2ppm	0.5
			0.70			Borehole BH8 terminated at 0.70m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH9

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 350mm thick					
HA			*0.35* 0.5			FILL, clayey sand, medium to coarse grained, light brown, with some gravels	M	MD	0.4-0.5	No Staining or No fibro fragments observed, PID = 0.1ppm	0.5
			0.55 1.0			Borehole BH9 terminated at 0.55m					1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH10

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT			0.5			Concrete Slab, approximately 500mm thick	M				0.5
HA			*0.50*			FILL, silty clay, high plasticity, grey-light brown	M	F-St			
			0.60			becoming dark brown, with some sand and gravel			0.7-0.8	No Staining or No fibro fragments observed, PID = 0.3ppm	
			0.90			Borehole BH10 terminated at 0.90m					1.0
			1.0								
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH11

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT			*0.02*			Asphalt Concrete, approximately 20mm thick					
						FILL, silty gravelly clay, low to medium plasticity, dark brown-brown	M	F-St			
			0.5						0.5-0.6	No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
			0.60		SC	Clayey SAND, fine to medium grained, brown-yellow	M	MD			
			1.0								1.0
			1.00			Borehole BH11 terminated at 1.00m					
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH12

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 15mm thick	M				
HA			*0.15*			FILL, sandy clay, medium plasticity, grey-brown, with gravel,	M	F-St	0.2-0.3	No Staining or No fibro fragments observed, PID = 0.2ppm	
			0.40			Borehole BH12 terminated at 0.40m					
			0.5								0.5
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH13

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 100mm thick					
			0.10			FILL, silty clay, low to medium plasticity, dark brown, with gravel and sandstone fragments	M	F-St			
									0.3-0.4	No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
			0.5								
			1.0								1.0
			1.5								1.5
ADT			2.0								2.0
									2.0-2.1	No Staining or No fibro fragments observed, minor hydrocarbon odour, PID = 0.4ppm	
			2.5								2.5
			3.0								3.0
			3.20			SANDSTONE, fine to medium grained, extremely weathered, extremly low to low strength, grey-brown	M				
			3.5								3.5
			3.50			Borehole BH13 terminated at 3.50m					
			4.0								4.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH14

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 100mm thick					
			0.10			FILL, silty clay, low to medium plasticity, dark brown, with gravels	M	F-St			
ADT			0.5						0.6-0.7	No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
			1.0								1.0
			1.00			Borehole BH14 terminated at 1.00m					
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH15

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Asphalt Slab, approximately 100mm thick					
			0.10								
HA						FILL, road base, silty gravels	M	F-St			
			0.5								0.5
			0.50			FILL, sandy clay, brown, medium plasticity, with some gravels	M	F-St	0.5-0.6	No Staining or No fibro fragments observed, PID = 0.2ppm	
			0.60			Borehole BH15 terminated at 0.60m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH16

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Asphalt Slab, approximately 100mm thick					
			0.10			FILL, road base, silty gravels	M	F-St			
HA			0.5						0.3-0.4	No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
			0.60			Borehole BH16 terminated at 0.60m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH17

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Asphalt Slab, approximately 100mm thick					
			0.10			FILL, road base, silty gravels	M	F-St			
HA			0.5								0.5
			0.50			FILL, sandy clay, light brown, medium plasticity, with some gravels	M	F-St	0.5-0.6	No Staining or No fibro fragments observed, PID = 0.3ppm	
			0.80			Borehole BH17 terminated at 0.80m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH18

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
			0.03			Asphalt Slab, approximately 30mm thick					
ADT			0.5			FILL, silty gravelly clay, low to medium plasticity, dark brown-dark grey	M	F-St	0.7-0.8	No Staining or No fibro fragments observed, PID = 0.2ppm	0.5
			1.0								1.0
			1.10		CH	Silty CLAY, medium to high plasticity, grey with traces of gravels	M	F-St			
			1.5								1.5
			1.50			Borehole BH18 terminated at 1.50m					
			2.0								2.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH19

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT			*0.02*			Asphalt Slab, approximately 20mm thick					
						FILL, silty gravelly clay, low to medium plasticity, dark brown-dark grey	M	F-St			
									0.2-0.3	No Staining or No fibro fragments observed, PID = 0.2ppm	
			0.5								0.5
			0.80		CH	Silty CLAY, medium to high plasticity, brown - orange	M	F-St			
			1.0								1.0
			1.5								1.5
			1.50			Borehole BH19 terminated at 1.50m					
			2.0								2.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH20

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
			0.02			Asphalt Slab, approximately 20mm thick					
						FILL, silty gravelly clay, low to medium plasticity, dark brown	M	F-St			
									0.3-0.4	No Staining or No fibro fragments observed, PID = 0.2ppm	
			0.5								0.5
ADT			*0.70*		CH	Silty CLAY, medium to high plasticity, brown - orange with traces of rock	M	F-St			
			1.0								1.0
			1.5								1.5
			1.50			Borehole BH20 terminated at 1.50m					
			2.0								2.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH21

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** EY **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Drilling Rig **Borehole Size :** 100mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
ADT			*0.02*			Asphalt Slab, approximately 20mm thick					
						FILL, silty gravelly clay, low to medium plasticity, dark brown	M	F-St			
			0.5								0.5
									0.6-0.7	No Staining or No fibro fragments observed, PID = 0.2ppm	
			1.0								1.0
			1.00		CH	Silty CLAY, medium to high plasticity, brown - orange with traces of ironstone	M	F-St			
			1.5								1.5
			1.50			Borehole BH21 terminated at 1.50m					
			2.0								2.0

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

BOREHOLE : BH22

FOUNDATION EARTH SCIENCES

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
HA						Concrete Slab, approximately 180mm thick					
			0.18			FILL, sandy clay, low to medium plasticity, brown- white with some gravels	M	F-St			
			0.5						0.5-0.6	No Staining or No fibro fragments observed, PID = 0.2ppm	0.5
			0.70		CH	Silty CLAY, medium to high plasticity, grey- red	M	F-St			
			0.90			Borehole BH22 terminated at 0.90m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

FOUNDATION EARTH SCIENCES

BOREHOLE : BH23

CLIENT NAME: Platino Properties Pty Ltd **JOB NUMBER:** E2843

SITE ADDRESS: 67-75 Lords Road, Leichhardt NSW 2040 **PROJECT:** Detailed Site Investigation

Date Started : 15/06/2022 **Completed :** 15/06/2022 **Logged By :** DG **Checked By :** MS

Borehole Location : Refer to Site Plan **Surface RL :** --- **Datum :** m AHD

Equipment : Hand Auger **Borehole Size :** 50mm **Slope :** -90°

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Moisture	Consistence	Samples Tests Remarks	Additional Observations	Depth (m)
DT						Concrete Slab, approximately 260mm thick					
HA			*0.26*			FILL, sandy clay, low to medium plasticity, brown- white with some gravels	M	F-St			
			0.5						HA	No Staining or No fibro fragments observed, PID = 0.3ppm	0.5
			0.60			Borehole BH23 terminated at 0.60m					
			1.0								1.0
			1.5								1.5

Comments:

D - Dry, M - Moist, W - Wet

VS - Very Soft, S - Soft, F - Firm, St - Stiff, VSt - Very Stiff, H - Hard

VL - Very Loose, L - Loose, MD - Medium Dense, D - Dense, VD - Very Dense

APPENDIX H: NATA ACCREDITED LABORATORY CERTIFICATES

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 298140

Client Details

Client	Foundation Earth Sciences Pty Ltd
Attention	Michael Silk
Address	PO Box 4405, East Gosford, NSW, 2250

Sample Details

Your Reference	**E2843, Leichhardt**
Number of Samples	28 Soil
Date samples received	16/06/2022
Date completed instructions received	16/06/2022

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	23/06/2022
Date of Issue	23/06/2022

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 ***

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Nyovan Moonean
Authorised by Asbestos Approved Signatory: Matt Mansfield

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Kyle Gavrily, Senior Chemist
Matt Mansfield, QHSE manager
Phalak Inthakesone, Organics Development Manager, Sydney
Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

VOCs in soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-13
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH13
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
1,1-dichloroethane	mg/kg	<1	<1	<1	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
bromochloromethane	mg/kg	<1	<1	<1	<1	<1
chloroform	mg/kg	<1	<1	<1	<1	<1
2,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1-dichloropropene	mg/kg	<1	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1	<1
carbon tetrachloride	mg/kg	<1	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
dibromomethane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
trichloroethene	mg/kg	<1	<1	<1	<1	<1
bromodichloromethane	mg/kg	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1	<1	<1	<1
dibromochloromethane	mg/kg	<1	<1	<1	<1	<1
1,2-dibromoethane	mg/kg	<1	<1	<1	<1	<1
tetrachloroethene	mg/kg	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
chlorobenzene	mg/kg	<1	<1	<1	<1	<1

VOCs in soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-13
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH13
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
bromoform	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
styrene	mg/kg	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1	<1	<1	<1
isopropylbenzene	mg/kg	<1	<1	<1	<1	<1
bromobenzene	mg/kg	<1	<1	<1	<1	<1
n-propyl benzene	mg/kg	<1	<1	<1	<1	<1
2-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
4-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1	<1	<1	<1
tert-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1	<1	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
sec-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
4-isopropyl toluene	mg/kg	<1	<1	<1	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
n-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
hexachlorobutadiene	mg/kg	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
Surrogate Dibromofluorometha	%	111	113	116	113	115
Surrogate aaa-Trifluorotoluene	%	79	80	95	86	87
Surrogate Toluene-d_8	%	108	108	111	108	109
Surrogate 4-Bromofluorobenzene	%	100	100	99	98	98

VOCs in soil			
Our Reference		298140-25	298140-26
Your Reference	UNITS	D1	D2
Depth		-	-
Date Sampled		15/06/2022	15/06/2022
Type of sample		Soil	Soil
Date extracted	-	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022
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

VOCs in soil			
Our Reference		298140-25	298140-26
Your Reference	UNITS	D1	D2
Depth		-	-
Date Sampled		15/06/2022	15/06/2022
Type of sample		Soil	Soil
Ethylbenzene	mg/kg	<1	<1
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	115
Surrogate aaa-Trifluorotoluene	%	83	76
Surrogate Toluene-d_8	%	110	111
Surrogate 4-Bromofluorobenzene	%	99	100

PFAS in Soils Extended						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-13
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH13
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	0.4	0.2	0.3	0.3
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	99	97	95	100	96
Surrogate $^{13}C_2$ *PFOA*	%	96	97	102	99	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	100	97	96	91
Extracted ISTD $^{18}O_2$ *PFHxS*	%	96	96	96	89	91
Extracted ISTD $^{13}C_4$ *PFOS*	%	99	96	100	89	95

PFAS in Soils Extended						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-13
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH13
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	97	97	96	95	85
Extracted ISTD $^{13}C_3$ *PFPeA*	%	96	99	101	96	92
Extracted ISTD $^{13}C_2$ *PFHxA*	%	95	97	101	97	90
Extracted ISTD $^{13}C_4$ *PFHpA*	%	94	94	94	92	91
Extracted ISTD $^{13}C_4$ *PFOA*	%	102	100	99	101	93
Extracted ISTD $^{13}C_5$ *PFNA*	%	101	99	97	103	96
Extracted ISTD $^{13}C_2$ *PFDA*	%	113	96	104	105	106
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	122	113	107	111	105
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	133	120	125	118	110
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	103	102	102	86	91
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	109	103	110	116	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	111	103	107	133	104
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	131	107	126	170	114
Extracted ISTD $^{13}C_8$ *FOSA*	%	104	103	105	108	104
Extracted ISTD d_3 *N MeFOSA*	%	106	103	100	90	95
Extracted ISTD d_5 *N EtFOSA*	%	100	99	100	86	93
Extracted ISTD d_7 *N MeFOSE*	%	107	110	109	87	108
Extracted ISTD d_9 *N EtFOSE*	%	101	107	101	86	93
Extracted ISTD d_3 *N MeFOSAA*	%	114	94	109	138	94
Extracted ISTD d_5 *N EtFOSAA*	%	122	110	121	143	95
Total Positive PFHxS & PFOS	µg/kg	<0.1	0.4	0.2	0.3	0.3
Total Positive PFOS & PFOA	µg/kg	<0.1	0.4	0.2	0.5	0.3
Total Positive PFAS	µg/kg	<0.1	0.4	0.2	0.5	0.3

PFAS in Soils Extended			
Our Reference		298140-25	298140-26
Your Reference	UNITS	D1	D2
Depth		-	-
Date Sampled		15/06/2022	15/06/2022
Type of sample		Soil	Soil
Date prepared	-	21/06/2022	21/06/2022
Date analysed	-	21/06/2022	21/06/2022
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.5	0.3
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	0.1	<0.1
Perfluoroheptanoic acid	µg/kg	0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.2	0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	107	98
Surrogate $^{13}C_2$ *PFOA*	%	97	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	101
Extracted ISTD $^{18}O_2$ *PFHxS*	%	93	93
Extracted ISTD $^{13}C_4$ *PFOS*	%	89	97

PFAS in Soils Extended			
Our Reference		298140-25	298140-26
Your Reference	UNITS	D1	D2
Depth		-	-
Date Sampled		15/06/2022	15/06/2022
Type of sample		Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	92	89
Extracted ISTD $^{13}C_3$ *PFPeA*	%	96	97
Extracted ISTD $^{13}C_2$ *PFHxA*	%	102	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%	93	92
Extracted ISTD $^{13}C_4$ *PFOA*	%	102	102
Extracted ISTD $^{13}C_5$ *PFNA*	%	100	106
Extracted ISTD $^{13}C_2$ *PFDA*	%	103	102
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	102	122
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	113	125
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	89	91
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	114	109
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	119	120
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	143	146
Extracted ISTD $^{13}C_8$ *FOSA*	%	108	110
Extracted ISTD d_3 *N MeFOSA*	%	93	98
Extracted ISTD d_5 *N EtFOSA*	%	95	100
Extracted ISTD d_7 *N MeFOSE*	%	101	100
Extracted ISTD d_9 *N EtFOSE*	%	95	100
Extracted ISTD d_3 *N MeFOSAA*	%	115	118
Extracted ISTD d_5 *N EtFOSAA*	%	123	126
Total Positive PFHxS & PFOS	µg/kg	0.5	0.3
Total Positive PFOS & PFOA	µg/kg	0.6	0.4
Total Positive PFAS	µg/kg	0.9	0.4

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} 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
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	79	80	95	86	86

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} 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
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	87	86	79	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		298140-11	298140-12	298140-13	298140-14	298140-15
Your Reference	UNITS	BH11	BH12	BH13	BH13	BH14
Depth		0.5-0.6	0.2-0.3	0.3-0.4	2.0-2.1	0.6-0.7
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} 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
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	85	82	87	87	82

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		298140-16	298140-17	298140-18	298140-19	298140-20
Your Reference	UNITS	BH15	BH16	BH17	BH18	BH19
Depth		0.5-0.6	0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} 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
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	86	87	88	83

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		298140-21	298140-22	298140-23	298140-24	298140-25
Your Reference	UNITS	BH20	BH21	BH22	BH23	D1
Depth		0.3-0.4	0.6-0.7	0.5-0.6	0.4-0.5	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} 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
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	72	89	77	83	83

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		298140-26	298140-27	298140-28
Your Reference	UNITS	D2	TS1	TB1
Depth		-	-	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	<25	[NA]	<25
TRH C_6 - C_{10}	mg/kg	<25	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]	<25
Benzene	mg/kg	<0.2	96%	<0.2
Toluene	mg/kg	<0.5	98%	<0.5
Ethylbenzene	mg/kg	<1	98%	<1
m+p-xylene	mg/kg	<2	98%	<2
o-Xylene	mg/kg	<1	98%	<1
Naphthalene	mg/kg	<1	[NA]	<1
Total +ve Xylenes	mg/kg	<1	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	76	93	92

svTRH (C10-C40) in Soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	240	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	240	<50	<50	<50	<50
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	220	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	320	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	540	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	80	80	89	88

svTRH (C10-C40) in Soil						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	460
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	930
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	1,400
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	1,200
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	730
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	1,900
Surrogate o-Terphenyl	%	85	81	82	80	97

svTRH (C10-C40) in Soil						
Our Reference		298140-11	298140-12	298140-13	298140-14	298140-15
Your Reference	UNITS	BH11	BH12	BH13	BH13	BH14
Depth		0.5-0.6	0.2-0.3	0.3-0.4	2.0-2.1	0.6-0.7
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	20/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	220
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	330
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	160	240
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	310
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	160	550
Surrogate o-Terphenyl	%	83	81	80	92	111

svTRH (C10-C40) in Soil						
Our Reference		298140-16	298140-17	298140-18	298140-19	298140-20
Your Reference	UNITS	BH15	BH16	BH17	BH18	BH19
Depth		0.5-0.6	0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	200	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	200	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	390	<50
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	340	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	120	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	460	<50
Surrogate o-Terphenyl	%	85	79	79	95	82

svTRH (C10-C40) in Soil						
Our Reference		298140-21	298140-22	298140-23	298140-24	298140-25
Your Reference	UNITS	BH20	BH21	BH22	BH23	D1
Depth		0.3-0.4	0.6-0.7	0.5-0.6	0.4-0.5	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	300	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	300	<50	<50	<50
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	230	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	480	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	720	<50	<50	<50
Surrogate o-Terphenyl	%	80	83	91	79	84

svTRH (C10-C40) in Soil		
Our Reference		298140-26
Your Reference	UNITS	D2
Depth		-
Date Sampled		15/06/2022
Type of sample		Soil
Date extracted	-	20/06/2022
Date analysed	-	21/06/2022
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	180
Total +ve TRH (>C10-C40)	mg/kg	180
Surrogate o-Terphenyl	%	91

PAHs in Soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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	0.2	<0.1	0.3	0.4	0.4
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	0.1
Fluoranthene	mg/kg	0.5	<0.1	0.4	1.2	0.9
Pyrene	mg/kg	0.5	<0.1	0.5	1.4	0.9
Benzo(a)anthracene	mg/kg	0.3	<0.1	0.3	0.9	0.6
Chrysene	mg/kg	0.2	<0.1	0.2	0.7	0.4
Benzo(b,j+k)fluoranthene	mg/kg	0.5	<0.2	0.4	2	0.9
Benzo(a)pyrene	mg/kg	0.4	<0.05	0.3	1.1	0.61
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	0.4	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	0.2	0.7	0.4
Total +ve PAH's	mg/kg	2.9	<0.05	2.5	8.7	5.4
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	1.5	0.8
Benzo(a)pyrene TEQ calc(half)	mg/kg	0.5	<0.5	<0.5	1.5	0.8
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.6	<0.5	<0.5	1.5	0.9
Surrogate p-Terphenyl-d14	%	87	89	86	80	86

PAHs in Soil						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
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	0.3	<0.1	<0.1	1.4
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.4
Fluoranthene	mg/kg	1.1	0.6	<0.1	0.2	3.3
Pyrene	mg/kg	1.2	0.7	<0.1	0.2	3.4
Benzo(a)anthracene	mg/kg	0.8	0.4	<0.1	0.1	2.4
Chrysene	mg/kg	0.5	0.3	<0.1	<0.1	1.5
Benzo(b,j+k)fluoranthene	mg/kg	1	0.7	<0.2	0.2	3.6
Benzo(a)pyrene	mg/kg	0.85	0.5	<0.05	0.1	2.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	0.2	<0.1	<0.1	0.9
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Benzo(g,h,i)perylene	mg/kg	0.5	0.3	<0.1	<0.1	1.6
Total +ve PAH's	mg/kg	7.1	3.9	<0.05	0.78	22
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.1	0.6	<0.5	<0.5	3.6
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.1	0.7	<0.5	<0.5	3.6
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.2	0.7	<0.5	<0.5	3.6
Surrogate p-Terphenyl-d14	%	98	87	89	87	89

PAHs in Soil						
Our Reference		298140-11	298140-12	298140-13	298140-14	298140-15
Your Reference	UNITS	BH11	BH12	BH13	BH13	BH14
Depth		0.5-0.6	0.2-0.3	0.3-0.4	2.0-2.1	0.6-0.7
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Phenanthrene	mg/kg	0.2	<0.1	<0.1	2.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.5	<0.1
Fluoranthene	mg/kg	0.3	0.1	<0.1	3.5	0.2
Pyrene	mg/kg	0.3	0.1	<0.1	3.6	0.2
Benzo(a)anthracene	mg/kg	0.2	0.1	<0.1	2.1	0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	1.5	0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2	<0.2	3.1	0.2
Benzo(a)pyrene	mg/kg	0.2	0.1	<0.05	2.2	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.7	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	1.3	0.1
Total +ve PAH's	mg/kg	1.7	0.5	<0.05	22	1.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	3.2	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	3.2	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	3.2	<0.5
Surrogate p-Terphenyl-d14	%	87	90	86	78	75

PAHs in Soil						
Our Reference		298140-16	298140-17	298140-18	298140-19	298140-20
Your Reference	UNITS	BH15	BH16	BH17	BH18	BH19
Depth		0.5-0.6	0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0.6	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Phenanthrene	mg/kg	0.3	<0.1	<0.1	3.8	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	1.1	<0.1
Fluoranthene	mg/kg	1.3	0.1	0.2	11	0.3
Pyrene	mg/kg	1.5	0.1	0.2	11	0.3
Benzo(a)anthracene	mg/kg	1.2	<0.1	0.1	7.1	0.2
Chrysene	mg/kg	0.8	<0.1	0.1	5.2	0.2
Benzo(b,j+k)fluoranthene	mg/kg	2.1	<0.2	0.2	12	0.4
Benzo(a)pyrene	mg/kg	1.5	0.1	0.2	8.6	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	0.6	<0.1	<0.1	2.7	0.1
Dibenzo(a,h)anthracene	mg/kg	0.2	<0.1	<0.1	1.1	<0.1
Benzo(g,h,i)perylene	mg/kg	1.1	<0.1	0.1	5.0	0.2
Total +ve PAH's	mg/kg	11	0.4	1.1	70	2.0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	2.1	<0.5	<0.5	12	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	2.1	<0.5	<0.5	12	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	2.1	<0.5	<0.5	12	<0.5
Surrogate p-Terphenyl-d14	%	91	87	86	96	93

PAHs in Soil						
Our Reference		298140-21	298140-22	298140-23	298140-24	298140-25
Your Reference	UNITS	BH20	BH21	BH22	BH23	D1
Depth		0.3-0.4	0.6-0.7	0.5-0.6	0.4-0.5	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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	1.1	<0.1	0.4
Anthracene	mg/kg	<0.1	<0.1	0.3	<0.1	0.1
Fluoranthene	mg/kg	<0.1	0.2	2.1	<0.1	1.2
Pyrene	mg/kg	<0.1	0.3	2.0	<0.1	1.3
Benzo(a)anthracene	mg/kg	<0.1	0.2	1.3	<0.1	0.9
Chrysene	mg/kg	<0.1	0.1	0.9	<0.1	0.7
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.3	2	<0.2	1
Benzo(a)pyrene	mg/kg	0.07	0.2	1.3	<0.05	0.97
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.4	<0.1	0.3
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	0.7	<0.1	0.6
Total +ve PAH's	mg/kg	0.07	1.5	12	<0.05	8.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	1.8	<0.5	1.3
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	1.8	<0.5	1.3
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	1.8	<0.5	1.4
Surrogate p-Terphenyl-d14	%	84	89	86	89	84

PAHs in Soil		
Our Reference		298140-26
Your Reference	UNITS	D2
Depth		-
Date Sampled		15/06/2022
Type of sample		Soil
Date extracted	-	20/06/2022
Date analysed	-	21/06/2022
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	82

Organochlorine Pesticides in soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	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
gamma-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
Endosulfan II	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
Endrin Aldehyde	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
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	%	84	80	86	81	81

Organochlorine Pesticides in soil						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	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
gamma-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	0.4
Endrin	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-DDD	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
pp-DDT	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	%	85	82	87	81	82

Organochlorine Pesticides in soil						
Our Reference		298140-11	298140-12	298140-13	298140-15	298140-16
Your Reference	UNITS	BH11	BH12	BH13	BH14	BH15
Depth		0.5-0.6	0.2-0.3	0.3-0.4	0.6-0.7	0.5-0.6
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	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
gamma-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
Endosulfan II	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
Endrin Aldehyde	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
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	%	84	84	81	78	83

Organochlorine Pesticides in soil						
Our Reference		298140-17	298140-18	298140-19	298140-20	298140-21
Your Reference	UNITS	BH16	BH17	BH18	BH19	BH20
Depth		0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	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
gamma-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
Endosulfan II	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
Endrin Aldehyde	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
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	%	84	80	80	84	81

Organochlorine Pesticides in soil						
Our Reference		298140-22	298140-23	298140-24	298140-25	298140-26
Your Reference	UNITS	BH21	BH22	BH23	D1	D2
Depth		0.6-0.7	0.5-0.6	0.4-0.5	-	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	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
gamma-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
Endosulfan II	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
Endrin Aldehyde	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
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	%	86	81	81	79	79

Organophosphorus Pesticides in Soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-13
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH13
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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
Diazinon	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
Ronnel	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
Chlorpyriphos	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
Bromophos-ethyl	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
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	80	86	81	81

Organophosphorus Pesticides in Soil			
Our Reference		298140-25	298140-26
Your Reference	UNITS	D1	D2
Depth		-	-
Date Sampled		15/06/2022	15/06/2022
Type of sample		Soil	Soil
Date extracted	-	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	79	79

PCBs in Soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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 TCMX	%	84	80	86	81	81

PCBs in Soil						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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 TCMX	%	85	82	87	81	82

PCBs in Soil						
Our Reference		298140-11	298140-12	298140-13	298140-15	298140-16
Your Reference	UNITS	BH11	BH12	BH13	BH14	BH15
Depth		0.5-0.6	0.2-0.3	0.3-0.4	0.6-0.7	0.5-0.6
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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 TCMX	%	84	84	81	78	83

PCBs in Soil						
Our Reference		298140-17	298140-18	298140-19	298140-20	298140-21
Your Reference	UNITS	BH16	BH17	BH18	BH19	BH20
Depth		0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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 TCMX	%	84	80	80	84	81

PCBs in Soil						
Our Reference		298140-22	298140-23	298140-24	298140-25	298140-26
Your Reference	UNITS	BH21	BH22	BH23	D1	D2
Depth		0.6-0.7	0.5-0.6	0.4-0.5	-	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
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 TCMX	%	86	81	81	79	79

Acid Extractable metals in soil						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Arsenic	mg/kg	<4	<4	<4	5	10
Cadmium	mg/kg	<0.4	0.4	<0.4	0.7	6.0
Chromium	mg/kg	20	12	6	10	15
Copper	mg/kg	50	56	9	94	32
Lead	mg/kg	18	7	17	95	92
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	62	41	2	5	4
Zinc	mg/kg	40	47	22	160	92

Acid Extractable metals in soil						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Arsenic	mg/kg	13	8	<4	<4	16
Cadmium	mg/kg	12	11	<0.4	<0.4	4.6
Chromium	mg/kg	18	12	9	2	15
Copper	mg/kg	67	15	1	8	39
Lead	mg/kg	76	44	5	25	120
Mercury	mg/kg	0.2	<0.1	<0.1	<0.1	0.4
Nickel	mg/kg	4	2	<1	1	8
Zinc	mg/kg	120	72	17	18	260

Acid Extractable metals in soil						
Our Reference		298140-11	298140-12	298140-13	298140-14	298140-15
Your Reference	UNITS	BH11	BH12	BH13	BH13	BH14
Depth		0.5-0.6	0.2-0.3	0.3-0.4	2.0-2.1	0.6-0.7
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Arsenic	mg/kg	<4	34	<4	10	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	5.9	<0.4
Chromium	mg/kg	21	9	9	14	22
Copper	mg/kg	43	18	9	28	60
Lead	mg/kg	18	100	16	76	34
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	48	2	11	5	63
Zinc	mg/kg	37	32	27	120	98

Acid Extractable metals in soil						
Our Reference		298140-16	298140-17	298140-18	298140-19	298140-20
Your Reference	UNITS	BH15	BH16	BH17	BH18	BH19
Depth		0.5-0.6	0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Arsenic	mg/kg	6	<4	6	<4	6
Cadmium	mg/kg	1	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	27	13	18	14	25
Copper	mg/kg	47	210	7	73	15
Lead	mg/kg	190	8	25	250	27
Mercury	mg/kg	0.5	<0.1	0.1	1.1	<0.1
Nickel	mg/kg	7	55	2	21	7
Zinc	mg/kg	440	52	45	310	16

Acid Extractable metals in soil						
Our Reference		298140-21	298140-22	298140-23	298140-24	298140-25
Your Reference	UNITS	BH20	BH21	BH22	BH23	D1
Depth		0.3-0.4	0.6-0.7	0.5-0.6	0.4-0.5	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Arsenic	mg/kg	8	<4	<4	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	1
Chromium	mg/kg	28	18	3	12	10
Copper	mg/kg	2	35	5	<1	67
Lead	mg/kg	10	14	33	4	140
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	2	20	2	<1	4
Zinc	mg/kg	12	24	44	2	210

Acid Extractable metals in soil					
Our Reference		298140-26	298140-29	298140-30	298140-31
Your Reference	UNITS	D2	BH1 - [TRIPLICATE]	BH13 - [TRIPLICATE]	BH22 - [TRIPLICATE]
Depth		-	0.4-0.5	0.3-0.4	0.5-0.6
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Arsenic	mg/kg	<4	<4	<4	<4
Cadmium	mg/kg	0.5	<0.4	<0.4	<0.4
Chromium	mg/kg	18	19	10	6
Copper	mg/kg	76	50	16	12
Lead	mg/kg	8	13	60	170
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	35	62	16	3
Zinc	mg/kg	50	33	68	88

Moisture						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Moisture	%	5.5	7.1	4.4	9.4	10

Moisture						
Our Reference		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Moisture	%	10	11	16	12	15

Moisture						
Our Reference		298140-11	298140-12	298140-13	298140-14	298140-15
Your Reference	UNITS	BH11	BH12	BH13	BH13	BH14
Depth		0.5-0.6	0.2-0.3	0.3-0.4	2.0-2.1	0.6-0.7
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Moisture	%	6.8	19	1.3	3.7	13

Moisture						
Our Reference		298140-16	298140-17	298140-18	298140-19	298140-20
Your Reference	UNITS	BH15	BH16	BH17	BH18	BH19
Depth		0.5-0.6	0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Moisture	%	15	7.6	14	12	7.7

Moisture						
Our Reference		298140-21	298140-22	298140-23	298140-24	298140-25
Your Reference	UNITS	BH20	BH21	BH22	BH23	D1
Depth		0.3-0.4	0.6-0.7	0.5-0.6	0.4-0.5	-
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/06/2022	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Date analysed	-	21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Moisture	%	15	14	19	1.1	9.8

Moisture		
Our Reference		298140-26
Your Reference	UNITS	D2
Depth		-
Date Sampled		15/06/2022
Type of sample		Soil
Date prepared	-	20/06/2022
Date analysed	-	21/06/2022
Moisture	%	6.6

Asbestos ID - soils						
Our Reference		298140-1	298140-2	298140-3	298140-4	298140-5
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.4-0.5	0.2-0.3	0.5-0.6	0.2-0.3	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Sample mass tested	g	Approx. 65g	Approx. 10g	Approx. 25g	Approx. 5g	Approx. 20g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown sandy soil & rocks	Brown fine-grained soil & rocks	Brown fine-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		298140-6	298140-7	298140-8	298140-9	298140-10
Your Reference	UNITS	BH6	BH7	BH8	BH9	BH10
Depth		0.3-0.4	0.2-0.6	0.5-0.6	0.4-0.5	0.7-0.8
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Sample mass tested	g	Approx. 45g	Approx. 40g	Approx. 35g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown sandy 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		298140-11	298140-12	298140-13	298140-15	298140-16
Your Reference	UNITS	BH11	BH12	BH13	BH14	BH15
Depth		0.5-0.6	0.2-0.3	0.3-0.4	0.6-0.7	0.5-0.6
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Sample mass tested	g	Approx. 30g	Approx. 20g	Approx. 30g	Approx. 20g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown clayey 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		298140-17	298140-18	298140-19	298140-20	298140-21
Your Reference	UNITS	BH16	BH17	BH18	BH19	BH20
Depth		0.3-0.4	0.5-0.6	0.7-0.8	0..2-0.3	0.3-0.4
Date Sampled		15/06/2022	15/06/2022	15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	23/06/2022	23/06/2022	23/06/2022	23/06/2022	23/06/2022
Sample mass tested	g	Approx. 55g	Approx. 25g	Approx. 10g	Approx. 10g	Approx. 15g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-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		298140-22	298140-23	298140-24
Your Reference	UNITS	BH21	BH22	BH23
Depth		0.6-0.7	0.5-0.6	0.4-0.5
Date Sampled		15/06/2022	15/06/2022	15/06/2022
Type of sample		Soil	Soil	Soil
Date analysed	-	23/06/2022	23/06/2022	23/06/2022
Sample mass tested	g	Approx. 10g	Approx. 30g	Approx. 30g
Sample Description	-	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-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
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

Misc Inorg - Soil		
Our Reference		298140-1
Your Reference	UNITS	BH1
Depth		0.4-0.5
Date Sampled		15/06/2022
Type of sample		Soil
Date prepared	-	22/06/2022
Date analysed	-	22/06/2022
pH 1:5 soil:water	pH Units	7.7

Clay 50-120g		
Our Reference		298140-1
Your Reference	UNITS	BH1
Depth		0.4-0.5
Date Sampled		15/06/2022
Type of sample		Soil
Date prepared	-	21/06/2022
Date analysed	-	22/06/2022
Clay in soils <2µm	% (w/w)	12

CEC		
Our Reference		298140-1
Your Reference	UNITS	BH1
Depth		0.4-0.5
Date Sampled		15/06/2022
Type of sample		Soil
Date prepared	-	23/06/2022
Date analysed	-	23/06/2022
Exchangeable Ca	meq/100g	18
Exchangeable K	meq/100g	0.3
Exchangeable Mg	meq/100g	6.9
Exchangeable Na	meq/100g	0.3
Cation Exchange Capacity	meq/100g	26

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
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.
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-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-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	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-020	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-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	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-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. 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.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. 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-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	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-023	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-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	92	98
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	1	<1	<1	0	94	102
2,2-dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	78	85
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	97	104
1,1-dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	95	97
bromodichloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	83	90
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	103	112
1,2-dibromoethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	135
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<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-3	298140-2
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	115	1	111	112	1	107	108
Surrogate aaa-Trifluorotoluene	%		Org-023	92	1	79	82	4	87	87
Surrogate Toluene-d_8	%		Org-023	110	1	108	108	0	101	102
Surrogate 4-Bromofluorobenzene	%		Org-023	98	1	100	100	0	100	101

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		[NT]	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
cis-1,2-dichloroethene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
chloroform	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
2,2-dichloropropane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,1-trichloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1-dichloropropene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
bromodichloromethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
trans-1,3-dichloropropene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	13	<0.5	<0.5	0	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dibromoethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
bromoform	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	13	<2	<2	0	[NT]	[NT]
styrene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	[NT]	13	115	116	1	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	13	87	86	1	[NT]	[NT]
Surrogate Toluene-d_8	%		Org-023	[NT]	13	109	108	1	[NT]	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	13	98	98	0	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date prepared	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	107	107
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	94	98
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	100	107
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	104	107
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	100	101
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	109	108
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	107	108
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	110	112
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	103	103
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	112	115
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	102
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	103
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	114	125
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	105	118
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	115	117
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	118	120
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	110	118
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	98
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	115	113
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	98	106
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	109	107
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	103	104
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	117	114
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	103	103
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	108	114
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	122	123
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	100	110
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	99	101
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	1	99	94	5	103	97
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	103	1	96	101	5	97	99

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	102	1	98	101	3	98	95
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	100	1	96	97	1	100	94
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	101	1	99	100	1	99	98
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	101	1	97	97	0	99	95
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	103	1	96	99	3	97	95
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	102	1	95	98	3	98	95
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	99	1	94	96	2	101	95
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	100	1	102	102	0	100	98
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	102	1	101	102	1	98	97
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	102	1	113	110	3	98	93
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	99	1	122	119	2	101	103
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	103	1	133	136	2	97	106
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	99	1	103	102	1	101	97
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	103	1	109	107	2	97	100
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	100	1	111	111	0	100	100
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	97	1	131	157	18	103	107
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	100	1	104	107	3	100	100
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	101	1	106	106	0	99	98
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	104	1	100	104	4	96	98
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	98	1	107	107	0	102	100

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	100	1	101	102	1	100	100
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	99	1	114	123	8	101	99
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	102	1	122	140	14	98	103

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	13	21/06/2022	21/06/2022		[NT]	[NT]
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	13	0.3	0.3	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	13	<0.5	<0.5	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	13	<0.5	<0.5	0	[NT]	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	13	<0.5	<0.5	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	13	<0.5	<0.5	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	13	<5	<5	0	[NT]	[NT]
4:2 FTS	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
10:2 FTS	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	13	<1	<1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	13	<1	<1	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	13	<1	<1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	13	<1	<1	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	13	<5	<5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	13	96	102	6	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	13	103	96	7	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	[NT]	13	91	91	0	[NT]	[NT]
Extracted ISTD $^{18}O_2$ PFHxS	%		Org-029	[NT]	13	91	89	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ PFOS	%		Org-029	[NT]	13	95	88	8	[NT]	[NT]
Extracted ISTD $^{13}C_4$ PFBA	%		Org-029	[NT]	13	85	91	7	[NT]	[NT]
Extracted ISTD $^{13}C_3$ PFPeA	%		Org-029	[NT]	13	92	95	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ PFHxA	%		Org-029	[NT]	13	90	93	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ PFHpA	%		Org-029	[NT]	13	91	89	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ PFOA	%		Org-029	[NT]	13	93	100	7	[NT]	[NT]
Extracted ISTD $^{13}C_5$ PFNA	%		Org-029	[NT]	13	96	99	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ PFDA	%		Org-029	[NT]	13	106	94	12	[NT]	[NT]
Extracted ISTD $^{13}C_2$ PFUnDA	%		Org-029	[NT]	13	105	101	4	[NT]	[NT]
Extracted ISTD $^{13}C_2$ PFDoDA	%		Org-029	[NT]	13	110	105	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ PFTeDA	%		Org-029	[NT]	13	91	91	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ 4:2FTS	%		Org-029	[NT]	13	101	104	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ 6:2FTS	%		Org-029	[NT]	13	104	104	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ 8:2FTS	%		Org-029	[NT]	13	114	117	3	[NT]	[NT]
Extracted ISTD $^{13}C_8$ FOSA	%		Org-029	[NT]	13	104	104	0	[NT]	[NT]
Extracted ISTD d_3 N MeFOSA	%		Org-029	[NT]	13	95	95	0	[NT]	[NT]
Extracted ISTD d_5 N EtFOSA	%		Org-029	[NT]	13	93	93	0	[NT]	[NT]
Extracted ISTD d_7 N MeFOSE	%		Org-029	[NT]	13	108	101	7	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	13	93	96	3	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	13	94	95	1	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	13	95	93	2	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	89	94
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	89	94
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	82	87
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	92	98
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	86	91
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	92	98
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	90	97
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	92	1	79	82	4	87	87

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	298140-24
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		21/06/2022	21/06/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	13	<25	<25	0	98	90
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	13	<25	<25	0	98	90
Benzene	mg/kg	0.2	Org-023	[NT]	13	<0.2	<0.2	0	92	83
Toluene	mg/kg	0.5	Org-023	[NT]	13	<0.5	<0.5	0	103	96
Ethylbenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	93	85
m+p-xylene	mg/kg	2	Org-023	[NT]	13	<2	<2	0	102	94
o-Xylene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	100	92
Naphthalene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	13	87	86	1	94	83

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	23	21/06/2022	21/06/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	23	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	23	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	23	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	23	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	23	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	23	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	23	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	23	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	23	77	83	8	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	124	113
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	86	84
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	240	240	0	100	93
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	124	113
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	220	180	20	86	84
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	320	390	20	100	93
Surrogate o-Terphenyl	%		Org-020	79	1	96	92	4	91	93

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	298140-24
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		21/06/2022	21/06/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	13	<50	<50	0	122	117
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	89	93
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	111	118
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	13	<50	<50	0	122	117
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	89	93
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	111	118
Surrogate o-Terphenyl	%		Org-020	[NT]	13	80	81	1	92	91

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	23	21/06/2022	21/06/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	23	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	23	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	23	91	85	7	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	90
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	83
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	86
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	<0.1	67	82	84
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.1	133	86	88
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.1	133	93	93
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	<0.1	100	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	<0.1	67	79	79
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	0.5	<0.2	86	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.4	0.1	120	102	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	<0.1	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	80	1	87	83	5	86	88

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	298140-24
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	90	86
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	87	83
Fluorene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	86	80
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	86	80
Anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	88	78
Pyrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	93	83
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	75	63
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	13	<0.05	<0.05	0	98	90
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	13	86	86	0	92	80

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	23	21/06/2022	21/06/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	23	0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	23	1.1	0.7	44	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	23	0.3	0.2	40	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	23	2.1	1.7	21	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	23	2.0	1.6	22	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	23	1.3	1.1	17	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	23	0.9	0.9	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	23	2	2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	23	1.3	1.1	17	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	23	0.4	0.4	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	23	0.2	0.1	67	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	23	0.7	0.6	15	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	23	86	90	5	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	82
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	75
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	87
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	89
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	86
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	90
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	86
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	103
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	100
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	96
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	67	1	84	81	4	83	84

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	298140-24
Date extracted	-			[NT]	10	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			[NT]	10	21/06/2022	21/06/2022		21/06/2022	21/06/2022
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	74	70
HCB	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	82	74
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	71	75
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	91	83
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	88	90
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	88	86
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	10	0.4	0.4	0	92	90
Endrin	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	88	90
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	86	80
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	76	75
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	10	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	10	82	68	19	85	81

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	13	81	83	2	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	23	21/06/2022	21/06/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	23	81	84	4	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	128	128
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	81
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	123	113
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	116
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	94
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	109
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	119	121
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	74	1	84	81	4	83	84

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		20/06/2022	[NT]
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		21/06/2022	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	72	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	76	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	89	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	89	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	80	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	84	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	102	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	13	81	83	2	85	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date extracted	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			21/06/2022	1	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	126	120
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	74	1	84	81	4	83	84

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	298140-24
Date extracted	-			[NT]	13	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			[NT]	13	21/06/2022	21/06/2022		21/06/2022	21/06/2022
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	128	120
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	13	81	83	2	85	81

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	23	21/06/2022	21/06/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	23	81	84	4	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-2
Date prepared	-			20/06/2022	1	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			23/06/2022	1	23/06/2022	23/06/2022		23/06/2022	23/06/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	89	74
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	86	73
Chromium	mg/kg	1	Metals-020	<1	1	20	18	11	88	86
Copper	mg/kg	1	Metals-020	<1	1	50	36	33	86	101
Lead	mg/kg	1	Metals-020	<1	1	18	7	88	87	81
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	95	109
Nickel	mg/kg	1	Metals-020	<1	1	62	39	46	88	73
Zinc	mg/kg	1	Metals-020	<1	1	40	21	62	87	73

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	298140-24
Date prepared	-			[NT]	13	20/06/2022	20/06/2022		20/06/2022	20/06/2022
Date analysed	-			[NT]	13	23/06/2022	23/06/2022		23/06/2022	23/06/2022
Arsenic	mg/kg	4	Metals-020	[NT]	13	<4	<4	0	78	95
Cadmium	mg/kg	0.4	Metals-020	[NT]	13	<0.4	<0.4	0	78	91
Chromium	mg/kg	1	Metals-020	[NT]	13	9	14	43	83	100
Copper	mg/kg	1	Metals-020	[NT]	13	9	19	71	79	104
Lead	mg/kg	1	Metals-020	[NT]	13	16	36	77	82	94
Mercury	mg/kg	0.1	Metals-021	[NT]	13	<0.1	<0.1	0	103	106
Nickel	mg/kg	1	Metals-020	[NT]	13	11	26	81	81	95
Zinc	mg/kg	1	Metals-020	[NT]	13	27	78	97	80	88

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	23	20/06/2022	20/06/2022		[NT]	[NT]
Date analysed	-			[NT]	23	23/06/2022	23/06/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	23	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	23	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	23	3	4	29	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	23	5	17	109	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	23	33	100	101	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	23	<0.1	0.2	67	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	23	2	3	40	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	23	44	91	70	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			22/06/2022	[NT]	[NT]	[NT]	[NT]	22/06/2022	[NT]
Date analysed	-			22/06/2022	[NT]	[NT]	[NT]	[NT]	22/06/2022	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	298140-1
Date prepared	-			23/06/2022	[NT]	[NT]	[NT]	[NT]	23/06/2022	23/06/2022
Date analysed	-			23/06/2022	[NT]	[NT]	[NT]	[NT]	23/06/2022	23/06/2022
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	107	#
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	100	91
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	96	120
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	108	104

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.
Note: Samples 298140-1,6,7 were sub-sampled from jars provided by the client.

CEC - # High spike recovery was obtained for this sample. Sample matrix interference is suspected. However, an acceptable recovery was obtained for the LCS

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 298140-1 for Ni, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 298140-29.
- The laboratory RPD acceptance criteria has been exceeded for 298140-13 for Cr, Cu, Ni, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 298140-30.
- The laboratory RPD acceptance criteria has been exceeded for 298140-23 for Cu, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 298140-31.

FOUNDATION EARTH SCIENCES

Chain of Custody Record

Client Details:	Foundation Earth Sciences PO Box 4405, East Gosford NSW 2250 email: ben@foundationes.com.au michael@foundationes.com.au; ray@foundationes.com.au ph: +61466 385 221	**Project Manager:**	Michael Silk
		Sampled By:	EY/DG
Delivery Details:	Envirolab Pty Ltd 12 Ashley Street, Chatswood NSW 2067 email: ahle@envirolab.com.au ph: +612 9910 6200	**Purchase Order #:**	N/A
		Page #:	1 of 1
		Project #:	E2843
		Project Name:	Leichhardt
		Quote #:	
		Turnaround:	Standard

#	Sample ID	Depth	Date Sampled	Matrix	Analytes: ph	CEC	%CLAY	Heavy Metals (8)	TRH	BTEXN	PAH	VOC	PFAS	OPP		Asbestos ID	Asbestos %w/w (NEPM /WA)	TRH C6-C10 & BTEXN	OCP PCB	Envirolab Suites	Sample Comments
1	BH1	0.4-0.5	15.6.2022	Soil	x	x	x	X	X	X	X	X	X	X		X			X	Combo 6a	Keep
2	BH2	0.2-0.3	15.6.2022	Soil				X	X	X	X	X	X	X		X			X	Combo 6a	Keep
3	BH3	0.5-0.6	15.6.2022	Soil				X	X	X	X	X	X	X		X			X	Combo 6a	Keep
4	BH4	0.2-0.3	15.6.2022	Soil				X	X	X	X	X	X	X		X			X	Combo 6a	Keep
5	BH5	0.4-0.5	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
6	BH6	0.3-0.4	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
7	BH7	0.2-0.3	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
8	BH8	0.5-0.6	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
9	BH9	0.4-0.5	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
10	BH10	0.7-0.8	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
11	BH11	0.5-0.6	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
12	BH12	0.2-0.3	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
13	BH13	0.3-0.4	15.6.2022	Soil				X	X	X	X	X	X	X		X			X	Combo 6a	Keep
14	BH13	2.0-2.1	15.6.2022	Soil				X	X	X	X					X				Combo 3	Keep
15	BH14	0.6-0.7	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
16	BH15	0.5-0.6	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
17	BH16	0.3-0.4	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
18	BH17	0.5-0.6	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
19	BH18	0.7-0.8	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
20	BH19	0.2-0.3	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
21	BH20	0.3-0.4	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
22	BH21	0.6-0.7	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
23	BH22	0.5-0.6	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
24	BH23	0.4-0.5	15.6.2022	Soil				X	X	X	X					X			X	Combo 5a	Keep
25	D1	-	15.6.2022	Soil				X	X	X	X	X	X	X					X	Combo 6	Keep
26	D2	-	15.6.2022	Soil				X	X	X	X	X	X	X					X	Combo 6	Keep
27	TS1	-	15.6.2022	Soil														X			Keep
28	TB1	-	15.6.2022	Soil														X			Keep

ENVIROLAB
Envirolab Service
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 298140
Date Received: 16/6/22
Time Received: 1700
Received by: KW
Temp: Cool/Ambient
Cooling: Icepack
Security: Intact/Broken

Special Directions and Coments:

Relinquished by	EY	Received By	Katy Wayne
Signature		Signature	
Date	16.6.2022	Date	16/6/22 1700

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Foundation Earth Sciences Pty Ltd
Attention	Michael Silk

Sample Login Details

Your reference	E2843, Leichhardt
Envirolab Reference	298140
Date Sample Received	16/06/2022
Date Instructions Received	16/06/2022
Date Results Expected to be Reported	23/06/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	28 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in soil	PFAS in Soils Extended	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	Misc Inorg - Soil	Clay 50-120g	CEC
BH1-0.4-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BH2-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH3-0.5-0.6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH4-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH5-0.4-0.5			✓	✓	✓	✓		✓	✓	✓			
BH6-0.3-0.4			✓	✓	✓	✓		✓	✓	✓			
BH7-0.2-0.6			✓	✓	✓	✓		✓	✓	✓			
BH8-0.5-0.6			✓	✓	✓	✓		✓	✓	✓			
BH9-0.4-0.5			✓	✓	✓	✓		✓	✓	✓			
BH10-0.7-0.8			✓	✓	✓	✓		✓	✓	✓			
BH11-0.5-0.6			✓	✓	✓	✓		✓	✓	✓			
BH12-0.2-0.3			✓	✓	✓	✓		✓	✓	✓			
BH13-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH13-2.0-2.1			✓	✓	✓				✓				
BH14-0.6-0.7			✓	✓	✓	✓		✓	✓	✓			
BH15-0.5-0.6			✓	✓	✓	✓		✓	✓	✓			
BH16-0.3-0.4			✓	✓	✓	✓		✓	✓	✓			
BH17-0.5-0.6			✓	✓	✓	✓		✓	✓	✓			
BH18-0.7-0.8			✓	✓	✓	✓		✓	✓	✓			
BH19-0..2-0.3			✓	✓	✓	✓		✓	✓	✓			
BH20-0.3-0.4			✓	✓	✓	✓		✓	✓	✓			
BH21-0.6-0.7			✓	✓	✓	✓		✓	✓	✓			
BH22-0.5-0.6			✓	✓	✓	✓		✓	✓	✓			
BH23-0.4-0.5			✓	✓	✓	✓		✓	✓	✓			
D1	✓	✓	✓	✓	✓	✓	✓	✓	✓				
D2	✓	✓	✓	✓	✓	✓	✓	✓	✓				
TS1			✓										
TB1			✓										

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Ben Buckley
Client	FOUNDATION EARTH SCIENCES PTY LTD
Address	UNIT 119/14 LOYALTY ROAD NORTH ROCKS NSW 2151
Telephone	(Not specified)
Facsimile	(Not specified)
Email	ben@foundationes.com.au
Project	**E2843 Leichhardt**
Order Number	**E2843**
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	**SE233208 R0**
Date Received	16/6/2022
Date Reported	23/6/2022

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No. ME327481.

MA-1523: Majority of surrogate and spike recoveries within acceptance criteria.

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Bennet LO
Senior Chemist

Dong LIANG
Metals/Inorganics Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1
Chloromethane	mg/kg	1	<1	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1
Bromomethane	mg/kg	1	<1	<1
Chloroethane	mg/kg	1	<1	<1
Trichlorofluoromethane	mg/kg	1	<1	<1
Acetone (2-propanone)	mg/kg	10	<10	<10
Iodomethane	mg/kg	5	<5	<5
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1
Acrylonitrile	mg/kg	0.1	<0.1	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5
Allyl chloride	mg/kg	0.1	<0.1	<0.1
Carbon disulfide	mg/kg	0.5	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1
Vinyl acetate	mg/kg	10	<10	<10
MEK (2-butanone)	mg/kg	10	<10	<10
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1
Bromochloromethane	mg/kg	0.1	<0.1	<0.1
Chloroform	mg/kg	0.1	<0.1	<0.1
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1
Benzene	mg/kg	0.1	<0.1	<0.1
Dibromomethane	mg/kg	0.1	<0.1	<0.1
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1
2-nitropropane	mg/kg	10	<10	<10
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1
2-hexanone (MBK)	mg/kg	5	<5	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1
Chlorobenzene	mg/kg	0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1
Bromoform	mg/kg	0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1
o-xylene	mg/kg	0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1
Bromobenzene	mg/kg	0.1	<0.1	<0.1

VOC's in Soil [AN433] Tested: 20/6/2022 (continued)

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
n-propylbenzene	mg/kg	0.1	<0.1	<0.1
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1
n-butylbenzene	mg/kg	0.1	<0.1	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1
Total BTEX	mg/kg	0.6	<0.6	<0.6
Total VOC*	mg/kg	24	<24	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
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: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
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	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
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	**0.2**	<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	**0.5**	<0.1
Anthracene	mg/kg	0.1	**0.2**	<0.1
Fluoranthene	mg/kg	0.1	**1.6**	<0.1
Pyrene	mg/kg	0.1	**1.6**	<0.1
Benzo(a)anthracene	mg/kg	0.1	**0.9**	<0.1
Chrysene	mg/kg	0.1	**0.9**	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	**1.4**	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	**0.6**	<0.1
Benzo(a)pyrene	mg/kg	0.1	**1.1**	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	**0.8**	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	**0.2**	<0.1
Benzo(ghi)perylene	mg/kg	0.1	**0.8**	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	**1.7**	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	**1.7**	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	**1.7**	<0.2
Total PAH (18)	mg/kg	0.8	**11**	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	**11**	<0.8

OC Pesticides in Soil [AN420] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
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
Total CLP OC Pesticides	mg/kg	1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1

OP Pesticides in Soil [AN420] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
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
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
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 Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 22/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
Arsenic, As	mg/kg	1	**9**	**2**
Cadmium, Cd	mg/kg	0.3	**1.2**	**0.5**
Chromium, Cr	mg/kg	0.5	**9.8**	**10**
Copper, Cu	mg/kg	0.5	**91**	**42**
Lead, Pb	mg/kg	1	**170**	**7**
Nickel, Ni	mg/kg	0.5	**4.3**	**35**
Zinc, Zn	mg/kg	2	**260**	**45**

Mercury in Soil [AN312] Tested: 22/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
Mercury	mg/kg	0.05	**0.22**	<0.05

Moisture Content [AN002] Tested: 20/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
% Moisture	%w/w	1	**48.5**	**7.5**

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 22/6/2022

PARAMETER	UOM	LOR	SS1 SOIL - 15/6/2022 SE233208.001	SS2 SOIL - 15/6/2022 SE233208.002
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	<0.0016
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	<0.008
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	<0.008
Total of PFAS (n=30)	mg/kg	0.08	<0.08	<0.08

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 Recoverable Hydrocarbons - Silica (TRH-Si) 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.
MA-1523	This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

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.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or

STATEMENT OF QA/QC PERFORMANCE

SE233208 R0

CLIENT DETAILS

Contact	Ben Buckley
Client	FOUNDATION EARTH SCIENCES PTY LTD
Address	UNIT 119/14 LOYALTY ROAD NORTH ROCKS NSW 2151
Telephone	(Not specified)
Facsimile	(Not specified)
Email	ben@foundationes.com.au
Project	**E2843 Leichhardt**
Order Number	**E2843**
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	**SE233208 R0**
Date Received	16 Jun 2022
Date Reported	23 Jun 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	3 items
	TRH (Total Recoverable Hydrocarbons) in Soil	3 items

SAMPLE SUMMARY

Sample cooling method	Ice Bricks	Sample counts by matrix	2 Soil
Date documentation received	16/6/2022	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	10°C
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE233208 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251560	15 Jun 2022	16 Jun 2022	13 Jul 2022	22 Jun 2022	13 Jul 2022	23 Jun 2022
SS2	SE233208.002	LB251560	15 Jun 2022	16 Jun 2022	13 Jul 2022	22 Jun 2022	13 Jul 2022	23 Jun 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251333	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	25 Jun 2022	22 Jun 2022
SS2	SE233208.002	LB251333	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	25 Jun 2022	22 Jun 2022

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	23 Jun 2022
SS2	SE233208.002	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	23 Jun 2022

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	22 Jun 2022
SS2	SE233208.002	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	22 Jun 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	22 Jun 2022
SS2	SE233208.002	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	22 Jun 2022

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	23 Jun 2022
SS2	SE233208.002	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	23 Jun 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251559	15 Jun 2022	16 Jun 2022	12 Dec 2022	22 Jun 2022	12 Dec 2022	23 Jun 2022
SS2	SE233208.002	LB251559	15 Jun 2022	16 Jun 2022	12 Dec 2022	22 Jun 2022	12 Dec 2022	23 Jun 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	22 Jun 2022
SS2	SE233208.002	LB251329	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	30 Jul 2022	22 Jun 2022

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251330	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	29 Jun 2022	22 Jun 2022
SS2	SE233208.002	LB251330	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	29 Jun 2022	22 Jun 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SS1	SE233208.001	LB251330	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	29 Jun 2022	22 Jun 2022
SS2	SE233208.002	LB251330	15 Jun 2022	16 Jun 2022	29 Jun 2022	20 Jun 2022	29 Jun 2022	22 Jun 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	SS1	SE233208.001	%	60 - 130%	113
	SS2	SE233208.002	%	60 - 130%	108

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	SS1	SE233208.001	%	60 - 130%	93
	SS2	SE233208.002	%	60 - 130%	90
d14-p-terphenyl (Surrogate)	SS1	SE233208.001	%	60 - 130%	93
	SS2	SE233208.002	%	60 - 130%	93

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	SS1	SE233208.001	%	70 - 130%	93
	SS2	SE233208.002	%	70 - 130%	90
d14-p-terphenyl (Surrogate)	SS1	SE233208.001	%	70 - 130%	93
	SS2	SE233208.002	%	70 - 130%	93
d5-nitrobenzene (Surrogate)	SS1	SE233208.001	%	70 - 130%	97
	SS2	SE233208.002	%	70 - 130%	94

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	SS1	SE233208.001	%	60 - 130%	113
	SS2	SE233208.002	%	60 - 130%	108

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 130%	64
	SS2	SE233208.002	%	0 - 130%	62
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	114
	SS2	SE233208.002	%	0 - 150%	98
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	105
	SS2	SE233208.002	%	0 - 150%	90
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	90
	SS2	SE233208.002	%	0 - 150%	95
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	77
	SS2	SE233208.002	%	0 - 150%	79
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	35
	SS2	SE233208.002	%	0 - 150%	27
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	73
	SS2	SE233208.002	%	0 - 150%	64
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	106
	SS2	SE233208.002	%	0 - 150%	112
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	90
	SS2	SE233208.002	%	0 - 150%	97
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	94
	SS2	SE233208.002	%	0 - 150%	95
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	86
	SS2	SE233208.002	%	0 - 150%	88
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	72
	SS2	SE233208.002	%	0 - 150%	68
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	84
	SS2	SE233208.002	%	0 - 150%	89
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	90
	SS2	SE233208.002	%	0 - 150%	86
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	84
	SS2	SE233208.002	%	0 - 150%	86
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	79
	SS2	SE233208.002	%	0 - 150%	91
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	84
	SS2	SE233208.002	%	0 - 150%	85
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	80
	SS2	SE233208.002	%	0 - 150%	80

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued) — Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	73
	SS2	SE233208.002	%	0 - 150%	71
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	85
	SS2	SE233208.002	%	0 - 150%	83
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	63
	SS2	SE233208.002	%	0 - 150%	64
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	89
	SS2	SE233208.002	%	0 - 150%	101
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	74
	SS2	SE233208.002	%	0 - 150%	65
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	SS1	SE233208.001	%	0 - 150%	66
	SS2	SE233208.002	%	0 - 150%	67

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	SS1	SE233208.001	%	60 - 130%	86
	SS2	SE233208.002	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	SS1	SE233208.001	%	60 - 130%	87
	SS2	SE233208.002	%	60 - 130%	89
d8-toluene (Surrogate)	SS1	SE233208.001	%	60 - 130%	92
	SS2	SE233208.002	%	60 - 130%	95

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	SS1	SE233208.001	%	60 - 130%	86
	SS2	SE233208.002	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	SS1	SE233208.001	%	60 - 130%	87
	SS2	SE233208.002	%	60 - 130%	89
d8-toluene (Surrogate)	SS1	SE233208.001	%	60 - 130%	92
	SS2	SE233208.002	%	60 - 130%	95

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB251560.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB251329.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	92

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB251329.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	87
		d14-p-terphenyl (Surrogate)	%	-	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB251329.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	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(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB251329.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	86
		2-fluorobiphenyl (Surrogate)	%	-	87
		d14-p-terphenyl (Surrogate)	%	-	89

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB251329.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	92

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB251559.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB251329.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB251330.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		Iodomethane	mg/kg	5	<5
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB251330.001	Halogenated Aliphatics	1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		o-xylene	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene (VOC)	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98
		d8-toluene (Surrogate)	%	-	100
		Bromofluorobenzene (Surrogate)	%	-	91
	Totals	Total BTEX	mg/kg	0.6	<0.3
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB251330.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233422.004	LB251560.014	Mercury	mg/kg	0.05	0.05	<0.05	152	1
SE233422.013	LB251560.024	Mercury	mg/kg	0.05	<0.05	<0.05	198	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251333.019	% Moisture	%w/w	1	7.5	7.7	43	3
SE233210.004	LB251333.011	% Moisture	%w/w	1	6.5	4.7	48	33

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251329.022		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	0
SE233210.004	LB251329.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233210.004	LB251329.014		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.17	30	3

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251329.022		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
SE233210.004	LB251329.014		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251329.022	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	158	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	156	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251329.022		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
SE233210.004	LB251329.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.1	<0.1	126	21
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251329.022		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	0
SE233210.004	LB251329.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	3

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233422.004	LB251559.014		Arsenic, As	mg/kg	1	5	5	49	1
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	11	11	34	2
			Copper, Cu	mg/kg	0.5	17	18	33	2
			Nickel, Ni	mg/kg	0.5	6.0	6.1	38	2
			Lead, Pb	mg/kg	1	48	49	32	1
			Zinc, Zn	mg/kg	2	70	71	33	2
SE233422.013	LB251559.024		Arsenic, As	mg/kg	1	5	4	52	37
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	12	9.1	35	30
			Copper, Cu	mg/kg	0.5	10	8.3	35	20
			Nickel, Ni	mg/kg	0.5	4.1	2.2	46	60 ②
			Lead, Pb	mg/kg	1	20	29	34	39 ②
			Zinc, Zn	mg/kg	2	42	43	35	1

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251329.022		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE233210.004	LB251329.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	130	110	68	21
			TRH C37-C40	mg/kg	100	130	<100	133	23
			TRH C10-C36 Total	mg/kg	110	130	<110	124	17
			TRH >C10-C40 Total (F bands)	mg/kg	210	280	<210	139	30
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	90	100	124	13
			TRH >C34-C40 (F4)	mg/kg	120	190	<120	108	47

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251330.021	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	200	0
		Aliphatics	Chloromethane	mg/kg	1	<1	<1	200	0
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromomethane	mg/kg	1	<1	<1	200	0
			Chloroethane	mg/kg	1	<1	<1	200	0
			Trichlorofluoromethane	mg/kg	1	<1	<1	200	0
			Iodomethane	mg/kg	5	<5	<5	200	0
			1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	200	0
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251330.021	Halogenated Aliphatics	Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	200	0
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	200	0
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	200	0
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	140	0
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	200	0
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	200	0
			2-nitropropane	mg/kg	10	<10	<10	200	0
		Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10	<10	200	0
			MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	200	0
			Vinyl acetate	mg/kg	10	<10	<10	200	0
			MEK (2-butanone)	mg/kg	10	<10	<10	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	200	0
			2-hexanone (MBK)	mg/kg	5	<5	<5	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	8.5	50	4
			d8-toluene (Surrogate)	mg/kg	-	9.5	9.1	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.7	8.4	50	4
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.3	200	0
			Total VOC*	mg/kg	24	<24	<24	200	0
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	<3	200	0
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
		Trihalomethanes	Chloroform	mg/kg	0.1	<0.1	<0.1	200	0
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	200	0
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	200	0
			Bromoform	mg/kg	0.1	<0.1	<0.1	200	0
SE233210.004	LB251330.014	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233210.004	LB251330.014	Monocyclic Aromatic	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	7.9	50	8
			d8-toluene (Surrogate)	mg/kg	-	9.5	8.8	50	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.3	50	6
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233208.002	LB251330.021		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	8.5	30	4
			d8-toluene (Surrogate)	mg/kg	-	9.5	9.1	30	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.7	8.4	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE233210.004	LB251330.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	7.9	30	8
			d8-toluene (Surrogate)	mg/kg	-	9.5	8.8	30	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.3	30	6
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251560.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	105

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251329.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	84
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	81
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	78
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	83
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	81
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	91

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251329.002		Dichlorvos	mg/kg	0.5	1.8	2	60 - 140	89
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	100
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.0	2	60 - 140	99
		Ethion	mg/kg	0.2	1.7	2	60 - 140	85
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251329.002		Naphthalene	mg/kg	0.1	4.3	4	60 - 140	107
		Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	102
		Acenaphthene	mg/kg	0.1	4.2	4	60 - 140	105
		Phenanthrene	mg/kg	0.1	4.2	4	60 - 140	105
		Anthracene	mg/kg	0.1	4.1	4	60 - 140	103
		Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	104
		Pyrene	mg/kg	0.1	3.9	4	60 - 140	98
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251329.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	105

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251559.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	4.5	4.81	70 - 130	95
	Chromium, Cr	mg/kg	0.5	35	38.31	80 - 120	92
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	111
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	280	273	80 - 120	104

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251329.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	48	40	60 - 140	120
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	93
	TRH F Bands	TRH >C10-C16	mg/kg	25	43	40	60 - 140	108
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	113
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	95

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251330.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	5.0	5	60 - 140	100
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	4.9	5	60 - 140	99
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	5.1	5	60 - 140	101
	Halogenated	Chlorobenzene	mg/kg	0.1	4.9	5	60 - 140	99
	Monocyclic	Benzene	mg/kg	0.1	4.6	5	60 - 140	91
	Aromatic	Toluene	mg/kg	0.1	4.6	5	60 - 140	92
		Ethylbenzene	mg/kg	0.1	4.9	5	60 - 140	97
		m/p-xylene	mg/kg	0.2	9.4	10	60 - 140	94
		o-xylene	mg/kg	0.1	5.1	5	60 - 140	102
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		d8-toluene (Surrogate)	mg/kg	-	10.3	10	70 - 130	103
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
	Trihalomethan	Chloroform	mg/kg	0.1	5.6	5	60 - 140	113

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251330.002		TRH C6-C10	mg/kg	25	77	92.5	60 - 140	83
		TRH C6-C9	mg/kg	20	68	80	60 - 140	85
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	49	62.5	60 - 140	78

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251329.024		Hexachlorobenzene (HCB)	mg/kg	0.1	0.00039881007	-	-
			Alpha BHC	mg/kg	0.1	0.00089955772	-	-
			Lindane	mg/kg	0.1	0.00193158872	-	-
			Heptachlor	mg/kg	0.1	0.00108877725	0.2	92
			Aldrin	mg/kg	0.1	0.00223284523	0.2	87
			Beta BHC	mg/kg	0.1	0.00056689776	-	-
			Delta BHC	mg/kg	0.1	0.00149164414	0.2	85
			Heptachlor epoxide	mg/kg	0.1	0	-	-
			o,p'-DDE	mg/kg	0.1	0.00111052164	-	-
			Alpha Endosulfan	mg/kg	0.2	0.00111052164	-	-
			Gamma Chlordane	mg/kg	0.1	0.00022553587	-	-
			Alpha Chlordane	mg/kg	0.1	0.00024176679	-	-
			trans-Nonachlor	mg/kg	0.1	0.00022553587	-	-
			p,p'-DDE	mg/kg	0.1	0	-	-
			Dieldrin	mg/kg	0.2	0.00376626177	0.2	82
			Endrin	mg/kg	0.2	0.00082653688	0.2	86
			o,p'-DDD	mg/kg	0.1	0.02306760350	-	-
			o,p'-DDT	mg/kg	0.1	0	-	-
			Beta Endosulfan	mg/kg	0.2	0	-	-
			p,p'-DDD	mg/kg	0.1	0.00227774668	-	-
			p,p'-DDT	mg/kg	0.1	0.00061116210	0.2	70
			Endosulfan sulphate	mg/kg	0.1	0.00093791729	-	-
			Endrin Aldehyde	mg/kg	0.1	0.00377516296	-	-
			Methoxychlor	mg/kg	0.1	0.00116003234	-	-
			Endrin Ketone	mg/kg	0.1	0.00055731886	-	-
			Isodrin	mg/kg	0.1	0.00086541345	-	-
			Mirex	mg/kg	0.1	0.00055731886	-	-
			Total CLP OC Pesticides	mg/kg	1	0	-	-
			Total OC VIC EPA	mg/kg	1	0	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16148045676	-	108

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251329.024		Dichlorvos	mg/kg	0.5	0	2	100
			Dimethoate	mg/kg	0.5	0.00137112732	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	0.00266252311	2	104
			Fenitrothion	mg/kg	0.2	0.00040038843	-	-
			Malathion	mg/kg	0.2	0	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	0.00391910753	2	102
			Parathion-ethyl (Parathion)	mg/kg	0.2	0.00223811516	-	-
			Bromophos Ethyl	mg/kg	0.2	0	-	-
			Methidathion	mg/kg	0.5	0	-	-
			Ethion	mg/kg	0.2	0.00197237423	2	98
			Azinphos-methyl (Guthion)	mg/kg	0.2	0	-	-
			Total OP Pesticides*	mg/kg	1.7	0	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.43809977266	-	97
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.45895800018	-	90

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251329.024	Naphthalene	mg/kg	0.1	0.00220569978	4	107
		2-methylnaphthalene	mg/kg	0.1	0.00380199980	-	-
		1-methylnaphthalene	mg/kg	0.1	0.00557697437	-	-
		Acenaphthylene	mg/kg	0.1	0	4	103
		Acenaphthene	mg/kg	0.1	0.00171096512	4	105
		Fluorene	mg/kg	0.1	0.00064831284	-	-
		Phenanthrene	mg/kg	0.1	0.02481046382	4	105
		Anthracene	mg/kg	0.1	0.00289581348	4	103
		Fluoranthene	mg/kg	0.1	0.02457918128	4	104
		Pyrene	mg/kg	0.1	0.01968475778	4	99
		Benzo(a)anthracene	mg/kg	0.1	0.02300337161	-	-
		Chrysene	mg/kg	0.1	0.02124932170	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251329.024		Benzo(b&j)fluoranthene	mg/kg	0.1	0.01531146724	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.01559190620	-	-
			Benzo(a)pyrene	mg/kg	0.1	0.00619699573	4	99
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.00669994092	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	0.00331689909	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.01148249504	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	0	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	0.242	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.121	-	-
			Total PAH (18)	mg/kg	0.8	0	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.46507169640	-	96
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.43809977266	-	97
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.45895800018	-	90

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251329.024		Arochlor 1016	mg/kg	0.2	0	-	-
			Arochlor 1221	mg/kg	0.2	0	-	-
			Arochlor 1232	mg/kg	0.2	0	-	-
			Arochlor 1242	mg/kg	0.2	0	-	-
			Arochlor 1248	mg/kg	0.2	0	-	-
			Arochlor 1254	mg/kg	0.2	0	-	-
			Arochlor 1260	mg/kg	0.2	0	0.4	102
			Arochlor 1262	mg/kg	0.2	0	-	-
			Arochlor 1268	mg/kg	0.2	0	-	-
			Total PCBs (Arochlors)	mg/kg	1	0	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16148045676	-	108

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE233208.001	LB251559.004	Arsenic, As	mg/kg	1	54	9	50	91
		Cadmium, Cd	mg/kg	0.3	47	1.2	50	91
		Chromium, Cr	mg/kg	0.5	56	9.8	50	93
		Copper, Cu	mg/kg	0.5	96	91	50	10 ④
		Nickel, Ni	mg/kg	0.5	52	4.3	50	95
		Lead, Pb	mg/kg	1	190	170	50	30 ④
		Zinc, Zn	mg/kg	2	260	260	50	-2 ④

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251329.024		TRH C10-C14	mg/kg	20	0	40	85
			TRH C15-C28	mg/kg	45	0	40	378 ⑨
			TRH C29-C36	mg/kg	45	186	40	1368 ⑨
			TRH C37-C40	mg/kg	100	170	-	-
			TRH C10-C36 Total	mg/kg	110	186	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	380	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	0	40	100
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	0	-	-
			TRH >C16-C34 (F3)	mg/kg	90	105	40	880 ⑨
			TRH >C34-C40 (F4)	mg/kg	120	275	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251330.023	Monocyclic Aromatic	Benzene	mg/kg	0.1	0.00300809224	5	83
			Toluene	mg/kg	0.1	0.00773059940	5	83
			Ethylbenzene	mg/kg	0.1	0.00223739684	5	88
			m/p-xylene	mg/kg	0.2	0.02164326046	10	84
			o-xylene	mg/kg	0.1	0.00443657367	5	91
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	0.00890281102	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.57112874950	10	89
			d8-toluene (Surrogate)	mg/kg	-	9.57991233643	10	99
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.77282739300	10	92
		Totals	Total Xylenes	mg/kg	0.3	0.02607983414	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251330.023	Totals	Total BTEX	mg/kg	0.6	0	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233210.005	LB251330.023		TRH C6-C10	mg/kg	25	0.30557543791	92.5	85
			TRH C6-C9	mg/kg	20	0.30753531623	80	84
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.57112874950	10	89
			d8-toluene (Surrogate)	mg/kg	-	9.57991233643	10	99
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.77282739300	-	92
		VPH F	Benzene (F0)	mg/kg	0.1	0.00300809224	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	0.30557543791	62.5	84

MATRIX SPIKE DUPLICATES

SE233208 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

SGS EHS Sydney COC

SE233208

FOUNDATION EARTH SCIENCES

Chain of Custody Record

Client Details:	Foundation Earth Sciences PO Box 4405, East Gosford NSW 2250 email: ben@foundationes.com.au michael@foundationes.com.au; ray@foundationes.com.au ph: +61466 385 221	**Project Manager:**	Michael Silk	**Project #:** E2843	
		Sampled By:	EY	**Project Name:** Leichhardt	
Delivery Details:	SGS Laboratories Pty Ltd Unit 16, 33 Maddox Street, Alexandria NSW 2015 email: au.samplereceipt@sgs.com ph: +612 8594 0400	**Purchase Order #:**	N/A	**Quote #:**	
		Page #:	1	**Turnaround:** Standard	

#	Sample ID	Depth	Date Sampled	Matrix	Analytes													Sample Comments
					ph	CEC	%CLAY	Heavy Metals	TRH	BTEXN	PAH	OCP OPP	PCB	VOC	PFAS	Phenol		Suites	
1	SS1	-	15.6.2022	Soil				X	X	X	X	x	x	x	x			CL17	Keep
2	SS2	-	15.6.2022	Soil				X	X	X	X	x	x	x	x			CL17	Keep

Special Directions and Coments:

Relinquished by	EY	**Received By**	
Signature		**Signature**	
Date	16.6.2022	**Date**	4.45

SAMPLE RECEIPT ADVICE

SE233208

CLIENT DETAILS

Contact	Ben Buckley
Client	FOUNDATION EARTH SCIENCES PTY LTD
Address	UNIT 119/14 LOYALTY ROAD NORTH ROCKS NSW 2151
Telephone	(Not specified)
Facsimile	(Not specified)
Email	ben@foundationes.com.au
Project	**E2843 Leichhardt**
Order Number	**E2843**
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
Samples Received	Thu 16/6/2022
Report Due	Thu 23/6/2022
SGS Reference	**SE233208**

SUBMISSION DETAILS

This is to confirm that 2 samples were received on Thursday 16/6/2022. Results are expected to be ready by COB Thursday 23/6/2022. Please quote SGS reference SE233208 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample cooling method	Ice Bricks	Sample counts by matrix	2 Soil
Date documentation received	16/6/2022	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	10°C
Turnaround time requested	Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.

SAMPLE RECEIPT ADVICE

SE233208

CLIENT DETAILS

Client FOUNDATION EARTH SCIENCES PTY LTD

Project E2843 Leichhardt

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	SS1	30	14	26	11	7	10	81	7
002	SS2	30	14	26	11	7	10	81	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE233208

CLIENT DETAILS

Client FOUNDATION EARTH SCIENCES PTY LTD

Project E2843 Leichhardt

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	Moisture Content	Per- and Polyfluoroalkyl Substances (PFAS) in
001	SS1	1	1	56
002	SS2	1	1	56

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Huong Crawford
Client	SGS I&E SYDNEY
Address	Unit 16, 33 Maddox Street Alexandria NSW 2015
Telephone	02 8594 0400
Facsimile	02 8594 0499
Email	au.environmental.sydney@sgs.com
Project	**E2843 Leichhardt**
Order Number	**SE233208**
Samples	2

LABORATORY DETAILS

Manager	Adam Atkinson
Laboratory	SGS Melbourne EH&S
Address	10/585 Blackburn Road Notting Hill Victoria 3168
Telephone	+61395743200
Facsimile	+61395743399
Email	Au.SampleReceipt.Melbourne@sgs.com
SGS Reference	**ME327481 R0**
Date Received	20 Jun 2022
Date Reported	22 Jun 2022

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(14420).

MA-1523: Majority of surrogate and spike recoveries within acceptance criteria.

SIGNATORIES

Sy NGUYEN
Senior Laboratory Technician

Parameter	Units	LOR	Sample Number: ME327481.001 Sample Matrix: Soil Sample Date: 15 Jun 2022 Sample Name: SE233208.001	Sample Number: ME327481.002 Sample Matrix: Soil Sample Date: 15 Jun 2022 Sample Name: SE233208.002
Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 22/6/2022				
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	<0.0016
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	<0.008
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	<0.008
Total of PFAS (n=30)	mg/kg	0.08	<0.08	<0.08
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	**94**	**95**
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	**84**	**89**
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	**72**	**68**
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	**86**	**88**
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	**90**	**97**
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	**80**	**80**
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	**90**	**86**
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	**84**	**86**
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	**77**	**79**
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	**64**	**62**
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	**35**	**27**
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	**73**	**64**
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	**106**	**112**
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	**79**	**91**
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	**114**	**98**
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	**105**	**90**
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	**90**	**95**
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	**84**	**85**
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	**73**	**71**
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	**63**	**64**
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	**74**	**65**
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	**66**	**67**
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	**85**	**83**
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	**89**	**101**

Moisture Content Method: AN002 Tested: 20/6/2022

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name ME327481.001 Soil 15 Jun 2022 SE233208.001	ME327481.002 Soil 15 Jun 2022 SE233208.002
Moisture Content Method: AN002 Tested: 20/6/2022 (continued)				
% Moisture	%w/w	1	**10.1**	**9.8**

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Moisture Content Method: ME-(AU)-[ENV]AN002

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB051936	%w/w	1	6%

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Perfluorobutanoic acid (PFBA)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentanoic acid (PFPeA)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexanoic acid (PFHxA)	LB052029	mg/kg	0.0016	<0.0016	11%	NA
Perfluoroheptanoic acid (PFHpA)	LB052029	mg/kg	0.0016	<0.0016	0%	94%
Perfluorooctanoic Acid (PFOA)	LB052029	mg/kg	0.0008	<0.0008	0%	117%
Perfluorononanoic acid (PFNA)	LB052029	mg/kg	0.0016	<0.0016	0%	158%
Perfluorodecanoic acid (PFDA)	LB052029	mg/kg	0.0016	<0.0016	0%	121%
Perfluoroundecanoic acid (PFUnA)	LB052029	mg/kg	0.0016	<0.0016	0%	93%
Perfluorododecanoic acid (PFDoA)	LB052029	mg/kg	0.0016	<0.0016	0%	115%
Perfluorotridecanoic acid (PFTrDA)	LB052029	mg/kg	0.0016	<0.0016	0%	146%
Perfluorotetradecanoic acid (PFTeDA)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexadecanoic acid (PFHxDA)	LB052029	mg/kg	0.0032	<0.0032	0%	NA
Perfluorobutane sulfonate (PFBS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentane sulfonate (PFPeS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexane sulfonate (PFHxS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptane sulfonate (PFHpS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorooctane sulfonate (PFOS)	LB052029	mg/kg	0.0016	<0.0016	8%	113%
Sum PFOS and PFHXS	LB052029	mg/kg	0.0016	<0.0016	8%	NA
Perfluorononane sulfonate (PFNS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorodecane sulfonate (PFDS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorododecane sulfonate (PFDoS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	LB052029	mg/kg	0.0016	<0.0016	0%	NA
Perfluorooctane sulfonamide (PFOSA)	LB052029	mg/kg	0.0016	<0.0016	0%	65%
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	LB052029	mg/kg	0.008	<0.008	0%	NA
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	LB052029	mg/kg	0.008	<0.008	0%	NA
2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	LB052029	mg/kg	0.016	<0.016	0%	NA
2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	LB052029	mg/kg	0.016	<0.016	0%	NA
N-Methylperfluorooctanesulfonamidoacetic acid (N_MeFOSAA)	LB052029	mg/kg	0.008	<0.008	0%	NA
N-Ethylperfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	LB052029	mg/kg	0.008	<0.008	0%	NA
Total of PFAS (n=30)	LB052029	mg/kg	0.08	<0.08	0%	NA
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	95%	1%	95%
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	76%	10%	83%
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	74%	4%	70%
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	89%	7%	87%
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	86%	5%	87%
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	83%	0%	82%
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	83%	9%	97%
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	90%	28%	91%
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	88%	25%	84%
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	107%	32%	91%
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	100%	18%	69%
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	69%	1%	71%
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	105%	2%	103%
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	76%	9%	90%
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	121%	0%	110%
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	100%	9%	99%
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	100%	16%	90%
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	107%	22%	108%
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	112%	5%	97%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 (continued)

				MB	DUP %RPD	LCS %Recovery
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	99%	0%	84%
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	87%	13%	77%
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	91%	93%	79%
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	107%	28%	106%
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	LB052029	%	-	135%	20%	101%

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.
MA-1523	This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been 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 calcuated 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 298599

Client Details

Client	Foundation Earth Sciences Pty Ltd
Attention	Michael Silk
Address	PO Box 4405, East Gosford, NSW, 2250

Sample Details

Your Reference	**E2843, Leichhardt**
Number of Samples	7 Water
Date samples received	22/06/2022
Date completed instructions received	22/06/2022

Analysis Details

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

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

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

Report Details

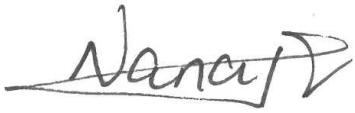
Date results requested by	29/06/2022
Date of Issue	29/06/2022

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
Giovanni Agosti, Group Technical Manager
Josh Williams, Organics and LC Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in water						
Our Reference		298599-1	298599-2	298599-3	298599-4	298599-5
Your Reference	UNITS	GW1	GW2	GW3	GW4	GWD1
Date Sampled		21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	24/06/2022	24/06/2022	24/06/2022	24/06/2022	24/06/2022
Date analysed	-	24/06/2022	24/06/2022	24/06/2022	24/06/2022	24/06/2022
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1

VOCs in water						
Our Reference		298599-1	298599-2	298599-3	298599-4	298599-5
Your Reference	UNITS	GW1	GW2	GW3	GW4	GWD1
Date Sampled		21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Type of sample		Water	Water	Water	Water	Water
Bromoform	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	103	100	100	99	98
Surrogate toluene-d8	%	99	97	97	97	87
Surrogate 4-BFB	%	106	102	101	96	103

vTRH(C6-C10)/BTEXN in Water						
Our Reference		298599-1	298599-2	298599-3	298599-4	298599-5
Your Reference	UNITS	GW1	GW2	GW3	GW4	GWD1
Date Sampled		21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	24/06/2022	24/06/2022	24/06/2022	24/06/2022	24/06/2022
Date analysed	-	24/06/2022	24/06/2022	24/06/2022	24/06/2022	24/06/2022
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	103	100	100	99	98
Surrogate toluene-d8	%	99	97	97	97	87
Surrogate 4-BFB	%	106	102	101	96	103

vTRH(C6-C10)/BTEXN in Water			
Our Reference		298599-6	298599-7
Your Reference	UNITS	TS1	TB1
Date Sampled		21/06/2022	21/06/2022
Type of sample		Water	Water
Date extracted	-	24/06/2022	24/06/2022
Date analysed	-	24/06/2022	24/06/2022
TRH C_6 - C_9	µg/L	[NA]	<10
TRH C_6 - C_{10}	µg/L	[NA]	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	[NA]	<10
Benzene	µg/L	94%	<1
Toluene	µg/L	87%	<1
Ethylbenzene	µg/L	101%	<1
m+p-xylene	µg/L	100%	<2
o-xylene	µg/L	100%	<1
Naphthalene	µg/L	[NT]	<1
Surrogate Dibromofluoromethane	%	103	101
Surrogate toluene-d8	%	98	97
Surrogate 4-BFB	%	103	102

svTRH (C10-C40) in Water						
Our Reference		298599-1	298599-2	298599-3	298599-4	298599-5
Your Reference	UNITS	GW1	GW2	GW3	GW4	GWD1
Date Sampled		21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	24/06/2022	24/06/2022	24/06/2022	24/06/2022	24/06/2022
Date analysed	-	26/06/2022	26/06/2022	26/06/2022	26/06/2022	26/06/2022
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	120	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	120	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	230	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	200	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	200	<50	<50
Surrogate o-Terphenyl	%	104	100	105	93	104

PAHs in Water - Low Level						
Our Reference		298599-1	298599-2	298599-3	298599-4	298599-5
Your Reference	UNITS	GW1	GW2	GW3	GW4	GWD1
Date Sampled		21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	24/06/2022	24/06/2022	24/06/2022	24/06/2022	24/06/2022
Date analysed	-	29/06/2022	25/06/2022	25/06/2022	25/06/2022	25/06/2022
Naphthalene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	0.3	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	0.27	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	79	100	116	96	102

HM in water - dissolved						
Our Reference	UNITS	298599-1	298599-2	298599-3	298599-4	298599-5
Your Reference		GW1	GW2	GW3	GW4	GWD1
Date Sampled		21/06/2022	21/06/2022	21/06/2022	21/06/2022	21/06/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	28/06/2022	28/06/2022	28/06/2022	28/06/2022	28/06/2022
Date analysed	-	28/06/2022	28/06/2022	28/06/2022	28/06/2022	28/06/2022
Arsenic-Dissolved	µg/L	<1	<1	7	<1	<1
Cadmium-Dissolved	µg/L	0.5	0.4	3.5	0.2	0.5
Chromium-Dissolved	µg/L	<1	<1	28	<1	<1
Copper-Dissolved	µg/L	<1	<1	19	2	<1
Lead-Dissolved	µg/L	<1	<1	11	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	6	7	180	62	6
Zinc-Dissolved	µg/L	33	28	160	37	30

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-020	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-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/06/2022	1	24/06/2022	28/06/2022		24/06/2022	[NT]
Date analysed	-			24/06/2022	1	24/06/2022	28/06/2022		24/06/2022	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	93	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	1	<1	<1	0	96	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	98	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	93	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	95	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	89	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	86	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	92	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	95	1	103	103	0	99	[NT]
Surrogate toluene-d8	%		Org-023	95	1	99	97	2	101	[NT]
Surrogate 4-BFB	%		Org-023	102	1	106	99	7	106	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/06/2022	1	24/06/2022	28/06/2022		24/06/2022	[NT]
Date analysed	-			24/06/2022	1	24/06/2022	28/06/2022		24/06/2022	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	1	<10	<10	0	98	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	1	<10	<10	0	98	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	95	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	92	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	99	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	101	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	103	[NT]
Naphthalene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	95	1	103	103	0	99	[NT]
Surrogate toluene-d8	%		Org-023	95	1	99	97	2	101	[NT]
Surrogate 4-BFB	%		Org-023	102	1	106	99	7	106	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	298599-3
Date extracted	-			24/06/2022	2	24/06/2022	24/06/2022		24/06/2022	24/06/2022
Date analysed	-			26/06/2022	2	26/06/2022	26/06/2022		26/06/2022	26/06/2022
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	2	<50	<50	0	81	108
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	2	<100	<100	0	80	108
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	2	<100	<100	0	78	117
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	2	<50	<50	0	81	108
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	2	<100	<100	0	80	108
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	2	<100	<100	0	78	117
Surrogate o-Terphenyl	%		Org-020	104	2	100	105	5	75	105

QUALITY CONTROL: PAHs in Water - Low Level						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	298599-4
Date extracted	-			24/06/2022	2	24/06/2022	24/06/2022		24/06/2022	24/06/2022
Date analysed	-			25/06/2022	2	25/06/2022	25/06/2022		25/06/2022	25/06/2022
Naphthalene	µg/L	0.2	Org-022/025	<0.2	2	<0.2	<0.2	0	115	111
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	113	107
Fluorene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	120	124
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	2	0.3	0.2	40	102	91
Anthracene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	122	116
Pyrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	126	123
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	101	99
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	134	112
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	122	2	100	111	10	122	108

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date prepared	-			28/06/2022	1	28/06/2022	28/06/2022		28/06/2022	[NT]
Date analysed	-			28/06/2022	1	28/06/2022	28/06/2022		28/06/2022	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	107	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	0.5	0.5	0	107	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	107	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	110	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	109	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	112	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	6	6	0	108	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	33	32	3	107	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

298599

Date Received: 22/06/22
Time Received: 1600
Received By: CR
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None 05 °C

FOUNDATION EARTH SCIENCES

Chain of Custody Record

Client Details:	Foundation Earth Sciences PO Box 4405, East Gosford NSW 2250 email: ben@foundationes.com.au michael@foundationes.com.au; ray@foundationes.com.au emerson@foundationes.com.au ph: +61466 385 221	Project Manager:	Michael Silk	Project #: E2843
Delivery Details:	Envirolab Pty Ltd 12 Ashley Street, Chatswood NSW 2067 email: ahle@envirolab.com.au ph: +612 9910 6200	Sampled By:	RL	Project Name: Leichhardt
		Purchase Order #:	N/A	Turnaround time : Standard
		Page #:	1	

#	Sample ID	Depth	Date Sampled	Matrix	Analytes: Heavy Metals (8)	TRH	BTEXN	PAH Low	VOC	TRH C6-C10 & BTEXN	PFAS							Envirolab Suites	Sample Comments
1	GW1	-	21.06.2022	Water	X	X	X	X	X									Combo 3L	Keep
2	GW2	-	21.06.2022	Water	X	X	X	X	X									Combo 3L	Keep
3	GW3	-	21.06.2022	Water	X	X	X	X	X									Combo 3L	Keep
4	GW4	-	21.06.2022	Water	X	X	X	X	X									Combo 3L	Keep
5	GWD1	-	21.06.2022	Water	X	X	X	X	X									Combo 3L	Keep
6	TS1	-	21.06.2022	Water					X	X								-	Keep
7	TB1	-	21.06.2022	Water					X	X								-	Keep

Special Directions and Coments:

Relinquished by	RL	Received By	Chesmen, ELS Sydney	Method of shipment
Signature		Signature		Courier
Date	22.06.2022	Date	22/06/22	

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Foundation Earth Sciences Pty Ltd
Attention	Michael Silk

Sample Login Details

Your reference	E2843, Leichhardt
Envirolab Reference	298599
Date Sample Received	22/06/2022
Date Instructions Received	22/06/2022
Date Results Expected to be Reported	29/06/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	7 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	5
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved
GW1	✓	✓	✓	✓	✓
GW2	✓	✓	✓	✓	✓
GW3	✓	✓	✓	✓	✓
GW4	✓	✓	✓	✓	✓
GWD1	✓	✓	✓	✓	✓
TS1		✓			
TB1		✓			

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Ben Buckley
Client	FOUNDATION EARTH SCIENCES PTY LTD
Address	UNIT 119/14 LOYALTY ROAD NORTH ROCKS NSW 2151
Telephone	(Not specified)
Facsimile	(Not specified)
Email	ben@foundationes.com.au
Project	**E2843 Leichhardt**
Order Number	**E2843**
Samples	1

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	**SE233432 R0**
Date Received	22/6/2022
Date Reported	30/6/2022

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Teresa NGUYEN
Organic Chemist

VOCs in Water [AN433] Tested: 27/6/2022

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
Dichlorodifluoromethane (CFC-12)	µg/L	5	<5
Chloromethane	µg/L	5	<5
Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3
Bromomethane	µg/L	10	<10
Chloroethane	µg/L	5	<5
Trichlorofluoromethane	µg/L	1	<1
Acetone (2-propanone)	µg/L	10	<10
Iodomethane	µg/L	5	<5
1,1-dichloroethene	µg/L	0.5	<0.5
Acrylonitrile	µg/L	0.5	<0.5
Dichloromethane (Methylene chloride)	µg/L	5	<5
Allyl chloride	µg/L	2	<2
Carbon disulfide	µg/L	2	<2
trans-1,2-dichloroethene	µg/L	0.5	<0.5
MtBE (Methyl-tert-butyl ether)	µg/L	2	<2
1,1-dichloroethane	µg/L	0.5	<0.5
Vinyl acetate	µg/L	10	<10
MEK (2-butanone)	µg/L	10	<10
cis-1,2-dichloroethene	µg/L	0.5	<0.5
Bromochloromethane	µg/L	0.5	<0.5
Chloroform (THM)	µg/L	0.5	<0.5
2,2-dichloropropane	µg/L	0.5	<0.5
1,2-dichloroethane	µg/L	0.5	<0.5
1,1,1-trichloroethane	µg/L	0.5	<0.5
1,1-dichloropropene	µg/L	0.5	<0.5
Carbon tetrachloride	µg/L	0.5	<0.5
Benzene	µg/L	0.5	<0.5
Dibromomethane	µg/L	0.5	<0.5
1,2-dichloropropane	µg/L	0.5	<0.5
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5
2-nitropropane	µg/L	100	<100
Bromodichloromethane (THM)	µg/L	0.5	<0.5
MIBK (4-methyl-2-pentanone)	µg/L	5	<5
cis-1,3-dichloropropene	µg/L	0.5	<0.5
trans-1,3-dichloropropene	µg/L	0.5	<0.5
1,1,2-trichloroethane	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
1,3-dichloropropane	µg/L	0.5	<0.5
Dibromochloromethane (THM)	µg/L	0.5	<0.5
2-hexanone (MBK)	µg/L	5	<5
1,2-dibromoethane (EDB)	µg/L	0.5	<0.5
Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5
1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5
Chlorobenzene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
Bromoform (THM)	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
cis-1,4-dichloro-2-butene	µg/L	1	<1
Styrene (Vinyl benzene)	µg/L	0.5	<0.5
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5
o-xylene	µg/L	0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5
1,2,3-trichloropropane	µg/L	0.5	<0.5
trans-1,4-dichloro-2-butene	µg/L	1	<1
Isopropylbenzene (Cumene)	µg/L	0.5	<0.5
Bromobenzene	µg/L	0.5	<0.5

VOCs in Water [AN433] Tested: 27/6/2022 (continued)

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
n-propylbenzene	µg/L	0.5	<0.5
2-chlorotoluene	µg/L	0.5	<0.5
4-chlorotoluene	µg/L	0.5	<0.5
1,3,5-trimethylbenzene	µg/L	0.5	<0.5
tert-butylbenzene	µg/L	0.5	<0.5
1,2,4-trimethylbenzene	µg/L	0.5	<0.5
sec-butylbenzene	µg/L	0.5	<0.5
1,3-dichlorobenzene	µg/L	0.5	<0.5
1,4-dichlorobenzene	µg/L	0.3	<0.3
p-isopropyltoluene	µg/L	0.5	<0.5
1,2-dichlorobenzene	µg/L	0.5	<0.5
n-butylbenzene	µg/L	0.5	<0.5
1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5
1,2,4-trichlorobenzene	µg/L	0.5	<0.5
Naphthalene (VOC)	µg/L	0.5	<0.5
Hexachlorobutadiene	µg/L	0.5	<0.5
1,2,3-trichlorobenzene	µg/L	0.5	<0.5
Total BTEX	µg/L	3	<3
Total VOC	µg/L	10	<10

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 27/6/2022

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
TRH C6-C9	µg/L	40	<40
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 24/6/2022

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C40	µg/L	320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 24/6/2022

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
Naphthalene	µg/L	0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1
Fluorene	µg/L	0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1
Anthracene	µg/L	0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1
Pyrene	µg/L	0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1
Chrysene	µg/L	0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1
Total PAH (18)	µg/L	1	<1

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 23/6/2022

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
Arsenic, As	µg/L	1	<1
Cadmium, Cd	µg/L	0.1	**0.4**
Chromium, Cr	µg/L	1	<1
Copper, Cu	µg/L	1	<1
Lead, Pb	µg/L	1	<1
Nickel, Ni	µg/L	1	**7**
Zinc, Zn	µg/L	5	**38**

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 23/6/2022

PARAMETER	UOM	LOR	GWSS1 WATER - 21/6/2022 SE233432.001
Mercury	mg/L	0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: 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.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
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). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoveerable Hydrocarbons - Silica (TRH-Silica) 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).
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.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This report must not be reproduced, except in full.

STATEMENT OF QA/QC PERFORMANCE

SE233432 R0

CLIENT DETAILS

Contact	Ben Buckley
Client	FOUNDATION EARTH SCIENCES PTY LTD
Address	UNIT 119/14 LOYALTY ROAD NORTH ROCKS NSW 2151
Telephone	(Not specified)
Facsimile	(Not specified)
Email	ben@foundationes.com.au
Project	**E2843 Leichhardt**
Order Number	**E2843**
Samples	1

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	**SE233432 R0**
Date Received	22 Jun 2022
Date Reported	30 Jun 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	VOCs in Water	1 item
	Volatile Petroleum Hydrocarbons in Water	1 item

SAMPLE SUMMARY

Sample cooling method	Ice Bricks	Sample counts by matrix	1 Water
Date documentation received	22/6/2022	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	13.1°C
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE233432 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury (dissolved) in Water — Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWSS1	SE233432.001	LB251567	21 Jun 2022	22 Jun 2022	19 Jul 2022	23 Jun 2022	19 Jul 2022	23 Jun 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Water — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWSS1	SE233432.001	LB251713	21 Jun 2022	22 Jun 2022	28 Jun 2022	24 Jun 2022	03 Aug 2022	28 Jun 2022

Trace Metals (Dissolved) in Water by ICPMS — Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWSS1	SE233432.001	LB251594	21 Jun 2022	22 Jun 2022	18 Dec 2022	23 Jun 2022	18 Dec 2022	23 Jun 2022

TRH (Total Recoverable Hydrocarbons) in Water — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWSS1	SE233432.001	LB251713	21 Jun 2022	22 Jun 2022	28 Jun 2022	24 Jun 2022	03 Aug 2022	29 Jun 2022

VOCs in Water — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWSS1	SE233432.001	LB251898	21 Jun 2022	22 Jun 2022	05 Jul 2022	27 Jun 2022	05 Jul 2022	30 Jun 2022

Volatile Petroleum Hydrocarbons in Water — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWSS1	SE233432.001	LB251898	21 Jun 2022	22 Jun 2022	05 Jul 2022	27 Jun 2022	05 Jul 2022	30 Jun 2022

SURROGATES

SE233432 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	62
d14-p-terphenyl (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	98
d5-nitrobenzene (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	52

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	99
d4-1,2-dichloroethane (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	88
d8-toluene (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	92

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	99
d4-1,2-dichloroethane (Surrogate)	GWSS1	SE233432.001	%	60 - 130%	88
d8-toluene (Surrogate)	GWSS1	SE233432.001	%	40 - 130%	92

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB251567.001	Mercury	mg/L	0.0001	<0.0001

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB251713.001		Naphthalene	µg/L	0.1	<0.1
		2-methylnaphthalene	µg/L	0.1	<0.1
		1-methylnaphthalene	µg/L	0.1	<0.1
		Acenaphthylene	µg/L	0.1	<0.1
		Acenaphthene	µg/L	0.1	<0.1
		Fluorene	µg/L	0.1	<0.1
		Phenanthrene	µg/L	0.1	<0.1
		Anthracene	µg/L	0.1	<0.1
		Fluoranthene	µg/L	0.1	<0.1
		Pyrene	µg/L	0.1	<0.1
		Benzo(a)anthracene	µg/L	0.1	<0.1
		Chrysene	µg/L	0.1	<0.1
		Benzo(a)pyrene	µg/L	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1
		Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	58
		2-fluorobiphenyl (Surrogate)	%	-	70
		d14-p-terphenyl (Surrogate)	%	-	96

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB251594.001	Arsenic, As	µg/L	1	<1
	Cadmium, Cd	µg/L	0.1	<0.1
	Chromium, Cr	µg/L	1	<1
	Copper, Cu	µg/L	1	<1
	Lead, Pb	µg/L	1	<1
	Nickel, Ni	µg/L	1	<1
	Zinc, Zn	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB251713.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB251898.001	Fumigants	2,2-dichloropropane	µg/L	0.5	<0.5
		1,2-dichloropropane	µg/L	0.5	<0.5
		cis-1,3-dichloropropene	µg/L	0.5	<0.5
		trans-1,3-dichloropropene	µg/L	0.5	<0.5
		1,2-dibromoethane (EDB)	µg/L	0.5	<0.5
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	µg/L	5	<5
		Chloromethane	µg/L	5	<5
		Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3
		Bromomethane	µg/L	10	<10
		Chloroethane	µg/L	5	<5
		Trichlorofluoromethane	µg/L	1	<1
		Iodomethane	µg/L	5	<5
		1,1-dichloroethene	µg/L	0.5	<0.5
		Dichloromethane (Methylene chloride)	µg/L	5	<5
		Allyl chloride	µg/L	2	<2
		trans-1,2-dichloroethene	µg/L	0.5	<0.5
		1,1-dichloroethane	µg/L	0.5	<0.5
		cis-1,2-dichloroethene	µg/L	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOCs in Water (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB251898.001	Halogenated Aliphatics	Bromochloromethane	µg/L	0.5	<0.5
		1,2-dichloroethane	µg/L	0.5	<0.5
		1,1,1-trichloroethane	µg/L	0.5	<0.5
		1,1-dichloropropene	µg/L	0.5	<0.5
		Carbon tetrachloride	µg/L	0.5	<0.5
		Dibromomethane	µg/L	0.5	<0.5
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5
		1,1,2-trichloroethane	µg/L	0.5	<0.5
		1,3-dichloropropane	µg/L	0.5	<0.5
		Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5
		1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5
		cis-1,4-dichloro-2-butene	µg/L	1	<1
		1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5
		1,2,3-trichloropropane	µg/L	0.5	<0.5
		trans-1,4-dichloro-2-butene	µg/L	1	<1
		1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5
		Hexachlorobutadiene	µg/L	0.5	<0.5
	Halogenated Aromatics	Chlorobenzene	µg/L	0.5	<0.5
		Bromobenzene	µg/L	0.5	<0.5
		2-chlorotoluene	µg/L	0.5	<0.5
		4-chlorotoluene	µg/L	0.5	<0.5
		1,3-dichlorobenzene	µg/L	0.5	<0.5
		1,4-dichlorobenzene	µg/L	0.3	<0.3
		1,2-dichlorobenzene	µg/L	0.5	<0.5
		1,2,4-trichlorobenzene	µg/L	0.5	<0.5
		1,2,3-trichlorobenzene	µg/L	0.5	<0.5
	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		Styrene (Vinyl benzene)	µg/L	0.5	<0.5
		o-xylene	µg/L	0.5	<0.5
		Isopropylbenzene (Cumene)	µg/L	0.5	<0.5
		n-propylbenzene	µg/L	0.5	<0.5
		1,3,5-trimethylbenzene	µg/L	0.5	<0.5
		tert-butylbenzene	µg/L	0.5	<0.5
		1,2,4-trimethylbenzene	µg/L	0.5	<0.5
		sec-butylbenzene	µg/L	0.5	<0.5
		p-isopropyltoluene	µg/L	0.5	<0.5
		n-butylbenzene	µg/L	0.5	<0.5
	Nitrogenous Compounds	Acrylonitrile	µg/L	0.5	<0.5
	Oxygenated Compounds	Acetone (2-propanone)	µg/L	10	<10
		MtBE (Methyl-tert-butyl ether)	µg/L	2	<1
		Vinyl acetate	µg/L	10	<10
		MEK (2-butanone)	µg/L	10	<10
		MIBK (4-methyl-2-pentanone)	µg/L	5	<5
		2-hexanone (MBK)	µg/L	5	<5
	Polycyclic VOCs	Naphthalene (VOC)	µg/L	0.5	<0.5
	Sulphonated	Carbon disulfide	µg/L	2	<2
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	125
		d8-toluene (Surrogate)	%	-	98
		Bromofluorobenzene (Surrogate)	%	-	100
	Trihalomethanes	Chloroform (THM)	µg/L	0.5	<0.5
		Bromodichloromethane (THM)	µg/L	0.5	<0.5
		Dibromochloromethane (THM)	µg/L	0.5	<0.5
		Bromoform (THM)	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Water (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB251898.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	125
		d8-toluene (Surrogate)	%	-	98
		Bromofluorobenzene (Surrogate)	%	-	100

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233432.001	LB251567.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	129	0

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233432.001	LB251594.012	Arsenic, As	µg/L	1	<1	<1	200	0
		Cadmium, Cd	µg/L	0.1	0.4	0.4	39	1
		Chromium, Cr	µg/L	1	<1	<1	200	0
		Copper, Cu	µg/L	1	<1	<1	147	0
		Lead, Pb	µg/L	1	<1	<1	200	0
		Nickel, Ni	µg/L	1	7	6	31	4
		Zinc, Zn	µg/L	5	38	36	28	6

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233345.011	LB251713.014		TRH C10-C14	µg/L	50	<50	<50	200	0
			TRH C15-C28	µg/L	200	<200	<200	200	0
			TRH C29-C36	µg/L	200	<200	<200	200	0
			TRH C37-C40	µg/L	200	<200	<200	200	0
			TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands	TRH >C10-C16	µg/L	60	<60	<60	200	0
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
			TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233447.001	LB251898.021	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.4	8.7	30	18
			d8-toluene (Surrogate)	µg/L	-	12.5	8.8	30	35 ②
			Bromofluorobenzene (Surrogate)	µg/L	-	13.4	10.6	30	24

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE233447.001	LB251898.021		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.4	8.7	30	18
			d8-toluene (Surrogate)	µg/L	-	12.5	8.8	30	35 ②
			Bromofluorobenzene (Surrogate)	µg/L	-	13.4	10.6	30	24
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251713.002		Naphthalene	µg/L	0.1	28	40	60 - 140	71
		Acenaphthylene	µg/L	0.1	33	40	60 - 140	83
		Acenaphthene	µg/L	0.1	32	40	60 - 140	81
		Phenanthrene	µg/L	0.1	33	40	60 - 140	82
		Anthracene	µg/L	0.1	30	40	60 - 140	75
		Fluoranthene	µg/L	0.1	32	40	60 - 140	81
		Pyrene	µg/L	0.1	33	40	60 - 140	83
		Benzo(a)pyrene	µg/L	0.1	34	40	60 - 140	85
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.5	40 - 130	60
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	74
		d14-p-terphenyl (Surrogate)	µg/L	-	0.5	0.5	40 - 130	98

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251594.002		Arsenic, As	µg/L	1	19	20	80 - 120	93
		Cadmium, Cd	µg/L	0.1	21	20	80 - 120	105
		Chromium, Cr	µg/L	1	21	20	80 - 120	107
		Copper, Cu	µg/L	1	22	20	80 - 120	108
		Lead, Pb	µg/L	1	20	20	80 - 120	101
		Nickel, Ni	µg/L	1	21	20	80 - 120	105
		Zinc, Zn	µg/L	5	22	20	80 - 120	109

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251713.002		TRH C10-C14	µg/L	50	1100	1200	60 - 140	92
		TRH C15-C28	µg/L	200	1400	1200	60 - 140	120
		TRH C29-C36	µg/L	200	1100	1200	60 - 140	90
	TRH F Bands	TRH >C10-C16	µg/L	60	1300	1200	60 - 140	112
		TRH >C16-C34 (F3)	µg/L	500	1200	1200	60 - 140	104
		TRH >C34-C40 (F4)	µg/L	500	530	600	60 - 140	89

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251898.002	Halogenated	1,1-dichloroethene	µg/L	0.5	55	45.45	60 - 140	122
	Aliphatics	1,2-dichloroethane	µg/L	0.5	59	45.45	60 - 140	131
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	60	45.45	60 - 140	132
	Halogenated	Chlorobenzene	µg/L	0.5	59	45.45	60 - 140	130
	Monocyclic	Benzene	µg/L	0.5	48	45.45	60 - 140	105
	Aromatic	Toluene	µg/L	0.5	47	45.45	60 - 140	104
		Ethylbenzene	µg/L	0.5	47	45.45	60 - 140	102
		m/p-xylene	µg/L	1	93	90.9	60 - 140	102
		o-xylene	µg/L	0.5	47	45.45	60 - 140	103
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.2	10	60 - 140	92
		d8-toluene (Surrogate)	µg/L	-	9.9	10	70 - 130	99
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10	70 - 130	107
	Trihalomethan	Chloroform (THM)	µg/L	0.5	50	45.45	60 - 140	109

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB251898.002		TRH C6-C10	µg/L	50	900	946.63	60 - 140	95
		TRH C6-C9	µg/L	40	780	818.71	60 - 140	95
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.2	10	60 - 140	92
		d8-toluene (Surrogate)	µg/L	-	9.9	10	70 - 130	99
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10	70 - 130	107
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	620	639.67	60 - 140	97

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE233387.002	LB251567.004	Mercury	mg/L	0.0001	0.0021	<0.00005	0.008	109

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE233377.008	LB251594.004	Arsenic, As	µg/L	1	19	<1	20	95
		Cadmium, Cd	µg/L	0.1	21	<0.1	20	107
		Chromium, Cr	µg/L	1	22	<1	20	109
		Copper, Cu	µg/L	1	22	<1	20	109
		Lead, Pb	µg/L	1	20	<1	20	101
		Nickel, Ni	µg/L	1	21	<1	20	106
		Zinc, Zn	µg/L	5	26	<5	20	125

VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE233443.001	LB251898.022	Monocyclic	Benzene	µg/L	0.5		<0.5	45.45	78
		Aromatic	Toluene	µg/L	0.5		<0.5	45.45	78
			Ethylbenzene	µg/L	0.5		<0.5	45.45	81
			m/p-xylene	µg/L	1		<1	90.9	82
			o-xylene	µg/L	0.5		<0.5	45.45	82
		Polycyclic	Naphthalene (VOC)	µg/L	0.5		<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.1	0.0	-	91
			d8-toluene (Surrogate)	µg/L	-	9.4	0.0	-	94
			Bromofluorobenzene (Surrogate)	µg/L	-	10.4	0.0	-	104

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE233443.001	LB251898.022		TRH C6-C10	µg/L	50	<50	946.63	94
			TRH C6-C9	µg/L	40	<40	818.71	95
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	0.0	-	91
			d8-toluene (Surrogate)	µg/L	-	0.0	-	94
			Bromofluorobenzene (Surrogate)	µg/L	-	0.0	-	104
		VPH F	Benzene (F0)	µg/L	0.5	<0.5	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	639.67	105

MATRIX SPIKE DUPLICATES

SE233432 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

SGS EHS Sydney COC

SE233432

FOUNDATION EARTH SCIENCES

Chain of Custody Record

Client Details:	Foundation Earth Sciences PO Box 4405, East Gosford NSW 2250 email: ben@foundationes.com.au michael@foundationes.com.au; ray@foundationes.com.au ph: +61466 385 221	**Project Manager:** Michael Silk **Sampled By:** RL **Purchase Order #:** N/A **Page #:** 1	**Project #:** E2843 **Project Name:** Leichhardt **Quote #:** **Turnaround:** Standard
Delivery Details:	SGS Laboratories Pty Ltd Unit 16, 33 Maddox Street, Alexandria NSW 2015 email: au.samplereceipt@sgs.com ph: +612 8594 0400		

#	Sample ID	Depth	Date Sampled	Matrix	Analytes														Sample Comments
					ph	CEC	PFAS	HM	TRH	BTEXN	PAH	OC	VOC	Asbestos ID	Asbestos %w/w (NEPM /WA)	Phenol		Suites	
1	GWSS1	-	21.06.2022	Water				X	X	X	X		X					CL12 & CL18	Keep

Special Directions and Coments:

Relinquished by	RL	Received By	MiBarbour
Signature		Signature	
Date	22.06.2022	Date	22.6.22 9:30

GP 13.1

SAMPLE RECEIPT ADVICE

SE233432

CLIENT DETAILS

Contact	Ben Buckley
Client	FOUNDATION EARTH SCIENCES PTY LTD
Address	UNIT 119/14 LOYALTY ROAD NORTH ROCKS NSW 2151
Telephone	(Not specified)
Facsimile	(Not specified)
Email	ben@foundationes.com.au
Project	**E2843 Leichhardt**
Order Number	**E2843**
Samples	1

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
Samples Received	Wed 22/6/2022
Report Due	Wed 29/6/2022
SGS Reference	**SE233432**

SUBMISSION DETAILS

This is to confirm that 1 sample was received on Wednesday 22/6/2022. Results are expected to be ready by COB Wednesday 29/6/2022.
Please quote SGS reference SE233432 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample cooling method	Ice Bricks	Sample counts by matrix	1 Water
Date documentation received	22/6/2022	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	13.1°C
Turnaround time requested	Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

SAMPLE RECEIPT ADVICE

SE233432

CLIENT DETAILS

Client FOUNDATION EARTH SCIENCES PTY LTD

Project E2843 Leichhardt

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	GWSS1	1	22	7	9	78	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

APPENDIX I: FIELD RECORD FORMS

SITE INSPECTION
DAILY WORKSHEET RECORD

Project name:	DS2	**Project #:**	23443
Client:	Platino properties	**Date:**	15/6/22
Site Address:	67-75 Lords, road. Leichhardt NSW		
Site Contact:	Paula	**Phone:**	
Representative:	Emerson & Daniel		
Title:	Engineer	**Phone:**	0409784783
Field Notes:			

Start Time:	7:00	**Finish Time:**	4:00
Weather:		**Rainfall (mm):**	
Wind Direction:		**Wind Speed:**	
Humidity:			
Odours present:		**Staining Present:**	
Environmental and Safety Concerns:			
23 BH soil sampling + 4 GW installation			
Actions:			
Site Safety Induction:		**Stormwater Control:**	
Dust Suppression:		**Traffic Control:**	
Machinery onsite:		**Equipment onsite:**	
Additional Observations:			

SITE INSPECTION
DAILY WORKSHEET RECORD

Project name: AI	**Project #:** E2843
Client: Platino Properties	**Date:** 21/06/2022
Site Address: 67-75 Lords Rd. Leichhardt NSW	
Site Contact: Paul	**Phone:**
Representative: RL	
Title: Civil & Str Engineer.	**Phone:**
Field Notes:	

Start Time: 9:30 am	**Finish Time:** 12:20PM
Weather: Sunny	**Rainfall (mm):** —
Wind Direction: —	**Wind Speed:** —
Humidity:	
Odours present:	**Staining Present:**
Environmental and Safety Concerns:	
— GW Sampling x4	
Actions:	

Site Safety Induction:	**Stormwater Control:**
Dust Suppression:	**Traffic Control:**
Machinery onsite:	**Equipment onsite:**

Additional Observations:

GROUNDWATER MONITORING RECORD FORM

PROJECT INFORMAION			
Client:	Platino Properties	Monitoring Well ID:	BH/GW1
Site Address:	67-75 Lords Rd Leichhardt (NSW)	Logged By:	RL
Project:	AI	Date:	24/06/2022

MONITORING WELL DETAILS			
Depth (m) as constructed:	4.3	Depth (m) as measured:	4.3
Finish:	Gatic Cover	Co-ordinates:	–
Condition:	Good	Surveyed levels:	–

METHODOLOGY AND EQUIPMENT			
Water measurement device:	Dip Meter	Reference point:	Ground Surface
Water quality meter:	YSI	Reference point to ground surface (mm):	0.0
GW Extraction method:	Peri Pump		

GROUNDWATER GAUGING (PRE-PURGE)		GROUNDWATER GAUGING (POST-PURGE)	
SWL (m bgl):		SWL (m bgl):	
Depth to Product (m bgl):		Depth to product (m bgl):	
Product thickness (mm):		Product thickness (mm):	
Time:		Time:	

PURGING AND PHYSICO-CHEMICAL PARAMETERS

Time (started)	Time (finished)	Volume purged	Pump rate (mL/min)	Temperature (°c)	DO (mg/L)	pH (pH units)	EC (us/cm)	Redox potential (mv)
11:20	11:22	0.5L	250	14.4	5.54	4.99	483.3	56.3
11:23	11:24	1.0L	↓	13.8	5.44	5.21	496.2	60.8
11:24	11:26	1.5L		14.0	3.98	5.43	511.7	71.8
		Stabilisation criteria		± 0.2 °c	± 0.2 mg/L	± 0.1 pH Units	± 5%	± 10 mV

OBSERVATIONS			
Odour:	No	Sheen:	No
Colour/ Turbidity:	Light red/brown Medium – High	Recent rain (days):	

SAMPLING					
Samples taken:	(Primary)	(Blind)		(Split)	(Rinsate)	(TS/TB)
Containers:					
Field filtered:					
Preservation:					

GROUNDWATER MONITORING RECORD FORM

PROJECT INFORMAION			
Client:	Platino Properties	Monitoring Well ID:	GW2
Site Address:	67-75 Lords Rd Leichhardt NSW	Logged By:	RL
Project:	AI	Date:	4/06/2022

MONITORING WELL DETAILS			
Depth (m) as constructed:	4.9m	Depth (m) as measured:	4.9m
Finish:	Gatic Cover	Co-ordinates:	–
Condition:	Good	Surveyed levels:	–

METHODOLOGY AND EQUIPMENT			
Water measurement device:	Dip Meter	Reference point:	Ground Surface
Water quality meter:	YSI	Reference point to ground surface (mm):	0.0
GW Extraction method:	Peri Pump		

GROUNDWATER GAUGING (PRE-PURGE)		GROUNDWATER GAUGING (POST-PURGE)	
SWL (m bgl):	1.2	SWL (m bgl):	1.6
Depth to Product (m bgl):	ND	Depth to product (m bgl):	ND
Product thickness (mm):		Product thickness (mm):	
Time:		Time:	

PURGING AND PHYSICO-CHEMICAL PARAMETERS

Time (started)	Time (finished)	Volume purged	Pump rate (mL/min)	Temperature (°c)	DO (mg/L)	pH (pH units)	EC (us/cm)	Redox potential (mv)
9:45	9:48	~~300~~ 0.9L	300	11.2	2.5	7.36	447.2	584
9:48	9:51	1.8L	300	11.6	2.16	4.55	446.8	563
9:51	9:54	2.7L	300	11.5	2.05	3.97	455.9	529
Stabilisation criteria				± 0.2 °c	± 0.2 mg/L	± 0.1 pH Units	± 5%	± 10 mV

OBSERVATIONS			
Odour:	~~Clear~~ → Light NO	Sheen:	NO
Colour/ Turbidity:	clear → light yellow	Recent rain (days):	–
	Low – Med		

SAMPLING					
Samples taken:	Primary	Blind	Split	Rinsate	TS/TB
Containers:					
Field filtered:					
Preservation:					

GROUNDWATER MONITORING RECORD FORM

PROJECT INFORMAION			
Client:	Platino Properties	Monitoring Well ID:	BH4/GW3
Site Address:	67-75 Lords Rd Leichhardt NSW	Logged By:	RL
Project:	AI	Date:	24/06/2022

MONITORING WELL DETAILS			
Depth (m) as constructed:	4.7	Depth (m) as measured:	4.7
Finish:	Gatic Cover	Co-ordinates:	-
Condition:	Good	Surveyed levels:	-

METHODOLOGY AND EQUIPMENT			
Water measurement device:	Dip Meter	Reference point:	Ground Surface
Water quality meter:	YSI	Reference point to ground surface (mm):	0.0
GW Extraction method:	Peri Pump		

GROUNDWATER GAUGING (PRE-PURGE)		GROUNDWATER GAUGING (POST-PURGE)	
SWL (m bgl):	4.0	SWL (m bgl):	4.3
Depth to Product (m bgl):	N/D	Depth to product (m bgl):	N/D
Product thickness (mm):		Product thickness (mm):	
Time:		Time:	

PURGING AND PHYSICO-CHEMICAL PARAMETERS

Time (started)	Time (finished)	Volume purged	Pump rate (mL/min)	Temperature (°c)	DO (mg/L)	pH (pH units)	EC (us/cm)	Redox potential (mv)
10:10	10:13	0.9L	300	12.5	4.61	7.68	988	636
10:13	10:16	1.8L		12.7	4.45	7.74	990	628
10:16	10:19	2.7L		12.8	4.25	7.84	842	60.6
		Stabilisation criteria		± 0.2 °c	± 0.2 mg/L	± 0.1 pH Units	± 5%	± 10 mV

OBSERVATIONS			
Odour:	No	Sheen:	-
Colour/ Turbidity:	Clear / low - Medium	Recent rain (days):	-

SAMPLING					
Samples taken:	Primary	Blind	Split	Rinsate	TS/TB
Containers:					
Field filtered:					
Preservation:					

GROUNDWATER MONITORING RECORD FORM

PROJECT INFORMAION			
Client:	Platino Properties	Monitoring Well ID:	GW4
Site Address:	67-75 Lords Rd Leichhardt NSW	Logged By:	RL
Project:	AI	Date:	24/06/2022

MONITORING WELL DETAILS			
Depth (m) as constructed:	4.0	Depth (m) as measured:	4.0m
Finish:	Gatic Cover	Co-ordinates:	–
Condition:	Good	Surveyed levels:	–

METHODOLOGY AND EQUIPMENT			
Water measurement device:	Dip Meter	Reference point:	Ground Surface
Water quality meter:	YSI	Reference point to ground surface (mm):	0.0
GW Extraction method:	Peri Pump		

GROUNDWATER GAUGING (PRE-PURGE)		GROUNDWATER GAUGING (POST-PURGE)	
SWL (m bgl):	3.0m	SWL (m bgl):	3.8m
Depth to Product (m bgl):	NP	Depth to product (m bgl):	NP
Product thickness (mm):		Product thickness (mm):	
Time:		Time:	

PURGING AND PHYSICO-CHEMICAL PARAMETERS

Time (started)	Time (finished)	Volume purged	Pump rate (mL/min)	Temperature (°c)	DO (mg/L)	pH (pH units)	EC (us/cm)	Redox potential (mv)
10:40	10:43	0.9L	300	13.3	4.54	6.99	916	554
10:43	10:46	1.8L		13.2	4.98	7.14	882	624
10:46	10:49	2.7L		12.8	4.66	7.22	897	479
		Stabilisation criteria		± 0.2 °c	± 0.2 mg/L	± 0.1 pH Units	± 5%	± 10 mV

OBSERVATIONS			
Odour:	No	Sheen:	No
Colour/ Turbidity:	Clear / Minimal	Recent rain (days):	–

SAMPLING					
Samples taken:	Primary	Blind	Split	Rinsate	TS/TB
Containers:					
Field filtered:					
Preservation:					

APPENDIX J: AERIAL PHOTOGRAPHS

Historical Aerial Photographs

67-75 Lords Road,

Leichhardt NSW

1930

1943


Advanced Search
PERCY STREET
LORD STREET
HAWTHORNE PARADE
DAWES STREET
FOSTER STREET
FOSTER LANE
KEGWORTH STREET
TEBBUTT STREET
UPWARD STREET
1:2,257
0
30
60m

1955

1971

1991:

2005:

Current (Six Maps):

APPENDIX K: SUMMARY TABLES

Table K1

Sample Information				Heavy Metals (mg/kg)								TRH (mg/kg)						BTEX (mg/kg)					PAH (mg/kg)				OCP (mg/kg)										OPP (mg/kg)		PCB	VOC	PFAS(ug/kg)			ASBESTOS		
Label	Depth (m BGL)	Date	Soil Type	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	ZINC	F1 (C_6-C_{10}) [2]	F2 ($>C_{10}$-C_{16}) [3]	F1 (C_6-C_{10})	F2 ($>C_{10}$-C_{16})	F3 (C_{16}-C_{34})	F4 (C_{34}-C_{40})	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	NAPHTHALENE	BENZO(A)PYRENE	CARINOGENIC PAHs (as Bap TEQ)	TOTAL PAH	NAPHTHALENE	DDT + DDD + DDE	ALDRIN + DIELDRIN	CHLORDANE	ENDOSULFAN	ENDRIN	HEPTACHLOR	HCB	METHOXYCHLOR	TOXAPHENE	DDT	Chlorpyrifos	Other OPPs	TOTAL PCB	Total VOCs(mg/kg)	Sum of PFOS and PFHxS	PFOA	PFOS	% w/w (AF /FA)	% w/w (ACM)	Asbestos ID
EMS DSI 2006																																														
KM01	0.2	6.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM01	0.9	6.11.2004	Fill-Bitumen	nd	nd	53	42	13	nd	89	76	-	-	-	-	-	-	nd	nd	nd	nd	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM01	1.3	6.11.2004	Nat- Clayey Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM01	2.4	6.11.2004	Nat- Weathered Sandstone	nd	nd	4	nd	4	nd	0.5	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM02	0.2	6.11.2004	Fill-Clayey Silt	8	5	16	24	66	0.07	12	190	-	-	-	-	-	-	nd	nd	nd	nd	-	0.6	-	6.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	-	-	nd	-	-	-	-	-	-	-
KM02	0.7	6.11.2004	Nat- Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM02	2	6.11.2004	Nat- Clayey SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM03	0.2	6.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM03	0.6	6.11.2004	Fill-Silt	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM03	0.9	6.11.2004	Nat- Clayey SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM03	1.8	6.11.2004	Nat - SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM04	0.1	8.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM04	0.5	8.11.2004	Fill-Silt	nd	nd	3	1	4	nd	1	6	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM04	0.8	8.11.2004	Nat-Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM04	2	8.11.2004	Nat-Clayey SAND	-	-	-	-	2	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM05	0.1	8.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM05	0.8	8.11.2004	Fill-Clay and Ash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM05	1.2	8.11.2004	Nat- Sandy CLAY	3	nd	3	1	nd	nd	0.8	25	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM05	2	8.11.2004	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM05	3	8.11.2004	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM06	0.1	8.11.2004	Fill-Silt	3	nd	6	120	21	nd	25	37	-	-	-	-	-	-	-	-	-	-	-	0.4	-	4.4	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM06	0.5	8.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM07	0.2	8.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM07	0.8	8.11.2004	Fill-Clayey Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM07	1.2	8.11.2004	Nat- CLAY	-	-	-	-	5	-	-	-	-	-	-	-	-	-	nd	nd	nd	nd	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM08	0.2	8.11.2004	Fill-Silt & Aggregate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM08	0.8	8.11.2004	Fill-Ash & Coal	15	24	17	18	99	0.09	3	140	-	-	-	-	-	-	nd	nd	nd	nd	-	0.9	-	9.3	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM08	1.4	8.11.2004	Fill-Clay / Sandstone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM08	2	8.11.2004	Nat - SAND	nd	nd	2	0.5	6	nd	0.4	32	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM09	0.2	8.11.2004	Fill-Silt/ Sand/ Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM09	0.8	8.11.2004	Fill-Clay / Sandstone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM09	1.5	8.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM09	2	8.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM09	3	8.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM09	3.6	8.11.2004	Fill-Silt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM10	0.4	9.11.2004	Fill-Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM10	1	9.11.2004	Fill-Clay	5	2	14	10	120	0.07	8	160	-	-	-	-	-	-	nd	nd	nd	nd	-	0.4	-	5	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM10	2.4	9.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM11	0.4	9.11.2004	Fill-Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM11	0.8	9.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM11	2	9.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM11	3	9.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM11	3.6	9.11.2004	Nat- CLAY	10	nd	16	1	10	nd	1	10	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM12	0.3	9.11.2004	Fill-Clay	4	0.7	12	44	100	0.06	9	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM12	0.8	9.11.2004	Fill- Bitumen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM12	1.2	9.11.2004	Fill-Clay	6	4	13	30	160	0.07	4	210	-	-	-	-	-	-	nd	nd	nd	nd	-	1.2	-	11	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM12	2	9.11.2004	Nat- CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM13	0.2	9.11.2004	Fill- Silt	nd	nd	74	29	7	nd	83	56	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM13	0.6	9.11.2004	Fill- Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM13	1	9.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM13	1.2	9.11.2004	Fill-Clay	5	nd	11	34	140	0.11	3	210	-	-	-	-	-	-	-	-	-	-	-	8	-	92	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM13	2	9.11.2004	Nat- CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM14	0.2	9.11.2004	Fill- Silt	3	nd	46	22	10	nd	60	43	-	-	-	-	-	-	nd	nd	nd	nd	-	0.1	-	0.9	nd	nd	nd	nd	nd	nd	nd	nd	nd	-	nd	-	-	nd	-	-	-	-	-	-	-
KM14	0.6	9.11.2004	Fill- Sand & Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM14	1	9.11.2004	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM14	2	9.11.2004	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM15	0.2	9.03.2005	Fill- Sand	4	nd	8	0.6	4	nd	0.2	6	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM15	0.5	9.03.2005	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM16	0.6	9.03.2005	Fill- Sand	nd	nd	14	1	8	nd	2	5	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM16	0.8	9.03.2005	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM17	0.2	9.03.2005	Fill- Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM17	0.5	9.03.2005	Fill- Sandy Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM17	1	9.03.2005	Fill- Silt	36	15	31	99	210	0.14	10	890	-	-	-	-	-	-	-	-	-	-	-	23	-	422	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM17	1.2	9.03.2005	Nat- CLAY	4	nd	4	13	81	0.07	2	94	-	-	-	-	-	-	-	-	-	-	-	0.5	-	7.4	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM18	0.6	9.03.2005	Fill-Sand	42	29	63	1291	510	0.08	25	1200	-	-	-	-	-	-	-	-	-	-	-	0.5	-	8.6	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM19	0.4	9.03.2005	Fill-Clay	5	nd	26	18	12	nd	0.5	19	-	-	-	-	-	-	-	-	-	-	-	0.08	-	0.48	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM19	0.7	9.03.2005	Nat- CLAY	5	nd	18	2	6	nd	0.2	5	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM20	0.4	9.03.2005	Fill-Clay	nd	nd	14	3	11	nd	1	7	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.3	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM20	0.6	9.03.2005	Nat- CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM21	0.2	9.03.2005	Fill	nd	nd	14	3	10	nd	1	6	-	-	-	-	-	-	-	-	-	-	-	nd	-	0.5	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KM21	0.4	9.03.2005	Nat	nd	nd	12	1	6	nd	0.6	3	-	-	-	-	-	-	nd	nd	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP01	-	6.11.2004	Nat- Weathered Sandstone	nd	nd	7	0.6	5	nd	1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP02	-	6.11.2004	Nat - SILT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP03	-	9.11.2004	Fill-Clay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP04	-	9.11.2004	Soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP05	-	9.11.2004	Fill-Clay	4	nd	10	11	50	0.093	3	110	-	-	-	-	-	-	-	-	-	-	-	5.6	-	62	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP06	-	09.03.2005	Nat- Sandy CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP07	-	09.03.2005	Nat- CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	-	0.33	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP08	-	09.03.2005	Nat- CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	nd	-	nd	nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FES Additional Investigation																																														
BH1	0.4-0.5	15.06.2022	Fill - Silty Sand	<4	<0.4	20	50	18	<0.1	62	40	<25	<50	<25	<50	220	320	<0.2	<0.5	<1	<1	<1	0.4	0.5	2.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<LOR	<0.1	<0.1	<0.1	-	-	ND
BH1 Triplicate	*0.4-0.5*	*15.06.2022*	Fill - Silty Sand	<4	<0.4	19	50	13	<0.1	62	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2	0.2-0.3	15.06.2022	Fill - Silty Gravelly Clay	<4	0.4	12	56	7	<0.1	41	47	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<LOR	0.4	<0.1	0.4	-	-	ND
BH3	0.5-0.6	15.06.2022	Fill - Silty Sand	<4	<0.4	6	9	17	<0.1	2	22	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.3	<0.5	2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<LOR	0.2	<0.1	0.2	-	-	ND
BH4	0.2-0.3	15.06.2022	Fill - Silty Sand	5	0.7	10	94	95	<0.1	5	160	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	1.1	1.5	8.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<LOR	0.3	0.2	0.3	-	-	ND
BH5	0.4-0.5	15.06.2022	Fill - Sandy Clay	10	6	15	32	92	0.1	4	92	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.61	0.8	5.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH6	0.3-0.4	15.06.2022	Fill - Sandy Clay	13	12	18	67	76	0.2	4	120	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.85	1.1	7.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH7	0.2-0.3	15.06.2022	Fill - Sandy Clay	8	11	12	15	44	<0.1	2	72	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.5	0.7	3.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH8	0.5-0.6	15.06.2022	Nat- Sandy CLAY	<4	<0.4	9	1	5	<0.1	<1	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH9	0.4-0.5	15.06.2022	Fill - Clayey Sand	<4	<0.4	2	8	25	<0.1	1	18	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.1	<0.5	0.78	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH10	0.7-0.8	15.06.2022	Fill - Sandy Clay	16	4.6	15	39	120	0.4	8	260	<25	<50	<25	<50	1200	730	<0.2	<0.5	<1	<1	<1	2.5	3.6	22	0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH11	0.5-0.6	15.06.2022	Fill - Silty Gravelly Clay	<4	<0.4	21	43	18	<0.1	48	37	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.2	<0.5	1.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH12	0.2-0.3	15.06.2022	Fill - Sandy Clay	34	<0.4	9	18	100	<0.1	2	32	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.1	<0.5	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH13	0.3-0.4	15.06.2022	Fill - Silty Clay	<4	<0.4	9	9	16	<0.1	11	27	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<LOR	0.3	<0.1	0.3	-	-	ND
BH13 - Triplicate	*0.3-0.4*	*15.06.2022*	Fill - Silty Clay	<4	<0.4	10	16	60	<0.1	16	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	2-2.1	15.06.2022	Fill - Silty Clay	10	5.9	14	28	76	<0.1	5	120	<25	<50	<25	<50	160	<100	<0.2	<0.5	<1	<1	<1	2.2	3.2	22	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
BH14	0.6-0.7	15.06.2022	Fill - Silty Clay	<4	<0.4	22	60	34	<0.1	63	98	<25	<50	<25	<50	240	310	<0.2	<0.5	<1	<1	<1	0.2	<0.5	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH15	0.5-0.6	15.06.2022	Fill - Sandy Clay	6	1	27	47	190	0.5	7	440	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	1.5	2.1	11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH16	0.3-0.4	15.06.2022	Road Base	<4	<0.4	13	210	8	<0.1	55	52	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.1	<0.5	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH17	0.5-0.6	15.06.2022	Fill - Sandy Clay	6	<0.4	18	7	25	0.1	2	45	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.2	<0.5	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH18	0.7-0.8	15.06.2022	Fill - Silty Gravelly Clay	<4	<0.4	14	73	250	1.1	21	310	<25	<50	<25	<50	340	120	<0.2	<0.5	<1	<1	<1	8.6	12	70	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH19	0.2-0.3	15.06.2022	Fill - Silty Gravelly Clay	6	<0.4	25	15	27	<0.1	7	16	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.3	<0.5	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH20	0.3-0.4	15.06.2022	Fill - Silty Gravelly Clay	8	<0.4	28	2	10	<0.1	2	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.07	<0.5	0.07	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH21	0.6-0.7	15.06.2022	Fill - Silty Gravelly Clay	<4	<0.4	18	35	14	<0.1	20	24	<25	<50	<25	<50	230	480	<0.2	<0.5	<1	<1	<1	0.2	<0.5	1.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH22	0.5-0.6	15.06.2022	Fill - Sandy Clay	<4	<0.4	3	5	33	<0.1	2	44	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	1.3	1.8	12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
BH22 - Triplicate	*0.5-0.6*	*15.06.2022*	Fill - Sandy Clay	<4	<0.4	6	12	170	0.1	3	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.4-0.5	15.06.2022	Fill - Sandy Clay	<4	<0.4	12	<1	4	<0.1	<1	2	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	-	-	-	-	-	ND
D1	-	15.06.2022	Fill - Silty Gravelly Clay	6	1	10	67	140	0.1	4	210	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.97	1.3	8.2	<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	<LOR	0.5	0.2	0.5	-	-	-
D2	-	15.06.2022	Fill - Silty Sand	<4	0.5	18	76	8	<0.1	35	50	<25	<50	<25	<50	<100	180	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<LOR	0.3	0.1	0.3	-	-	-
SS1	-	15.06.2022	Fill - Silty Gravelly Clay	9	1.2	9.8	91	170	0.22	4.3	260	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	1.1	1.7	11	<0.1	<0.1	<0.2	<0.1	<0.2	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.2	<1.7	<1	<24	1.6	0.8	1.6	-	-	-
SS2	-	15.06.2022	Fill - Silty Sand	2	0.5	10	42	7	<0.05	35	45	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<0.2	<0.8	<0.1	<0.1	<0.2	<0.1	<0.2	<0.2	<0.1	<0.1	<0.1	-	<0.1	<0.2	<1.7	<1	<24	1.6	0.8	1.6	-	-	-
Statistical Analysis											Fill												Fill	Fill	Fill																					
No of Observations											50												39	27	44																					
Minimum											2												0.05	0.2	0.05																					
Maximum											1200												1.5	3.6	422																					
Standard Deviation											212.8												0.419	0.855	65.06																					
Mean											128.6												0.384	0.963	18.63																					
95% Gamma or Chebyshew- UCL											174.4												0.676	1.681	79.88																					
Limit of Resolution (LOR)				4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1	1	1	0.05	0.5	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1					0.001	0.01	0.1
NEPM (2013) HIL B				500	150	500	30,000	1,200	120	1,200	60,000													4	400		600	10	90	400	20	10	15	500	30				1		2,000ug/kg		20,000ug/kg			
NEPM (2013) HIL C				300	90	300	17,000	600	80	1,200	30,000													3	300		400	10	70	340	20	10	10	400	30				1		1,000ug/kg		10,000ug/kg			
NEPM (2013) EIL & ESLs [1]				100																						170										180	340									
Fill BH1 (0.4-0.5m)						420	270	1100		410	1000																																			
NEPM (2013) ESLs - (Fine Grain Soil - Clay / Silt) [1]												180	120			1,300	5,600	65	105	125	45		0.7																							
NEPM (2013) ESLs - (Coarse Grain Soil - Sand / Gravel) [1]												180	120			300	2,800	50	85	70	105		0.7																							
NEPM (2013) HSL A & B (SAND)																																														
0m to <1m												45	110					0.5	160	55	40	3																								
Soil Saturation Concentration (Csat)												950	560					360	560	64	300	9																								
NEPM (2013) HSL C (SAND)																																														
0m to <4m												NL	NL					NL	NL	NL	NL	NL																								
Soil Saturation Concentration (Csat)												950	560					360	560	64	300	9																								
NEPM (2013) HSL A & B (SILT)																																														
0m to <1m												50	280					0.7	480	NL	110	5																								
1m to <2m												90	NL					1	NL	NL	310	NL																								
2m to <4m												150	NL					2	NL	NL	NL	NL																								
Soil Saturation Concentration (Csat)												910	570					440	640	69	330	10																								
NEPM (2013) HSL C (SILT)																																														
0m to <4m												NL	NL					NL	NL	NL	NL	NL																								
Soil Saturation Concentration (Csat)												910	570					440	640	69	330	10																								
NEPM (2013) HSL A & B (CLAY)																																														
0m to <1m												50	280					0.7	480	NL	110	5																								
1m to <2m												90	NL					1	NL	NL	310	NL																								
2m to <4m												150	NL					2	NL	NL	NL	NL																								
Soil Saturation Concentration (Csat)												850	560					430	630	68	330	10																								
NEPM (2013) HSL C (CLAY)																																														
0m to <4m												NL	NL					NL	NL	NL	NL	NL																								
Soil Saturation Concentration (Csat)												850	560					430	630	68	330	10																								
NEPM (2013) Management Limit (Fine Grain Soil)														800	1,000	5,000	10,000																													
NEPM (2013) Management Limit (Coarse Grain Soil)														700	1,000	2,500	10,000																													
PFAS NEMP 2020																																														
Ecological Direct Exposure																																										10,000ug/kg	1,000ug/kg			
Ecological indirect exposure																																											10ug/kg			
NEPM (2013) HSL - Asbestos																																														
%w/w asbestos for FA and AF																																												0.001%		Detected
%w/w asbestos for ACM - Residential A																																													0.01%	

Notes

1 Urban residential / public open space is broadly equivalent to the HIL-A, HIL-B and HIL-C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedul

2 To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fracti

3 To obtain F2 subtract naphthalene from the $>C_{10}$-C_{16} fraction.

NL Calculated HSL is Non Limiting per NEPM (2013)

ND Not detected

Table K2

Sample Information		Heavy Metals								TRH		BTEX							PAH					
SAMPLE ID	Date	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	ZINC	F1 (C_6-C_{10}) [2]	F2 (>C_{10}-C_{16}) [3]	BENZENE	TOLUENE	ETHYL BENZENE	M/P-XYLENE	O-XYLENE	NAPHTHALENE	TOTAL-XYLENE	BENZO(A)PYRENE	ANTHRACENE	PHENANTHRENE	FLUORANTHENE	NAPHTHALENE
FES DSI 2022																								
GW1	21.06.2022	<1	0.5	<1	<1	<1	<0.05	6	33	<10	<50	<1	<1	<1	<2	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.2
GW2	21.06.2022	<1	0.4	<1	<1	<1	<0.05	7	28	<10	<50	<1	<1	<1	<2	<1	<1	<3	<0.1	<0.1	0.3	<0.1	<0.2
GW3	21.06.2022	7	3.5	28	19	11	<0.05	180	160	<10	<50	<1	<1	<1	<2	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.2
GW4	21.06.2022	<1	0.2	<1	2	<1	<0.05	62	37	<10	<50	<1	<1	<1	<2	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.2
GWD1	21.06.2022	<1	0.5	<1	<1	<1	<0.05	6	30	<10	<50	<1	<1	<1	<2	<1	<1	<3	<0.1	<0.1	<0.1	<0.1	<0.2
GWSS1	21.06.2022	<1	0.4	<1	<1	<1	<0.1	7	38	<50	<60	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<1.5	<0.1	<0.1	<0.1	<0.1	<0.1
Limit of Resolution (LOR)		1	0.1	1	1	1	0.05	1	1	10	50	1	1	1	2	1	1	2	0.1	0.1	0.1	0.1	0.2
GILs - NEPM (2013) - Groundwater Investigation Levels																								
Marine Waters [2]		**-**	**0.70**	**4.40**	**1.30**	**4.40**	**0.10**	**7.00**	**15.00**			**500**	**-**	**-**	**-**	**-**			**-**	**-**	**-**	**-**	**50**
Fresh Waters - Low Reliability (Trigger Values) [3]		24 / 13	0.20	1.00	1.40	3.40	0.06	11.00	8.00			950	180	80	200	350			0.1	0.01	0.6	1	-
Groundwater HSLs - NEPM (2013) HSL B (CLAY)																								
2m to <4m										NL	NL	5,000	NL	NL	-	-	NL	NL						
4m to <8m										NL	NL	5,000	NL	NL	-	-	NL	NL						
Solubility Limit										9,000	3,000	59,000	61,000	3,900	-	-	170	21,000						

Notes

1	All units are in ug/L
2	Investigation Levels apply to typical slightly-moderately disturbed systems
3	QSAR derived, statistical distribution method used, 95% trigger values applied as per ANZECC 2000
4	Investigation levels are taken from the health values of the Australian Drinking Water Guidelines NHMRC 2011
NL	Non Limiting

Table K3

Sample Information		ALKANES							ALKENES					BENZENES												Other VOC	
SAMPLE ID	GME DATE	TETRACHLOROMETHANE (CARBON TETRACHLOR	TRICHLOROMETHANE (CHLOROFORM)	BROMODICHLOROMETHANE	TRIHALOMETHANES (TOTAL)	1, 2-DICHLOROETHANE	CYCLOHEXANE	1,1,2-TRICHLOROETHANE	CHLOROETHENE (VINYL CHLORIDE)	TRICHLOROETHENE	CIS-1,2-DICHLOROETHENE	1,1-DICHLOROETHENE	TETRACHLOROETHENE (PCE PERCHLOROETHENE)	CHLOROBENZENE	1,2-DICHLOROBENZENE	1,3-DICHLOROBENZENE	1,4-DICHLOROBENZENE	1,2,3-TRICHLOROBENZENE	1,2,4-TRICHLOROBENZENE	ISOPROPYL BENZENE (CUMENE)	SEC-BUTYL BENZENE	1,3,5-TRIMETHYL BENZENE	N-PROPYL BENZENE	N-BUTYL BENZENE	1.2.4 - TRIMETHYLBENZENE	4-ISOPROPYL TOULENE	HEXACHLOROBUTADIENE
FES DSI 2022																											
GW1	21.06.2022	<1	<1	<1	-	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GW2	21.06.2022	<1	<1	<1	-	<1	<1	<1	<10	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GW3	21.06.2022	<1	<1	<1	-	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GW4	21.06.2022	<1	<1	<1	-	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GWD1	21.06.2022	<1	<1	<1	-	<1	<1	<1	<10	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GWSS1	21.06.2022	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
Limit of Resolution (LOR)		1	1	1	1	1	1	1	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
GILs - NEPM (2013) - Groundwater Investigation Levels																											
Marine Waters [2]								1,900									60		20								
Marine Low reliability			370							330.00																	
US EPA Regional Screening Levels (RSLs) May 2016																											
US EPA MCLs [c]							NV													NV	NV	NV	NV	NV	NV	NV	
US EPA Tapwater [d]							13,000													NV	2,000	120	660	1,000	15	NV	

Notes

1	All units are in ug/L
2	Investigation levels apply to typical slightly-moderately disturbed systems
4	Investigation levels are taken from the health values of the Australian Drinking Water Guidelines NHMRC 2011
-	NV - no derived value
-	" - " Not Tested
a:	QSAR derived, statistical distribution method used, 99% trigger value applied as per ANZECC guidelines for slightly-moderately disturbed systems
b:	QSAR derived, statistical distribution method used, 95% trigger value applied as per ANZECC guidelines for slightly-moderately disturbed systems
c:	US EPA Region 9 RSL (MCLs) utilised in absence of criteria from NEPM 2013. MCLs are legally enforceable USEPA drinking water standards
d:	US EPA Region 9 RSL (Tapwater) utilised in absence of criteria from NEPM 2013. Non cancer

Table K4

	Heavy Metals (mg/kg)								TRH (mg/kg)					BTEX (mg/kg)				PAH (mg/kg)		OCP (mg/kg)		OPP (mg/kg)	PCB (mg/kg)	VOCs (mg/kg)	
	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	ZINC	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 [a]	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	BENZO(a)PYRENE	TOTAL PAH	Other OCPs	TOTAL ENDOSULFAN[11]	CHLORPYRIPHOS (OPP)	TOTAL PCB	VOCs	ASBESTOS ID (Presence / Absence)
NSW EPA Waste Criteria (No Leachates)																									
CT1	100	20	100	-	100	4	40	-	NA	-	-	-	NA	10	288	600	1000	0.8	200	<50	60	4	<50		Detected
CT2	400	80	400	-	400	16	160	-	NA	-	-	-	NA	40	1152	2400	4000	3.2	800	<50	240	16	<50		
NSW EPA Waste Criteria (With Leachates)																									
SCC1	500	100	1900	-	1500	50	1050	-	650	-	-	-	10000	18	518	1080	1800	10	200	Total = <50**	108	7.5	<50**		
SCC2	2000	400	7600	-	6000	200	4200	-	2600	-	-	-	40000	72	2073	4320	7200	23	800	Total = <50**	432	30	<50**		
Limit of Resolution (LOR)	4	0.4	5	5	5	0.10	5	5	25	50	100	100	NA	0.2	0.5	1	3	0.05	0.05	0.1	0.1	0.1	0.1		
Sample ID	**Date Sampled**	**Depth**																							
FES DSI 2022																									
BH1	15.06.2022	0.4-0.5	<4	<0.4	20	50	18	<0.1	62	40	<25	<50	<100	240	240	<0.2	<0.5	<1	<1	0.4	2.9	<0.1	<0.1	<0.1	<0.1	<LOR	ND
BH1 Triplicate	15.06.2022	0.4-0.5	<4	<0.4	19	50	13	<0.1	62	33	<25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2	15.06.2022	0.2-0.3	<4	0.4	12	56	7	<0.1	41	47	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<LOR	ND
BH3	15.06.2022	0.5-0.6	<4	<0.4	6	9	17	<0.1	2	22	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.3	2.5	<0.1	<0.1	<0.1	<0.1	<LOR	ND
BH4	15.06.2022	0.2-0.3	5	0.7	10	94	95	<0.1	5	160	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	1.1	8.7	<0.1	<0.1	<0.1	<0.1	<LOR	ND
BH5	15.06.2022	0.4-0.5	10	6	15	32	92	0.1	4	92	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.61	5.4	<0.1	<0.1	-	<0.1	-	ND
BH6	15.06.2022	0.3-0.4	13	12	18	67	76	0.2	4	120	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.85	7.1	<0.1	<0.1	-	<0.1	-	ND
BH7	15.06.2022	0.2-0.3	8	11	12	15	44	<0.1	2	72	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.5	3.9	<0.1	<0.1	-	<0.1	-	ND
BH8	15.06.2022	0.5-0.6	<4	<0.4	9	1	5	<0.1	<1	17	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	-	<0.1	-	ND
BH9	15.06.2022	0.4-0.5	<4	<0.4	2	8	25	<0.1	1	18	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.1	0.78	<0.1	<0.1	-	<0.1	-	ND
BH10	15.06.2022	0.7-0.8	16	4.6	15	39	120	0.4	8	260	<25	<50	460	930	1,400	<0.2	<0.5	<1	<1	2.5	22	<0.1	<0.1	-	<0.1	-	ND
BH11	15.06.2022	0.5-0.6	<4	<0.4	21	43	18	<0.1	48	37	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.2	1.7	<0.1	<0.1	-	<0.1	-	ND
BH12	15.06.2022	0.2-0.3	34	<0.4	9	18	100	<0.1	2	32	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.1	0.5	<0.1	<0.1	-	<0.1	-	ND
BH13	15.06.2022	0.3-0.4	<4	<0.4	9	9	16	<0.1	11	27	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<LOR	ND
BH13 - Triplicate	15.06.2022	0.3-0.4	<4	<0.4	10	16	60	<0.1	16	68	<25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	15.06.2022	2-2.1	10	5.9	14	28	76	<0.1	5	120	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	2.2	22	-	-	-	-	-	ND
BH14	15.06.2022	0.6-0.7	<4	<0.4	22	60	34	<0.1	63	98	<25	<50	100	220	330	<0.2	<0.5	<1	<1	0.2	1.1	<0.1	<0.1	-	<0.1	-	ND
BH15	15.06.2022	0.5-0.6	6	1	27	47	190	0.5	7	440	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	1.5	11	<0.1	<0.1	-	<0.1	-	ND
BH16	15.06.2022	0.3-0.4	<4	<0.4	13	210	8	<0.1	55	52	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.1	0.4	<0.1	<0.1	-	<0.1	-	ND
BH17	15.06.2022	0.5-0.6	6	<0.4	18	7	25	0.1	2	45	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.2	1.1	<0.1	<0.1	-	<0.1	-	ND
BH18	15.06.2022	0.7-0.8	<4	<0.4	14	73	250	1.1	21	310	<25	<50	200	200	390	<0.2	<0.5	<1	<1	8.6	70	<0.1	<0.1	-	<0.1	-	ND
BH19	15.06.2022	0.2-0.3	6	<0.4	25	15	27	<0.1	7	16	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.3	2	<0.1	<0.1	-	<0.1	-	ND
BH20	15.06.2022	0.3-0.4	8	<0.4	28	2	10	<0.1	2	12	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.07	0.07	<0.1	<0.1	-	<0.1	-	ND
BH21	15.06.2022	0.6-0.7	<4	<0.4	18	35	14	<0.1	20	24	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.2	1.5	<0.1	<0.1	-	<0.1	-	ND
BH22	15.06.2022	0.5-0.6	<4	<0.4	3	5	33	<0.1	2	44	<25	<50	<100	300	300	<0.2	<0.5	<1	<1	1.3	12	<0.1	<0.1	-	<0.1	-	ND
BH22 - Triplicate	15.06.2022	0.5-0.6	<4	<0.4	6	12	170	0.1	3	88	<25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	15.06.2022	0.4-0.5	<4	<0.4	12	<1	4	<0.1	<1	2	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	-	<0.1	-	ND
D1	15.06.2022	-	6	1	10	67	140	0.1	4	210	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	0.97	8.2	<0.1	<0.1	<0.1	<0.1	<LOR	-
D2	15.06.2022	-	<4	0.5	18	76	8	<0.1	35	50	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<LOR	-
SS1	15.06.2022	-	9	1.2	9.8	91	170	0.22	4.3	260	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	1.1	11	<0.2	<0.2	<0.2	<1	<24	-
SS2	15.06.2022	-	2	0.5	10	42	7	<0.05	35	45	<20	<20	<45	<45	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.8	<0.2	<0.2	<0.2	<1	<24	-

Notes

1 CT1, CT2 : Total concentrations used for defining General Solid Waste and Restricted Solid Waste respectively (without TCLP)

2 SCC1, SCC2 : Total Concentration used for defining General Solid Waste and Restricted Solid Waste respectively (in conjunction with TCLP)

3 Concentrations in GREEN exceed the CT1 criteria

4 Concentrations in RED exceed the CT2 criteria

5 Concentrations in BLUE exceed the SCC1 criteria

6 Concentrations in ORANGE exceed the SCC2 criteria

7 Concentrations in YELLOW indicate the presence of Asbestos

8 NA = Not Applicable

9 " - " Not Tested

10 *** Indicates Retest Result

11 Total Endosulfan = Endosulfan I, Endosulfan II and Endosulfan Sulphate

APPENDIX L: CALIBRATION CERTIFICATE

PID Calibration Certificate

Instrument **PhoCheck Tiger**
Serial No. **T-114173**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
Pump	Operation	✓	
	Filter	✓	
	Flow	✓	
	Valves, Diaphragm	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	PID	✓	10.6 ev
Alarms	Beeper	✓	Low: 50ppm; High: 100ppm; TWA: ; STEL:
	Settings	✓	
Software	Version	✓	
Data logger	Operation	✓	
Download	Operation	✓	
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		93ppm Isobutylene		SY361		93.2ppm

Calibrated by: **Gary Needs**

Calibration date: **14/06/2022**

Next calibration due: **11/12/2022**

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 19D105096

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		381241	pH 6.85
2. pH 4.00		pH 4.00		384826	pH 4.00
3. ORP		242.2mV		380834/387761	242.3mV
4. EC		2.76mS		385047	2.76mS
5. D.O		0.00ppm		11343	0.00ppm
6. Temp		19°C		MultiTherm 09000528	18.2°C

Calibrated by: **Sarah Lian**

Calibration date: **17/06/2022**

Next calibration due: **17-Dec-22**

APPENDIX M: LAND TITLE INFORMATION

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

Title Search

17/06/2022 01:36 PM

Client Reference: DI-E2843

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 1/940543

SEARCH DATE	TIME	EDITION NO	DATE
17/6/2022	1:36 PM	50	19/2/2019

LAND

LOT 1 IN DEPOSITED PLAN 940543
AT LEICHHARDT
LOCAL GOVERNMENT AREA INNER WEST
PARISH OF PETERSHAM COUNTY OF CUMBERLAND
TITLE DIAGRAM DP940543

FIRST SCHEDULE

LORD SIXTY SEVEN PTY LIMITED (T AB211141)

SECOND SCHEDULE (9 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 W321534 LEASE TO THE SYDNEY COUNTY COUNCIL OF SUBSTATION PREMISES NO 2386 AS SHOWN IN PLAN WITH W321534. EXPIRES 31-12-2035
AK971351 LEASE OF LEASE W321534 TO BLUE ASSET PARTNER PTY LTD, ERIC ALPHA ASSET CORPORATION 1 PTY LTD, ERIC ALPHA ASSET CORPORATION 2 PTY LTD, ERIC ALPHA ASSET CORPORATION 3 PTY LTD & ERIC ALPHA ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii).
AK971352 LEASE OF LEASE AK971351 TO BLUE OP PARTNER PTY LTD, ERIC ALPHA OPERATOR CORPORATION 1 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 2 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 3 PTY LTD & ERIC ALPHA OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 12.1
AK971502 MORTGAGE OF LEASE AK971351 TO ANZ FIDUCIARY SERVICES PTY LTD
AK971571 CHANGE OF NAME AFFECTING LEASE W321534 LESSEE NOW ALPHA DISTRIBUTION MINISTERIAL HOLDING CORPORATION

3 AD101847 EASEMENT FOR ACCESS APPURTENANT TO THE LAND ABOVE
DESCRIBED AFFECTING LOT 1 IN DP550608
4 AD414382 LEASE TO KAY. T. INVESTMENTS PTY LTD OF UPPER UNIT
7, 67-69 LORDS ROAD, LEICHHARDT. EXPIRES: 30/4/2012.
OPTION OF RENEWAL: 5 YEARS.
AE977535 VARIATION OF LEASE AD414382 EXPIRY DATE NOW
30/4/2019.
AJ337256 VARIATION OF LEASE AD414382

END OF PAGE 1 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

SECOND SCHEDULE (9 NOTIFICATIONS) (CONTINUED)
---
5 AF97430 LEASE TO KAY. T. INVESTMENTS PTY. LTD. OF UNIT 7,
71-73 LORDS ROAD, LEICHHARDT. EXPIRES: 30/4/2019.
OPTION OF RENEWAL: 10 YEARS.
AJ337257 VARIATION OF LEASE AF97430
6 AF572069 LEASE TO HEAD ACADEMY KUNG FU PTY LIMITED OF UNIT 6,
71-73 LORDS ROAD, LEICHHARDT. EXPIRES: 6/5/2014.
OPTION OF RENEWAL: 5 YEARS.
7 AG421067 MORTGAGE TO WESTPAC BANKING CORPORATION
8 AJ309293 LEASE TO ART EST. PTY LIMITED OF UNIT 4, UPPER
LEVEL, 67-69 LORDS ROAD, LEICHHARDT. EXPIRES:
31/12/2019.
9 AP71167 LEASE TO COUNTRY ROAD CLOTHING PTY LIMITED OF UNIT
2, 67-69 LORDS ROAD, LEICHHARDT COMMENCES 15/05/2019.
EXPIRES: 14/5/2022.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

DI-E2843 PRINTED ON 17/6/2022

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register.

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

Historical Search
17/06/2022 01:38 PM

Client Reference: DI-E2843

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:37PM

FOLIO: 1/940543

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15444 FOL 245

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/12/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
14/6/1991	Z702792	REQUEST	EDITION 1
12/9/1991	Z914134	CAVEAT	
4/8/1992	E655159	WITHDRAWAL OF CAVEAT	
4/8/1992	E655160	TRANSFER	EDITION 2
24/9/1992	E782853	LEASE	EDITION 3
25/6/1993	I437817	LEASE	EDITION 4
9/9/1993	I633225	LEASE	EDITION 5
22/11/1993	I811911	LEASE	EDITION 6
6/12/1993	I848607	LEASE	
6/12/1993	I848608	LEASE	EDITION 7
4/3/1994	U78028	LEASE	EDITION 8
31/3/1994	U147757	LEASE	EDITION 9
13/5/1994	U262326	TRANSFER OF LEASE	
2/12/1994	U836239	REQUEST	
2/12/1994	U836240	LEASE	EDITION 10

13/6/1995 O298465 MORTGAGE EDITION 11

24/1/1997 2786076 LEASE EDITION 12

28/4/1997 3011043 LEASE
28/4/1997 3011044 LEASE EDITION 13

END OF PAGE 1 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:37PM

FOLIO: 1/940543 PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1997	3340081	REQUEST	
21/8/1997	3340082	LEASE	
21/8/1997	3340083	LEASE	
21/8/1997	3340084	LEASE	EDITION 14
4/3/1998	3834256	LEASE	
4/3/1998	3834257	LEASE	EDITION 15
5/5/1998	3963473	LEASE	EDITION 16
23/3/2000	6664826	LEASE	
23/3/2000	6664827	LEASE	
23/3/2000	6664828	LEASE	EDITION 17
1/5/2000	6743632	LEASE	EDITION 18
1/5/2000	6743644	DEPARTMENTAL DEALING	EDITION 19
3/8/2001	7827466	TRANSFER OF LEASE	
3/8/2001	7827467	VARIATION OF LEASE	
3/6/2002	8651649	TRANSFER	
3/6/2002	8651650	LEASE	
3/6/2002	8651651	LEASE	
3/6/2002	8651652	LEASE	EDITION 20
25/6/2002	8713741	LEASE	

25/6/2002 8713742 LEASE EDITION 21

14/8/2002 8866169 VARIATION OF LEASE EDITION 22

27/8/2002 8903637 LEASE EDITION 23

17/1/2003 9297112 DISCHARGE OF MORTGAGE
17/1/2003 9297113 TRANSFER
17/1/2003 9297114 MORTGAGE EDITION 24

5/7/2004 AA776911 DISCHARGE OF MORTGAGE
5/7/2004 AA776912 MORTGAGE EDITION 25

22/11/2004 AB108621 CAVEAT

10/2/2005 AB211130 DISCHARGE OF MORTGAGE
10/2/2005 AB211132 WITHDRAWAL OF CAVEAT

END OF PAGE 2 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:37PM

FOLIO: 1/940543 PAGE 3

Recorded	Number	Type of Instrument	C.T. Issue
10/2/2005	AB211133	REQUEST	
10/2/2005	AB211134	REQUEST	
10/2/2005	AB211135	REQUEST	
10/2/2005	AB211136	REQUEST	
10/2/2005	AB211137	LEASE	
10/2/2005	AB211138	LEASE	
10/2/2005	AB211139	LEASE	
10/2/2005	AB211140	LEASE	
10/2/2005	AB211141	TRANSFER	
10/2/2005	AB211143	MORTGAGE	EDITION 26
19/6/2006	AC390301	LEASE	EDITION 27
22/6/2006	AC397532	LEASE	EDITION 28
5/7/2006	AC435598	VARIATION OF MORTGAGE	EDITION 29

28/8/2006 AC555395 LEASE EDITION 30

17/5/2007 AD101847 TRANSFER GRANTING EASEMENT EDITION 31
ETC OVER OWN LAND

14/9/2007 AD414382 LEASE EDITION 32

13/12/2007 AD634716 LEASE EDITION 33

11/3/2008 AD820193 LEASE EDITION 34

29/4/2008 AD918715 LEASE EDITION 35

1/7/2009 AE807612 VARIATION OF MORTGAGE EDITION 36

15/9/2009 AE977535 VARIATION OF LEASE

20/10/2009 AF55865 MORTGAGE EDITION 37

10/11/2009 AF97430 LEASE EDITION 38

22/6/2010 AF572069 LEASE
22/6/2010 AF572070 LEASE EDITION 39

20/1/2011 AG13243 LEASE EDITION 40

END OF PAGE 3 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:37PM

FOLIO: 1/940543 PAGE 4

Recorded	Number	Type of Instrument	C.T. Issue
9/8/2011	AG421066	DISCHARGE OF MORTGAGE	
9/8/2011	AG421067	MORTGAGE	EDITION 41
17/8/2011	AG439874	POSTPONEMENT OF MORTGAGE	EDITION 42
25/11/2011	AG642759	LEASE	EDITION 43
20/6/2012	AH60315	LEASE	EDITION 44

27/2/2013 AH580569 LEASE EDITION 45

27/6/2013 AH836699 SURRENDER OF LEASE EDITION 46

21/1/2014 AI316800 LEASE

23/1/2014 AI325778 LEASE

12/2/2014 AI353727 VARIATION OF LEASE

13/2/2014 AI373491 TRANSFER OF LEASE

5/3/2015 AJ309293 LEASE
5/3/2015 AJ309361 DISCHARGE OF MORTGAGE EDITION 47

17/3/2015 AJ337256 VARIATION OF LEASE
17/3/2015 AJ337257 VARIATION OF LEASE

29/6/2016 AK533443 LEASE EDITION 48

28/2/2017 AK971351 LEASE
28/2/2017 AK971352 SUB-LEASE
28/2/2017 AK971502 MORTGAGE OF LEASE
28/2/2017 AK971571 CHANGE OF NAME
28/2/2017 AM28347 DEPARTMENTAL DEALING

14/11/2017 AM885885 CAVEAT

13/7/2018 AN500135 WITHDRAWAL OF CAVEAT

8/9/2018 AN695391 DEPARTMENTAL DEALING EDITION 49
CORD ISSUED

19/2/2019 AP71167 LEASE EDITION 50

END OF PAGE 4 - CONTINUED OVER

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:37PM

FOLIO: 1/940543 PAGE 5

Recorded Number Type of Instrument C.T. Issue

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

--- --- --- ---

CORD ISSUED

*** END OF SEARCH ***

DI-E2843 PRINTED ON 17/6/2022

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

17/06/2022 01:42 PM

Form: 01T
Licence: 03-10-204
Licensee: Gadens Lawyers

TRANSFER

New South Wales
Real Property Act 1900

AB211141C

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 Proper... that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only

NSW Treasury
Client No: 1405240 1974
VENDOR DUTY EXEMPT
ENDORSED 1625
Trans No: 2365593

NEW SOUTH WALES DUTY
20-12-2004 0002379021-001
SECTION 18(2)
DUTY $ **********2.00

(A) TORRENS TITLE

If appropriate, specify the part transferred.

1/940543

(B) LODGED BY

Delivery Box	Name, Address or DX and Telephone	CODES
348F	LLPN: 123232P Gray & Perkins Lawyers DX 431 Sydney Box No. 348F Reference (optional): JRK:10635	T TW (Sheriff)

(C) TRANSFEROR

Dodaro Investments No. 1 Pty Limited ACN 100 153 786 and
Dodaro Investments No. 2 Pty Limited ACN 100 153 795

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of $ 11,576,500.00 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

Lord Sixty Seven Pty Limited ACN 111 975 190

(I)

TENANCY:

DATE 24 / 12 / 2004
dd mm yy

(J)

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

Corporation: Dodaro Investments No. 1 Pty Limited
Authority: Section 127 of the Corporations Act
Signature of authorised person:
Name of authorised person: Maria Dodaro
Office held: Director

Signature of authorised person:
Name of authorised person: Theresa Dodaro
Office held: Director/Sec

2240042.1 GSS GSS

All handwriting must be in block capitals.

and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Corporation: Dodaro Investments No. 2 Pty Limited
Authority: Section 127 of the Corporations Act
Signature of authorised person:

Name of authorised person: JARALE DODARO
Office held: Director

Signature of authorised person:

Name of authorised person: ROBERT DODARO
Office held: Director

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

Signature:

Signatory's name: Roslyn Forrest
Signatory's capacity: solicitor for transferee

Title Search

17/06/2022 01:40 PM

Client Reference: DI-E2843

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 1/550608

SEARCH DATE	TIME	EDITION NO	DATE
17/6/2022	1:39 PM	13	27/4/2018

LAND

LOT 1 IN DEPOSITED PLAN 550608
AT LEICHHARDT
LOCAL GOVERNMENT AREA INNER WEST
PARISH OF PETERSHAM COUNTY OF CUMBERLAND
TITLE DIAGRAM DP550608

FIRST SCHEDULE

LORD SIXTY SEVEN PTY LIMITED (T AB211142)

SECOND SCHEDULE (10 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) AS REGARDS THE PART IN LOT 19 SEC 2 IN DP1268
2 LAND EXCLUDES MINERALS (S.141 PUBLIC WORKS ACT, 1912) AS REGARDS THE PART FORMERLY IN 1/508417
3 DP1054391 EASEMENT FOR ELECTRICITY SUPPLY AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1054391
4 DP1054391 EASEMENT FOR DRAINAGE AND ACCESS FOR MAINTENANCE 6 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1054391
5 9656893 EASEMENT FOR NOISE AND VIBRATION AFFECTING THE WHOLE OF THE LAND ABOVE DESCRIBED
6 9656893 EASEMENT FOR ELECTROLYSIS AFFECTING THE WHOLE OF THE LAND ABOVE DESCRIBED
7 9656893 RESTRICTION(S) ON THE USE OF LAND
8 AD101847 EASEMENT FOR ACCESS AFFECTING THE LAND ABOVE DESCRIBED
9 AD414382 LEASE TO KAY. T. INVESTMENTS PTY LTD OF UPPER UNIT 7, 67-69 LORDS ROAD, LEICHHARDT. EXPIRES: 30/4/2012. OPTION OF RENEWAL: 5 YEARS.
AE977535 VARIATION OF LEASE AD414382 EXPIRY DATE NOW 30/4/2019.

AJ337256 VARIATION OF LEASE AD414382
10 AG421067 MORTGAGE TO WESTPAC BANKING CORPORATION

NOTATIONS

DP1009971 NOTE: PLAN OF PROPOSED EASEMENT

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

DI-E2843 PRINTED ON 17/6/2022

Historical Search

17/06/2022 01:40 PM

Client Reference: DI-E2843

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:40PM

FOLIO: 1/550608

First Title(s): OLD SYSTEM

Prior Title(s): 1/508417 VOL 4522 FOL 40

Recorded	Number	Type of Instrument	C.T. Issue
10/1/1992	DP814867	DEPOSITED PLAN	FOLIO CREATED EDITION 1
3/2/1993	I86350	LEASE	EDITION 2
19/4/2000	DP1009971	DEPOSITED PLAN	
19/6/2003	DP1054391	DEPOSITED PLAN	
24/6/2003	9656893	TRANSFER	EDITION 3
22/11/2004	AB108628	CAVEAT	
15/12/2004	AB158144	REQUEST	
10/2/2005	AB211131	WITHDRAWAL OF CAVEAT	
10/2/2005	AB211142	TRANSFER	
10/2/2005	AB211143	MORTGAGE	EDITION 4
17/5/2007	AD101847	TRANSFER GRANTING EASEMENT ETC OVER OWN LAND	EDITION 5
14/9/2007	AD414382	LEASE	EDITION 6
13/12/2007	AD634716	LEASE	EDITION 7
18/6/2009	AE755155	DEPARTMENTAL DEALING	
1/7/2009	AE807612	VARIATION OF MORTGAGE	EDITION 8
15/9/2009	AE977535	VARIATION OF LEASE	

20/10/2009 AF55865 MORTGAGE EDITION 9

9/8/2011 AG421066 DISCHARGE OF MORTGAGE
9/8/2011 AG421067 MORTGAGE EDITION 10

17/8/2011 AG439874 POSTPONEMENT OF MORTGAGE EDITION 11

2/5/2014 AI544020 DEPARTMENTAL DEALING

END OF PAGE 1 - CONTINUED OVER

DI-E2843 PRINTED ON 17/6/2022

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 1:40PM

FOLIO: 1/550608 PAGE 2

Recorded Number Type of Instrument C.T. Issue
--- --- --- ---
17/3/2015 AJ337256 VARIATION OF LEASE

21/3/2018 AN203897 APPLICATION FOR REPLACEMENT EDITION 12
CERTIFICATE OF TITLE

27/4/2018 AN293385 DISCHARGE OF MORTGAGE EDITION 13
CORD ISSUED

*** END OF SEARCH ***

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

DI-E2843 PRINTED ON 17/6/2022

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

Historical Search
17/06/2022 03:35 PM

Client Reference: DI-E2843

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

17/6/2022 3:34PM

FOLIO: 1/508417

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 10056 FOL 32

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/6/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
10/1/1992	E180244	APPLICATION FOR ISSUE OF CERTIFICATE OF TITLE	
10/1/1992	DP814867	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

DI-E2843 PRINTED ON 17/6/2022

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

17/06/2022 03:34 PM

Form: 01TE
Release: 1.1
www.lpi.nsw.gov.au

(1)

TRANSFER INCLUDING EASEMENT

New South Wales
Real Property Act 1900

9656893S

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

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
19-05-2003 0001406565-001
SECTION 18(2)
DUTY $ **********2.00

Revenue Office YEAR 2000 - 2005 ALTERATION NOTED

(A) **TORRENS TITLE** FOLIO IDENTIFIER 1/~~55068~~ 550608

(B) **TENEMENTS**

Servient	Dominant
DODARO HOLDINGS PTY LTD	STATE RAIL AUTHORITY

(C) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODE
758K	McCanns Legal Services Pty Ltd DX 1463 Sydney Box 758K Phone: 9223 7455 Reference: 146483-DODARO	TE

(D) **TRANSFEROR** STATE RAIL AUTHORITY OF NEW SOUTH WALES OVER

The transferor—

(E) 1. acknowledges receipt of the consideration of $380,000.00

2. transfers to the transferee an estate in fee simple and

(F) 3. RESERVES an easement as set out in Schedule 2.

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** DODARO HOLDINGS PTY LTD ABN 87701406

(I) **TENANCY:**

DATE 28-4-03.

The Common Seal of STATE RAIL AUTHORITY OF NEW SOUTH WALES was hereunto affixed in the presence of:-

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

Signature of witness: x

Name of witness: x Ron S. CRIGHTON

Address of witness: x18 Lae St. Chippendale.

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

Signature of authorised officer: x

Authorised officer's name: x MARGOT MANSAICKER'S

Authority of officer: Corporate Secretary.

Signing on behalf of: The State Rail Authority of New South Wales.

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

Corporation:

Authority:

DODARO HOLDING PTY LTD A.C.N. 003 308 049 THE COMMON SEAL

Signature of authorised person:

Name of authorised person: Maria Dodaro

Office held: Secretary

Signature of authorised person:

Name of authorised person: Natale Dodaro

Office held: Director

(K) **SCHEDULE 1**
Grant of easement

The transferor GRANTS:

NOT APPLICABLE

(K) **SCHEDULE 2**
Reservation of easement

The transferor RESERVES:

1. EASEMENT FOR NOISE AND VIBRATION

1.1 The transferor reserves for itself, its successors and assigns and all persons authorised by it or them the right to cause such noise and vibration as may arise from its operations to be transmitted into and across the land burdened.

1.2 For the benefit of the right reserved the ~~Transferee~~ Transferee as owner of the land burdened covenants with the Transferor its successors and assigns as follows:

1.2.1 to waive all rights and remedies which it might otherwise have had against the Transferor arising out of the exercise of rights under this easement; and

1.2.2 to indemnify the Transferor against any demand, claim, suit or proceeding which might be made against ~~the~~ Transferor arising out of it exercising its rights under this easement.

1.3 For the purpose of this clause "operations" includes all activities, infrastructure and works related to the operation of railway passenger services & railway freight services.

REFER TO ANNEXURE "A"

Annexure "A" to TRANSFER INCLUDING EASEMENT

Parties:

STATE RAIL AUTHORITY OF NEW SOUTH WALES ("Transferor") AND DODARO HOLIDNGS PTY LIMITED ("Transferee")

Dated:

2. EASEMENT FOR ELECTROLYSIS

2.1 The Transferor reserves for itself, its successors and assigns and all persons authorised by it or ~~them~~ ~~him~~ the right to cause electrical currents originating from its operations to pass across, above, through or under the land burdened.

2.2 For the purpose of this clause 'operations' includes all activities, infrastructure and works related to the operation of railway passenger services and railway freight services and any such transport service which is additional to or in substitution for any railway service.

2.3 The parties agree that clauses 1.2 and 1.2.1 herein apply to this easement

3. RESTRICTION ON USE

3.1 The Transferee for itself, its successors and assigns covenants with the Transferor for the benefit of the Transferor its successors and assigns that the Transferee will not without the prior written approval of the Transferor and (all costs and expenses of the Transferor and in connection therewith to be met by the Transferee)~~:~~

3.1.1 permit, allow or cause any water to be discharged from the land burdened onto, in, under or through any land owned by the Transferor;

3.1.2 erect or allow any drainage works to be erected on the land burdened unless they are also approved by the Council in the Local Government area in which the land burdened is situate and/or by Sydney Water;

3.2 The prescribed Authority pursuant to Section 88E of the Conveyancing Act, 1919 that is imposing this restriction is the State Rail Authority of New South Wales.

The land burdened by this restriction on use is Folio Identifier 1/550608

M. Dodaro M Dodaro

M. Dodaro

RP88/ANNEX

REGISTRATION DIRECTION ANNEXURE

Use this side only for **Second Schedule directions**

PAG 2 OF 2

DO NOT USE BOTH SIDES OF THIS FORM

SECOND SCHEDULE AND OTHER DIRECTIONS

FOLIO IDENTIFIER	DIRECTION	NOTFN TYPE	DEALING NUMBER	DETAILS
	ON	EA		EASEMENT FOR NOISE AND
				VIBRATION AFFECTING THE WHOLE OF THE
				LAND ABOVE DESCRIBED.
	ON	EB		EASEMENT FOR ELECTROLYSIS
				AFFECTING THE WHOLE OF THE LAND
				ABOVE DESCRIBED
	ON	RU		

17/06/2022 03:36 PM

Form: 05M
Licence: 03-10-213
Licensee: Gadens Lawyers

MORTGAGE

New South Wales
Real Property Act 1900

AB21142J

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

HOME MORTGAGE

Office of State Revenue use only.
Office of State Revenue
NSW Treasury
Client No: 1405240 1974
Duty: $1,381-00 Trans No: 2228773
Asst details: PRIME - $360,000-00
4/10/04

Land Mortgaged insert current title reference of land being mortgaged e.g. Identifier 6/278946

LAND MORTGAGED

8/SP73433

LODGED BY

Delivery 46X

Name, Address or DX and Telephone
THOMSON
LAWPOINT GALLOWAYS
Phone: (02) 9233 1011 Fax: (02) 9232 6491
Reference (optional): HSL/2319706/~~Michelle Pascua~~ 12e

Mortgagor State Christian Name(s) and Surname(s) in full of each Mortgagor.

MORTGAGOR **KATHERINE MARGARET JACKSON and JOHN WILLIAM JACKSON**

("the Mortgagor") being the registered proprietor of the land specified above acknowledges giving this Mortgage and incurring obligations and giving rights under it for valuable consideration received from the Mortgagee ("the Bank") specified below and agrees with the Bank that the provisions in the attached Schedule are incorporated in this Mortgage AND for the purpose of securing to the Bank payment of the amount owing MORTGAGES to the Bank all the estate and interest of the Mortgagor in the land specified above together with each structure, fixture or improvement on it or fixed to it.

Encumbrances State only the registered number of any mortgage, lease, charge or writ to which the mortgage is subject. Rights of carriageway, covenants, etc are not to be shown.

Encumbrances (if applicable):
1. 2. 3.

MORTGAGEE

M	**NATIONAL AUSTRALIA BANK LIMITED ABN 12 004 044 937**	**MM**

THIS IS THE SCHEDULE REFERRED TO IN THIS MORTGAGE

The Mortgagor agrees with the Bank that:

1. This Mortgage is not executed in consequence of any representation, promise or statement by the Bank, or anyone on behalf of the Bank, other than any representation, promise or statement expressly or by implication contained in this Mortgage, and that this Mortgage is not entered into upon or subject to any condition not expressly stated in this Mortgage or implied;

1988909.1 MVP MBL

All handwriting must be in block capitals.

M.Jackson
All mortgagors to sign

THIS IS THE SCHEDULE REFERRED TO IN THIS MORTGAGE (continued)

2. The provisions in the memorandum filed in the Land and Property Information NSW as Number 7652453 ("the Memorandum") are incorporated in this Mortgage. A reference to "this Mortgage" in the cover sheet, this Schedule, the Memorandum or any annexure to this Mortgage is a reference to the Mortgage constituted by the cover sheet, this Schedule, the Memorandum and each of those annexures and the Mortgagor acknowledges that the Mortgagor has received and read a copy of this Mortgage prior to executing it.

DATE 1 / 10 / 04
dd mm yy

I certify that the mortgagor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this mortgage in my presence.

Signature of Witness

Terence Stamer
Name of Witness

24 The Crescent Penrith
Address of Witness

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

Signature of Mortgagor

M Jackson
Signature of Mortgagor

Companies Executing without using a Common Seal

Executed by

by being signed by:

Signature

Full name

Address

Office held (Director, Secretary or Sole Director and Sole Company Secretary)

Signature

Full name

Address

Office held (Director, Secretary or Sole Director and Sole Company Secretary)

1988909.1 MVP MBL

M Jackson
All mortgagors to sign

All handwriting must be in block capitals.

Companies Executing by using a Common Seal

The Common Seal of

_____

_____

was affixed in the presence of:

Signature	Signature
Full name	Full name
Address	Address
Office held (Director, Secretary or Sole Director and Sole Company Secretary)	Office held (Director, Secretary or Sole Director and Sole Company Secretary)

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

Signatory's name PAUL ANTHONY ARMSTRONG

Signatory's capacity Solicitor for Mortgagee

1988909.1 MVP MBL

All handwriting must be in block capitals.

M. Jackson

All mortgagors to sign

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

17/06/2022 03:46 PM

66907 7.28

New South Wales.

[CERTIFICATE OF TITLE.]
Order No C 103972
Residue after Transfer No C104468

Nos of Applications 4145 and 5823
Reference to last Certificate Volume 2606 Folio 29

REGISTER BOOK.

VOL. 4522 FOL. 40

CANCELLED W

Railway Commissioners for New South Wales by virtue of Certificate of Title Volume 2606 Folio 29 now surrendered as to residue after transfer No C104468 are now the proprietors of an estate in fee simple subject nevertheless to the reservations and conditions if any contained in the Grants hereinafter referred to and also subject to such encumbrances, liens, and interests as are notified hereon in Firstly that piece of land situated in the Municipality of Leichardt Parish of Petersham and County of Cumberland containing One acre twenty nine and one quarter perches or thereabouts being part of Lot 19 of Section 2 in Deposited Plan No 1268 and being also part of 270 acres originally granted to Hugh Piper by Crown Grant dated the 17th day of October 1811 Secondly those pieces of land situated as aforesaid containing Two roods twelve and one half perches or thereabouts being Lots 26, 27 and 28 of Section 3 and Three roods five and one half perches or thereabouts being Lots 62 and 63 and part of Lots 59, 60, 64, 65, 66 and 67 of Section 4 in Deposited Plan No 2626 and being also parts of 48 acres originally granted to William Thomas by Crown Grant dated the 1st day of January 1810 Which said pieces of land are shown in the plan hereon and therein edged red.

In Witness whereof I have hereunto signed my name and affixed my Seal this Fourth day of March 1932

Signed in the presence of W. Webster

J. M. O'Donohue
Acting Registrar General

NRT

NOTIFICATION REFERRED TO

The Commissioner For Railways is
now the registered proprietor of the land within described. See Application under Section 46 C
No. M443864
Entered 29th October 1971
REGISTRAR GENERAL.

Sec 46(C) M443864

No. M605572 - Lease dated 30th November 1971
to Amalgamated Wireless (Australasia) Limited
of part being Lot 1 in Deposited Plan No 550608
Entered 6th March 1972
J. Watson
REGISTRAR GENERAL
Expired V929985 30-9-1985

Lse Lot 1 DP 550608 M605572

V929985 Lease to Amalgamated Wireless (Australasia) Limited ~~being~~ of ~~ba~~ part being Lot 1 in Deposited Plan 550608, with option of renewal for 10 years. Expires 31-8-1991. Registered 30-9-1985

30.9.1985

REGISTERED PROPRIETOR State Rail Authority of New South Wales by Application V929984. Registered 30-9-1985

RP V929984

DP/SP A) 814867 B) 550608 Registered 10-1-92
This folio is cancelled as to whole/~~part~~ upon creation of computer folios for lots A) 1 B) 1 in the abovementioned plan.

Registrar General.

D.P. 550608 Sec 46c R M443864 M605572 Lse 573 cc 1/DP 550608 R V929984 RP Lse 1/644 K E180244 (part)

4522 - 40

C 103972

Total Area included in Certificate. 2A. 2R. 7¼P.

All lengths shown hereon are in feet & inches

Scale 100 ft. to one inch.

6690

LAND REGISTRY SERVICES

Direct Info
Quick and easy online

17/06/2022 03:50 PM

[redacted]

TIFICATE OF TITLE

NEW SOUTH WALES

[redacted]PERTY ACT, 1900, as amended.

10056032

Appln. No. 4145

Prior Title Vol. 312 Fol. 149

Vol. 10056 Fol. 32

1st Edition issued 13-7-1965

IT J928839

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 M J Hoopell

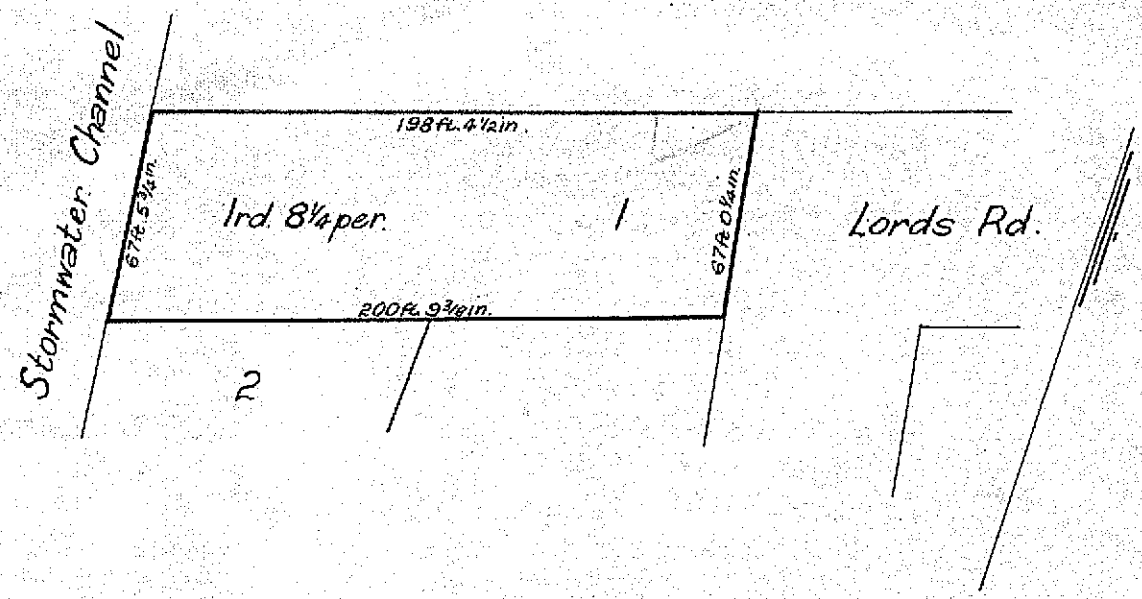
CANCELLED

Registrar General.

REGISTRAR GENERAL NEW SOUTH WALES

PLAN SHOWING LOCATION OF LAND

SEE AUTO FOLIO



J928839 CH. BC

Scale: 60feet to one inch

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 508417 in the Municipality of Leichhardt Parish of Petersham and County of Cumberland being part of 270 acres granted to Hugh Piper on 17-10-1811. Excepting thereout the mines and deposits specified in Section 141 Public Works Act, 1912.

Registrar General.

FIRST SCHEDULE (continued overleaf)

~~THE COMMISSIONER FOR RAILWAYS.~~

Registrar General.

SECOND SCHEDULE (continued overleaf)

GRN
XC

(Page 1) Vol. 10056 Fol. 32

67 1608 V. C. N. BLIGHT, GOVERNMENT PRINTER

Vol. 10056 Fol 32

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
State Rail Authority Of New South Wales by Application V929984. Registered 30.9.1985.					[seal]

D.P. 550608
M605572 Lease (Cancelled by 550608?) -573 (?)
V929984 (Appl.) — 5 Lse — 6 cc

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
~~Lease~~	~~M605572~~	~~30-11-1971~~	~~of part being Lot 1 in Deposited Plan No 550608 to Amalgamated Wireless (Australasia) Limited~~	6-3-1972	[signature] [seal]	Expired	V929985	[seal]
V929985			Lease to Amalgamated Wireless (~~Australasia~~ AUSTRALASIA) Limited of premises being Lot 1 in Deposited Plan 550608. Expires 31.8.1991 with an option of renewal 10 years. Registered 30.9.1985.					

(Page 2 of 2 pages)

FORM No. 62

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

ADVANCE LEGAL SEARCH PTY LIMITED

(ACN 077 067 068)
ABN 49 077 067 068

PO Box 149
Yagoona NSW 2199

Telephone: (02) 9754 1590
Mobile: 0412 169 809
Facsimile: (02) 9754 1364
Email: alsearch@verital.com.au

28 October 2004

Environmental Monitoring Services
PO Box 334
PADDINGTON NSW 2021

Attention Clayton Cowper

RE: **67 – 73 Lords Road, Leichhardt, NSW**
Lot 1 DP 940543

Current Search

Folio Identifier 1/940543 (attached)
DP 940543 (plan attached)
Dated 28 October 2004
Registered Proprietor:
DODARO INVESTMENTS NO 1 PTY LIMITED
DODARO INVESTMENTS NO 2 PTY LIMITED

Title Tree

Lot 1 DP 940543

Folio Identifier 1/940543

Certificate of Title Volume 15444 Folio 245

Certificate of Title Volume 3129 Folio 58

Summary of Proprietors
Lot 1 DP 940543

Year	Proprietor
	(Lot 1 DP 940543)
2003 – todate	Dodaro Investments No 1 Pty Limited Dodaro Investments No 2 Pty Limited
2002 – 2003	Clywin Pty Limited
(2002 – todate)	*(various commercial leases see Folio 1/940543)*
(1992 – 2002)	*(various commercial leases see Folio & Historical 1/940543)*
1992 – 2002	Trigamist Holdings Pty Limited
1988 – 1992	Amalgamated Wireless (Australasia) Limited
(1988 – 1992)	*(Lease to Westpac Banking Corporation of parts of 67 Lords Road, Leichhardt)*
(1988 – todate)	*(Lease to The Sydney County Council of substation No 2386)*
	(Part Lot 19 Section 2 DP 1268- CT Vol 3129 Fol 58)
1964 – 1988	Amalgamated Wireless (Australasia) Limited
(1986 · 1988)	*(Lease to The Sydney County Council of substation No 2386)*
(1983 – 1988)	*(Lease to Westpac Banking Corporation of 67 Lords Rd, Leichhardt)*
(1924 – 1932)	*(Lease to the Aeolian Company (Australia) Limited of part)*
1924 – 1964	F Dickin Limited
1920 – 1924	Octavius Charles Beale, merchant

*****

Information Provided Through
Advance Legal Search Pty Ltd
Ph. 0297541590 *Fax.* 0297541364
DX.

Title Search

EziSearch
An Approved LPI *NSW*
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/940543

SEARCH DATE	TIME	EDITION NO	DATE
27/10/2004	6:38 PM	25	5/7/2004

LAND

LOT 1 IN DEPOSITED PLAN 940543
AT LEICHHARDT
LOCAL GOVERNMENT AREA: LEICHHARDT
PARISH OF PETERSHAM COUNTY OF CUMBERLAND
TITLE DIAGRAM: DP940543

FIRST SCHEDULE

DODARO INVESTMENTS NO.1 PTY LIMITED
DODARO INVESTMENTS NO.2 PTY LIMITED
AS TENANTS IN COMMON IN EQUAL SHARES (T 9297113)

SECOND SCHEDULE (18 NOTIFICATIONS)

1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2. W321534 LEASE TO THE SYDNEY COUNTY COUNCIL OF SUBSTATION PREMISES NO 2386 AS SHOWN IN PLAN WITH W321534. EXPIRES 31-12-2035
3. 3340082 LEASE TO CLASSIC CERAMIC IMPORTERS PTY LIMITED OF UNITS 5, 6, 7 & 8, LEVEL 1, 71-73 LORDS ST, LEICHHARDT EXPIRES 31/8/2002 OPTION OF RENEWAL 5 YEARS
4. 3340083 LEASE TO DOORS WITH BACK BONE PTY LIMITED OF UNIT 6/67 LORDS RD, LEICHHARDT EXPIRES 2/2/2000 OPTION OF RENEWAL 3 YEARS
5. 3340084 LEASE TO SUNSHINE SCREENS (AUSTRALIA) PTY LIMITED OF UNIT 7, LEVEL 2, 67-69 LORDS RD, LEICHHARDT EXPIRES 28/2/2000 OPTION OF RENEWAL 3 YEARS
6. 3834256 LEASE TO WAGTAIL CLEANING TOOLS PTY LIMITED OF UNIT 9, 71-73 LORDS RD LEICHHARDT EXPIRES 31/7/2000 OPTION OF RENEWAL 3 YEARS
7. 3834257 LEASE TO OUTDOOR SIGN SERVICES PTY LIMITED OF UNIT 3 LEVEL 1, 71-73 LORDS RD LEICHHARDT EXPIRES 28/2/2000 OPTION OF RENEWAL 3 YEARS
8. 3963473 LEASE TO COLEBUILD PTY LIMITED OF UNIT 9, LEVEL 2, 67-69 LORDS RD, LEICHHARDT. EXPIRES: 31/7/2000. OPTION OF RENEWAL: 3 YEARS.
9. 6664827 LEASE TO JOHAN OLOF BLOMQUIST, STEVEN PRICE & MICHAEL SIEGENTHALER UNIT 3, 67-69 LORDS ROAD, LEICHHARDT. EXPIRES: 6/2/2003. OPTION OF RENEWAL: 3 YEARS.
10. 6664828 LEASE TO BOX & DICE PTY LTD UNIT 4, 67-69 LORDS

END OF PAGE 1 - CONTINUED OVER

EMS ALSP PRINTED ON 27/10/2004

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/940543 PAGE 2

SECOND SCHEDULE (18 NOTIFICATIONS) (CONTINUED)

ROAD, LEICHHARDT. EXPIRES: 20/11/2002. OPTION OF RENEWAL: 3 YEARS.

11. 6743632 LEASE TO RICK ECKERSLEY CONCEPTS PTY. LIMITED OF UNIT 1, 71-73 LORDS ROAD, LEICHHARDT. EXPIRES: 6/2/2003. OPTION OF RENEWAL: 3 YEARS.

7827466 TRANSFER OF LEASE 6743632 LESSEE NOW SOFRACO INTERNATIONAL PTY. LIMITED

7827467 VARIATION OF LEASE 6743632

12. 8651650 LEASE TO UNITED DISPLAYS PTY LIMITED OF UNIT 5/67-69 LORDS ROAD, LEICHHARDT. EXPIRES: 21/12/2004. OPTION OF RENEWAL: 3 YEARS.

13. 8651651 LEASE TO SYSTEMS SUPPLY PTY LIMITED OF UNIT 1/67-69 LORDS ROAD, LEICHHARDT. EXPIRES: 31/1/2005. OPTION OF RENEWAL: 3 YEARS.

14. 8651652 LEASE TO SYSTEMS SUPPLY PTY LIMITED OF UNIT 8/67-69 LORDS ROAD, LEICHHARDT. EXPIRES: 31/1/2005. OPTION OF RENEWAL: 3 YEARS.

15. 8713741 LEASE TO JOHN COSCO OF UNIT 11, 67-73 LORDS ROAD, LEICHHARDT.. EXPIRES: 31/5/2007.

8866169 VARIATION OF LEASE 8713741

16. 8713742 LEASE TO COKO TOYS PTY LIMITED OF UNIT 2, 67-69 LORDS ROAD, LEICHHARDT.. EXPIRES: 31/10/2003. OPTION OF RENEWAL: 3 YEARS.

17. 8903637 LEASE TO BINDERS AUSTRALIA PTY LTD OF UNIT 2, 71-73 LORDS ROAD, LEICHARDT. EXPIRES: 31/5/2005.

18. AA776912 MORTGAGE TO PERPETUAL NOMINEES LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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. 22nd February, 1984

A 9660

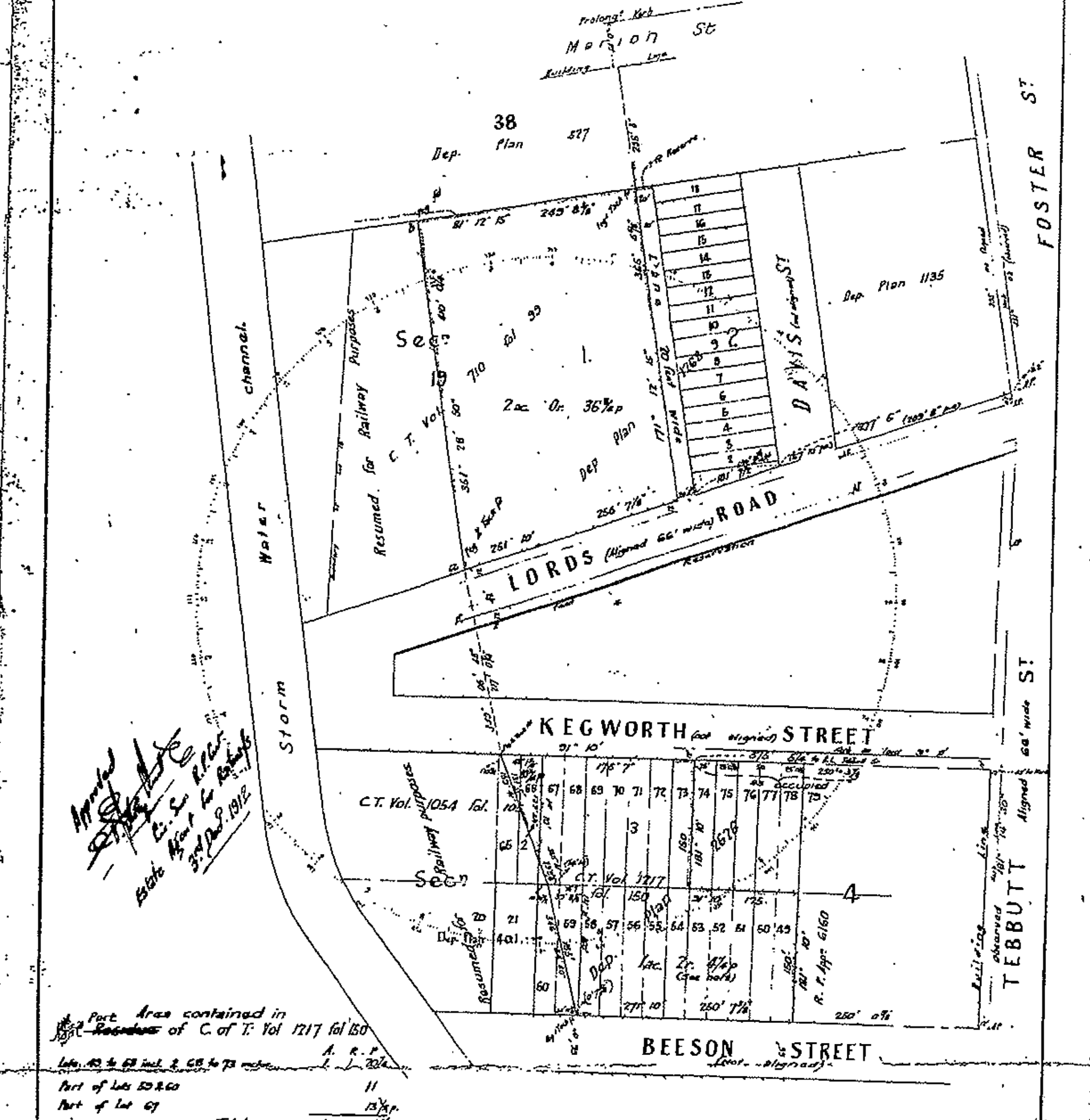
PLAN

FP 940543

of part of the land comprised in (2) (6)

Certificates of Title Vol. 710 fol. 99, Vol. 1054 fol. 105 & Vol. 1217 fol. 150

Parish of Petersham County of Cumberland



Part Area contained in Residue of C. of T. Vol 1217 fol 150

	A.	R.	P.
Lots 43 to 68 incl. & 68 to 73		1	30¾
Part of Lots 59 & 60			11
Part of Lot 67			13¼
Total	1.	2.	4¼

Part Residue of C. of T. Vol 1054 fol 105 edged blue hereon

We accept this plan as shewing the whole land in description attached to Transfer dated the 23rd day of August AD 1912.

John Brown Tonnies

William Bacon Combe

DECLARATION.

I, Alex. Hope Buckham, of 75 Pitt St Sydney Licensed Surveyor, specially licensed under the Real Property Act, do hereby solemnly and sincerely declare that the boundaries and measurements shown on this Plan are correct for the purposes of the said Act, and that the said Plan and the survey of the land to which the same relates, have been prepared and made by me, or under my immediate supervision; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act 1900.

Subscribed and declared before me at Sydney this 21st day of October A.D. 1912.

J. Haydn Carden J.P.

Alex H Buckham
Licensed Surveyor

Assumed Magnetic Variation 9° 30 East.
Azimuth taken from [illegible]

Date of Survey 18th Oct 1912

Scale 100 feet to an Inch.

00140
897 /Reg:L582394 /CT 15444-245

[redacted] CERTIFICATE OF TITLE

NEW SOUTH WALES — REAL PROPERTY ACT, 1900

Vol. 15444 Fol. 245

First Title Old System

Prior Title Vol. 3129 Fol. 58

ISSUED 14 7 1988

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

CANCELLED
Registrar General.

SEE AUTO FOLIO

LAND REFERRED TO

Lot 1 in DP940543 at Leichhardt in the Municipality of Leichhardt Parish of Petersham County of Cumberland.

Title Diagram: DP940543.

FIRST SCHEDULE

AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED. J667582

SECOND SCHEDULE

1. Reservations and conditions in the Crown grant.
2. ~~T603582 Lease to Westpac Banking Corporation of premises being the whole of the ground floor area of buildings 49 and 50 at 67 Lords Road, Leichhardt. Expires 1-5-1986. Option of renewal 5 years.~~ Expired 8-1-1987
3. ~~T801132 Lease to Westpac Banking Corporation of premises being the whole of the top floor area of building 49 at 67 Lords Road, Leichhardt. Expires 30-6-1986. Option of renewal 5 years.~~ Expired 8-1-1987
4. W321534 Lease to The Sydney County Council of substation premises No.2305 as shown in plan with W321534. Expires 31-12-2035.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY ENDORSEMENT HEREON (Part) Vol 15444 Fol 245

ENTRIES MADE IN THIS FOLIO AFTER THE ISSUE OF THE CERTIFICATE ARE NOT NOTIFIED ON THE CERTIFICATE UNLESS A SPECIAL REQUEST IS LODGED WITH THE REGISTRAR GENERAL

FR/164

(Page 2 of 2 pages)

Vol. 10444 Fol. 245

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Registrar General

CANCELLED

SEE AJ[illegible]

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
6537123P Lease to Westpac Banking Corporation of premises being the Ground Floor areas of Buildings 49 and 50, 67 Lords Road, Leichhardt and the top floor of Building 49, 67 Lords Road, Leichhardt. Expires 30-4-1989. Option of renewal 3 years. Registered 8-1-1987.		

NOTATIONS AND UNREGISTERED DEALINGS

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

Req:R010184 /Doc:DL 8651649 /Rev:05-Jun-2002 /Sts:NO.OK /Prt:27-Oct-2004 19:37 /Pgs:ALL /Seq:1 of 1
Ref:ERM ALSP /Src:M

Form: 01T
Licence: 01-05-025
Licensee: Leslie Caplan & Grunstein

TRANSFER

New South Wales
Real Property Act 1900

8651649G

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

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
23-05-2002 0000989087-001
SECTION 54(3)
DUTY $ **********10.00

(A) TORRENS TITLE

If appropriate, specify the part transferred
1/940543

(B) LODGED BY

Delivery Box

Name, Address or DX and Telephone
BOX 302G
Burkhart Legal
Tel: 9231 0122 Fax: 9262 1904

LCA/ Clywin

Reference (optional):

CODES
T
TW
(Sheriff)

(C) TRANSFEROR

TRIGAMIST HOLDINGS PTY LIMITED (ACN 054968875)

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of NIL 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. MTGE 0298465 2. 3.

(H) TRANSFEREE

CLYWIN PTY LIMITED (ACN 091605480)

(I)

TENANCY:

DATE 26 SEPTEMBER 2001

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

Corporation: **TRIGAMIST HOLDINGS PTY LTD**

Authority: Kay Cosco

Signature of authorised person:

KAY COSCO
Name of authorised person:

Office held: SECRETARY

Common Seal
TRIGAMIST HOLDINGS PTY. LTD.
A.C.N. 054 968 875

Signature of authorised person:

JOHN COSCO
Name of authorised person:

Office held: DIRECTOR

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

Signature:

Signatory's name: GARY GRUNSTEIN

Signatory's capacity: SOLICITOR

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

2K

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
27/10/2004 7:31PM

FOLIO: 1/940543

PAGE 2

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1997	3340081	REQUEST	
21/8/1997	3340082	LEASE	
21/8/1997	3340083	LEASE	
21/8/1997	3340084	LEASE	EDITION 14
4/3/1998	3834256	LEASE	
4/3/1998	3834257	LEASE	EDITION 15
5/5/1998	3963473	LEASE	EDITION 16
23/3/2000	6664826	LEASE	
23/3/2000	6664827	LEASE	
23/3/2000	6664828	LEASE	EDITION 17
1/5/2000	6743632	LEASE	EDITION 18
1/5/2000	6743644	DEPARTMENTAL DEALING	EDITION 19
3/8/2001	7827466	TRANSFER OF LEASE	
3/8/2001	7827467	VARIATION OF LEASE	
3/6/2002	8651649	TRANSFER	
3/6/2002	8651650	LEASE	
3/6/2002	8651651	LEASE	
3/6/2002	8651652	LEASE	EDITION 20
25/6/2002	8713741	LEASE	
25/6/2002	8713742	LEASE	EDITION 21
14/8/2002	8866169	VARIATION OF LEASE	EDITION 22
27/8/2002	8903637	LEASE	EDITION 23
17/1/2003	9297112	DISCHARGE OF MORTGAGE	
17/1/2003	9297113	TRANSFER	
17/1/2003	9297114	MORTGAGE	EDITION 24
5/7/2004	AA776911	DISCHARGE OF MORTGAGE	
5/7/2004	AA776912	MORTGAGE	EDITION 25

*** END OF SEARCH ***

EMS ALSP

PRINTED ON 27/10/2004

Information Provided Through
Advance Legal Search Pty Ltd
Ph. 0297541590 Fax. 0297541364
DX.

Historical Search

EziSearch
An Approved LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
27/10/2004 7:31PM

FOLIO: 1/940543

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15444 FOL 245

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/12/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
14/6/1991	Z702792	REQUEST	EDITION 1
12/9/1991	Z914134	CAVEAT	
4/8/1992	E655159	WITHDRAWAL OF CAVEAT	
4/8/1992	E655160	TRANSFER	EDITION 2
24/9/1992	E782853	LEASE	EDITION 3
25/6/1993	I437817	LEASE	EDITION 4
9/9/1993	I633225	LEASE	EDITION 5
22/11/1993	I811911	LEASE	EDITION 6
6/12/1993	I848607	LEASE	
6/12/1993	I848608	LEASE	EDITION 7
4/3/1994	U78028	LEASE	EDITION 8
31/3/1994	U147757	LEASE	EDITION 9
13/5/1994	U262326	TRANSFER OF LEASE	
2/12/1994	U836239	REQUEST	
2/12/1994	U836240	LEASE	EDITION 10
13/6/1995	O298465	MORTGAGE	EDITION 11
24/1/1997	2786076	LEASE	EDITION 12
28/4/1997	3011043	LEASE	
28/4/1997	3011044	LEASE	EDITION 13

END OF PAGE 1 - CONTINUED OVER

PRINTED ON 27/10/2004

EMS ALSP

APPENDIX N: SAFEWORK SEARCH RECORDS

BL 10
Bx 78

N.S.W. GOVERNMENT DEPARTMENT OF INDUSTRIAL RELATIONS

DANGEROUS GOODS BRANCH

AMALGAMATED WIRELESS (A/SIA) LTD
67 LORDS RD
LEICHHARDT 2040

HEALTH & SAFETY MANAGEMENT - LICENSING - Dangerous Goods Keeping Licence 35/003472 - Leichhardt, 67 Lords Rd

BL10
BX 78

SS/003472 EXPIRED

ROYAL CROWN GROUP

N & E Royal Investments Pty Limited ACN 054 459 979
Crown Constructions Pty Limited ACN 003 465 834

Sender ☑

Lvl. 7, 350 Kent Street,
Sydney NSW 2000.
Tel. (02) 9262-5580
Fax. (02) 9262-3775

Attention: Khan Sivarajanathan

Company: Work Cover.

Facsimile No.: 9370-6104.

Date: 20/5/02. No. of Pages: 2 (inc. this page)

RE: 67-73 Lords Road, Leichhardt.

Dear Khan,

We have obtained the Work Cover report for a portion of a property that we have purchased, however, the search did not include the additional parcel of land.

We would ask that we be provided with a letter notifying whether there are any ~~hazardous~~ enviro hazardous goods on the second parcel of land.

Regards

Robert

WorkCover New South Wales, 400 Kent Street, Sydney 2000. Tel: 9370 5000 Fax: 9370 5999 ALL MAIL TO G.P.O. BOX 5339 SYDNEY 2001

SCIENTIFIC SERVICES BRANCH
Dangerous Goods Licensing
Ph. (02) 9370 5187 fax (02) 9370 6104

WORKCOVER
NEW SOUTH WALES

Attn: Jenny WALSH
HLA-Envirosciences Pty Limited
Level 2, 55-65 Grandview Street
Pymble NSW 2073

11th October 2000

Dear Jenny,

REQUEST FOR INFORMATION ON LICENCES TO KEEP DANGEROUS GOODS PREMISES at LORDS RD, LEICHHARDT

I refer to your fax of 25th August 2000 requesting information on Licences to Keep Dangerous Goods for a site **at Lords Rd, Leichhardt**

A thorough search has not located any records pertaining to the above-mentioned premises.

An invoice for this information will be forwarded separately.

If you have any further queries, please contact WorkCover's Dangerous Goods Licensing staff ☎ (02) 9370 5187 or Chemical Safety Unit ☎ (02) 9370 5210.

Yours faithfully

Kham SIRIMANOTHAM
Team Leader, Dangerous Goods Licensing

Encs.

WorkCover New South Wales, 400 Kent Street, Sydney 2000. Tel: 9370 5000 Fax: 9370 5999 ALL MAIL TO G.P.O. BOX 5364 SYDNEY 2001

35/003472

OHS LICENSING UNIT
Dangerous Goods Licensing
ph. (02) 9370 5187 fax (02) 9370 6122
e-mail:scid@workcover.nsw.gov.au

WORKCOVER NEW SOUTH WALES

AMALGAMATED WIRELESS (A'ASIA) LTD
BOX 218 P O
LEICHHARDT NSW 2040

18 November 2001

Dear Sir/Madam

RE: SECURITY OF DANGEROUS GOODS AT YOUR SITE

PREMISES: 67 LORDS RD, LEICHHARDT 2040 .

As a consequence of the 11 September 2001 terrorist attacks on New York and Washington, the New South Wales Government is taking every measure necessary to ensure the security of the State's residents and property.

One of these measures involves the security of certain dangerous goods with high potential for public harm. This letter is intended to remind you of your obligation to ensure the security of your premises at all times and to be mindful that for the time being there may be an increased risk of theft of dangerous goods.

Under clause 17 of the Dangerous Goods (General) Regulation 1999 you are responsible, amongst other things, for ensuring that unauthorised persons do not have access to those areas where you keep dangerous goods.

We therefore ask that you take steps, at your earliest convenience, to:

- conduct an inspection of your facilites for storing chemicals, checking the condition of your stock and your inventories;
- re-assess security arrangements in place (more advisory information on security aspects will be available from the NSW Police in the near future);
- review your on-site procedures for emergency response and to remove any material accumulated around storage facilities which may hinder a clear view of unforseen interference or unusual devices etc.

Should you at any time find that there has been a theft of dangerous goods or if there are other aspects of concern relating to site security issues, please immediately advise the NSW Police Chemical Operations Unit by phone on (02) 9316 8133 and the NSW WorkCover Authority Chemical Management Unit on (02) 9370 5164.

Thank you for your cooperation in this matter.

Yours sincerely

Michele Patterson
Assistant General Manager
OHS Division

WorkCover
NEW SOUTH WALES

RECEIVED
SERVICE CENTRE
4 DEC 2001

POSTAGE
PAID
AUSTRALIA

SWLF ML540 NOV 28

RETURN TO SENDER

Removeable Label

8838522 (JUL/00)

ALL MAIL TO GPO BOX 5364 SYDNEY 2001

Workcover New South Wales, 400 Kent Street, Sydney 2000. Telephone (02) 9370 5000

DX 13067 Market Street, Sydney

Reference 35/003472

WORKCOVER AUTHORITY

SCIENTIFIC SERVICES BRANCH
Dangerous Goods Licensing
ph. (02) 370 5184 fax (02) 370 6105

The Manager
Trigamist Holdings P/L
C/o Mr J Cosco
PO Box 74
LEICHHARDT NSW 2040

12 July 1995

Dear Sir

RE: NON RENEWAL OF LICENCE FOR THE KEEPING OF DANGEROUS GOODS NO. 35/003472 67 LORDS ROAD, LEICHHARDT

Leichhardt Council has advised us that you still own the abovementioned site. This site was previously licensed for storage of the following dangerous goods:

1	Underground tank	Flammable Liquids	20,000 L maximum capacity
2	Underground tank	Flammable Liquids	10,000 L maximum capacity
3	Roofed Store	Flammable Liquids	5,000 L maximum capacity

This licence expired in 1992.

If dangerous goods are still being kept at this site, the licence must be renewed and transferred into your name. **To renew the licence,** please fully complete and return the enclosed application form. If you are leasing the site to someone else and they are using the dangerous goods, please tell them to fill out and return the form so the licence can be renewed in their name. If extra depots need to be added to the licence, please include a plan stamped by an accredited consultant for these depots.

** **Please note that even though the site was previously licensed, you still need to fill out all sections of the enclosed application form to renew the licence on our new database system.**

If the licence is not to be renewed, please provide the Chief Inspector of Dangerous Goods, WorkCover Authority with a signed statement giving the reason why the licence is no longer required *(eg. site sold, lease ended or storage removed)*.

- If the depots have been removed from the site or are no longer used for storing dangerous goods, please advise the date the goods/depots were removed and by whom *see specific information enclosed for underground tanks.*

If you have any queries, please phone licensing staff on 370 5184.

Expire p/s. Note status of u/g tanks not known.

Yours sincerely

Angela McLaren
Dangerous Goods Licensing

16/8/99

3/7/95

3679173
Lisa at Leichhardt Council

says owner of
67-73 Lords Rd Leichhardt
is Trigamist Holdings P/L

c/o Mr J Cosco
PO Box 74
LEICHHARDT.

** TRANSMISSION REPORT **

S.I.D. : SCIENTIFIC SERVICES N° : 61 2 3706105 Date : 03/07/95 09:39

Date/Time	3-07 9:38
Dialled number	03679111
Subscriber	61 2 367 9111
Durat.	0'30"
Mode	NORM
Name	
Pages	1
Status	Correct

WORKCOVER AUTHORITY

FAX

TO The Rates Section
Leichhardt Municipal Council

FAX 3679111

NUMBER OF PAGES INCLUDING THIS ONE 1

FROM Angela McLaren
Dangerous Goods Licensing

FAX 370 6105

PHONE 370 5184

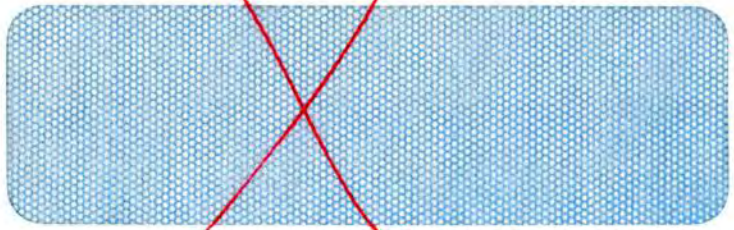
DATE 3/7/95

Would you please provide me with the name and mailing address of the owner of the following site, to enable us to enquire into their licence for keeping dangerous goods:

67 Lords Rd, Leichhardt
(Formerly occupied by Trigonist Holdings P/L).

Thank you,
Angela.

WORKCOVER AUTHORITY
1 Rosebery Avenue Rosebery NSW 2018



Reference 35-003472

WORKCOVER AUTHORITY

CHEMICAL SAFETY UNIT
400 Kent St; SYDNEY 2000
LOcked bag 10; Clarence St; SYDNEY 2000
Phone = 370-5186

TRIGAMIST HOLDINGS P/L
67 LORD Shell
LEICHHARDT 2040

37

19 MAR 1992

The Occupier (previously ...)

Dear Sir/Madam,

RE: LICENCE FOR THE KEEPING OF DANGEROUS GOODS

Advice has been received that you have taken over the premises previously occupied by AMALGAMATED WIRELESS (A'ASIA) LTD.

Done M 26/3/92

These premises are licensed for the keeping of the following dangerous goods:

1.	U/G Tank	Flammable liquids	20,000
2.	U/G Tank	—"—	10.000
3.	Roofed Store	—"—	5,000

Lords Rd

Leichhardt Council

If you are keeping dangerous goods, the licence must be transferred to your name. Please complete and return the enclosed application form .

If dangerous goods in licensable quantities are no longer kept on the above premises, please advise details and date of removal. In the case of unused underground petrol or kerosene tanks a certificate of abandonment pursuant to Clause 138 of the Dangerous Goods Regulation, 1978 is required for cancellation of licence (see the back of this letter for guidance notes).

Yours faithfully,

for Chief Inspector,
Dangerous Goods

encs.

Angela,
Pls write to council & request name of occupier
Tim
25/6/95

ABANDONING OF UNDERGROUND TANKS

The Dangerous Goods Act, 1975 (Clause 138 of its Regulation) requires that underground tanks which have not been used for a continuous period of 28 days shall be sealed until :

(1) they are to be used again; or

(2) a period of three (3) months has elapsed.

After three (3) months, the tanks must be abandoned (i.e. removed or rendered safe). The accepted procedures for abandoning underground tanks are as follows :

(1) the tank is removed from the ground and taken to an appropriate place for disposal; or

(2) the tank is filled with an inert solid, such as sand, concrete or earth and all service pipes including fill, supply, dip and vent lines are disconnected; or

(3) the tank is gas freed (i.e. all liquid and vapour is removed from the tank), the tank is filled with water containing a suitable corrosion inhibitor and openings into the tank are permanently sealed (with a screwed metal cap or other equally effective device). The vent pipe must be cut off at ground level and the remaining pipe also permanently sealed.

Would you please advise me whether the tanks are expected to be used again in the next three (3) months or abandoned.

If they are to be abandoned, a certificate detailing the locations of the tanks and the method of abandonment must be forwarded to this office upon completion of the work.

FORM DG1

KEEPING LICENCE EXPLANATORY NOTES

1. Name of applicant in full: Full name(s) including given name(s) or holding company name (if any) must be supplied.
2. Nature of premises: State whether premises are a dwelling, service station, fuel storage depot, general store, farm, mine site, etc.
3. Type of depot: Describe depot as "aboveground tank", "underground tank", "magazine", "roofless package store", "roofed package store", "cylinder store" (or where not more than two LPG decanting cylinders of each of a capacity not exceeding 50kg are kept) "decanting cylinders". For safety cartridges describe as "in original packages".
4. If space is insufficient for depot particulars, attach a separate list, showing the type of each depot (as per 3 above), and indicating contents and capacities of each in litres, kilograms etc.

Licences are issued, for a specific site, annually and may NOT be altered and/or transferred to a new applicant without the approval of the Chief Inspector of Dangerous Goods.

Dangerous Goods are divided into classes and an explanation is shown hereunder. Certain dangerous goods may be kept without a licence, providing the quantity of the goods does not exceed the amount specified in the exemptions listed below.

EXPLANATION OF DANGEROUS GOODS AND THEIR CLASSES

1.1	Blasting explosives (including detonators).
1.4	Fireworks and/or safety cartridges.
2.1	Flammable gases (e.g. L.P.G. or acetylene).
2.2)	Poison cryogenic gases (e.g. ammonia, chlorine, liquid oxygen).
2.3)	
3.1)	Flammable Liquids (e.g. any or all of, petrol, kerosene, methylated spirits, solvents).
3.2)	
3.3	Combustible liquids (e.g. distillate, diesel fuel, heating oil).
4	Flammable solids (e.g. nitro cellulose).
5	Oxidising substances (e.g. pool chlorine ammonia nitrate).
6.1	(a) Poisons (e.g. sodium cyanide, pesticides); (b) Harmful substances (e.g. sodium flourosilicate, pesticides, lead acetate).
6.2	Infectious substances (e.g. bacterial cultures).
7	Radioactive substances (storage of Class 7 is NOT covered by the Dangerous Goods Act, 1975).
8	Corrosives (e.g. hydrochloric acid, sulphuric acid, sodium hydroxide and sodium hypochlorite).

EXEMPTIONS FROM LICENCE

1. *Acetylene:* Storage of 60 cu.m or less of acetylene per premises (i.e. up to and including 8 x "G" class cylinders, the most common size of acetylene cylinder).

2. *Distillate, Diesel Fuel, Heating Oil:* Storage of 50,000 litres or less per tank.

3. *Petrol:* Storage of 100 litres or less per premises.

4. *Kerosene:* Storage of 1,000 litres or less per premises, when stored aboveground.

5. *All dangerous goods of classes 6 and 8:* any quantity.

Please contact the WorkCover Authority, Chemical Safety Unit, for further exemptions.

OTHER WORKCOVER AUTHORITY OFFICES - Advice on Dangerous Goods* can be also be obtained from the following offices.

GOSFORD	(043) 24 3384	BANKSTOWN	(02) 707 2500
NEWCASTLE	(049) 26 5400	CITY	(02) 370 5034
ORANGE	(063) 61 7070	HURSTVILLE	(02) 580 0366
PORT MACQUARIE	(065) 84 1188	PARRAMATTA	(02) 895 3600
WAGGA WAGGA	(069) 23 0692	ST LEONARDS	(02) 906 2055
WOLLONGONG	(0420 26 9033		

*** ALL LICENSING ENQUIRIES to Chemical Safety Unit: Tel: (02) 370 5191 or (02) 370 5192**

The completed and signed form is to be forwarded to the Chief Inspector of Dangerous Goods, Locked Bag 10, P.O. CLARENCE STREET NSW 2000. Licences will be issued within four (4) weeks of receipt of completed form within the Authority.

FAILURE TO ANSWER ALL QUESTIONS WILL RESULT IN A DELAY IN THE ISSUE OF YOUR LICENCE.

L.O. 1542

Form DGI

WORKCOVER AUTHORITY
DANGEROUS GOODS ACT, 1975

LICENCE No. 35 -003472

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

MARCH

(* Delete whichever is not required)

Name of Applicant in full (see Item 1 - Explanatory notes - page 4)	
Trading name or occupier's name (if any)	
Postal Address	Postcode
Address of the premises to be licensed. (Including Street No.)	67 Lord Street LEICHHARDT Postcode 2040
Nature of premises (See Item 2 - Explanatory notes - page 4)	
Telephone number of applicant	STD Code Number Contact Person:

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

Depot number	Type of depot (See item 3 - Explanatory notes - page 4)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Has site plan been approved by the Dangerous Goods Branch? Yes / No — If yes, no plans required. If no, please attach site plan, or provide sketch plan overleaf which has been stamped by an accredited consultant.

Have premises previously been licensed? Yes / No — If, yes, state name of previous occupier, and licence No. (if known)

Name of oil company supplying flammable liquid and/or flammable gases (if applicable).

Signature of applicant..... Date .....

For external explosives magazine(s), please fill in page 3.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector..... Date.....

SKETCH PLAN OF SITE

Show positions of Depot(s) with:-

(1) distances from public places and protected works;

(2) street names;

(3) nature and details of adjacent properties.

INFORMATION TO BE PROVIDED FOR LICENSING OF EXTERNAL EXPLOSIVE MAGAZINES

1. (a) Construction of
   (i) Walls (ii) Roof (iii) Shade roof (iv) Door(s) (v) Lock(s) (vi) Lining (vii) Lighting conductor
   (b) Internal dimensions (mm)

2. Special attention is directed to the necessity for filling in accurately the distances from each of the undermentioned places, irrespective of the quantity of Explosives intended to be kept. If any of the "Protected Places or Protected Works" specified below, are not within radius of 3 kms of the Magazine, place the word NIL against such place or works.

PROTECTED PLACES or PROTECTED WORKS	Distance in metres from magazine to nearest works or place	
	Not occupied or used by applicant	Occupied or used by applicant
Public place		
Waterway used for navigation		
Reservoir (public or private)		
River or sea wall		
Bridge		
Dock, wharf, pier or jetty		
Any furnace, kiln, forge or fire for manufacturing purposes or for the use of any boiler, engine or machine		
Aboveground water main or water supply channel		
Electrical power transmission line		
Radio or television transmitter		
Shop		
Store or warehouse		
Factory		
Other building or timber yard in which any person is employed or engaged in any trade, business or profession		
Magazine or premises licensed for the keeping of explosives		
Depot for other dangerous goods		
Railway, tramway or aerodrome		
Any dwelling house		
Any church, chapel, college, school or theatre		
Hospital		
Government or public building		
Any other building or structure in or about which persons are usually present or from time to time assemble		

AWA Limited

(15)

AWA Limited ACN 000 005 916
Level 6, 15 Talavera Rd, North Ryde
NSW 2113 Australia
PO Box 96 North Ryde NSW 2113

Telephone (02) 887 7111
Int'l + 61 2 887 7111
Facsimile (02) 887 7616
Telex AA20623

17 March 1992

Work Cover Authority
Chemical Safety Unit
400 Kent Street
SYDNEY NSW 2000

Dear Sir,

Re: **Licence No. 35/003472**

We refer to the application for renewal notice for the above licence which you issued on 26 February, 1992.

The property at 67 Lord Street, Leichhardt to which this licence applies was sold on March 13, 1992 to Trigamist Holdings Pty Ltd (ACN 054 968 875). It was vacated by AWA Limited on 8 June, 1991 at which time all chemicals were removed.

We do not wish to renew this licence. letter + DG 1

Yours faithfully,

Castelli

A CASTELLI
PROPERTY MANAGER

TC:at:007

FORM DG1

LICENCE No. 35003472 9

DANGEROUS GOODS ACT, 1975

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

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

(*delete whichever is not required)

FEE: $10.00 per Depot

Name of Applicant in full (see over)	Surname ..... Given Names .....
Trading name or occupier's name (if any)	AMALGAMATED WIRELESS (A/SIA) LTD
Postal address	P O Box 218 LEICHHARDT Postcode 2040
Telephone number of applicant	STD Code Number 5608644
Address of the premises in or on which the depot or depots are situated (including street number, if any)	67 LORDS ST LEICHHARDT Postcode 2040
Nature of premises (see over)	FACTORY

~~PLEASE ATTACH SITE PLAN~~

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

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods Product being stored	C & C Office use only
			DD 003 020 2	
1	Underground	15000	3.1	~~2 020 24~~
2	" "	12000	3.1	2 020 14
3	Roofed Package	4500	3.1 3.2 3.3	6 020 53
4				
5				
6				
7				
8				
9				
10				
11				
12				

INSPECTORS F. & D. COLLECTION 87 RECEIPT No. 39225 DATE 2.11.88 AMOUNT $30.00 CASH

Name of company supplying flammable liquid (if any) Ampol

Have premises previously been licensed? Yes

If known, state name of previous occupier A.W.A (A/sia) Ltd Licence No. 35.003472.9

X Signature of applicant ..... Date .....

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

FOR OFFICE USE ONLY

LICENCE No.

CERTIFICATE OF INSPECTION

I, K.O. BISHOP being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector K.O. Bishop

Date 12.7.89.

For each external explosives magazine, supply the following additional information.

1. (a) Construction of
   (i) Walls (ii) Roof (iii) Shade roof (iv) Door(s) (v) Lock(s) (vi) Lining (vii) Lightning conductor
   (b) Internal dimensions (mm)
2. Special attention is directed to the necessity for filling in accurately the distances from each of the undermentioned places, irrespective of the quantity of Explosives intended to be kept. If any of the "Protected Places or Protected Works" specified below, are not within a radius of 3 km of the Magazine, place the word NIL against such place or works.

[redacted]

PROTECTED PLACES or PROTECTED WORKS	Distance in metres from magazine to nearest works or place	
	Not occupied or used by applicant	Occupied or used by applicant
Public place		
Waterway used for navigation		
Reservoir (public or private)		
River or sea wall		
Bridge		
Dock, wharf, pier or jetty		
Any furnace, kiln, forge or fire for manufacturing purposes or for the use of any boiler, engine, or machine		
Aboveground water main or water supply channel		
Electrical power transmission line		
Radio or television transmitter		
Shop		
Store or warehouse		
Factory		
Other building or timber yard in which any person is employed or engaged in any trade, business or profession		
Magazine or premises licensed for the keeping of explosives		
Depot for other dangerous goods		
Railway, tramway or aerodrome		
Any dwelling house		
Any church, chapel, college, school or theatre		
Hospital		
Government or public building		
Any other building or structure in or about which persons are usually present or from time to time assemble		

FORM DG1

EXPLANATORY NOTES

1. Name of applicant in full: Full name(s) including given name(s) or holding company name (if any) must be supplied.
2. Nature of premises: State whether premises are a dwelling, service station, fuel storage depot, general store, farm, mine site, etc.
3. Type of depot: Describe depot as "aboveground tank", "underground tank", "magazine" "roofless package store", "roofed package store", "cylinder store" (or where not more than two LPG decanting cylinders each of a capacity not exceeding 50 kg are kept) "decanting cylinders". For safety cartridges describe as "in original packages".
4. If space is insufficient for depot particulars, attach a separate list.
5. For each magazine supply additional information above.
6. A site plan of the premises showing the position(s) of the depot(s) with distances from protected works and public places is to be attached.
7. The completed form and site plan accompanied by the prescribed fee ($10 per depot) should be forwarded to:
   Chief Inspector,
   Dangerous Goods Branch,
   Box 846, P.O.,
   Darlinghurst, N.S.W. 2010
   (6th Floor, 1 Oxford Street).

FAILURE TO ANSWER ALL QUESTIONS WILL RESULT IN A DELAY IN THE ISSUE OF YOUR LICENCE

Refer Col Cannon

The Manager
Military Services Division
Amalgamated Wireless (Australasia) Ltd
PO Box 218
LEICHHARDT NSW 2040

35.003472.9 EX ALB:MF
MSD/81/WNB:M1/265
266 8632

11 September 1981

ATTENTION: W.N. BAKER

Dear Sir

PROPOSED ADDITIONAL UNDERGROUND TANK (12000 LITRE) FOR STORAGE OF PETROL

The plan forwarded with your letter of 3 September, 1981, is approved subject to compliance with AS 1940-1976. As only one copy was received it will be retained for records.

Yours faithfully

A L BARTLETT
Senior Inspector, Dangerous Goods

WEST
R/S 15-11-81

Marine and Aviation Divisions
67 LORDS ROAD LEICHHARDT NSW 2040

AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED

PO BOX 218 LEICHHARDT NSW 2040
TELEGRAMS "RADSERV" SYDNEY
TELEPHONE 560 8644
TELEX AA 24493

MSD/81/WNB:MI/265

3rd September, 1981

Chief Inspector of Dangerous Goods,
Department of Industrial Relations and Technology,
Box 847, P.O,
DARLINGHURST. N.S.W. 2010

Dear Sir,

Due to an expansion of activities at our Leichhardt premises we wish to increase the existing underground petrol storage capacity.

It is proposed that an additional underground tank of approximately 13,000 litre capacity interlinked with the existing tank and bowser be installed as indicated on the attached plan.

Your approval is sought accordingly.

Our existing licence is registration number 35 00347 29.

Yours faithfully,
AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED,

W. N. Baker.
MANAGER. MILITARY SERVICES DIVISION.
LEICHHARDT GROUP.

ME 37
FORM B
Page 1

Register No. 3472.

INFLAMMABLE LIQUID ACT, 1915 (AS AMENDED)

Application for Registration of Premises or Store Licence under Division A or for the transfer alteration or amendment of any such Registration or Licence, for the keeping of Inflammable Liquid and/or Dangerous Goods, in accordance with the provisions of the Inflammable Liquid Act, 1915 (as amended), for the ensuing year.

SEE PAGE 4 FOR DETAILS OF FEES PAYABLE AND DISTANCES FROM PROTECTED WORKS Ample

DIRECTIONS

1. Applications must be forwarded to the Chief Inspector of Inflammable Liquid, Explosives Department, Box R216, Royal Exchange Sydney, N.S.W. 2000 and must be accompanied by the prescribed fee.

Registration of Premises — For quantities not exceeding 300 gallons of mineral oil and 100 gallons of mineral spirit, if kept together; or 800 gallons of mineral oil and 100 gallons of mineral spirit, if kept in separate depots; or 500 gallons of mineral spirit, if kept in an underground tank depot; or 800 gallons of mineral oil and 500 gallons of mineral spirit, if mineral spirit is kept in an underground tank depot.

In addition to, or in lieu of the above, similar quantities of Dangerous Goods of Classes 1 and 2 may be kept under the like conditions; reading Dangerous Goods of Class 1 for the words Mineral Spirit and Dangerous Goods of Class 2 for the words Mineral Oil.

Store Licence, Div. A — For quantities in excess of those stated above, but not exceeding 4,000 gallons mineral oil and/or mineral spirit, and/or Dangerous Goods of Classes 1, 2 and 9.

Store Licence, Div. B (Fee See Regulation 7) — For quantities exceeding 4,000 gallons of mineral spirit, and/or Dangerous Goods of Classes 1 and 2, and/or Dangerous Goods of Class 3.

For the keeping of Dangerous Goods of Classes 3 and/or 4.

Issued 15/8/75

1. Name of occupier including full christian names.	AMALGAMATED WIRELESS (AUSTRALASIA) Ltd
2. Trading Name (if any)	
3. Locality of the premises in which the depot or depots are situated	No. or Name 67 Street LORDS RD Town LEICHHARDT
4. Postal address	PO Box 218 Leichhardt Postcode 2040
5. Occupation	~~ELECTRICAL ENGINEERS~~ RADIO SERVICING
6. Nature of premises (dwelling, garage etc.)	FACTORY

7. Particulars of construction of depots and maximum quantities of inflammable liquid and/or Dangerous Goods to be kept at any **one** time.

PLEASE ATTACH PLAN OF PREMISES

Depot No.	Construction of depots*			Inflammable liquid		Dangerous goods						
	Walls	Roof	Floor	Mineral spirit gallons	Mineral oil gallons	Class 1 gallons	Class 2 gallons	Class 3 lb	Class 4 cu ft	Class 5A water gal	Class 5B water gal	Class 9 gallons
1	Brick	Iron	Concrete		1000							
2	Underground tank			3000								
3												
4												
5												
6												
7												
8												
9												
10												

PUBLIC REVENUE A/c
Cheq | $ 4.00.
(Date) 9/5/74.
Receipt No. 6558.

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

Signature of applicant [signature]

Date of application 1st May 1974

CERTIFICATE OF INSPECTION

I, GARVIN F GILLIS being an Inspector under the Inflammable Liquid Act, 1915 (as amended), do hereby certify that the premises or store herein referred to and described is suitable with regard to its situation and construction for the safe keeping of inflammable liquid and/or dangerous goods in quantity and nature specified.

Place Sydney

Date 17.5.74

Signature of Inspector [signature]

PLEASE TURN OVER

Amendment to 3472(3) make storage for 4 depots

Make Rough Sketches showing:

Ground plans of premises showing position of depot or depots and adjacent buildings, also distances separating depots and buildings.

Sketch of depot or depots showing provision made for ventilation, also inside dimensions (length, width, and depth) of the pit or lower portion, designed to prevent outflow.

EXPLANATORY

Inflammable Liquid –

Mineral Oil - includes kerosene, mineral turpentine and white spirit (for cleaning), and compositions containing same.
Mineral Spriit - includes petrol, benzene, benzolene, benzol and naphtha, and compositions containing same.

Dangerous Goods -

Class 1 - acetal, acetaldehyde, acetone, acrolein, amyl mercaptan, butyl acetate, butyl mercaptan, butyl propionate, crotonaldehyde, dichloro-ethylene, diethylketone, dioxane, diethylamine, dimethyl hydrozine, dipropylamine, divinyl ether, dipropyl ether, ethyl acetate, ethyl acrylate, ethyl chloride, ethyl ether, dichloroethane (ethylene dichloride), ethyl mercaptan, ethyl methacrylate, ethyl methyl ether, ethyl propyl ether, ethyl propionate, methyl propyl ketone, methyl acetate, methyl acrylate, methylal, methyl ethyl ether, methyl ethyl ketone, methyl methacrylate, methyl vinyl ketone, methyl vinyl acetate, piperidine, propanal, propyl acetate, propylamine, propylene oxide, pyridine, tetrahydrofuran, thiophene, triethylamine, valeraldehyde, vinyl acetate, vinyl allyl ether, vinyl butyl ether, vinyl butyrate, vinyl cyanide (acrylonitrile), vinylidene chloride, vinyl ethyl ether, vinyl propyl ether, vinyl propionate, any combination of substances of an inflammable character suitable for use as an industrial solvent and having a true flashing point of less than 73 degrees Fahrenheit, manufactured products, containing organic solvents, having a true flashing point of less than 73 degrees Fahrenheit.

Class 2 - acetic acid, acetyl acetone, acetic anhydride, allyl alcohol, amyl acetate, amyl alcohol, butyl alcohol, butyl methacrylate, chloro-benzene, cyclohexanone, dibutyl ether, dibutyl ketone, dipentene, epichlorohydrin, ethanol (ethyl alcohol), ethyl benzene, ethylene diamine, furfural, mesityl oxide, methyl alcohol, methyl amyl ketone, methyl butyl ketone, pine oil (having a flashing point below 150°F), propyl benzene, propanol, vegetable turpentine, vinyl benzene (styrene monomer), any liquid containing more than 50 per centum ethyl alcohol, manufactured products, containing organic solvents, having a true flashing point of 73 degrees Fahrenheit and above but not exceeding 150 degrees Fahrenheit.

Class 3 - nitro-cellulose moistened with an alcohol, nitro-cellulose product.

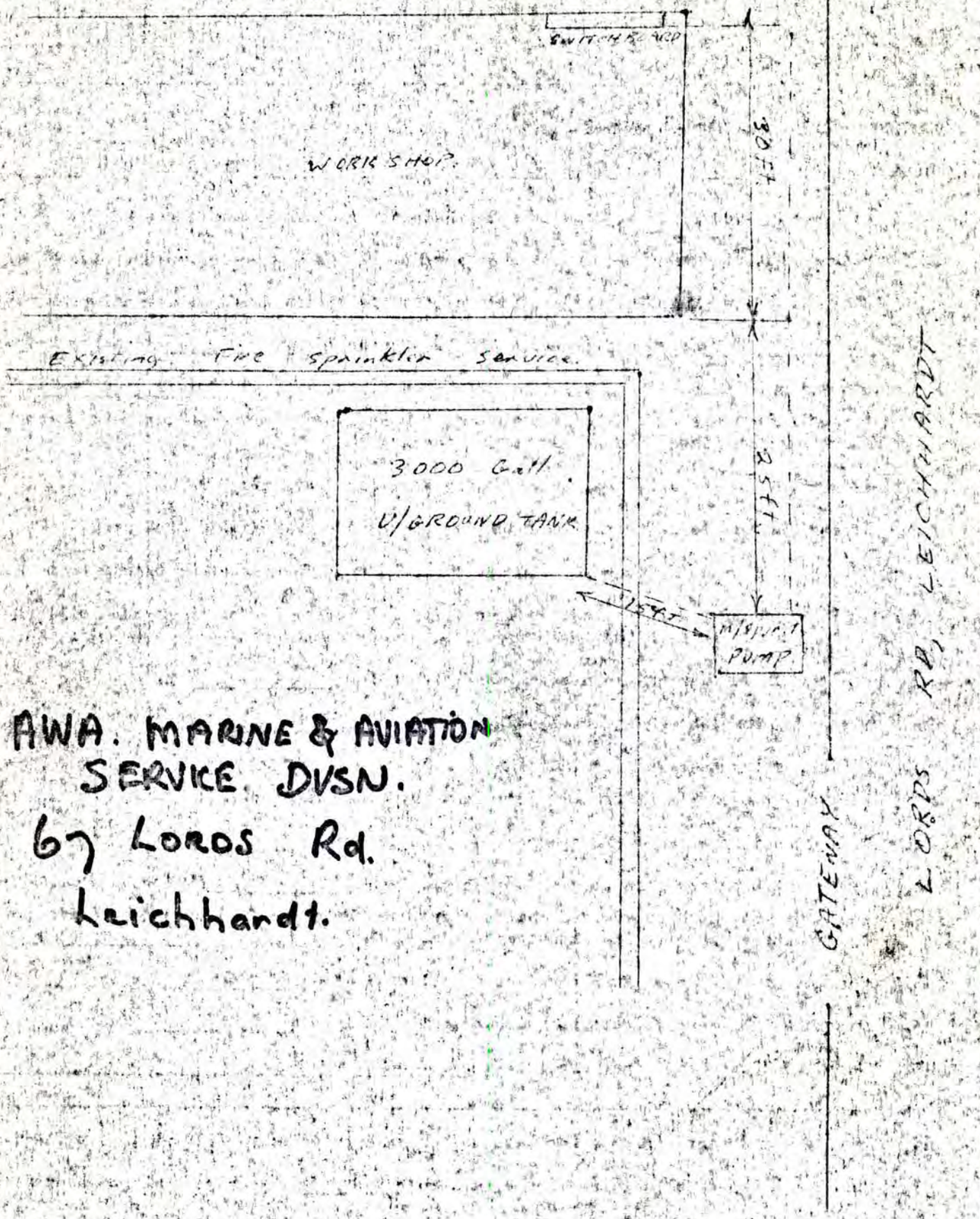
Class 4 - compressed or dissolved acetylene contained in a porous substance.

Class 5 (A) - liquefied inflammable gases (liquefied petroleum gas, vinyl chloride, ethylene chloride, ethylene oxide, butadine, methylamine, dimethylamine and trimethylamine).

Class 5(B) - anhydrous ammonia.

Class 9 - Carbon disulphide, ethyl nitrite.

GIVE SKETCH HEREUNDER SHOWING POSITION OF PUMP TANKS, PIPELINES AND FILL POINT (S) AND DISTANCE IN FEET.



AWA. MARINE & AVIATION
SERVICE. DVSN.
67 Loros Rd.
Leichhardt.

Seller's
Signature _____

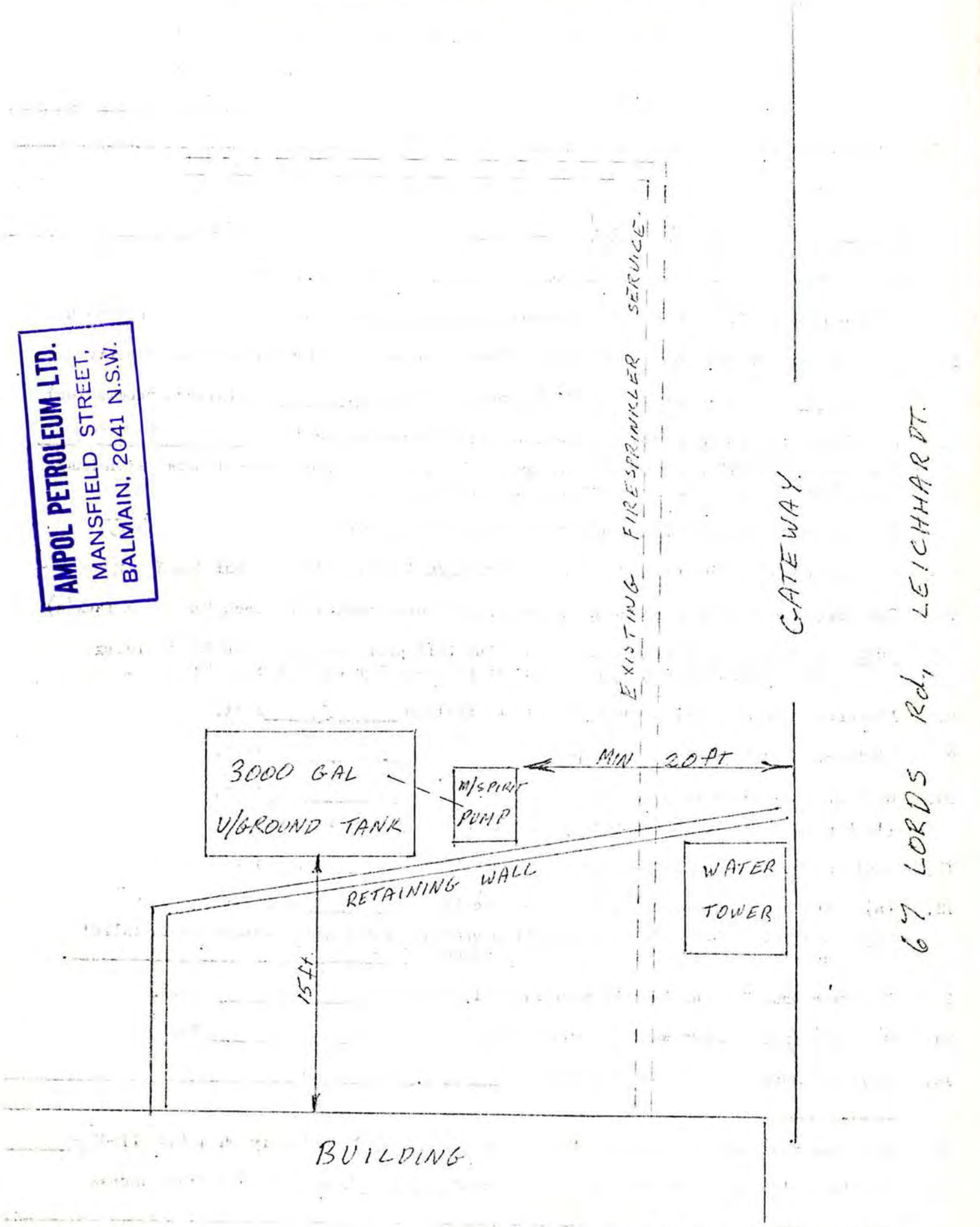
Representative's
Signature _____

EXPLOSIVES DEPARTMENT
PASSED
for CHIEF INSPECTOR
23/5/73
SUBJECT TO COMPLIANCE WITH
REGULATIONS

NSW 133-11/58

3472.

GIVE SKETCH HEREUNDER SHOWING POSITION OF PUMP TANKS, PIPELINES AND FILL POINT (S) AND DISTANCE IN FEET.



AMPOL PETROLEUM LTD.
MANSFIELD STREET,
BALMAIN, 2041 N.S.W.

Reseller's Signature _____

Representative's Signature 19 Leigh

EXPLOSIVES DEPT.
PASSED
For Chief Inspector
4/5/77

INSPECTION RECORD

Licence No. A. 3472.

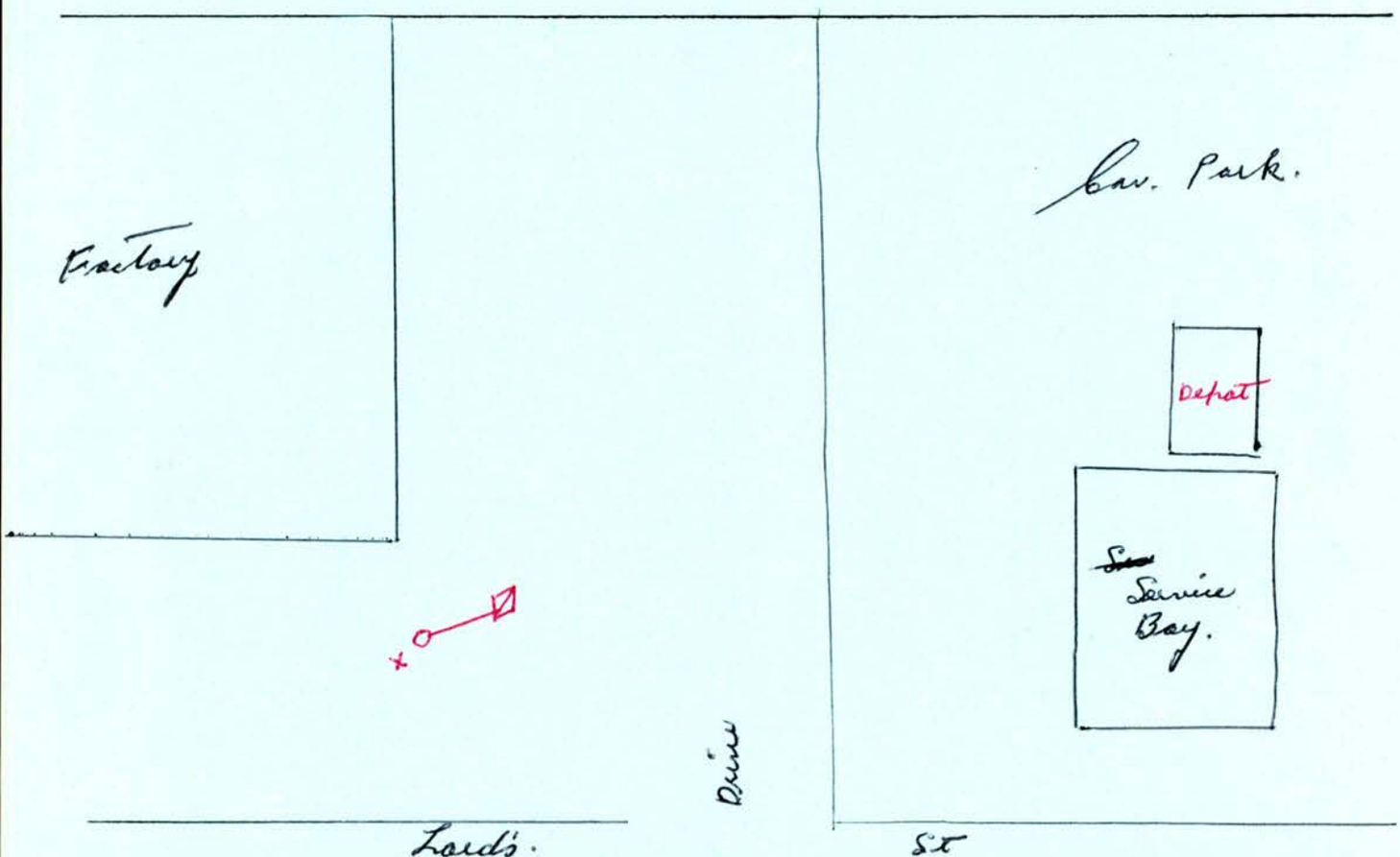
Licensee: Amalgamated Wireless (Aust) Pty Ltd.

Address: 67 Lords Rd. Leichhardt.

Storage licensed: 1/3000. m.s. B. 9. b. 300. m.s. m.o.D. 4. 182.

Ampol.

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



Inspected	Initials	Requisitions made or state of depot
13. 3. 73	H. b.	Sat

Ml 5388 Government Printer.

The Chief Inspector of Inflammable Liquids,
~~Box 48, G.P.O.,~~ R 216
Sydney. Royal Exchange.
2000.

EXPLOSIVES DEPARTMENT
8 MAR 1973

INFLAMMABLE LIQUID ACT, 1915, AS AMENDED

CONTRACTOR'S CERTIFICATE

Underground Tanks

I hereby certify that the tank(s) as indicated below recently installed by me at the undermentioned premises have fill, dip and suction pipes as detailed hereunder.

Petroleum Company AMPOL PETROLEUM LIMITED.

Address of Premises 67 LORDS ROAD. LEICHHARDT.

Name of Occupant AMALGAMATED. WIRELESS AUSTRALIA.

Capacity of each tank and distance in inches between bottom of tank and lower end of internal pipes.

Capacity (Gallons)	Suction Pipe (Inches)	Fill Pipe (Inches)	Dip Pipe (Inches)
3000.	4½"	1½"	1½"

PETER GORMAN PTY. LIMITED

Signed Peter Gorman.

Date 28th February 1973.

ML 12519 V.C.N. Blight, Government Printer

PETER GORMAN PTY. LIMITED
51 CARLINGFORD STREET
SEFTON. 2162 N.S.W.

PHONE
644-6772

PR-769

35.003472-1

EXISTING FENCE

PLAYING FIELD APPROX. 25M AWAY

WATER COOLING TOWER

LIQUID NITROGEN TANK

MAN 15 HYROGEN CONTAINER

3M

3M

2M

5-10 METRES TO RAILWAY LINE

RAILWAY ENBANKMENT

4 HR FIRE RATED BUILDING

VACANT AREA

EXISTING FENCE

APPROX. 12.5 METRES

DANGEROUS GOODS BRANCH
PASSED
FOR CHIEF INSPECTOR
21/8/09
SUBJECT TO COMPLIANCE WITH REGULATIONS

THE COMMONWEALTH INDUSTRIAL GASES	
COMPANY:	
AWA LTD 67 LORDS ROAD LEICHARDT	
PROPOSAL:	
VIE 3000 LIQUID NITROGEN TANK	
SCALE:	
N.T.S.	

AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED.

67 LORDS ROAD LIECHHARDT

PROPOSED ADDITIONAL FUEL STORAGE

SCALE 1:96

N

RAMP.

RAMP.

SUNKEN DOCK.

ROLLER SHUTTER DOOR

SWITCH

PROPOSED ADDITIONAL STORAGE 12000 Lt CAPACITY

PROPOSED PERIMETER OF EXCAVATION

ELECTRIC CABLES

EXISTING TANK 12000 Lt CAPACITY

EXCAVATION PERIMETER OF EXISTING TANK

PETROL PUMP

GARAGES

EXISTING

WOMEN

W.B.

W.B.

MALE STAFF

TOILETS

URINAL

WASHBASINS

MEN

SHOWER

Gatekeeper

LORDS ROAD

DANGEROUS GOODS BRANCH
PASSED
FOR THIS INSPECTION
10 SEP 1981
SUBJECT TO COMPLIANCE WITH REGULATIONS

1/3

AMALGAMATED WIRELESS (AUSTRALASIA) LTD. A 3472

CALLING RADIO MANUFACTURERS $9.00

ADDRESS LEICHHARDT, 2040. 67 Lords Road PLATE MADE

DESCRIPTION OF PREMISES FACTORY (Parramatta Road Ashfield 2137)

Depot No.	Construction of Premises			Mineral Spirit	Mineral Oil	Dangerous Goods				
	Walls	Roof	Floor	Gallons	Gallons	Class 1 Gallons	Class 2 Gallons	Class 3 Lbs.	Class 4 Cubic Feet	Class 5 Lbs.
1	BRICK	CORR. IRON	CONCRETE		1320					

OBSOLETE NEW CARD MADE OUT—FILE

Fee Paid			Fee Paid			Remarks
Date	Receipt No.	For Year Ending	Date	Receipt No.	For Year Ending	
23-9-64	0426	28.2.65				Prev. T. Dickin Pty Ltd
13 4 65	9503	28 2 66				
15-3-66	9540	28-2-67				
14 3 67	0423	29 2 68				
22 3 68	9442	28 2 69				
10 2 69	8360	15 3 70				
16-2-70	4099	1971				
23-2-71	7344	15-3-72				
22 2 72	8508	15 3 73				

St 5709—1 V. C. N. Blight, Government Printer

Date	Record of Inspections	Inspector's Initials

St 5709—2

INSPECTION RECORD

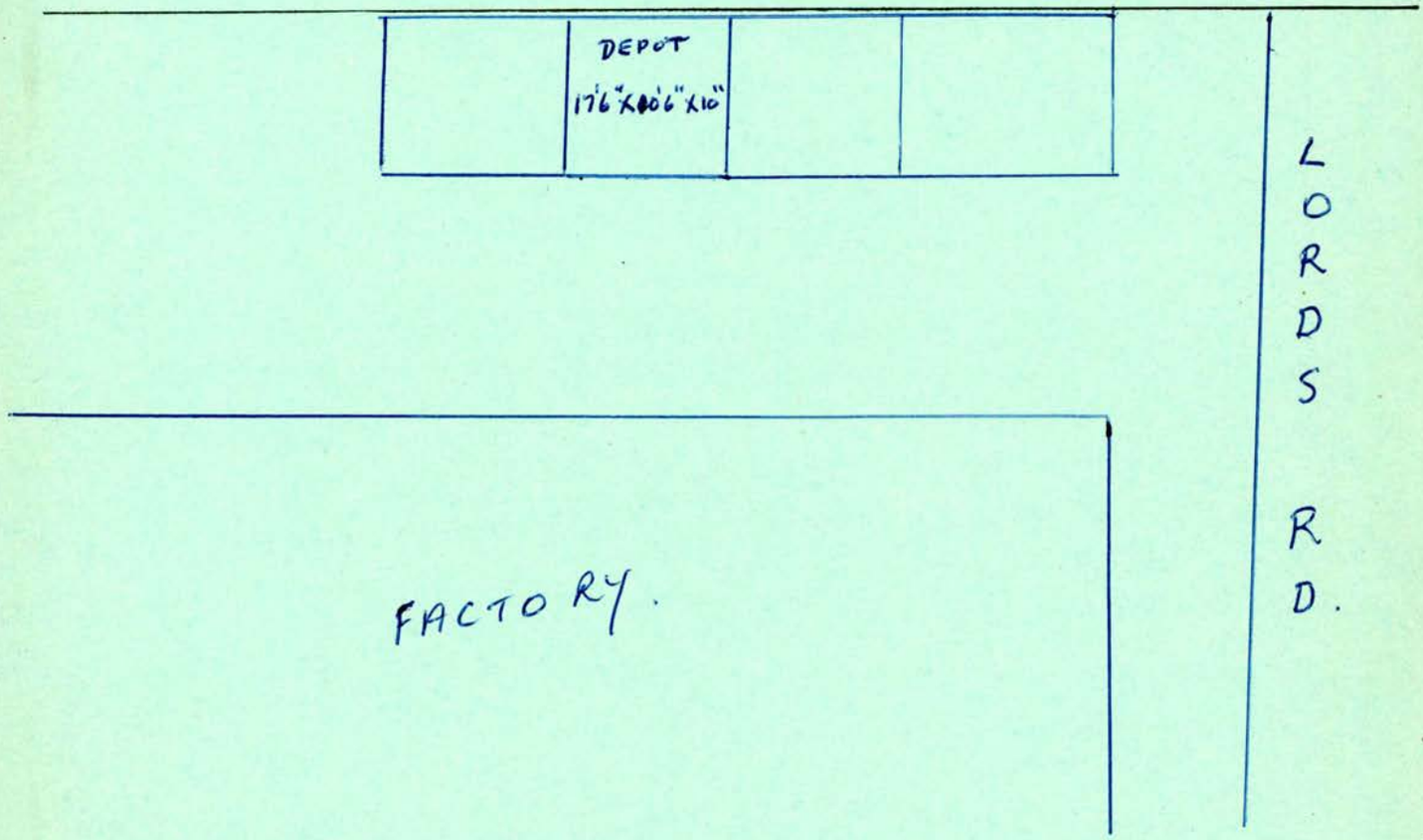
Licence No. _____

Licensee: A. W. A. Aust. Pty Ltd.

Address: 67 Lords Road, Leichhardt.

Storage licensed: _____

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



Inspected	Initials	Requisitions made or state of depot
16/7/64	RLL	Sat

Ml 5388 A. H. Pettifer, Government Printer.

APPENDIX O: STATISTICAL ANALYSIS

1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	5/07/2022 11:32:56 AM										
5	From File	WorkSheet_a.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**C0**											
12												
13	**General Statistics**											
14	Total Number of Observations	39				Number of Distinct Observations	17					
15						Number of Missing Observations	8					
16	Minimum	0.05				Mean	0.384					
17	Maximum	1.5				Median	0.2					
18	SD	0.419				Std. Error of Mean	0.0671					
19	Coefficient of Variation	1.091				Skewness	1.247					
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic	0.784				**Shapiro Wilk GOF Test**						
23	5% Shapiro Wilk Critical Value	0.939				Data Not Normal at 5% Significance Level						
24	Lilliefors Test Statistic	0.234				**Lilliefors GOF Test**						
25	5% Lilliefors Critical Value	0.142				Data Not Normal at 5% Significance Level						
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**						
30	95% Student's-t UCL	0.497				95% Adjusted-CLT UCL (Chen-1995)	0.509					
31						95% Modified-t UCL (Johnson-1978)	0.499					
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic	1.615				**Anderson-Darling Gamma GOF Test**						
35	5% A-D Critical Value	0.782				Data Not Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic	0.212				**Kolmogrov-Smirnoff Gamma GOF Test**						
37	5% K-S Critical Value	0.146				Data Not Gamma Distributed at 5% Significance Level						
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)	0.914				k star (bias corrected MLE)	0.861					
42	Theta hat (MLE)	0.42				Theta star (bias corrected MLE)	0.446					
43	nu hat (MLE)	71.33				nu star (bias corrected)	67.17					
44	MLE Mean (bias corrected)	0.384				MLE Sd (bias corrected)	0.414					
45						Approximate Chi Square Value (0.05)	49.31					
46	Adjusted Level of Significance	0.0437				Adjusted Chi Square Value	48.71					
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))	0.523				95% Adjusted Gamma UCL (use when n<50)	0.53					
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic	0.878				**Shapiro Wilk Lognormal GOF Test**						

5% Shapiro Wilk Critical Value	0.939	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.142	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-2.996	Mean of logged Data	-1.595
Maximum of Logged Data	0.405	SD of logged Data	1.185

Assuming Lognormal Distribution

95% H-UCL	0.678	90% Chebyshev (MVUE) UCL	0.673
95% Chebyshev (MVUE) UCL	0.797	97.5% Chebyshev (MVUE) UCL	0.97
99% Chebyshev (MVUE) UCL	1.31		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.494	95% Jackknife UCL	0.497
95% Standard Bootstrap UCL	0.492	95% Bootstrap-t UCL	0.516
95% Hall's Bootstrap UCL	0.502	95% Percentile Bootstrap UCL	0.496
95% BCA Bootstrap UCL	0.501		
90% Chebyshev(Mean, Sd) UCL	0.585	95% Chebyshev(Mean, Sd) UCL	0.676
97.5% Chebyshev(Mean, Sd) UCL	0.803	99% Chebyshev(Mean, Sd) UCL	1.052

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	0.676

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.

For additional insight the user may want to consult a statistician.

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/07/2022 11:36:43 AM								
5	From File			WorkSheet_b.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**C0**											
12												
13	**General Statistics**											
14	Total Number of Observations					27	Number of Distinct Observations					12
15							Number of Missing Observations					4
16	Minimum					0.2	Mean					0.963
17	Maximum					3.6	Median					0.5
18	SD					0.855	Std. Error of Mean					0.165
19	Coefficient of Variation					0.888	Skewness					2
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic					0.674	**Shapiro Wilk GOF Test**					
23	5% Shapiro Wilk Critical Value					0.923	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.335	**Lilliefors GOF Test**					
25	5% Lilliefors Critical Value					0.171	Data Not Normal at 5% Significance Level					
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL					1.244	95% Adjusted-CLT UCL (Chen-1995)					1.301
31							95% Modified-t UCL (Johnson-1978)					1.254
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic					3.119	**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value					0.756	Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.354	**Kolmogrov-Smirnoff Gamma GOF Test**					
37	5% K-S Critical Value					0.17	Data Not Gamma Distributed at 5% Significance Level					
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)					2.028	k star (bias corrected MLE)					1.827
42	Theta hat (MLE)					0.475	Theta star (bias corrected MLE)					0.527
43	nu hat (MLE)					109.5	nu star (bias corrected)					98.66
44	MLE Mean (bias corrected)					0.963	MLE Sd (bias corrected)					0.712
45							Approximate Chi Square Value (0.05)					76.75
46	Adjusted Level of Significance					0.0401	Adjusted Chi Square Value					75.51
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))					1.238	95% Adjusted Gamma UCL (use when n<50)					1.258
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic					0.8	**Shapiro Wilk Lognormal GOF Test**					

5% Shapiro Wilk Critical Value	0.923	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.343	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.171	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.609	Mean of logged Data	-0.304
Maximum of Logged Data	1.281	SD of logged Data	0.69

Assuming Lognormal Distribution

95% H-UCL	1.252	90% Chebyshev (MVUE) UCL	1.323
95% Chebyshev (MVUE) UCL	1.503	97.5% Chebyshev (MVUE) UCL	1.752
99% Chebyshev (MVUE) UCL	2.242		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1.234	95% Jackknife UCL	1.244
95% Standard Bootstrap UCL	1.222	95% Bootstrap-t UCL	1.364
95% Hall's Bootstrap UCL	1.379	95% Percentile Bootstrap UCL	1.241
95% BCA Bootstrap UCL	1.3		
90% Chebyshev(Mean, Sd) UCL	1.457	95% Chebyshev(Mean, Sd) UCL	1.681
97.5% Chebyshev(Mean, Sd) UCL	1.991	99% Chebyshev(Mean, Sd) UCL	2.601

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	1.681

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.

For additional insight the user may want to consult a statistician.

1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	5/07/2022 12:27:35 PM										
5	From File	WorkSheet.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**C0**											
12												
13	**General Statistics**											
14	Total Number of Observations	44			Number of Distinct Observations	32						
15					Number of Missing Observations	3						
16	Minimum	0.05			Mean	18.63						
17	Maximum	422			Median	2.25						
18	SD	65.06			Std. Error of Mean	9.808						
19	Coefficient of Variation	3.493			Skewness	5.847						
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic	0.303			**Shapiro Wilk GOF Test**							
23	5% Shapiro Wilk Critical Value	0.944			Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic	0.404			**Lilliefors GOF Test**							
25	5% Lilliefors Critical Value	0.134			Data Not Normal at 5% Significance Level							
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**							
30	95% Student's-t UCL	35.12			95% Adjusted-CLT UCL (Chen-1995)	44						
31					95% Modified-t UCL (Johnson-1978)	36.56						
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic	2.125			**Anderson-Darling Gamma GOF Test**							
35	5% A-D Critical Value	0.863			Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic	0.21			**Kolmogrov-Smirnoff Gamma GOF Test**							
37	5% K-S Critical Value	0.145			Data Not Gamma Distributed at 5% Significance Level							
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)	0.295			k star (bias corrected MLE)	0.29						
42	Theta hat (MLE)	63.06			Theta star (bias corrected MLE)	64.14						
43	nu hat (MLE)	26			nu star (bias corrected)	25.56						
44	MLE Mean (bias corrected)	18.63			MLE Sd (bias corrected)	34.57						
45					Approximate Chi Square Value (0.05)	15.04						
46	Adjusted Level of Significance	0.0445			Adjusted Chi Square Value	14.76						
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))	31.66			95% Adjusted Gamma UCL (use when n<50)	32.25						
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic	0.938			**Shapiro Wilk Lognormal GOF Test**							

53	5% Shapiro Wilk Critical Value					0.944	Data Not Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic					0.119	**Lilliefors Lognormal GOF Test**					
55	5% Lilliefors Critical Value					0.134	Data appear Lognormal at 5% Significance Level					
56	**Data appear Approximate Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59	Minimum of Logged Data					-2.996	Mean of logged Data					0.584
60	Maximum of Logged Data					6.045	SD of logged Data					2.365
61												
62	**Assuming Lognormal Distribution**											
63	95% H-UCL					134.3	90% Chebyshev (MVUE) UCL					62.07
64	95% Chebyshev (MVUE) UCL					79.36	97.5% Chebyshev (MVUE) UCL					103.4
65	99% Chebyshev (MVUE) UCL					150.5						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71	95% CLT UCL					34.76	95% Jackknife UCL					35.12
72	95% Standard Bootstrap UCL					34.79	95% Bootstrap-t UCL					79.07
73	95% Hall's Bootstrap UCL					83.92	95% Percentile Bootstrap UCL					36.63
74	95% BCA Bootstrap UCL					48.52						
75	90% Chebyshev(Mean, Sd) UCL					48.05	95% Chebyshev(Mean, Sd) UCL					61.38
76	97.5% Chebyshev(Mean, Sd) UCL					79.88	99% Chebyshev(Mean, Sd) UCL					116.2
77												
78	**Suggested UCL to Use**											
79	97.5% Chebyshev (Mean, Sd) UCL					79.88						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	5/07/2022 11:22:53 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

C0

General Statistics

Total Number of Observations	50	Number of Distinct Observations	41
		Number of Missing Observations	0
Minimum	2	Mean	128.6
Maximum	1200	Median	51
SD	212.8	Std. Error of Mean	30.1
Coefficient of Variation	1.654	Skewness	3.713

Normal GOF Test

Shapiro Wilk Test Statistic	0.56	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.947	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.276	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.125	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	179.1	95% Adjusted-CLT UCL (Chen-1995)	195
		95% Modified-t UCL (Johnson-1978)	181.7

Gamma GOF Test

A-D Test Statistic	0.887	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.796	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.121	**Kolmogrov-Smirnoff Gamma GOF Test**
5% K-S Critical Value	0.131	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.72	k star (bias corrected MLE)	0.691
Theta hat (MLE)	178.6	Theta star (bias corrected MLE)	186.3
nu hat (MLE)	72.04	nu star (bias corrected)	69.06
MLE Mean (bias corrected)	128.6	MLE Sd (bias corrected)	154.8
		Approximate Chi Square Value (0.05)	50.93
Adjusted Level of Significance	0.0452	Adjusted Chi Square Value	50.46

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	174.4	95% Adjusted Gamma UCL (use when n<50)	176

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**

53	5% Shapiro Wilk Critical Value					0.947	Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic					0.0612	**Lilliefors Lognormal GOF Test**					
55	5% Lilliefors Critical Value					0.125	Data appear Lognormal at 5% Significance Level					
56	**Data appear Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59	Minimum of Logged Data					0.693	Mean of logged Data					4.022
60	Maximum of Logged Data					7.09	SD of logged Data					1.358
61												
62	**Assuming Lognormal Distribution**											
63	95% H-UCL					239.8	90% Chebyshev (MVUE) UCL					236.1
64	95% Chebyshev (MVUE) UCL					281.6	97.5% Chebyshev (MVUE) UCL					344.8
65	99% Chebyshev (MVUE) UCL					468.8						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71	95% CLT UCL					178.1	95% Jackknife UCL					179.1
72	95% Standard Bootstrap UCL					177.9	95% Bootstrap-t UCL					226.4
73	95% Hall's Bootstrap UCL					420.1	95% Percentile Bootstrap UCL					181
74	95% BCA Bootstrap UCL					200.7						
75	90% Chebyshev(Mean, Sd) UCL					218.9	95% Chebyshev(Mean, Sd) UCL					259.8
76	97.5% Chebyshev(Mean, Sd) UCL					316.6	99% Chebyshev(Mean, Sd) UCL					428.1
77												
78	**Suggested UCL to Use**											
79	95% Approximate Gamma UCL					174.4						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												