PHASE 1 PRELIMINARY SITE INVESTIGATION

PROPOSED COMMUNITY RECYCLING FACILITY

HEPHER ROAD, CAMPBELLTOWN

LOT 104 DP 1056782

Premise

PREPARED FOR:

CAMPBELLTOWN CITY COUNCIL

MARCH 2019

ENGINEERING ENVIRONMENT AGRICULTURE WATER

Report Title:	*Phase 1 Preliminary Site Investigation*
Project:	*Proposed Community Recycling Facility – Hepher Road, Cambelltown*
Client:	*Campbelltown City Council*
Report Ref.:	*218439_REP_001B.docx*
Status:	*Final*
Issued:	*15 March 2019*

Premise (NSW) Pty Ltd (Premise) and the authors responsible for the preparation and compilation of this report declare that we do not have, nor expect to have a beneficial interest in the study area of this project and will not benefit from any of the recommendations outlined in this report.

The preparation of this report has been in accordance with the project brief provided by the client and has relied upon the information, data and results provided or collected from the sources and under the conditions outlined in the report.

All information contained within this report is prepared for the exclusive use of Campbelltown City Council to accompany this report for the land described herein and are not to be used for any other purpose or by any other person or entity. No reliance should be placed on the information contained in this report for any purposes apart from those stated therein.

Premise accepts no responsibility for any loss, damage suffered or inconveniences arising from, any person or entity using the plans or information in this study for purposes other than those stated above.

TABLE OF CONTENTS

TABLES

PLATES

DRAWINGS

APPENDICES

Executive Summary

Premise was engaged by Campbelltown City Council (Council) to conduct a Phase 1 Preliminary Site Investigation (P1 PSI) for a property located in Campbelltown NSW 2560 in support of a development application for construction of a community recycling facility at the site.

This P1 PSI is recommended by the *Managing Land Contamination – Planning Guidelines* 1998 under the NSW State *Environmental Planning Policy (SEPP) No 55 – Remediation of Land* 1998.

This report has been prepared in general accordance with the NSW EPA publication Contaminated Sites: *Guidelines for Consultants Reporting on Contaminated Sites* (EPA, November 1997). The overall objective was to identify the potential for land contamination to have occurred at the site from past activities.

The host lot on which the development site is located has an area of approximately 6,900 m^2 to the north of Hepher Road, and 67,000 m^2 south of Hepher Road. The site largely consists of stormwater drainage and diversion infrastructure.

Conclusions regarding the potential for land contamination at the site are summarised below:

- The area of the site appears to have predominantly been historically utilised for rural / agricultural purposes including passive livestock grazing. In the 1980s the alignment of Biriwiri Creek and its unnamed tributary were altered to modify the site to its current layout, incorporating a large detention basin and levee bank.
- No structures are present on the site, or have been identified as ever being present on the site.
- Potential exists for runoff and sediments containing contaminants from off-site sources to pass across the site, however this would be largely limited to within drainage channels.
- Soil stockpiles resulting from illegal dumping are present on the site.
- Four (4) stockpile samples were collected from observed stockpiles across the site. All soil samples met the investigation criteria for the respective analytes.

No significant routes for exposure by receptors (current or future) to potential contamination sources have been identified, due to negligible impacts being recorded.

Based on the findings of this P1 PSI report, Premise considers the suitability of the site to be consistent with the proposed land use, identified as a community recycling facility, within the requirements of the NSW *State Environmental Planning Policy No 55 – Remediation of Land* (1998).

INTRODUCTION

1.1 BACKGROUND

Premise was engaged by Campbelltown City Council (Council) to conduct a Phase 1 Preliminary Site Investigation (P1 PSI) for a property located in Campbelltown NSW 2560 in support of a development application for construction of a community recycling facility (CRC) at the site.

This P1 PSI is recommended by the *Managing Land Contamination – Planning Guidelines* 1998 under the NSW State *Environmental Planning Policy (SEPP) No 55 – Remediation of Land* 1998.

Clause 7 of SEPP 55 requires that a consent authority must consider contamination and remediation in determining a development application and must not grant consent unless:

> *(a) it has considered whether the land is contaminated, and*
>
> *(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
>
> *(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

The subject site is owned by Campbelltown City Council and is unoccupied. The site is identified as lot 104 in deposited plan (DP) 1056782.

This report has been prepared in general accordance with the NSW EPA publication Contaminated Sites: *Guidelines for Consultants Reporting on Contaminated Sites* (EPA, November 1997). The overall objective is to identify the potential for land contamination to have occurred at the site from past activities.

Lot 104 has an area of approximately 6,900 m^2 to the north of Hepher Road, and 67,000 m^2 south of Hepher Road. The site largely consists of stormwater drainage and diversion infrastructure. The area of the site on which the proposed CRC is be located is in the north-western corner of the lot and has an area of approximately 3,000 square metres.

The site area is presented below on **Figure 1**.

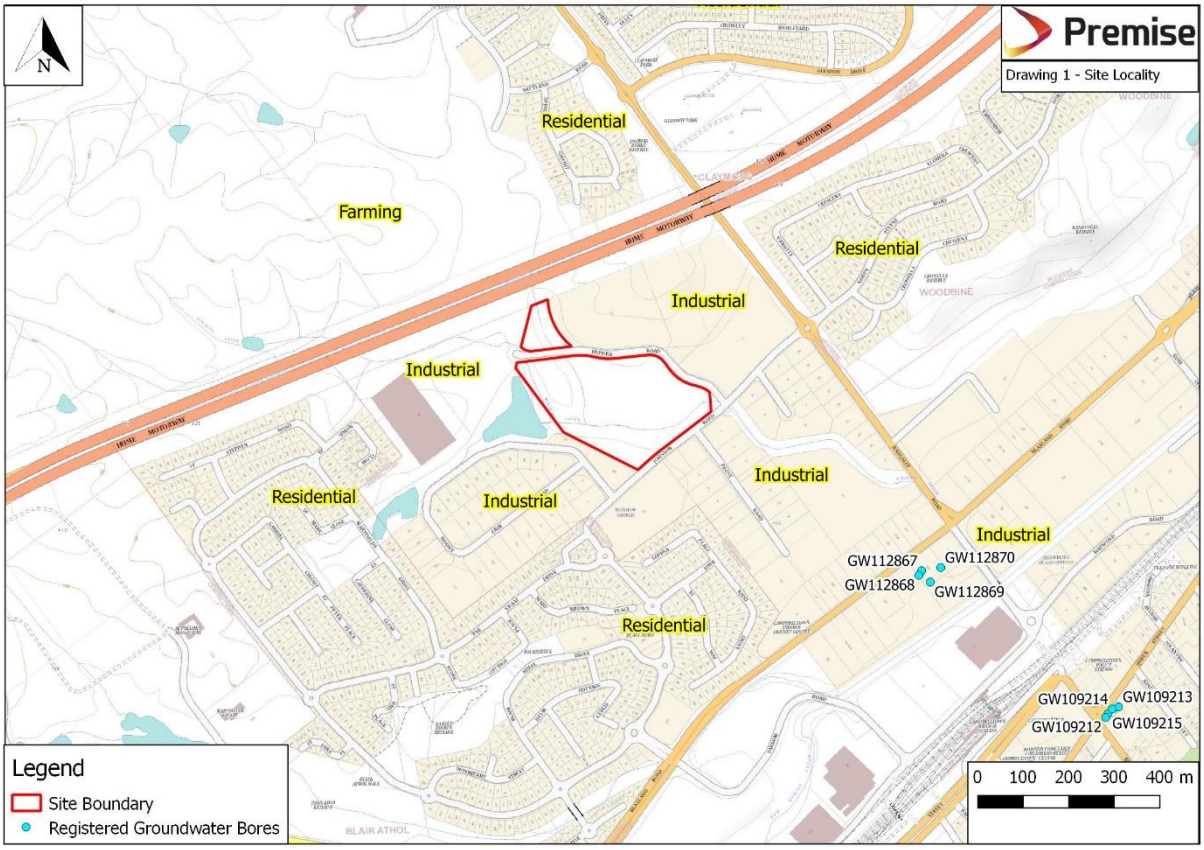


Figure 1: Site Locality

1.2 SCOPE OF WORK

The scope of work for this assessment consisted of the following components:

- Review of the following third party documents:
  - Published topographical, geological and soil maps of the area;
  - Details of groundwater bores located within 500 m of the site and registered on the groundwater bore database, maintained by the NSW Office of Water (http://allwaterdata.water.nsw.gov.au/water.stm);
  - The public register managed by the NSW EPA for information on scheduled activities and penalty notices issued under the Protection of the Environment Operations Act;
  - The database managed by the NSW Environment Protection Authority (EPA) for information on notices issued under the Contaminated Land Management Act 1997;
  - Aerial photographs – selected historical aerial photographs of the site available for review to provide evidence of the history of development of the site and indications of potential sources of contamination;
  - Review title folio documentation to provide details of historic ownership and land use(s) for nominated properties;
  - Review of site records, where available.
- Site inspection – A site inspection by Premise personnel of the site and surrounding areas was undertaken to provide further information, via visual inspection, of potential sources and areas of significant environmental liability. The site inspection focused on the following:

  - Areas of operational processes including waste management, water management, the condition of the site surfaces and buildings, and the presence of electrical transformers on site.
  - Areas of potential landfilling.
  - Potential impacts of neighbouring land uses.
  - Sensitivity of the receiving environment.
  - Other relevant information which could be provided by the site operator.
- Collection of soil samples from waste stockpiles identified to have originated from off-site, and laboratory analysis for chemicals of potential concern (COPC).
- Preparation of this factual report detailing the assessment findings in accordance with the NSW EPA publication *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (EPA, November 1997).

An overview of neighbouring properties was also conducted to identify the presence and proximity of sensitive receptors which could be significantly impacted upon by the site, and off-site operations which could have a significant impact on land contamination at the site.

The assessment did not include sampling and analysis of site soil (excluding waste stockpiles), groundwater, sediment or surface water, and the findings of this investigation do not conclusively verify the existence (or otherwise) of contamination across the entirety of the site.

SITE DESCRIPTION

2.1 SITE DEFINITION

Table 2.1 – Summary of Property Description Details

Feature	Details
Facility Address[1]	Hepher Road, Campbelltown NSW 2560
Title Identification Details[1]	Lot 104 in DP 1056782
Current Ownership	Campbelltown City Council
Current Site Use and Zoning[2]	Land Use: Stormwater Drainage and Diversion Zoning: Infrastructure (SP2) – Drainage
Proposed Future Site Use	Community / Commercial
Previous Reports	• Nil
Site Area[1]	73,900 m^2
Development area	Approximately 3,000 m^2
Sources: 1: SIX Maps Website developed by NSW Government, Land and Property Information. http://maps.six.nsw.gov.au/ (accessed March 2019). 2: Campbelltown Local Environmental Plan, 2015, under the Environmental Planning and Assessment Act 1979.	

2.2 SITE SETTING

2.2.1 REGIONAL SETTING

The site is located on Hepher Road, Campbelltown NSW. The site is approximately 1 km north-west of Campbelltown railway station. Industrial land-uses largely surround the site, with a church facility located to the south of the site opposite Johnson Road.

The following sensitive receptors are located in the proximal area of the site:

- Residential areas are located within 500 m to the north, east and west, and 300 m to the south;
- Biriwiri Creek and unnamed tributary traverse the site from north-west to south-east;
- A childcare centre is located on Mount Erin road and borders the site to the south-west; and
- Groundwater present in aquifer(s) underlying the site.

2.2.2 LOCAL SETTING

No structures are currently located on the site. Biriwiri Creek traverses the site from north-west to south-east, and an unnamed tributary joins the creek from the west. Underground stormwater drainage infrastructure is present.

Land uses and properties adjacent to the site, including those across adjacent roads were obtained from the site inspection conducted by Premise personnel in February 2019. The local area surrounding the site is displayed in **Figure 1**. Identified adjacent land uses are summarised in **Table 2.2**:

Table 2.2 – Adjacent Properties Descriptions

Direction From Site	Site Use (Nature of Activity)
North	Industrial premises with frontage on Hepher Road with Hume Motorway and residential dwellings (Blairmount) beyond
South	Childcare centre with frontage on Mount Erin Road, church facility with frontage on Johnson Road, and industrial premises with frontage on Frost Road. Residential dwellings (Blair Athol) beyond
East	Industrial premises with frontage on Hepher Road, Johnson Road and Nursery Road with residential dwellings (Woodbine) beyond
West	Industrial premises with frontage on Hepher Road and Mount Erin Road with residential dwellings (Blair Athol) beyond

A detailed presentation of the surrounding area is attached as **Drawing 1**.

2.3 TOPOGRAPHY

Topographical site information was obtained from the:

- Campbelltown 9029-1N, 1:25,000 Scale, Topographic Map, Third Edition (New South Wales Land and Property Information, 2001); and
- Site visit in February 2019.

The site is undulating by virtue of the stormwater drainage and diversion infrastructure. A raised levee bank exists on the southern and eastern boundaries, with the majority of the site utilised as a stormwater detention basin. A raised portion of the site of approximately 10,000 m^2 exists in the western extent of the site.

The elevation of the site ranges from approximately 70 mAHD at the site's west and levee bank to 64 mAHD at the base of the detention basin.

2.4 SURFACE WATER RECEPTORS

Transient drainage features identified as Biriwiri Creek and an unnamed tributary transect the site, and did not contain flowing water at the time of the site inspection. A less transient water body is present neighbouring the site to the west. Surface water exists as sheet flow towards these drainage lines then flows to the south-east via an underground drainage channel from the base of the stormwater detention basin.

The catchment of surface waters at the site includes portions of properties to the north and west of the site's boundaries. Some flow originating from these properties is anticipated.

2.5 REGIONAL AND SITE GEOLOGY

Mapped soil landscapes around the site are shown on **Figure 2**. The site lies on the 'Blacktown' soil landscape.

The Blacktown soil landscape consists of "*hardsetting mottled texture contrast soils, red and brown podzolic soils (Dr3.21, Dr3.31, Db2.11, Db2.21) on crests grading to yellow podzolic soils (Dy2.11, Dy3.11) on lower slopes and in drainage lines*".

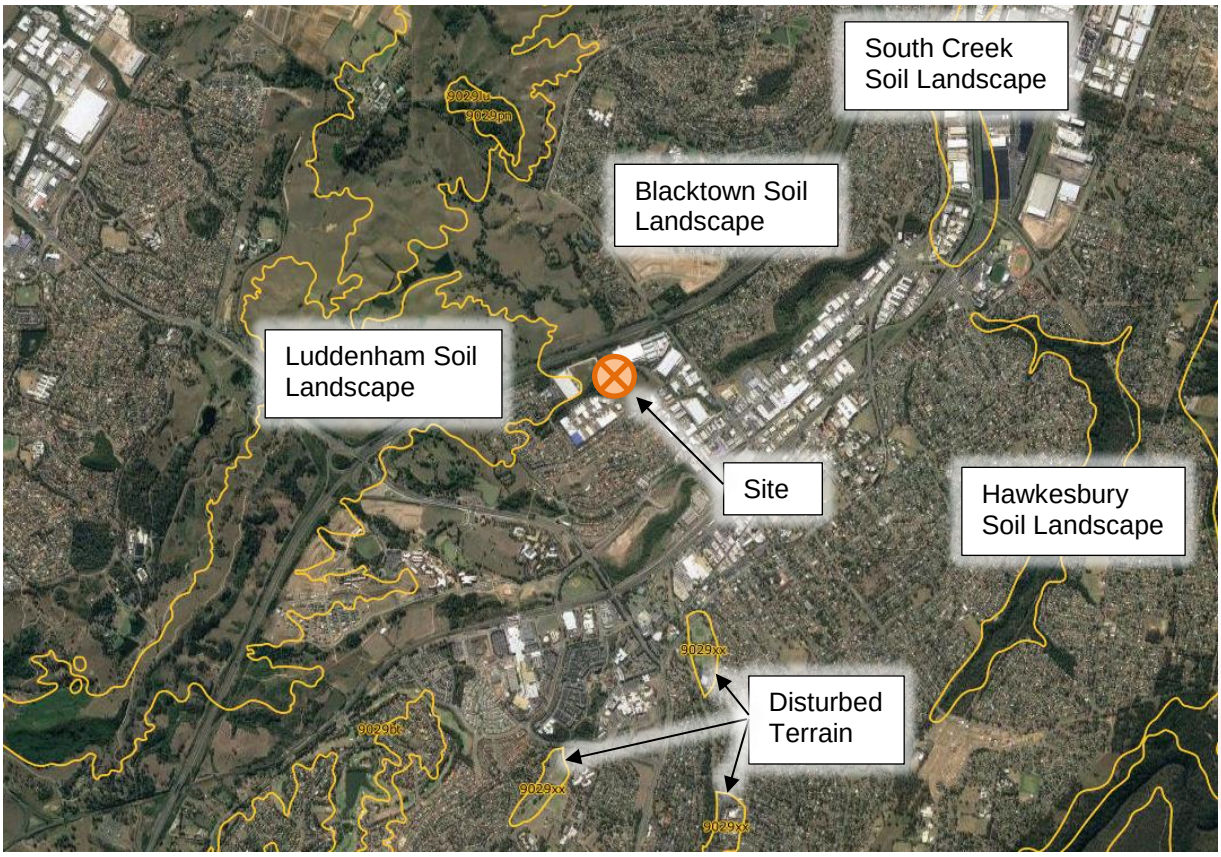


Figure 2: Soil Landscape Group Distribution

The Wollongong-Port Hacking 9029-9129 Geological 1 : 100,000 Series Sheet (Geological Survey of NSW, 1985) indicates the underlying geology comprises Quaternary era quartz and lithic fluvial sand, silt and clay, overlying late-Triassic era fine to medium grained lithic sandstone of the Minchinbury unit.

The *Australian Soil Resource Information System* (ASRIS) on-line database, maintained by CSIRO Land and Water, indicates there is an extremely low probability of occurrence of acid sulphate soils in the area of the site (compiled 2010, accessed March 2019).

The NSW Heads of Asbestos Coordination Authorities (HACA) *Mapping of Naturally Occurring Asbestos in NSW* (2015) has assessed the area surrounding the site as having the lowest potential for naturally occurring asbestos (NOA) to be encountered within approximately 10 metres of the natural surface. No NOA indicator minerals such as serpentinite, tremolite or antigorite, have been identified as being associated with the known geology of the site.

2.6 REGIONAL HYDROGEOLOGY

A search for registered groundwater users located within a 500 m radius of the site was undertaken using the NSW Office of Water on-line database (http://realtimedata.water.nsw.gov.au/water.stm), in March 2019. The results indicated that there are no groundwater bores registered at the site, or within 500 m of the site, as shown on **Drawing 1**.

The closest registered groundwater bore to the site, reference GW112867 and registered for monitoring purposes, is located approximately 650 m south-east of the site and was installed to a depth of 6.5 metres below ground level.

Registration details of the above groundwater bore is included in **Appendix A**.

Premise has considered the surrounding agricultural land uses and notes the potential for unregistered bores for irrigation purposes proximal to the site.

SITE HISTORICAL REVIEW

A review of the site history was undertaken to assess historical use of the site, and in particular to identify activities with the potential to contaminate soil and/or groundwater at the site.

3.1 NSW EPA RECORDS

3.1.1 SCHEDULED ACTIVITIES AND/OR ENVIRONMENTAL NOTICES

A search of the NSW EPA on-line register (http://www.epa.nsw.gov.au/prpoeoapp/) was undertaken in March 2019 for environment protection licenses and/or penalty notices issued under the Protection of the Environment Operations Act (POEO) 1997. The search indicated that no licenses have been issued for any of the titles comprising the site or properties located within 500 m of the site.

No clean-up notices relating to the site or surrounding properties have been issued by the NSW EPA.

3.1.2 CONTAMINATED SITES REGISTER

A search of the NSW EPA on-line register (http://www.environment.nsw.gov.au/prclmapp/) was undertaken in March 2019 for contaminated land notices issued or regulated under the Contaminated

Land Management Act 1997. The search indicated that the NSW EPA holds no contaminated land records relating to the site and properties within 500 m of the site.

3.2 PREVIOUS TITLE INFORMATION

Historic title information was sought for Lot 104 DP 1056782.

Previous title ownership for these titles is attached in **Appendix B** and summarised in **Table 3.2**.

Table 3.1 – Title History, Lot 104 DP 1056782

Date Range	Ownership	
1816 – 1911	**Parish St. Peter Portion 137** Thomas Burke, 100 Acres, Grant Serial 8 Page 114 **Parish St. Peter Portion 140** Neil McLeod, 30 Acres, Grant Serial 8 Page 112 **Parish St. Peter Portion 144** Benjamin Vause, 30 Acres, Grant Serial 8 Page 186 **Parish St. Peter Portion 145** Stephen Blake, 35 Acres, Grant Serial 8 Page 185	
1911 – 1916		**Part Portions 137, 140, 144 & 145** **Parish St. Peter Vol 2148 Fol 163** Mary Bourke, spinster
1916 – 1921	**Part Portions 137, 144 & 145** **Parish St. Peter Vol 3243 Fol 80** John David Bourke, leased to Thomas Frost	
1921 – 1921	John David Bourke, retired school teacher	
1921 – 1922	John Edmund Bourke, gentleman Alice Mary Bourke, widow Mary Gertrude Bourke, spinster Clive Wynter Ducat, farmer Clarence Alwyn Ducat, farmer Victor Alan Ducat, farmer	
1922 – 1934	William Phillips, gentleman Lease to Percy Baxter, farmer of part	
1934 – 1935		Catherine Teresa Keihone, widow
1935 – 1937		Mary Ellen Harrington, wife of Patrick Francis Harrington, dairyman
1937 – 1940	Florence Phillips, widow George Alfred Kaves, solicitor	
1940 – 1946	Charles Swan, farmer	
1946 – 1949	Andrew Edward Campbell, accountant	
1949 – 1949	Title reference amended to **Vol 5939 Fol 230** Gladys Ellen Campbell, widow Jane Lindsay, spinster	
1949 – 1961	Charles Ernest Mc Clelland, farmer	
1961 – 1966	Minnie Beatrice Mc Clelland, widow Allan Charles Mc Clelland, school teacher Elwyn Miller, married woman	
1966 – 1967	Lubo Medich, theatre proprietor	
1967 – 1974		Johnson & Johnson Pty. Limited
1974 – 1976		Title reference amended to **Vol 12348 Fol 147 (Lot 11 DP 559111)** Johnson & Johnson Pty. Limited
1976 – 1977	Title reference amended to **Vol 13103 Fol 109 (Lot 2 DP 542996)** Lubo Medich, theatre proprietor	
1977 – 1978	Titles combined to **Vol 13396 Fol 209, (Lot 2 DP 590605)** Johnson & Johnson Pty. Limited Lubo Medich, theatre proprietor	

Table 3.1 – Title History, Lot 104 DP 1056782

Date Range	Ownership
1816 – 1911	**Parish St. Peter Portion 137** Thomas Burke, 100 Acres, Grant Serial 8 Page 114 **Parish St. Peter Portion 140** Neil McLeod, 30 Acres, Grant Serial 8 Page 112 **Parish St. Peter Portion 144** Benjamin Vause, 30 Acres, Grant Serial 8 Page 186 **Parish St. Peter Portion 145** Stephen Blake, 35 Acres, Grant Serial 8 Page 185
1978 – 1979	Title reference amended to **Vol 13869 Fol 135, (Lot 6 DP 601056)** Johnson & Johnson Pty. Limited
1988 – 1998	Title reference amended to **Lot 6 DP 601056** Johnson & Johnson Pty. Limited
1998 – 1999	The Uniting Church (NSW) Trust Association
1999 – 2003	Title reference amended to **Lot 99 DP 883218** The Uniting Church (NSW) Trust Association
2003 – present	Title reference amended to **Lot 104 DP 1056782** Campbelltown City Council

3.3 HISTORICAL AERIAL PHOTOGRAPHY SURVEY

An historical aerial photography survey was undertaken for the site, with a total of ten (10) photographs identified and reviewed. The historical aerial photographs that were reviewed spanned a period of approximately 62 years, with the most recent from 2018, to the earliest in 1956. Aerial photographs, as attached in **Appendix C**, were reviewed to track changes in use of the site and surrounding properties over time. Key observations made during the review of aerial photos are summarised in **Table 3.3** as follows:

Table 3.2 – Summary of Aerial Photo Information

Date	Site Activity	Surrounding Land Use
1956	The site is generally utilised for agricultural purposes. Biriwiri Creek and its unnamed tributary intersect the site, which is cleared of remnant vegetation with the exception of the land between the two drainage channels. An access roadway transects the south-eastern extent of the site where it crosses Biriwiri Creek.	The unnamed tributary of Biriwiri Creek is dammed to the immediate west of the site. A dwelling and associated structures is present to the south-west of the site. The land surrounding the site is generally utilised for agricultural purposes (presumed to be grazing pasture).
1963	The area encompassing the site is generally unchanged.	Land uses of the surrounding area do not appear to have been significantly altered.
1972	The area encompassing the site is generally unchanged.	Construction activities have commenced to the north of the site for the Hume Motorway. Other land uses of the surrounding area do not appear to have been significantly altered.
1979	The access road and creek crossing have been removed. The area encompassing the remainder of the site is generally unchanged.	Construction activities of the Hume Motorway to the north of the site are completed. Johnson Road has been constructed, bordering the southern boundary of the site. The dwelling to the south-west of the site is no longer present, and the Johnson & Johnson plant has been constructed. The holding capacity of the dam on the unnamed tributary of Biriwiri Creek has been expanded. Industrial premises and operations are present to the south-east of the site.

Table 3.2 – Summary of Aerial Photo Information

Date	Site Activity	Surrounding Land Use
1983	The area encompassing the site is generally unchanged.	Expansion of the Johnson & Johnson plant to the south-west of the site has occurred. Significant residential development has occurred on properties within Woodbine, to the north-east of the site. Other land uses of the surrounding area do not appear to have been significantly altered.
1990	The detention basin and levee bank at the site have been constructed	Further expansion of the Johnson & Johnson plant to the south-west of the site has occurred. Other land uses of the surrounding area do not appear to have been significantly altered.
2002	The area encompassing the site is generally unchanged.	Hepher Road has been constructed. A warehouse to the east of the site has been constructed. Industrial premises and operations are present on Frost Road and the southern side on Johnson Road, to the south-east of the site. A church facility is undergoing construction to the south of the site. Significant residential development has occurred on properties within Woodbine, to the north-east of the site.
2009	The area encompassing the site is generally unchanged.	Additional warehousing facilities have been constructed to the north-east of the site. The Johnson & Johnson plant is no longer present. Two smaller industrial premises are present on the newly constructed Mount Erin Road. The cul-de-sac of Nursery Road has been constructed and former structures in this area have been cleared.
2013	The area encompassing the site is generally unchanged.	Additional industrial premises and operations are present on Nursery Road and Mount Erin Road (including the childcare facility).
2018	The area encompassing the site is generally unchanged.	Additional industrial premises and operations are present on Nursery Road, Mount Erin Road, and at the end of Hepher Road.

3.4 SUMMARY OF SITE HISTORY INFORMATION

Crown grants incorporating the site commenced in 1816, which has been subject to private ownership until acquisition by Campbelltown City Council in 2003. Based on historical aerial photographs, no developments with the exception of stormwater infrastructure have occurred on the area of the site. The surrounds have predominantly been utilised for rural / agricultural purposes, until industrial developments commenced in the 1970s.

Historic agricultural land uses are considered to be predominantly passive and unlikely to have resulted in burial of wastes at the site.

SITE RECONNAISSANCE

Observations from the site inspection are presented on **Drawing 2**, attached. Refer to **Plate 1** and **Plate 2** for photography of the general site layout.

4.1 WASTE MANAGEMENT

No septic wastewater systems were identified at the site.

Soil stockpiles and other wastes were observed at the site. Refer to **Plates 11** to **13** and **Drawing 3**. The specific source(s) of this material was not established, however was considered to be consistent with illegal dumping.

4.2 STORMWATER

Site stormwater would consist of surface flows would drain to existing drainage infrastructure generally aligned north-west to south-east.

Potential exists for runoff and sediments containing contaminants from off-site sources to pass across the site, however this would be largely limited to within drainage channels.

4.3 CHEMICAL AND FUEL STORAGE / SPILLS

No evidence of fuel, oils or other chemical storage was observed at the site:

No findings of the historic aerial photography review (refer to **Section 3.4**) indicate the presence (historic or otherwise) of bulk chemical storage infrastructure at the site.

No sheep dips or cattle dips were observed at the site. No evidence of stressed vegetation, which may be indicative of soil and/or groundwater contamination, was observed during the site inspection.

4.4 ASBESTOS

Premise did not conduct an asbestos survey during the site inspection. Premise notes that waste stockpiles observed on the site, as described in **Section 4.1**, may potentially include asbestos containing materials.

No structures have been identified as previously being present at the site.

4.5 LANDFILLING

No landfilling currently occurs on the site. The levee bank at the site's eastern and southern boundaries is considered to have been constructed from material sourced on-site during construction of the detention basin (i.e. as 'cut-and-fill' civil works).

ENVIRONMENTAL INVESTIGATION

5.1 CHEMICALS OF POTENTIAL CONCERN

Based on the historic and predominantly passive uses of the site, impacts that are considered to have the potential to adversely impact the underlying soil and groundwater environments are limited to waste from illegal dumping. Chemicals of potential concern (COPC) associated with such impacts are understandably diverse, and may include:

- Heavy metals, (including arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);
- Organochlorine pesticides (OCPs);
- Total recoverable / petroleum hydrocarbons (TRH/TPH);
- Benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN);
- Polycyclic aromatic hydrocarbons (PAHs);
- Phenolic compounds;
- Polychlorinated biphenyls (PCBs); and
- Asbestos.

5.2 INVESTIGATION CRITERIA

Adopted investigation criteria is summarised in **Table 1** (attached).

Health Investigation Levels

The National Environment Protection Council (NEPC) National Environment Protection (Assessment of Site Contamination) Measure, 1999 (*Amended ASC NEPM* – amended 2013) provides Health Investigation Levels (HILs) for assessing human health risk via all relevant pathways of exposure. Based on the current land use and zoning for the area of the site, commercial / industrial 'HIL D' land use HILs have been adopted as assessment criteria.

Health Screening Levels

The *Amended ASC NEPM* (NEPC, 2013) presents health screening levels (HSLs) for petroleum compounds. HSLs are relevant to various land use settings for residential, recreational open space, and commercial / industrial land use and reflect the risk posed by vapour.

Based on the current land uses and zonings for the site, concentrations of contaminants in soil are to be compared against the commercial / industrial 'HSL D' land use HSLs. Where screening levels are non-limiting, Premise has adopted the maximum – or saturation[1] – concentration as the soil investigation level.

Management Limits

The *Amended ASC NEPM* (NEPC, 2013) Management Limits for TRH reflect the nature and properties of petroleum hydrocarbons. Management Limits are specified for coarse and fine soil types and land uses. Compliance with the Management Limits is intended to avoid or minimise the potential effects of the following:

[1] Soil saturation concentration at which the porewater phase cannot dissolve any more of an individual chemical, adopted from NEPM 1999 (2013) Health screening levels for petroleum hydrocarbons in soil and groundwater

- Formation of observable light non-aqueous phase liquid (LNAPL);
- Fire and explosive hazards;
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services by hydrocarbons; and
- Aesthetics.

Based on the current and future land uses for the site and surrounding area, concentrations of contaminants in the soil have been compared against the 'Commercial and Industrial' management limits.

5.3 METHODOLOGY

The methodology for the investigations undertaken at the site is detailed as follows.

Soil was sampled from the inner material comprising the stockpiles by grab-sampling whilst wearing disposable nitrile gloves, and placed into acid-washed glass jars with sealed lids provided by the laboratory.

Samples were chilled on ice during transit to the laboratory.

The sampling locations are shown on **Drawing 2**.

5.4 SCHEDULE OF SAMPLE ANALYSIS

The adopted analytical schedule for COPC at each investigation area is presented below.

Table 5.1 – Analytical Schedule

Area	No. Samples	COPC				
		Heavy Metals	TRH / TPH / BTEXN	PAH / Phenolics	OCP / PCBs	Asbestos
Stockpile 1	1	✓	✓	✓	✓	✓
Stockpile 2	1	✓	✓	✓	✓	✓
Stockpile 3	1	✓	✓	✓	✓	✓
Stockpile 4	1	✓	✓	✓	✓	✓

RESULTS

6.1 SOIL INVESTIGATION

6.1.1 SUMMARY OF WORKS

Four (4) stockpile samples were collected from observed stockpiles across the site.

No indicators of potential significant impact were observed (e.g. staining, odour, ash), however stockpiles were noted to contain vegetation. All samples were scheduled for analysis as summarised below:

6.1.2 ANALYTICAL RESULTS

Analytical results of collected soil samples are presented in **Table 1**, attached. Laboratory analytical results and chain of custody (COC) documentation are provided in **Appendix D**.

All soil samples met the investigation criteria for the respective analytes (refer to **Section 5.2**).

Samples analysed for heavy metals, TPH/TRH, BTEXN, Total PAHs, phenolics, OCPs and PCBs did not record concentrations of these analytes above the adopted human health criteria.

No respirable asbestos fibres were detected in any soil sample.

CONCLUSIONS

Premise make the following conclusions regarding the potential for land contamination at the site, based on a desktop review of available information, a review of historical records, and a site walkover reconnaissance.

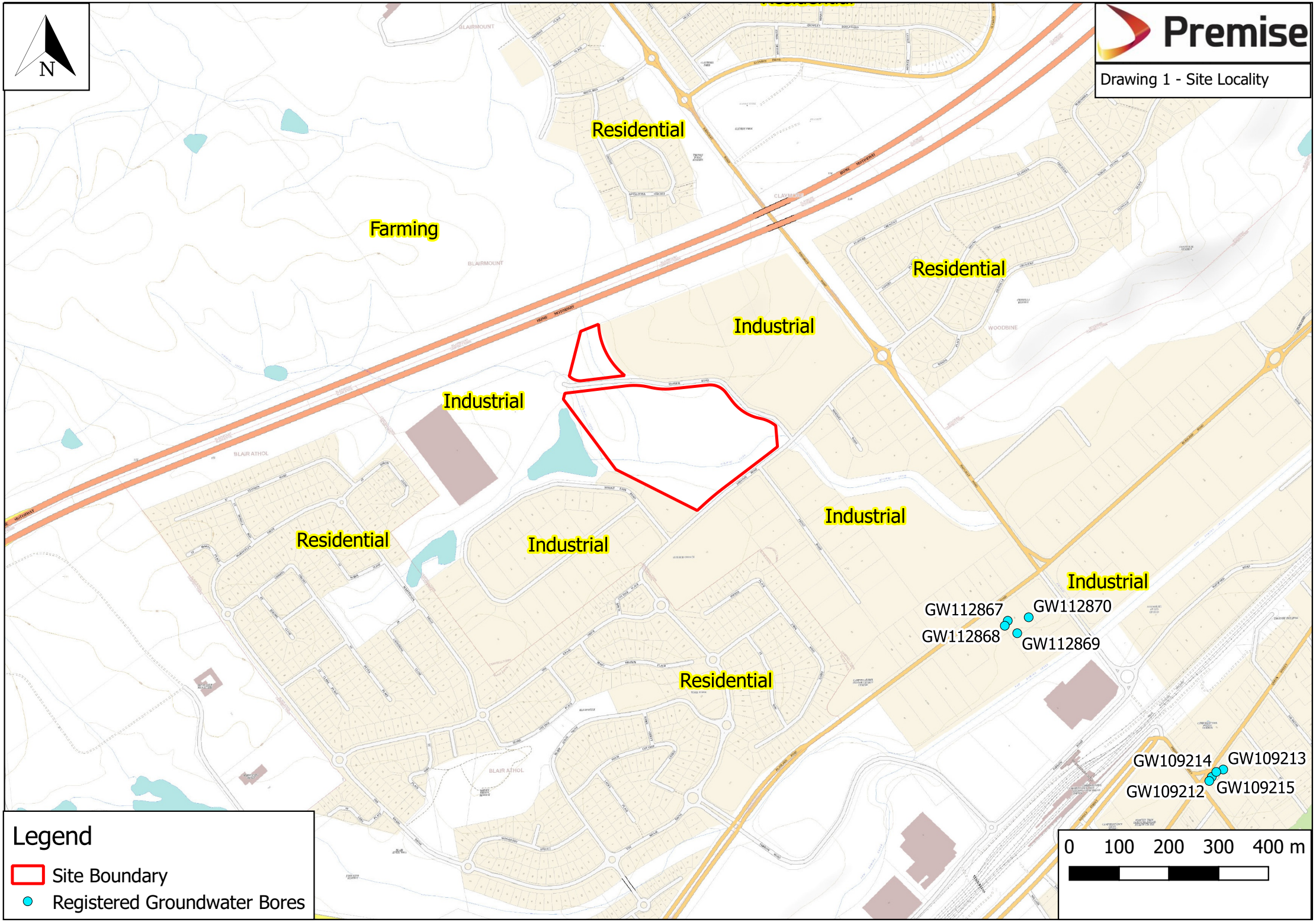
- The area of the site appears to have predominantly been historically utilised for rural / agricultural purposes including passive livestock grazing. In the 1980s the alignment of Biriwiri Creek and its unnamed tributary were altered to modify the site to its current layout, incorporating a large detention basin and levee bank.
- No structures are present on the site, or have been identified as ever being present on the site.
- Potential exists for runoff and sediments containing contaminants from off-site sources to pass across the site, however this would be largely limited to within drainage channels.
- Soil stockpiles resulting from illegal dumping are present on the site.
- Four (4) stockpile samples were collected from observed stockpiles across the site. All soil samples met the investigation criteria for the respective analytes.

No significant routes for exposure by receptors (current or future) to potential contamination sources have been identified, due to negligible impacts being recorded.

Having assessed the site against the investigation criteria documented in **Section 5.2** of this P1 PSI report, and with respect to identified historic land uses, Premise considers the suitability of the site to be consistent with the proposed land use, identified as a community recycling facility, within the requirements of the NSW State Environmental Planning Policy No 55 – Remediation of Land (1998).

.

Drawings


N
Premise
Drawing 1 - Site Locality
Residential
Farming
Industrial
Industrial
Residential
Industrial
Industrial
Residential
Industrial
Residential
GW112867
GW112870
GW112868
GW112869
GW109214
GW109213
GW109212
GW109215
Legend
Site Boundary
Registered Groundwater Bores
0
100
200
300
400 m


N
Premise
Drawing 2 - Site Reconnaissance Findings
Stockpile 1
Stockpile 2
Stockpile 4
Stockpile 3
Detention Basin
Levee Bank
Childcare
Legend
Site Boundary
Site Features
0 20 40 60 80 m

Tables

TABLE 1: Hepher Road - Stockpile Sampling Results
FEBRUARY 2019

				Sample ID	Sample 1	Sample 2	Sample 3	Sample 4
				Sample Date	26/02/2019	26/02/2019	26/02/2019	26/02/2019
Group	**Analyte**	**LOR**	**Units**	**Criteria**	PS	PS	PS	PS
Physical Parameters	Moisture	0.1	%	-	**2.8**	**8.7**	**12**	**4.1**
Trace Metals	Lead (Pb)	1	mg/kg	1500	**7**	**19**	**24**	**22**
	Chromium (Cr)	1	mg/kg	3600	**6**	**13**	**15**	**11**
	Arsenic (As)	4	mg/kg	3000	< 4	**6**	**8**	**8**
	Cadmium (Cd)	0.4	mg/kg	900	< 0.4	< 0.4	< 0.4	< 0.4
	Copper (Cu)	1	mg/kg	240000	**2**	**21**	**53**	**45**
	Nickel (Ni)	1	mg/kg	6000	< 1	**8**	**14**	**13**
	Zinc (Zn)	1	mg/kg	400000	**5**	**34**	**280**	**160**
	Mercury (Hg)	0.1	mg/kg	730	< 0.1	< 0.1	< 0.1	< 0.1
Total Recoverable Hydrocarbons	TRH C6-C10	25	mg/kg	700	< 25	< 25	< 25	< 25
	TRH C6-C10 less BTEX (F1)	25	mg/kg	260	< 25	< 25	< 25	< 25
	TRH >C10-C16	50	mg/kg	1000	< 50	< 50	< 50	< 50
	TRH >C10-C16 less Naphthalene (F2)	50	mg/kg	560	< 50	< 50	< 50	< 50
	TRH >C16-C34 (F3)	100	mg/kg	2500	< 100	< 100	**180**	< 100
	TRH >C34-C40 (F4)	100	mg/kg	10000	< 100	**120**	**160**	**100**
	TRH C10-C40	50	mg/kg	-	< 50	**120**	**340**	**100**
Total Petroleum Hydrocarbons	TPH C6-C9	25	mg/kg	-	< 25	< 25	< 25	< 25
	TPH C10-C14	50	mg/kg	-	< 50	< 50	< 50	< 50
	TPH C15-C28	100	mg/kg	-	< 100	< 100	< 100	< 100
	TPH C29-C36	100	mg/kg	-	< 100	**110**	**200**	**100**
BTEXN Analytes	Benzene	0.2	mg/kg	3	< 0.2	< 0.2	< 0.2	< 0.2
	Toluene	0.5	mg/kg	560	< 0.5	< 0.5	< 0.5	< 0.5
	Ethylbenzene	1	mg/kg	64	< 1	< 1	< 1	< 1
	meta- & para-Xylene	2	mg/kg	-	< 2	< 2	< 2	< 2
	ortho-Xylene	1	mg/kg	-	< 1	< 1	< 1	< 1
	Naphthalene	1	mg/kg	9	< 1	< 1	< 1	< 1
	Total Xylenes	1	mg/kg	300	< 1	< 1	< 1	< 1
Polynuclear Aromatic Hydrocarbons	Acenaphthylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Acenaphthene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Fluorene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Phenanthrene	0.1	mg/kg	-	< 0.1	< 0.1	**0.1**	**0.3**
	Anthracene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Fluoranthene	0.1	mg/kg	-	< 0.1	< 0.1	**0.1**	**0.4**
	Pyrene	0.1	mg/kg	-	< 0.1	< 0.1	**0.1**	**0.4**
	Benzo(a)anthracene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	**0.2**
	Chrysene	0.1	mg/kg	-	< 0.1	< 0.1	**0.1**	**0.2**
	Benzo(a)pyrene	0.05	mg/kg	-	< 0.05	< 0.05	**0.07**	**0.1**
	Indeno(1,2,3-cd)pyrene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Dibenzo(ah)anthracene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Benzo(ghi)perylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	**0.1**
	Benzo(b,j+k)fluoranthene	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2	**0.3**
	Naphthalene	0.1	mg/kg	9	< 0.1	< 0.1	< 0.1	< 0.1
	Total +ve PAH's	0.05	mg/kg	4000	< 0.05	< 0.05	**0.56**	**2**
	Benzo(a)pyrene TEQ (zero)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene TEQ (LOR)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene TEQ (half LOR)	0.5	mg/kg	40	< 0.5	< 0.5	< 0.5	< 0.5

TABLE 1: Hepher Road - Stockpile Sampling Results
FEBRUARY 2019

				Sample ID	Sample 1	Sample 2	Sample 3	Sample 4
				Sample Date	26/02/2019	26/02/2019	26/02/2019	26/02/2019
Group	**Analyte**	**LOR**	**Units**	**Criteria**	PS	PS	PS	PS
OC Pesticides	Hexachlorobenzene (HCB)	0.1	mg/kg	80	< 0.1	< 0.1	< 0.1	< 0.1
	Aldrin	0.1	mg/kg	22.5	< 0.1	< 0.1	< 0.1	< 0.1
	Dieldrin	0.1	mg/kg	22.5	< 0.1	< 0.1	< 0.1	< 0.1
	Alpha BHC	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Beta BHC	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Lindane (gamma BHC)	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Delta BHC	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Heptachlor	0.1	mg/kg	25	< 0.1	< 0.1	< 0.1	< 0.1
	Heptachlor epoxide	0.1	mg/kg	25	< 0.1	< 0.1	< 0.1	< 0.1
	Alpha Chlordane	0.1	mg/kg	265	< 0.1	< 0.1	< 0.1	< 0.1
	trans-Chlordane	0.1	mg/kg	265	< 0.1	< 0.1	< 0.1	< 0.1
	Endrin	0.1	mg/kg	50	< 0.1	< 0.1	< 0.1	< 0.1
	Endrin aldehyde	0.1	mg/kg	50	< 0.1	< 0.1	< 0.1	< 0.1
	p,p'-DDD	0.1	mg/kg	1200	< 0.1	< 0.1	< 0.1	< 0.1
	p,p'-DDE	0.1	mg/kg	1200	< 0.1	< 0.1	< 0.1	< 0.1
	p,p'-DDT	0.1	mg/kg	1200	< 0.1	< 0.1	< 0.1	< 0.1
	Sum of DDD + DDE + DDT	0.1	mg/kg	3600	< 0.1	< 0.1	< 0.1	< 0.1
	Alpha Endosulfan	0.1	mg/kg	667	< 0.1	< 0.1	< 0.1	< 0.1
	Beta Endosulfan	0.1	mg/kg	667	< 0.1	< 0.1	< 0.1	< 0.1
	Endosulfan sulphate	0.1	mg/kg	667	< 0.1	< 0.1	< 0.1	< 0.1
	Methoxychlor	0.1	mg/kg	2500	< 0.1	< 0.1	< 0.1	< 0.1
Polychlorinated Biphenyls	Arochlor 1016	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Arochlor 1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Arochlor 1232	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Arochlor 1242	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Arochlor 1248	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Arochlor 1254	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Arochlor 1260	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1	< 0.1
	Total Polychlorinated biphenyls	0.1	mg/kg	7	< 0.1	< 0.1	< 0.1	< 0.1
Phenolics	Total Phenols	5	mg/kg	240000	< 5	< 5	< 5	< 5
Asbestos In Soil	Asbestos Detected	0	-	-	< 0	< 0	< 0	< 0

mg/kg	milligrams per kilogram
LOR	limit of reporting
PS	primary sample
Criteria	Criteria adopted from National Environment Protection (Assessment of Site Contamination) Measure 1999 *(NEPC 2013)*

within criteria
criteria exceeded

Notes

Plates

Plate 1: General Site Layout – Lot 104 DP 1056782

(February 2019)

Plate 2: General Site Layout – Lot 104 DP 1056782.

(February 2019)

Plate 3: Stockpile 1 / Sample 1 – Lot 104 DP 1056782.

(February 2019)

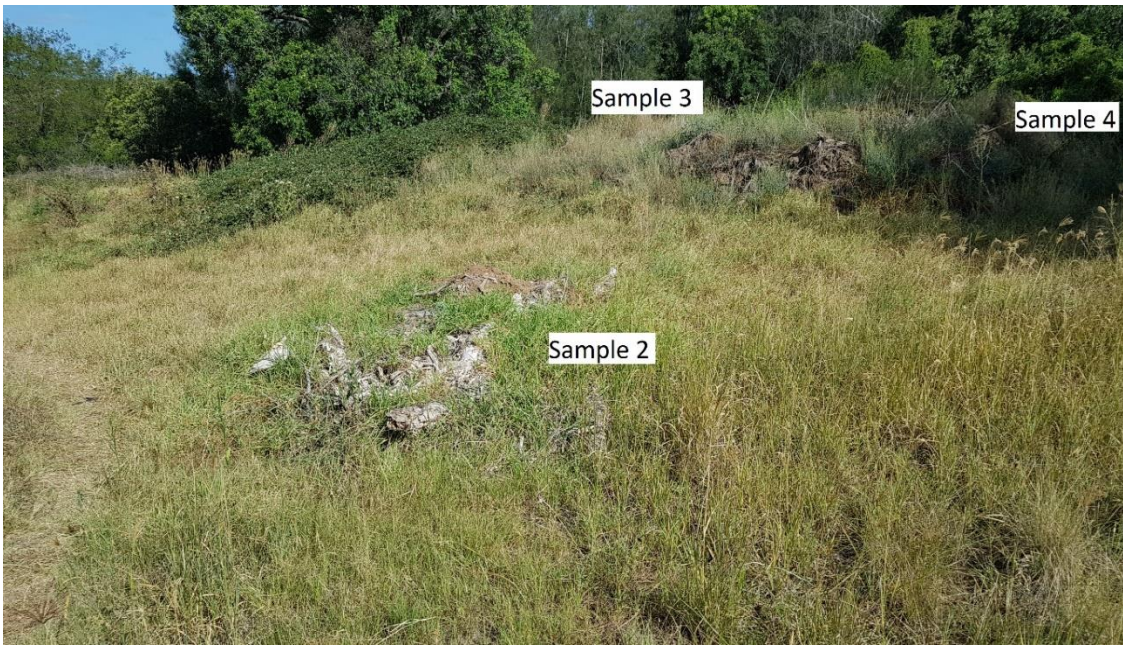


Plate 4: Stockpiles 2, 3 & 4 / Samples 2, 3 & 4 – Lot 104 DP 1056782.

(February 2019)

Appendix A

REGISTERED GROUNDWATER BORE RECORDS

WaterNSW
Work Summary

GW112867

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: 07/03/2011
Final Depth: 6.50 m
Drilled Depth: 6.50 m

Contractor Name: EPOCA ENVIRONMENTAL
Driller: Daniel Giles Fox
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 4.500
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ST PETER	1//518952
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: 6228964.000
Easting: 298152.000
Latitude: 34°03'38.2"S
Longitude: 150°48'46.5"E

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

Remarks

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

***** End of GW112867 *****

Appendix B

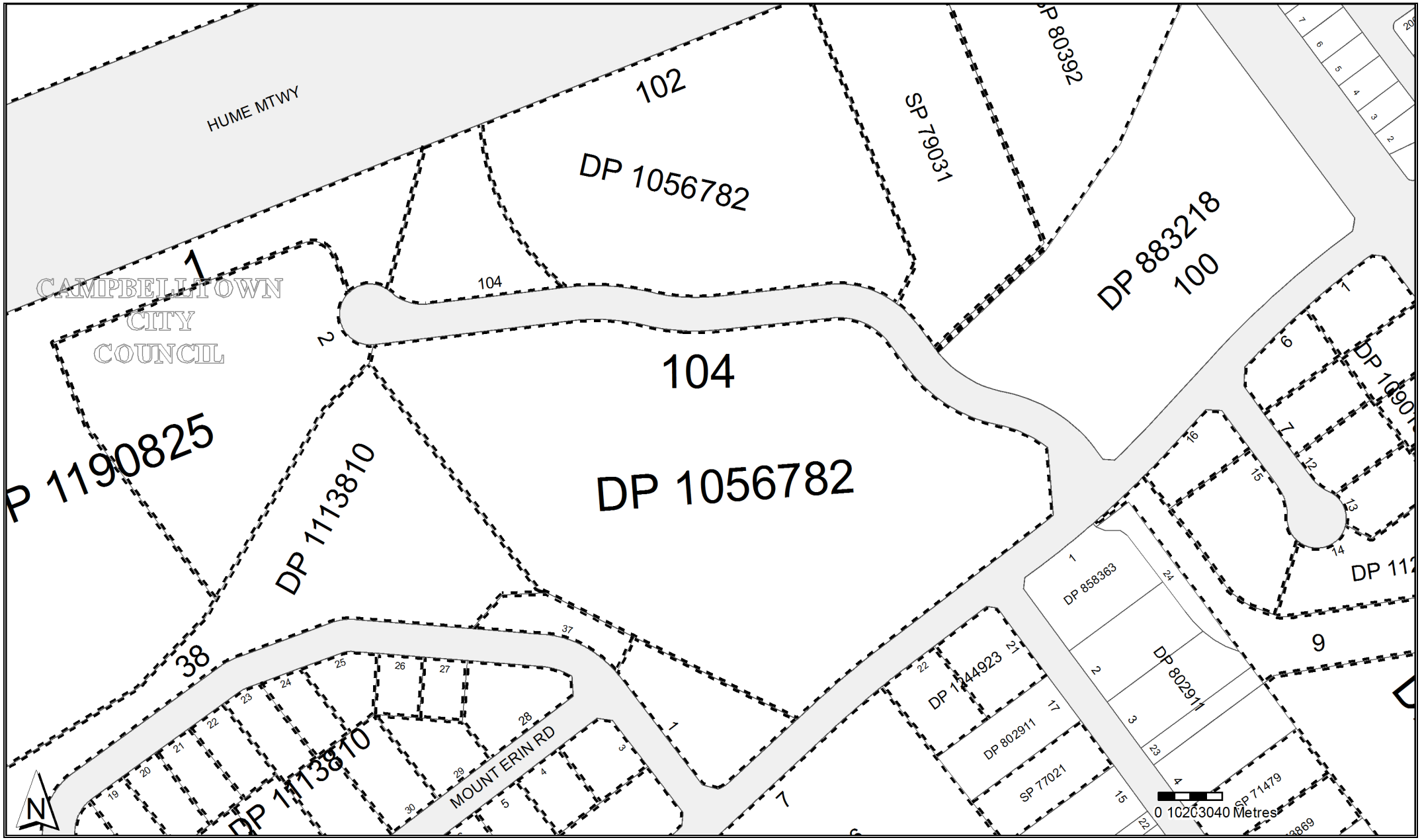
Previous Title Records

LAND REGISTRY SERVICES

Cadastral Records Enquiry Report : Lot 104 DP 1056782

Ref : NOUSER

Locality : CAMPBELLTOWN
Parish : ST PETER
LGA : CAMPBELLTOWN
County : CUMBERLAND



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

	Status	Surv/Comp	Purpose
DP601056			
Lot(s): 7			
DP1011339	REGISTERED	SURVEY	SUBDIVISION
DP1033262	REGISTERED	COMPILATION	EASEMENT
DP1056782			
Lot(s): 102			
DP1063949	REGISTERED	SURVEY	EASEMENT
Lot(s): 102, 104			
DP883218	HISTORICAL	SURVEY	SUBDIVISION
DP1090151			
Lot(s): 3, 4			
DP1234412	REGISTERED	SURVEY	EASEMENT
Lot(s): 1, 2, 3, 4			
DP1126785	REGISTERED	SURVEY	SUBDIVISION
Lot(s): 1, 6, 9			
DP858363	HISTORICAL	SURVEY	SUBDIVISION
Lot(s): 1, 2, 3, 4, 6, 7, 9, 10			
DP752062	HISTORICAL	COMPILATION	CROWN ADMIN NO.
DP1113810			
Lot(s): 1, 2, 3, 4, 5, 6, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 37, 38			
DP883218	HISTORICAL	SURVEY	SUBDIVISION
DP1126785			
Lot(s): 12, 13, 14, 15, 16			
DP752062	HISTORICAL	COMPILATION	CROWN ADMIN NO.
DP858363	HISTORICAL	SURVEY	SUBDIVISION
DP1090151	HISTORICAL	SURVEY	SUBDIVISION
DP1190825			
Lot(s): 2			
DP1237853	REGISTERED	SURVEY	EASEMENT
Lot(s): 1, 2			
DP883218	HISTORICAL	SURVEY	SUBDIVISION
DP1056782	HISTORICAL	SURVEY	SUBDIVISION
DP1233624			
Lot(s): 2			
DP869045	HISTORICAL	SURVEY	SUBDIVISION
DP1042471	HISTORICAL	SURVEY	SUBDIVISION
DP1244923			
Lot(s): 21, 22			
DP858363	HISTORICAL	SURVEY	SUBDIVISION
SP71479			
DP802911	HISTORICAL	SURVEY	SUBDIVISION
SP73869			
DP802911	HISTORICAL	SURVEY	SUBDIVISION
SP77021			
DP802911	HISTORICAL	SURVEY	SUBDIVISION
SP79031			
DP883218	HISTORICAL	SURVEY	SUBDIVISION
DP1056782	HISTORICAL	SURVEY	SUBDIVISION
DP1064899	HISTORICAL	SURVEY	SUBDIVISION
SP93548	REGISTERED	COMPILATION	STRATA SUBDIVISION PLAN
SP80392			
DP883218	HISTORICAL	SURVEY	SUBDIVISION
DP1056782	HISTORICAL	SURVEY	SUBDIVISION
DP1064899	HISTORICAL	SURVEY	SUBDIVISION
SP89726	REGISTERED	COMPILATION	STRATA SUBDIVISION PLAN
SP89844	REGISTERED	COMPILATION	STRATA SUBDIVISION PLAN
SP91446	REGISTERED	COMPILATION	STRATA SUBDIVISION PLAN
SP92580	REGISTERED	COMPILATION	STRATA SUBDIVISION PLAN

Plan	Surv/Comp	Purpose
DP259077	SURVEY	SUBDIVISION
DP601056	SURVEY	SUBDIVISION
DP802911	SURVEY	SUBDIVISION
DP858363	SURVEY	SUBDIVISION
DP883218	SURVEY	SUBDIVISION
DP1056782	SURVEY	SUBDIVISION
DP1090151	SURVEY	SUBDIVISION
DP1113810	SURVEY	SUBDIVISION
DP1126785	SURVEY	SUBDIVISION
DP1190825	SURVEY	SUBDIVISION
DP1190825	UNRESEARCHED	SUBDIVISION
DP1233624	SURVEY	SUBDIVISION
DP1233624	UNRESEARCHED	SUBDIVISION
DP1244923	SURVEY	SUBDIVISION
SP71479	COMPILATION	STRATA PLAN
SP73869	COMPILATION	STRATA PLAN
SP77021	COMPILATION	STRATA PLAN
SP79031	COMPILATION	STRATA PLAN
SP80392	COMPILATION	STRATA PLAN

[redacted]ICATE OF TITLE

12348147

NEW SOUTH WALES

PROPERTY ACT, 1900

Appln No. 16933

Prior Title Vol.2148 Fol.163

Vol. 12348 Fol. 147

Edition issued 11-2-1974.

(Page 1) Vol. 12348 Fol. 147

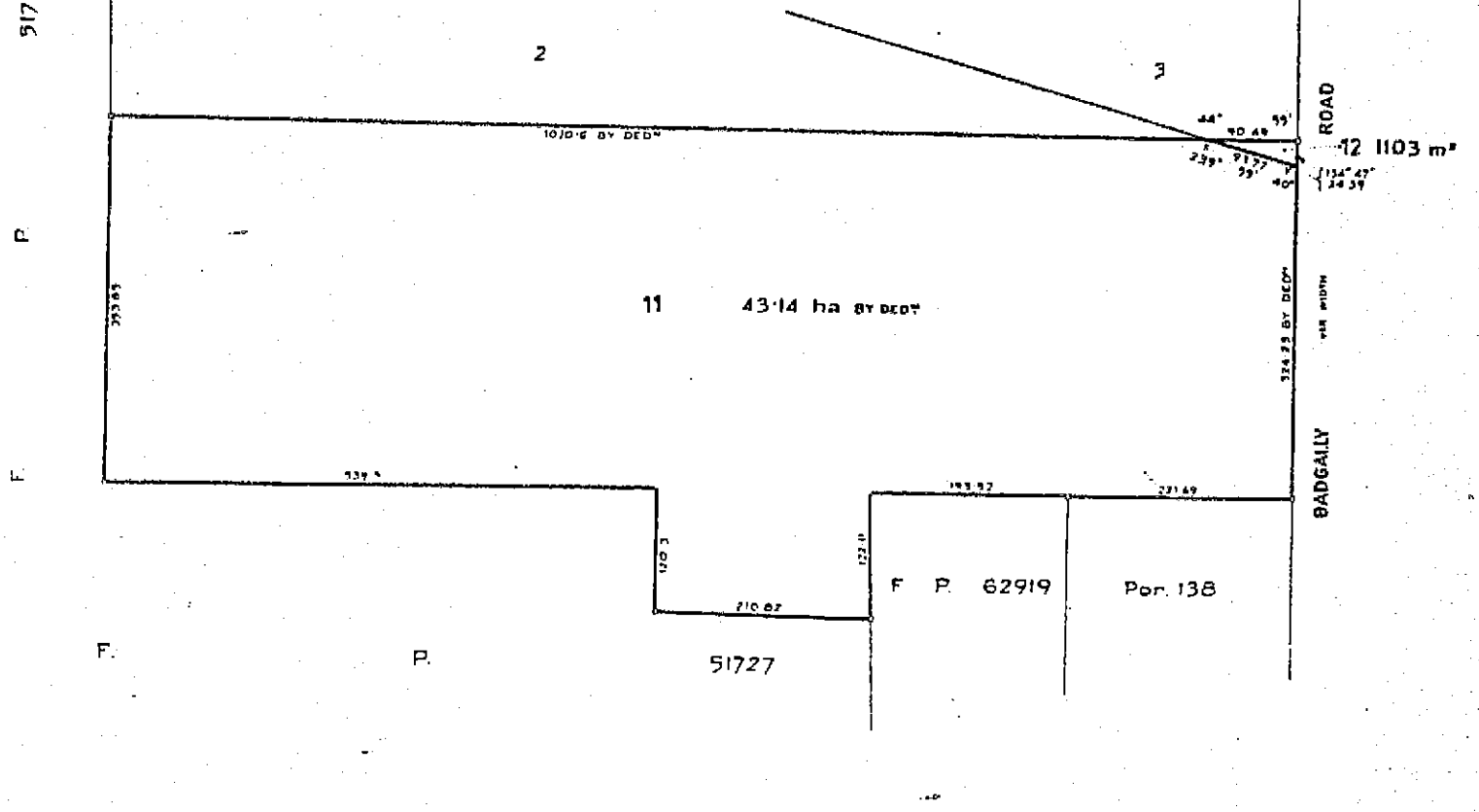
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

PLAN SHOWING LOCATION OF LAND

CANCELLED

LENGTHS ARE IN METRES



LOT 11 DELINEATED HEREON IS TO BE ACQUIRED BY THE COMMISSIONER FOR MAIN ROADS AND WILL ULTIMATELY FORM PART OF A MOTORWAY UNDER PART V^AA OF THE MAIN ROADS ACT, 1924.

ACCESS ACROSS THE BOUNDARY MARKED [illegible] WILL BE DENIED.

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 11 in Deposited Plan 559111 at Campbelltown in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 140 granted to Neil McLeod on 20-6-1816, part of Portion 137 granted to Thomas Burke on 20-6-1816, part of Portion 145 granted to Stephen Blake on 8-10-1816 and part of Portion 144 granted to Benjamin Vaux on 8-10-1816.

FIRST SCHEDULE

JOHNSON & JOHNSON PTY. LIMITED.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. Covenant created by Transfer No.N515635.

DP590605
B147

Vol. 12348 Fol. 147

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This deed is cancelled as to the Whole New Certificates of Title have issued on 10-8-1977 for lots in Deposited Plan No. 590605 as follows:- Lots 1 - 4 Vol. 13396 Fol. 208-211 respectively. REGISTRAR GENERAL					

NEW CERTIFICATE(S) OF TITLE ISSUED ON DP590605
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAWING BRANCH

SECOND SCHEDULE (continued)

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

(Page 2 of 2 pages)

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

[redacted]CATE OF TITLE

NEW SOUTH WALES

[redacted]PROPERTY ACT, 1900

Appln No. 21778

Prior Title Vol. 5939 Fol. 230

Vol. 13103 Fol. 109

CANCELLED

EDITION ISSUED

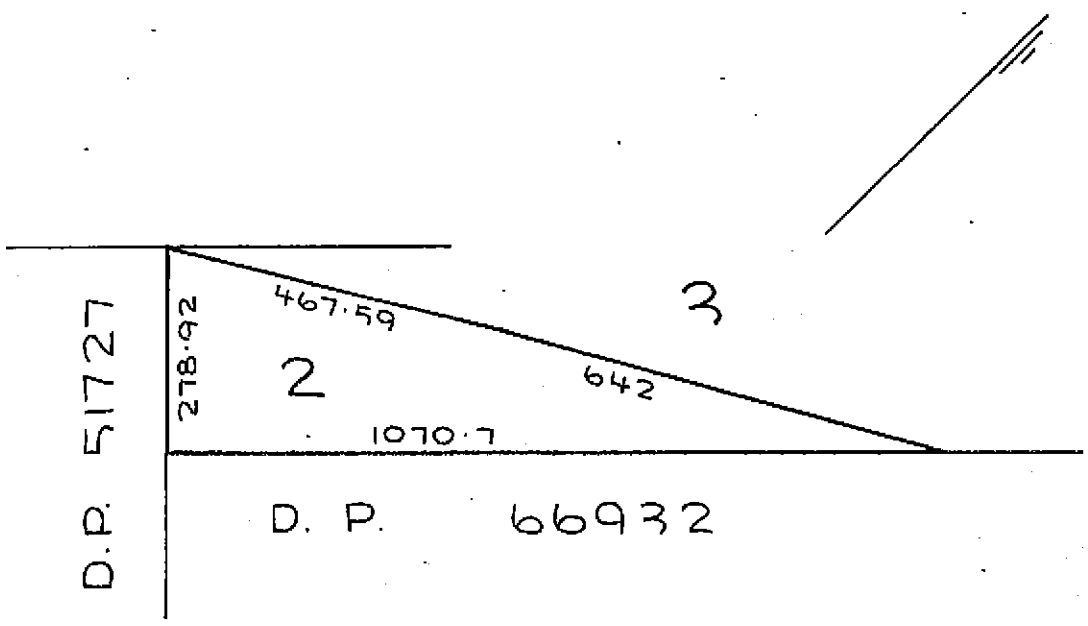
18 8 1976

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

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



P 747018 mw

AREA : 15·25 ha
REDUCTION RATIO 1:10000

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 542996 at Campbelltown in the City of Campbelltown Parish of St. Peter and County of Cumberland being part of Portion 137 granted to Thomas Bourke on 20-6-1816 and part of Portions 144 and 145 granted to Benjamin Vaux and Stephen Blake respectively on 8-10-1816.

FIRST SCHEDULE

LUBO MEDICH of Cabramatta, Theatre Proprietor.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

Vol. 13103 Fol. 109

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This deed is cancelled as to the Whole New Certificates of Title have issued on 10-8-1977 for lots in Deposited Plan No. 590605 as follows:- Lots 1-4 Vol. 13396 Fol. 208-211 respectively. REGISTRAR-GENERAL					

NEW CERTIFICATE(S) OF TITLE ISSUING ON DP590605
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH

CT 1-6-2
DP 590605
14/7/77

SECOND SCHEDULE (continued)

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

(Page 2 of 2 pages)

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

[redacted]

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. 13396 Fol. 208

Appln. No.16933

Prior Title Vol.12348 Fol.147

EDITION ISSUED

10 8 1977

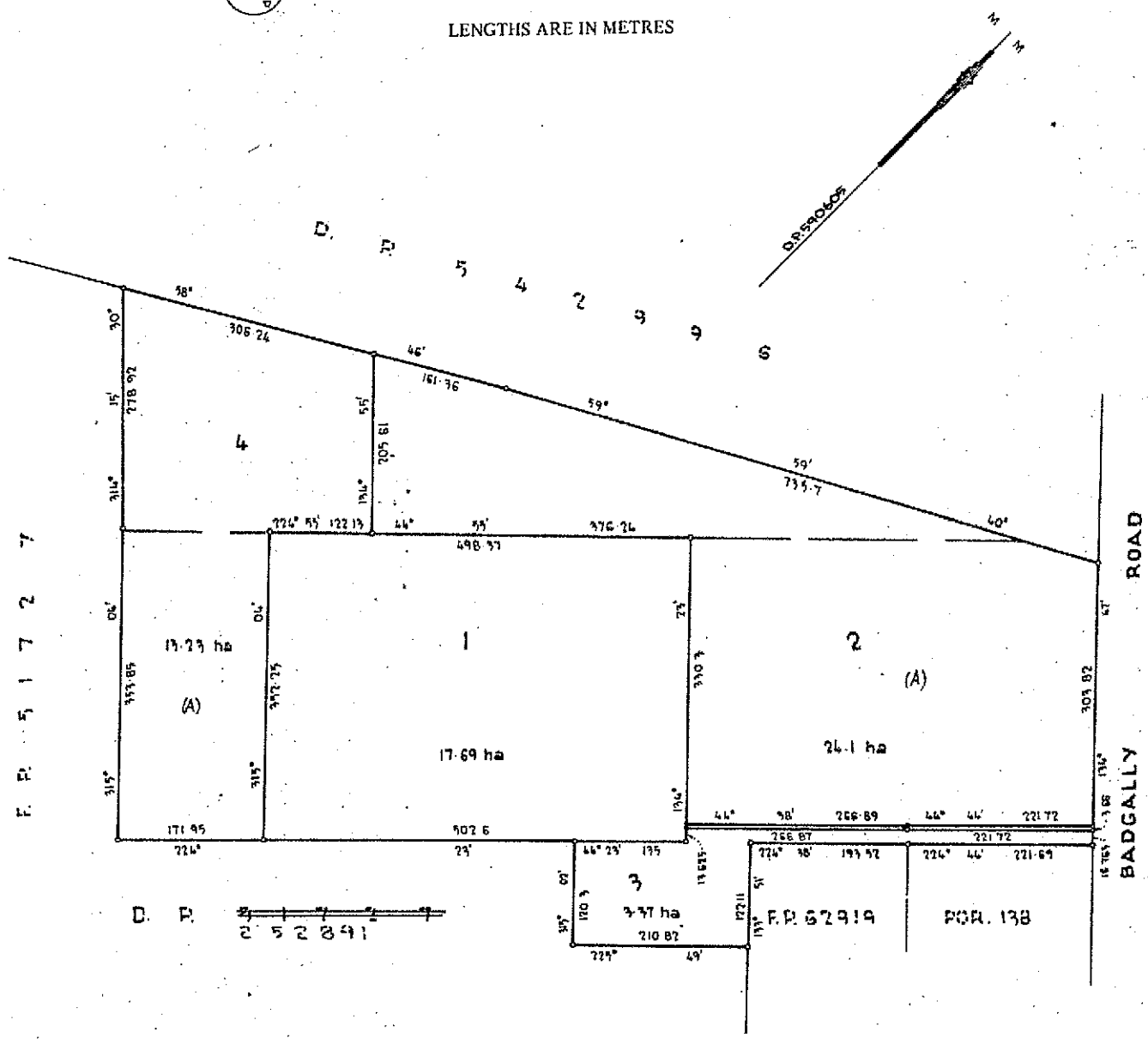
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

(Page 1) Vol. 13396 Fol. 208

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 590605 in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 137 granted to Thomas Bourke on 20-6-1816, part of Portion 145 granted to Stephen Blake on 8-10-1816 and part of Portion 144 granted to Benjamin Vaux on 8-10-1816.

FIRST SCHEDULE

REG. GENL 11-7-78 { JOHNSON & JOHNSON PTY. LIMITED
~~JOHNSON & JOHNSON PTY. LIMITED~~.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. N515635 Covenant.

Vol. 13396 Fol. 208

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
This deed is cancelled as to the whole of the road New Certificates of Title have issued on 29.5.1979 for lots in Hemsted Plan No. 601056 as follows:- Lots 3 & 3 Vol. 13869 Fol. 134 & 137 respectively. REGISTRAR GENERAL The residue of land in this folio comprises the road REGISTRAR GENERAL NEW CERTIFICATE(S) OF TITLE ISSUING ON DP601056 NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH.					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
Covenant	Q720080	———	Created by Transfer No. Q720080	11-7-1978		
			INTERESTS OF THE COUNCIL OF THE CITY OF CAMPBELLTOWN			
			IN THE NEW ROAD SHOWN ON D.P. 601056	1-5-1979		
			Interests created pursuant to Section 88B Conveyancing Act, 1919			
			by the registration of Deposited Plan 601056	1-5-1979		

(Page 2 of 2 pages)

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

Q720080
DP601056

[redacted]

CERTIFICATE OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

Appln. Nos.16933 & 21778

Prior Titles Vol.12348 Fol.147
Vol.13103 Fol.109

Vol. 13396 Fol. 209

CANCELLED R7 EDITION ISSUED

10 8 1977

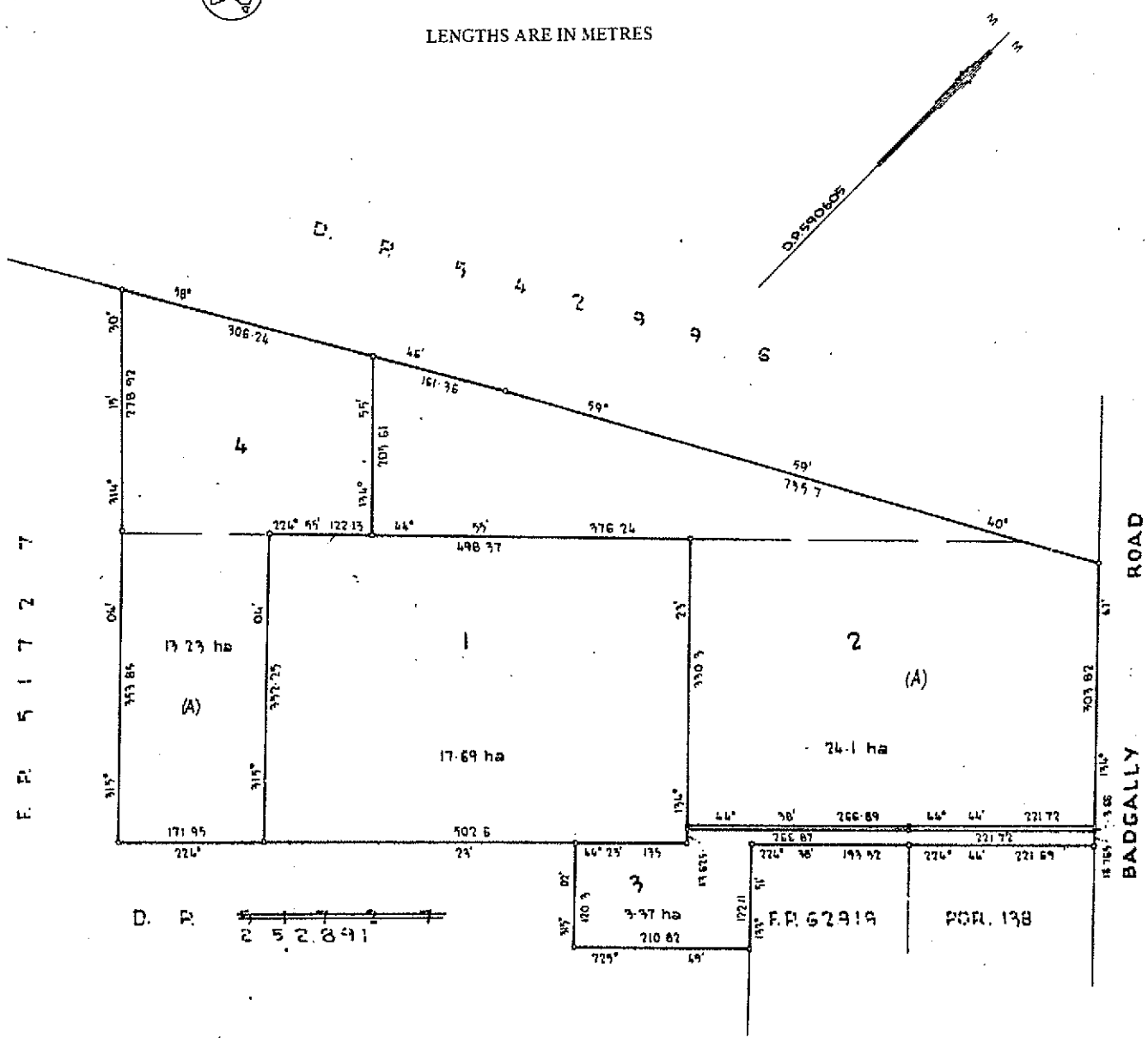
(Page 1) Vol. 13396 Fol. 209

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

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



(A) COVT N515695

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 590605 in the City of Campbelltown Parish of St.Peter and County of Cumberland being part of Portion 137 granted to Thomas Bourke on 20-6-1816 and part of Portion 145 granted to Stephen Blake on 8-10-1816.

FIRST SCHEDULE

~~JOHNSON & JOHNSON PTY. LIMITED as to the part of the land above described formerly comprised in Certificate of Title Volume 12348 Folio 147 and LUBO MEDICH of Cabramatta, Theatre Proprietor to the part of the land formerly comprised in Certificate of Title Volume 13103 Folio 109.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. N515635 Covenant affecting the part of the land above described designated (A) in plan hereon.

Dual Entries Filed in ... Q674110 T/Cov DP601056 ... 2/5/7...

Vol. 13396 Fol. 209

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
Johnson & Johnson Pty. Limited	Transfer	Q674110	----	10-5-1978	[signature]

This deed is cancelled as to the whole ex road

New Certificates of Title have issued on 29.5.1979

for lots in deposited Plan No. 601056 as follows:-

Lots 5 to 8 Vol. 13869 Fol. 134 to 137 respectively.

[signature]

REGISTRAR GENERAL

The residue of land in this fo... ...prises the road.

[signature]

REGISTRAR GENERAL

NEW CERTIFICATE(S) OF TITLE ISSUING ON DP601056
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH.

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
Covenant	Q674110	------	Created by Transfer No.Q674110	10-5-1978	[signature]	
			INTERESTS OF THE COUNCIL OF THE CITY OF CAMPBELLTOWN			
			IN THE NEW ROAD SHOWN ON D.P. 601056	1-5-1979	[signature]	

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

[redacted]ICATE OF TITLE

13869/134

NEW SOUTH WALES

[redacted] PROPERTY ACT, 1900

Appln. No. 16933

Vol. 13869 Fol. 134

Prior Titles Vol.13396 Fol.208
Vol.13396 Fol.210

EDITION ISSUED

30 5 1979

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

CANCELLED

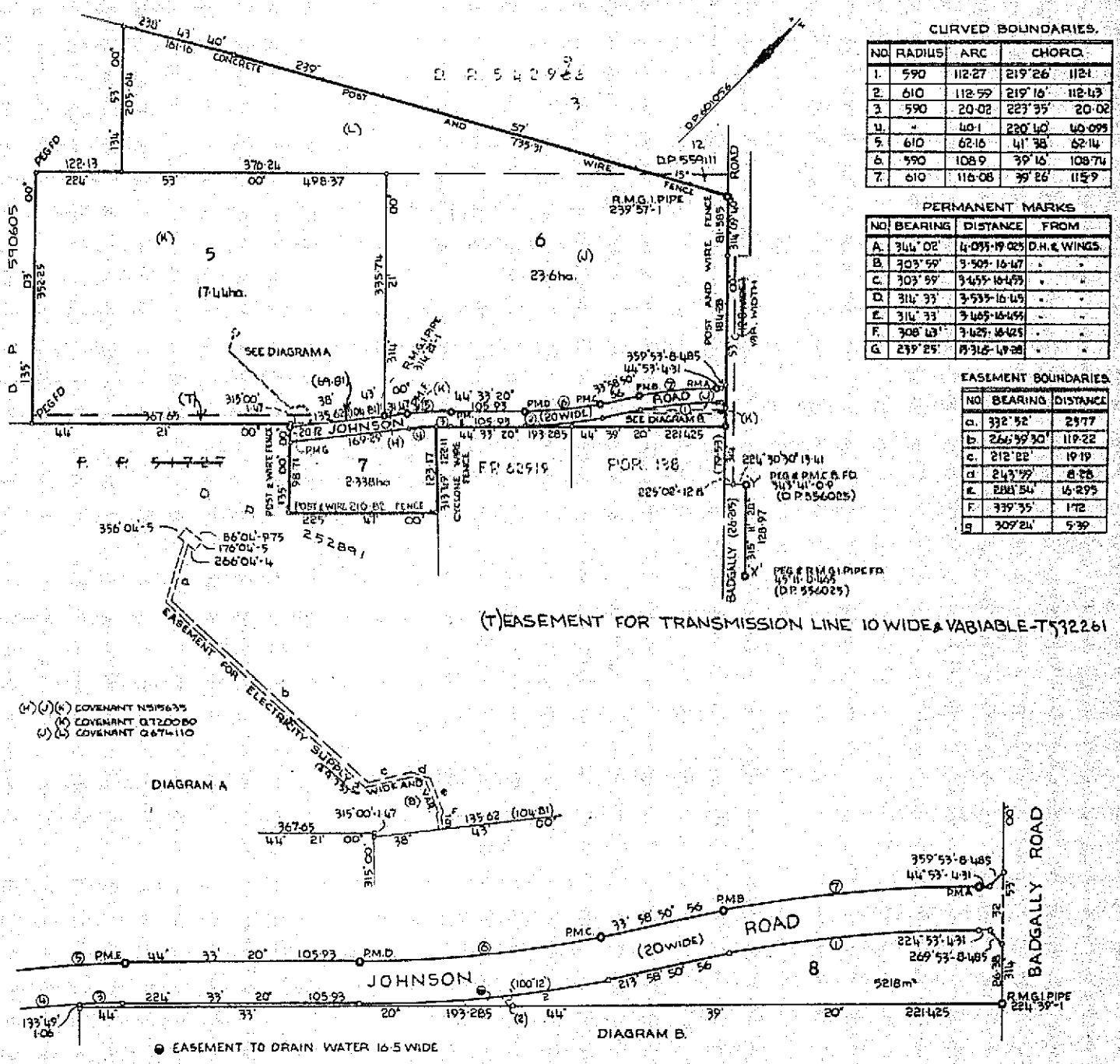
Registrar General.

SEE AUTO FOLIO

(Page 1) Vol. 13869 Fol. 134

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



CURVED BOUNDARIES.

NO.	RADIUS	ARC	CHORD	
1.	590	112·27	219°26'	112·1
2.	610	112·59	219°16'	112·43
3.	590	20·02	223°35'	20·02
4.	"	40·1	230°40'	40·099
5.	610	62·16	41°38'	62·14
6.	590	108·9	39°16'	108·74
7.	610	116·08	39°26'	115·9

PERMANENT MARKS

NO.	BEARING	DISTANCE	FROM
A.	344°02'	4·095-19·025	D.H. & WINGS
B.	303°59'	3·509-16·67	" "
C.	303°59'	3·455-16·455	" "
D.	314°33'	3·535-16·45	" "
E.	314°33'	3·465-16·455	" "
F.	308°43'	3·429-16·425	" "
G.	239°25'	19·316-19·28	" "

EASEMENT BOUNDARIES.

NO.	BEARING	DISTANCE
a.	332°52'	25·77
b	266°59'30"	119·22
c.	212°22'	19·19
d	243°59'	8·28
e.	288°54'	16·295
f.	339°35'	1·72
g	309°21'	5·39

S

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 5 in Deposited Plan 601056 at Campbelltown in the City of Campbelltown Parish of St. Peter County of Cumberland being part of Portion 137 granted to Thomas Bourke on 20-6-1816, part of Portion 144 granted to Benjamin Vaux on 8-10-1816, part of Portion 145 granted to Stephen Blake on 8-10-1816 and part of Portion 140 granted to Neil McLeod on 20-6-1816.

FIRST SCHEDULE

JOHNSON & JOHNSON PTY. LIMITED.

GRY

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
CY 2. N515635 P Covenant affecting the part of the land above described shown so burdened in Deposited Plan 601056.
CY 3. Q720080 P Covenant affecting the part of the land above described shown so burdened in Deposited Plan 601056.
EA (SB) 4. DP601056 P Easement for electricity supply affecting the land shown so burdened in Deposited Plan 601056.
EW Z 5. DP601056 P Easement to drain water appurtenant to the land above described.

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

RG 2/62

FIRST SCHEDULE (continued)

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

S491711 P4Y
DP 628411 6/10
C.T. 21.4.83
T 532261 T&G.R
X734681WX
~~DP 640329 R~~

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
~~S491711 Caveat by Lubo Medich. Registered 5-6-1981~~					Withdrawn	X073468
ET 1532261/P		Transfer Easement for transmission line affecting the land shown so burdened in DP 117632 & DP 628411.				
		in the plan hereon. Registered 10-8-1983				
EASEMENT	DP 640329 P	DP 640329 EASEMENT FOR DRAINAGE AFFECTING THE PART OF THE LAND WITHIN DESCRIBED SHOWN SO BURDENED IN DP 640329	30/10/87			

ED

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

[redacted]ICATE OF TITLE

NEW SOUTH WALES

[redacted] PROPERTY ACT, 1900

Appln. Nos. 16933 & 21778

Prior Titles Vol.13396 Fol.208
Vol.13396 Fol.209

Vol. 13869 Fol. 135

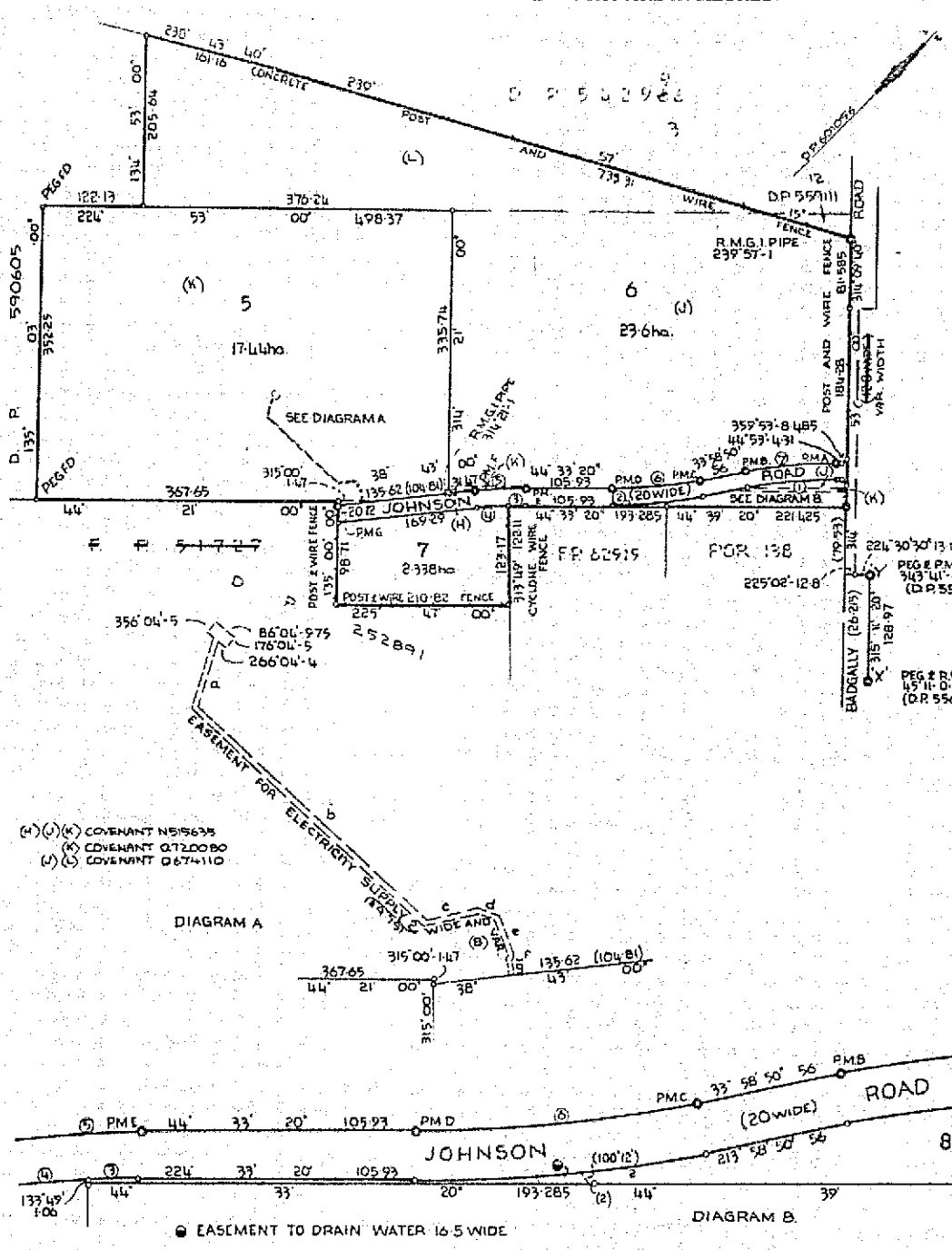
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

SEE AUTO FOLIO

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



CURVED BOUNDARIES

NO.	RADIUS	ARC	CHORD	
1.	590	112·27	219°26'	112·1
2.	610	112·59	219°16'	112·43
3.	590	20·02	223°35'	20·02
4.	-	40·1	220°40'	40·099
5.	610	62·16	41°38'	62·14
6.	590	108·9	39°16'	108·74
7.	610	116·08	39°26'	115·9

PERMANENT MARKS

NO.	BEARING	DISTANCE	FROM
A.	344°02'	4·055·19·025	D.H. & WINGS.
B.	303°59'	3·505·16·147	-
C.	303°59'	3·495·16·455	-
D.	314°33'	3·535·16·145	-
E.	314°33'	3·485·16·455	-
F.	308°49'	3·425·16·425	-
G.	239°25'	19·316·49·28	-

EASEMENT BOUNDARIES

NO.	BEARING	DISTANCE
a.	332°52'	25·77
b.	266°39'30"	119·22
c.	212°22'	19·19
d.	243°59'	8·28
e.	288°54'	16·295
f.	339°35'	1·72
g.	309°24'	5·39

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 6 in Deposited Plan 601056 at Campbelltown in the City of Campbelltown Parish of St. Peter County of Cumberland being part of Portion 137 granted to Thomas Bourke on 20-6-1816 and part of Portion 145 granted to Stephen Blake on 8-10-1816.

FIRST SCHEDULE

JOHNSON & JOHNSON PTY. LIMITED.

SECOND SCHEDULE

GRY

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
CY 2. N515635 P Covenant affecting the part of the land above described shown so burdened in Deposited Plan 601056.
CY 3. Q674110 P Covenant affecting the part of the land above described shown so burdened in Deposited Plan 601056.
CY 4. Q720080 P Covenant affecting the part of the land above described shown so burdened in Deposited Plan 601056.
EWZ 5. DP601056 F Easement to drain water appurtenant to the land above described.

Vol. 13869 Fol. 135

DP 640329

FIRST SCHEDULE (continued)

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

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
ED DP 640329 P	EASEMENT FOR DRAINAGE AFFECTING THE PART OF THE LAND WITHIN DESCRIBED SHOWN SO BURDENED IN D.P. 640329		30/10/87			

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

Form: 97-01T
Licence: AUS/0634/96

TRANSFER

New South Wales

Real Property Act 1900

J494403U

Instructions for filling out this form are available from the Land Titles Office

Office of State Revenue use only

(A) **LAND TRANSFERRED**
If appropriate, specify the share or part transferred.

Folio Identifiers 5/601056, 6/601056, 7/601056
3/858363

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone
605M	LEGALITIES PTY LIMITED DX 725 SYDNEY Reference (15 character maximum): SLADE:RAM/24158

(C) **TRANSFEROR** **JOHNSON & JOHNSON PTY LIMITED** ACN 000 023 709

(D) acknowledges receipt of the consideration of $16,300,000.00

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

(E) Encumbrances (if applicable): 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

T TS (s713 LGA) TW (Sheriff)	**THE UNITING CHURCH (NSW) TRUST ASSOCIATION** ACN 000 022 480

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE** 28 September 1998

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

THE COMMON SEAL of JOHNSON & JOHNSON PTY LIMITED was hereunto affixed by the authority of the board of directors and in the ~~Signature of Witness~~ presence of:

Common Seal
JOHNSON & JOHNSON PTY. LTD. A.C.N. 000 023 709

~~Name of Witness (BLOCK LETTERS)~~

~~Address of Witness~~

Secretary

Director ~~Signature of Transferor~~

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Solicitor for ~~Signature of~~ Transferee
R A Manwaring

G:\WORK\MG\24158-10.FEB

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name in block letters.

Checked by (LTO use) .....

PLAN FORM 2

Plan Drawing only to appear in this space

SIGNATURE AND SEALS ONLY

THE COMMON SEAL of THE UNITING CHURCH (N.S.W.) TRUST ASSOCIATION A.C.N. 000 022 480 was hereunto affixed by the authority of the Directors previously given and in the presence of:-

Secretary — Director

ANTHONY ROBERT DIMAURO — James Stephen MEIN

CAMPBELLTOWN CITY COUNCIL
ACCEPTED
GENERAL MANAGER / AUTHORISED PERSON

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....

Paper No. .....

Field Book ..... pages .....

Subdivision Certificate

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

SUBDIVISION ..... *set out herein*
(Insert 'subdivision' or 'new road')

†Authorised Person/~~General Manager/Accredited Certifier~~

Consent Authority:

Date of endorsement: 9TH AUGUST 2001

Accreditation No.:

Subdivision Certificate No.: 53 of 2001

File No.: 96676

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

†*Delete whichever is inapplicable*

SURVEY PRACTICE REG. 1996 CL. 32 (2)

MARK	ISG CO-ORDINATES EASTING	NORTHING	ZONE	ACC
TS 974	281 591·591	1 229 330·340	56	2
TS 4988	283 091·102	1 226 045·863	56	2
SSM 37356	281 584·758	1 229 321·186	56	2

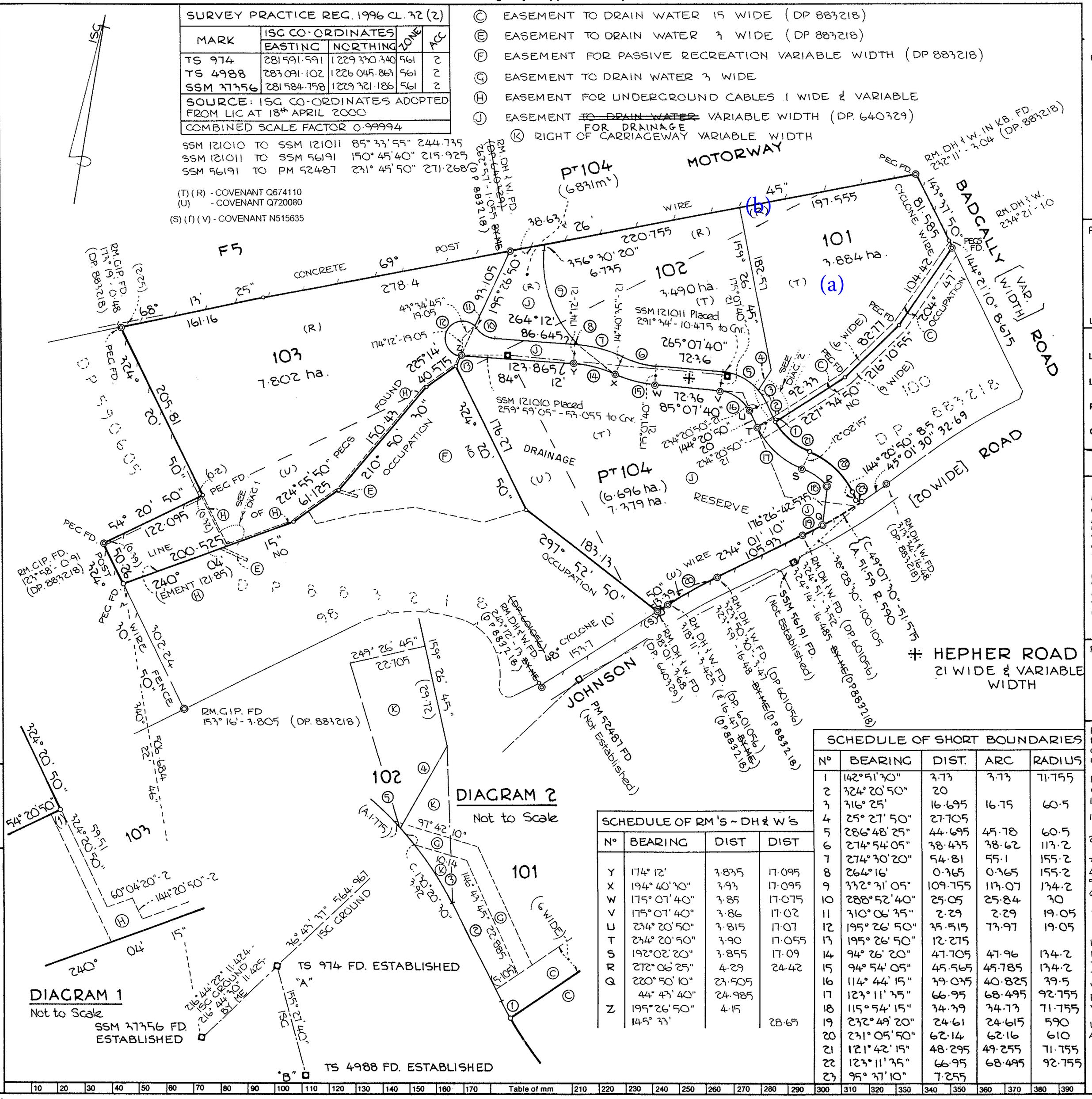
SOURCE: ISG CO-ORDINATES ADOPTED FROM LIC AT 18th APRIL 2000

COMBINED SCALE FACTOR 0·99994

SSM 121010	TO SSM 121011	85° 33' 55"	244·735
SSM 121011	TO SSM 56191	150° 45' 40"	215·925
SSM 56191	TO PM 52487	231° 45' 50"	271·268

(T) (R) - COVENANT Q674110
(U) - COVENANT Q720080
(S) (T) (V) - COVENANT N515635

(C) EASEMENT TO DRAIN WATER 15 WIDE (DP 883218)
(E) EASEMENT TO DRAIN WATER 3 WIDE (DP 883218)
(F) EASEMENT FOR PASSIVE RECREATION VARIABLE WIDTH (DP 883218)
(G) EASEMENT TO DRAIN WATER 3 WIDE
(H) EASEMENT FOR UNDERGROUND CABLES 1 WIDE & VARIABLE
(J) EASEMENT ~~TO DRAIN WATER~~ FOR DRAINAGE VARIABLE WIDTH (DP. 640329)
(K) RIGHT OF CARRIAGEWAY VARIABLE WIDTH



SCHEDULE OF RM 'S ~ DH & W'S

N°	BEARING	DIST	DIST
Y	174° 12'	3·835	17·095
X	194° 40' 30"	3·93	17·095
W	175° 07' 40"	3·85	17·075
V	175° 07' 40"	3·86	17·02
U	234° 20' 50"	3·815	17·07
T	234° 20' 50"	3·90	17·055
S	192° 02' 20"	3·855	17·09
R	272° 06' 25"	4·29	24·42
Q	220° 50' 10"	23·505	
	44° 43' 40"	24·985	
Z	195° 26' 50"	4·15	
	145° 33'		28·65

SCHEDULE OF SHORT BOUNDARIES

N°	BEARING	DIST.	ARC	RADIUS
1	142° 51' 30"	3·73	3·73	71·755
2	324° 20' 50"	20		
3	316° 25'	16·695	16·75	60·5
4	25° 27' 50"	27·705		
5	286° 48' 25"	44·695	45·78	60·5
6	274° 54' 05"	38·435	38·62	113·2
7	274° 30' 20"	54·81	55·1	155·2
8	264° 16'	0·365	0·365	155·2
9	332° 31' 05"	109·755	113·07	134·2
10	288° 52' 40"	25·05	25·84	30
11	310° 06' 35"	2·29	2·29	19·05
12	195° 26' 50"	35·515	73·97	19·05
13	195° 26' 50"	12·275		
14	94° 26' 20"	47·705	47·96	134·2
15	94° 54' 05"	45·565	45·785	134·2
16	114° 44' 15"	39·035	40·825	39·5
17	123° 11' 35"	66·95	68·495	92·755
18	115° 54' 15"	34·39	34·73	71·755
19	232° 49' 20"	24·61	24·615	590
20	231° 05' 50"	62·14	62·16	610
21	121° 42' 15"	48·295	49·255	71·755
22	123° 11' 35"	66·95	68·495	92·755
23	95° 37' 10"	7·255		

DP1056782

Registered: 7.8.2003

CA: SEE CERTIFICATE

Title System: TORRENS

Purpose: SUBDIVISION

Ref Map: U 7322-3,U7330-9 U8230-73,U8222-11

Last Plan: DP883218

PLAN OF SUBDIVISION OF LOT 99 IN DP. 883218

Lengths are in metres. Reduction Ratio 1:3000

LGA CAMPBELLTOWN

Locality: CAMPBELLTOWN

Parish: ST. PETER

County: CUMBERLAND

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

Surveyors (Practice) Regulation 1996

I, STEPHEN J ABBOTT

of LEAN LACKENBY & HAYWARD L'POOL 209 Northumberland St Liverpool 2170

a surveyor registered under the Surveyors Act, 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveyors (Practice) Regulation 1996 and was completed on 22nd May 2000

The survey relates to lots 101, 102, 104 & 104

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

Datum Line: "A" - "B"
Zone: Suburban/Country

(Signature) Stephen Abbott

Surveyor registered under the Surveyors Act 1929

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

DP's 883218, 601056, 640329, 590605

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

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 AS AMENDED IT IS INTENDED TO CREATE :

1. EASEMENT TO DRAIN WATER 3 WIDE
2. EASEMENT FOR UNDERGROUND CABLES 1 WIDE & VARIABLE
3. RESTRICTION ON THE USE OF LAND
4. RESTRICTION ON THE USE OF LAND
5. RESTRICTION ON THE USE OF LAND
6. RIGHT OF CARRIAGEWAY VARIABLE WIDTH
7. RESTRICTION ON THE USE OF LAND

IT IS INTENDED TO DEDICATE HEPHER ROAD 21 WIDE & VARIABLE TO THE PUBLIC AS ROAD SUBJECT TO EASEMENT FOR DRAINAGE VARIABLE WIDTH (DP. 640329) & EASEMENT TO DRAIN WATER 15 WIDE (DP 883218)

IT IS INTENDED TO CREATE LOT 104 AS DRAINAGE RESERVE

SURVEYOR'S REFERENCE: 55489/2 Checklist

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

PLAN AMENDED BY C. DUTTON 5.8.03

Req:R923563 /Doc:DP 1056782 P /Rev:11-Aug-2003 /Sts:SC.OK /Pgs:ALL /Prt:07-Feb-2019 15:36 /Seq:1 of 1
Ref:advlegs /Src:P

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
7/2/2019 8:38PM

FOLIO: 6/601056

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13869 FOL 135

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
31/8/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
15/9/1998	5266801	CAVEAT	
29/12/1998	5494462	WITHDRAWAL OF CAVEAT	
29/12/1998	5494463	TRANSFER	EDITION 1
13/1/1999	5522755	DEPARTMENTAL DEALING	
5/2/1999	DP883218	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

advlegs PRINTED ON 7/2/2019

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
7/2/2019 8:45PM

FOLIO: 99/883218

First Title(s): OLD SYSTEM
Prior Title(s): 5-6/601056

Recorded	Number	Type of Instrument	C.T. Issue
9/2/1999	DP883218	DEPOSITED PLAN	FOLIO CREATED EDITION 1
7/8/2003	DP1056782	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

advlegs PRINTED ON 7/2/2019

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
7/2/2019 8:51PM

FOLIO: 104/1056782

First Title(s): OLD SYSTEM
Prior Title(s): 99/883218

Recorded	Number	Type of Instrument	C.T. Issue
7/8/2003	DP1056782	DEPOSITED PLAN	FOLIO CREATED EDITION 1

*** END OF SEARCH ***

advlegs PRINTED ON 7/2/2019

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 104/1056782

SEARCH DATE	TIME	EDITION NO	DATE
7/2/2019	3:37 PM	1	7/8/2003

LAND

LOT 104 IN DEPOSITED PLAN 1056782
AT CAMPBELLTOWN
LOCAL GOVERNMENT AREA CAMPBELLTOWN
PARISH OF ST PETER COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1056782

FIRST SCHEDULE

CAMPBELLTOWN CITY COUNCIL

SECOND SCHEDULE (7 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 N515635 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
3 Q720080 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
4 Q674110 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.
5 DP601056 EASEMENT TO DRAIN WATER APPURTENANT TO THE LAND ABOVE DESCRIBED
6 DP640329 EASEMENT FOR DRAINAGE VARIABLE WIDTH AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
7 DP883218 RESTRICTION(S) ON THE USE OF LAND

NOTATIONS

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

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 7/2/2019

ADVANCE LEGAL SEARCHERS PTY LTD

(ACN 147 943 842)
ABN 82 147 943 842

18/36 Osborne Road,
Manly NSW 2095

Telephone: +612 9977 6713
Mobile: 0412 169 809
Email: search@alsearchers.com.au

08th February 2019

LOTSEARCH PTY LTD
Level 3, 68 Alfred Street,
MILSONS POINT, NSW 2061

Attention: Rosemary Hulak,

RE: **Hepher Road,**
Campbelltown
Reference: LS005029_AS

Current Search

Folio Identifier 104/1056782 (title attached)
DP 1056782 (plan attached)
Dated 07th February 2019
Registered Proprietor:
CAMPBELLTOWN CITY COUNCIL

Title Tree
Lot 104 DP 1056782

Folio Identifier 104/1056782

Folio Identifier 99/883218

Folio Identifier 6/601056

Certificate of Title Volume 13869 Folio 135

Certificate of Title Volume 13396 Folio 209

(a)

Certificate of Title Volume 12348 Folio 147

Certificate of Title Volume 2148 Folio 163

****

(b)

Certificate of Title Volume 13103 Folio 109

Certificate of Title Volume 5939 Folio 230

Certificate of Title Volume 3243 Folio 60

****

Land Part Portion 137 Parish St. Peter
Granted to Thomas Bourke 20th June 1816
& Part Portion 145 Parish St. Peter
Granted to Stephen Blake on 8th October 1816

****

Summary of proprietor(s)
Lot 104 DP 1056782

Year	Proprietor(s)
	(Lot 104 DP 1056782)
2003 – todate	Campbelltown City Council
	(Lot 99 DP 883218)
1999 – 2003	The Uniting Church (NSW) Trust Association
	(Lot 6 DP 601056)
1998 – 1999	The Uniting Church (NSW) Trust Association
1988 – 1998	Johnson & Johnson Pty. Limited
	(Lot 6 DP 601056 – CTVol 13869 Fol 135)
1979 – 1988	Johnson & Johnson Pty. Limited
	(Lot 2 DP 590605 – CTVol 13396 Fol 209)
1978 – 1979	Johnson & Johnson Pty. Limited
1977 – 1978	Johnson & Johnson Pty. Limited Lubo Medich, theatre proprietor

See Notes (a) & (b)

Note (a)

	(Lot 11 DP 559111 – CTVol 12348 Fol 147)
1974 – 1977	Johnson & Johnson Pty. Limited
	(Part Portion 140, 137, 145 & 144 Parish St. Peter – Area 106 Acres 3 Roods 20 ½ Perches – CTVol 2148 Fol 163)
1967 – 1974	Johnson & Johnson Pty. Limited
1935 – 1967	Mary Ellen Harrington, wife of Patrick Francis Harrington, dairyman
1934 – 1935	Catherine Teresa Keihone, widow
1911 – 1934	Mary Bourke, spinster

****

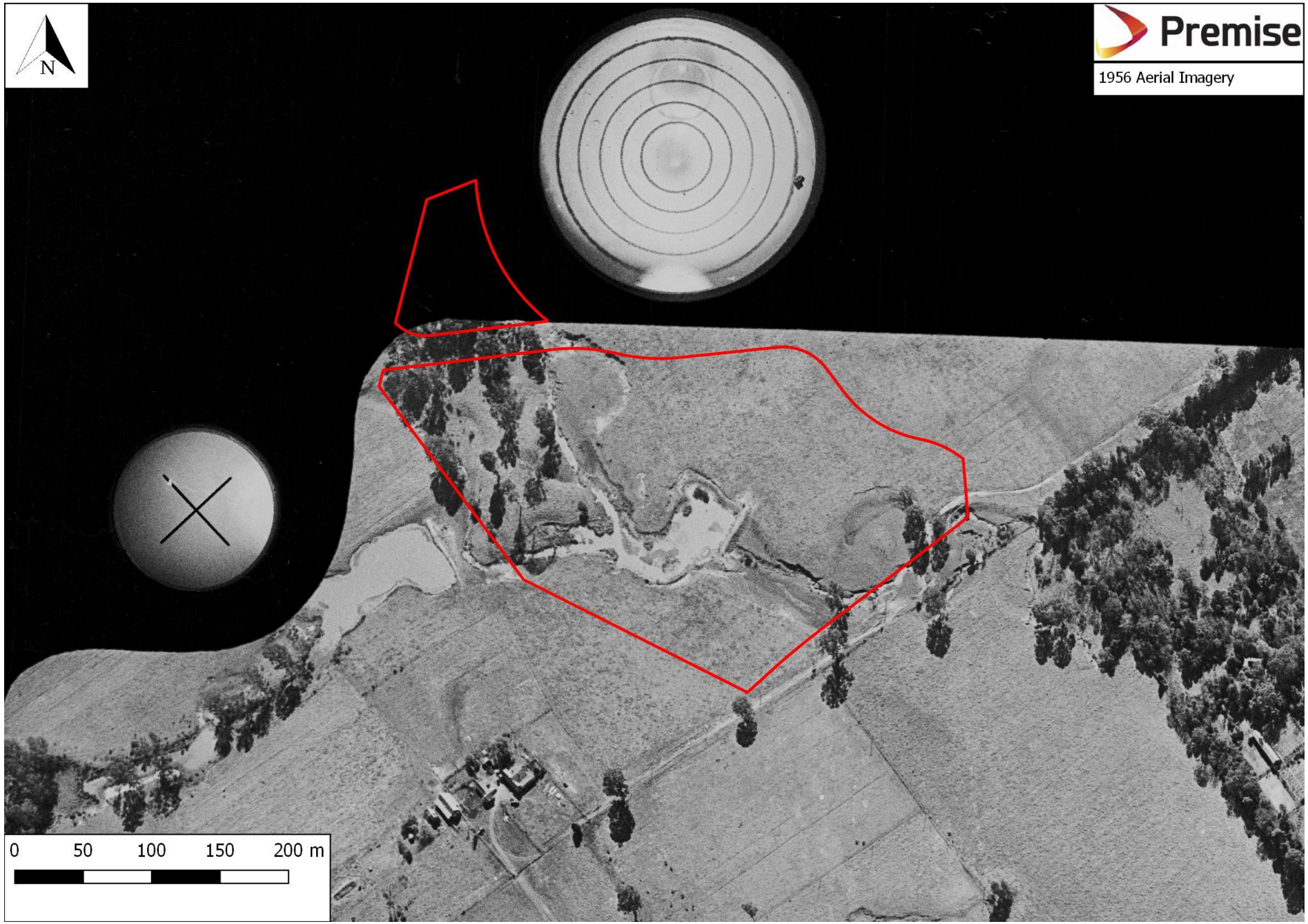
Note (b)

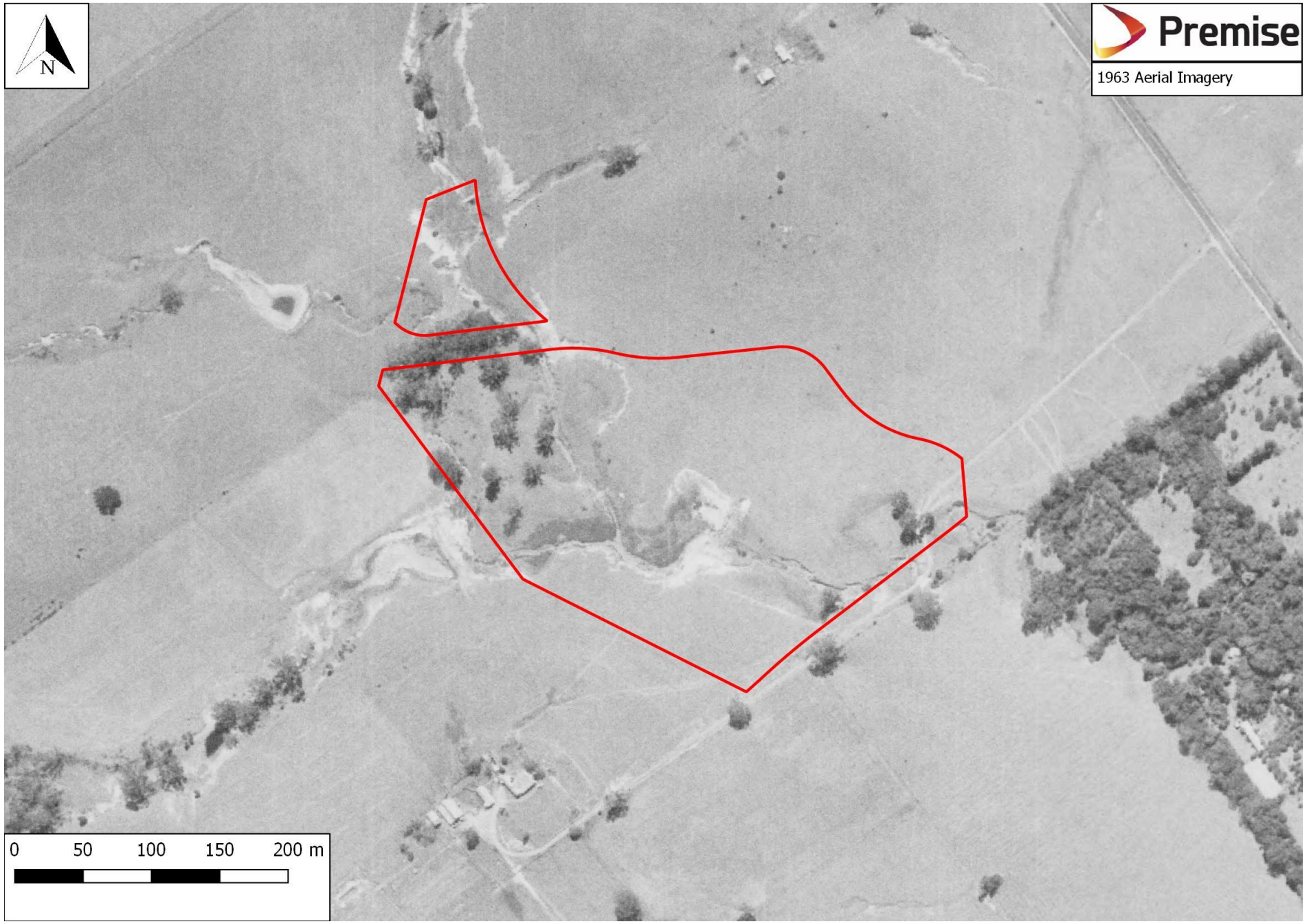
	(Lot 2 DP 542996 – CTVol 13103 Fol 109)
1976 – 1977	Lubo Medich, theatre proprietor
	(Part Portion 137, 145 & 144 Parish St. Peter – Area 80 Acres 1 Rood 23 Perches – CTVol 5939 Fol 230)
1966 – 1976	Lubo Medich, theatre proprietor
1961 – 1966	Minnie Beatrice Mc Clelland, widow Allan Charles Mc Clelland, school teacher Elwyn Miller, married woman
1949 – 1961	Charles Ernest Mc Clelland, farmer
1949 – 1949	Jane Lindsay, spinster
1949 – 1949	Gladys Ellen Campbell, widow
	(Part Portion 137, 145 & 144 Parish St. Peter – Area 80 Acres 1 Rood 23 Perches – CTVol 3243 Fol 80)
1946 – 1949	Andrew Edward Campbell, accountant
1940 – 1946	Charles Swan, farmer
1937 – 1940	Florence Phillips, widow George Alfred Kaves, solicitor
(1922 – 1937)	*(lease to Percy Baxter, farmer of part)*
1922 – 1937	William Phillips, gentleman
1922 – 1922	Clive Wynter Ducat, farmer Clarence Alwyn Ducat, farmer Victor Alan Ducat, farmer
1921 – 1922	John Edmund Bourke, gentleman Alice Mary Bourke, widow Mary Gertrude Bourke, spinster
1921 – 1921	John David Bourke, retired school teacher
(1916 – 1921)	*(lease to Thomas Frost)*

****

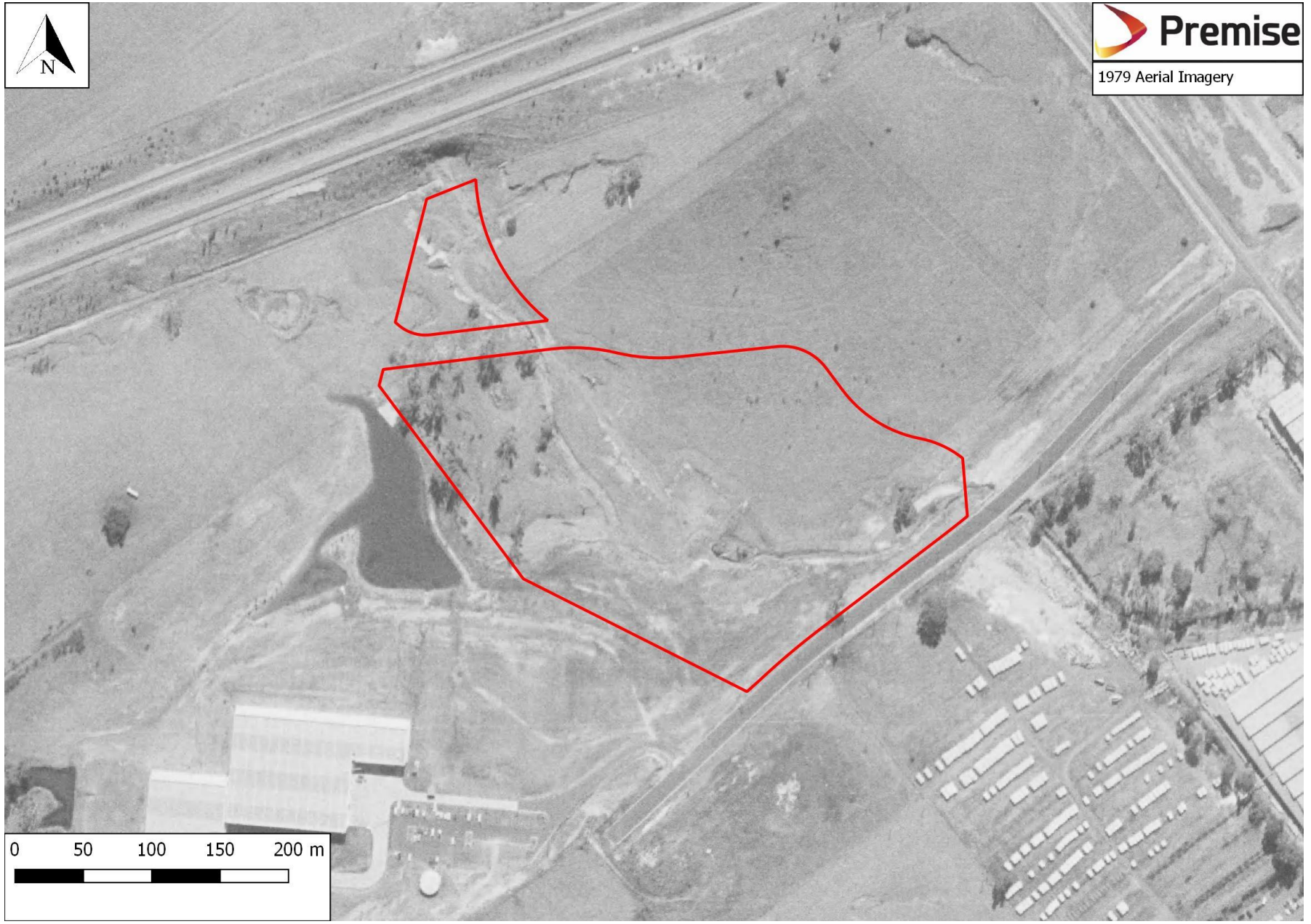
Appendix C

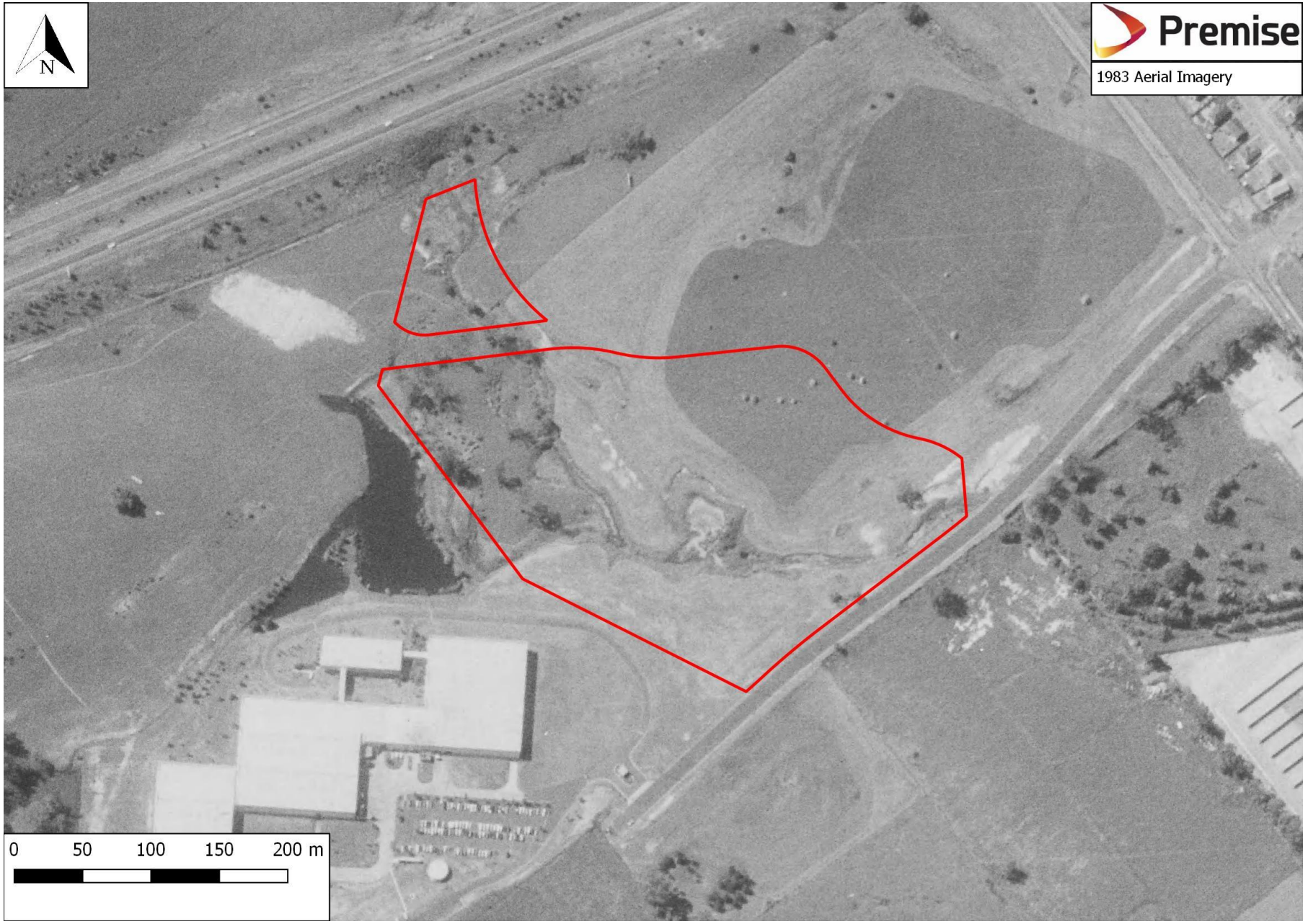
HISTORIC AERIAL PHOTOGRAPHY

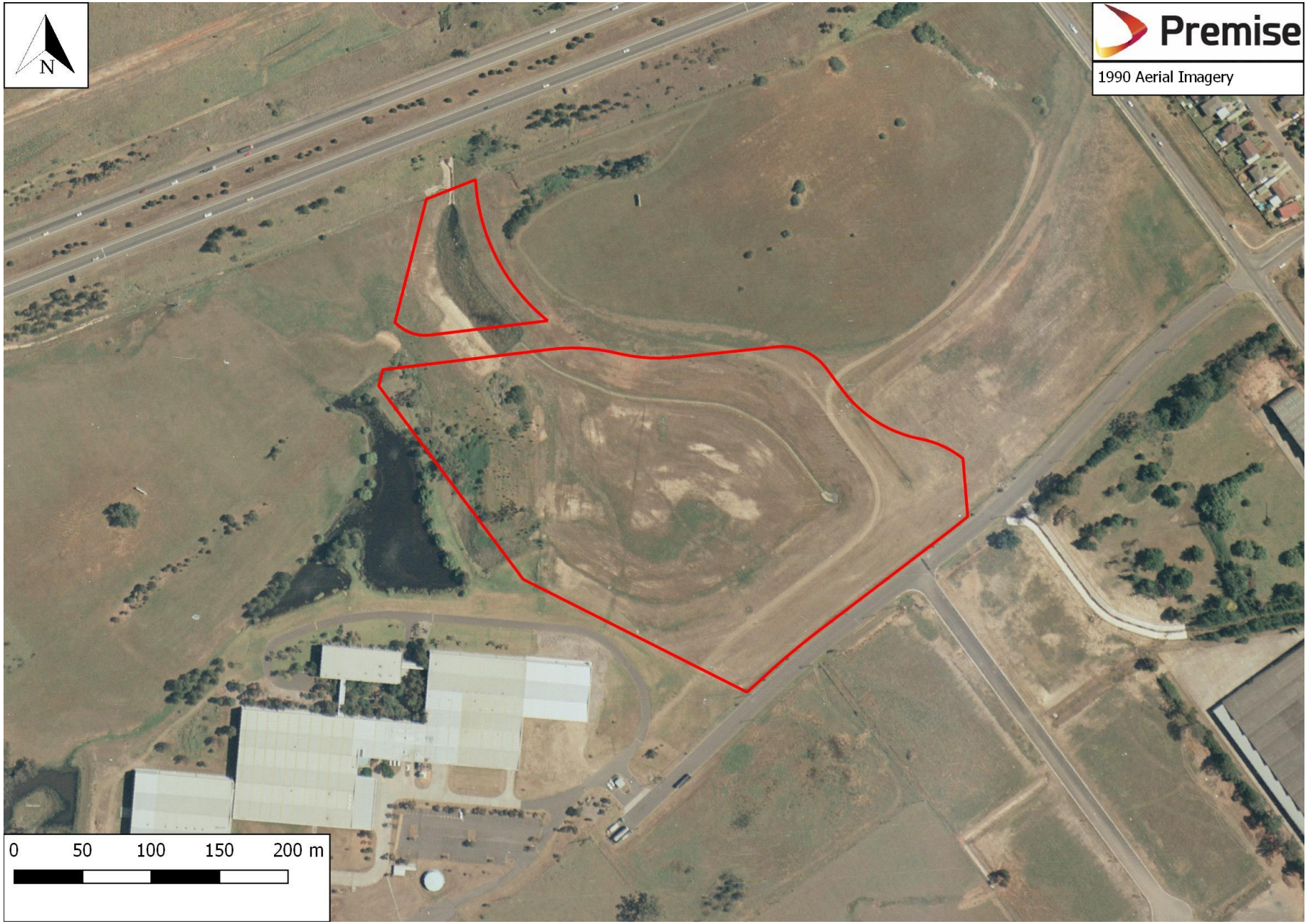

N
Premise
1956 Aerial Imagery
0
50
100
150
200 m

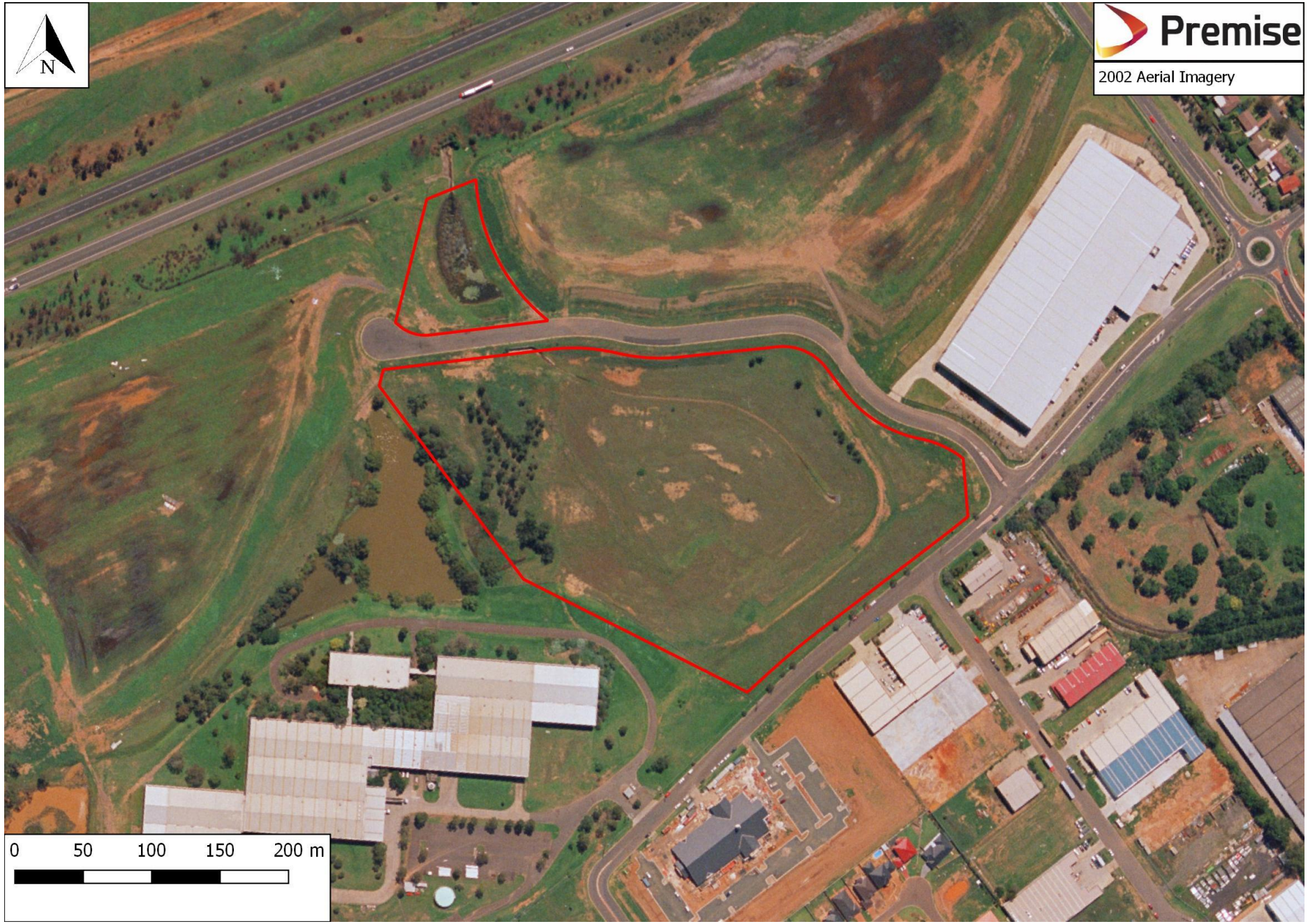

N
Premise
1963 Aerial Imagery
0
50
100
150
200 m

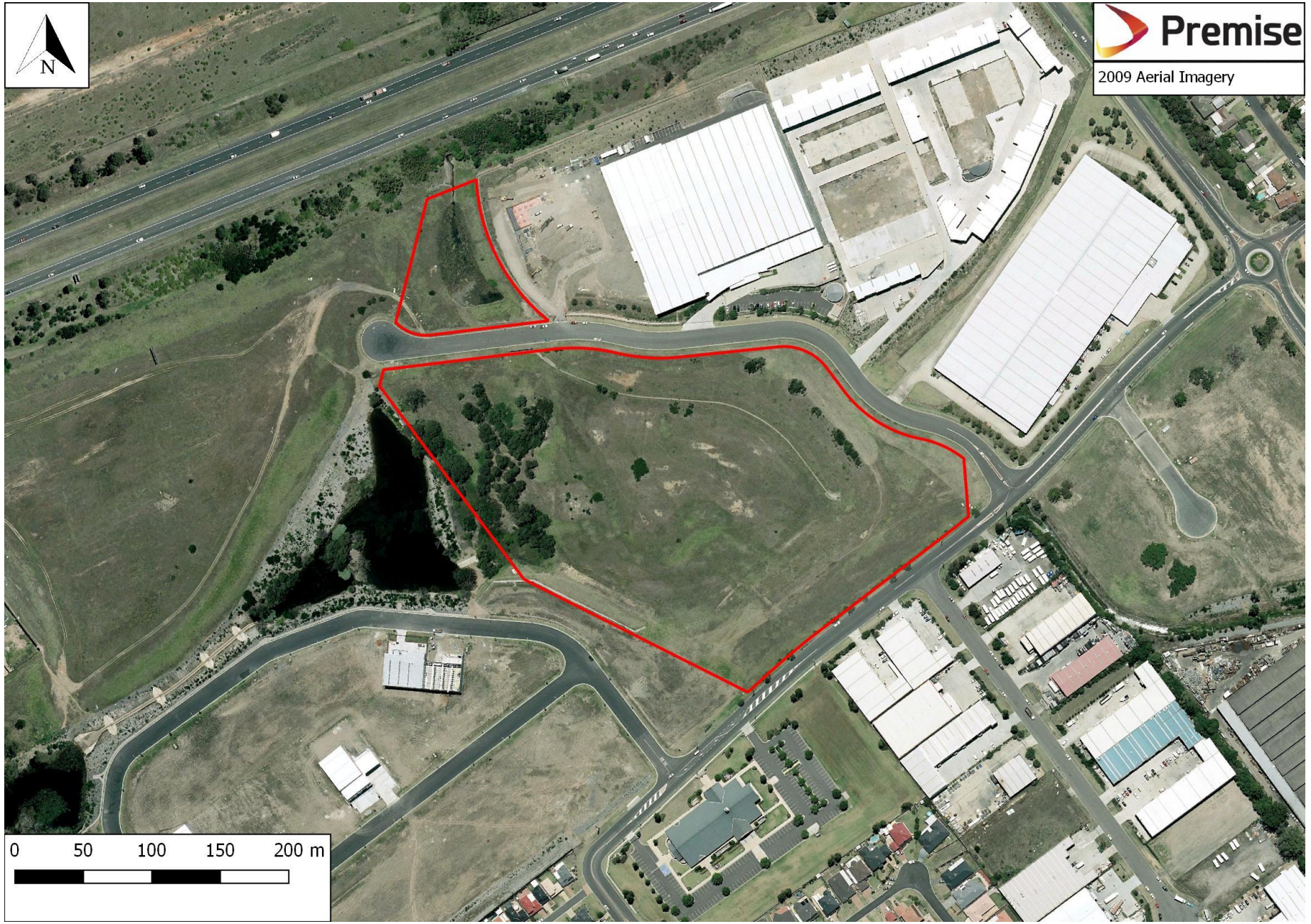

N
Premise
1972 Aerial Imagery
0
50
100
150
200 m

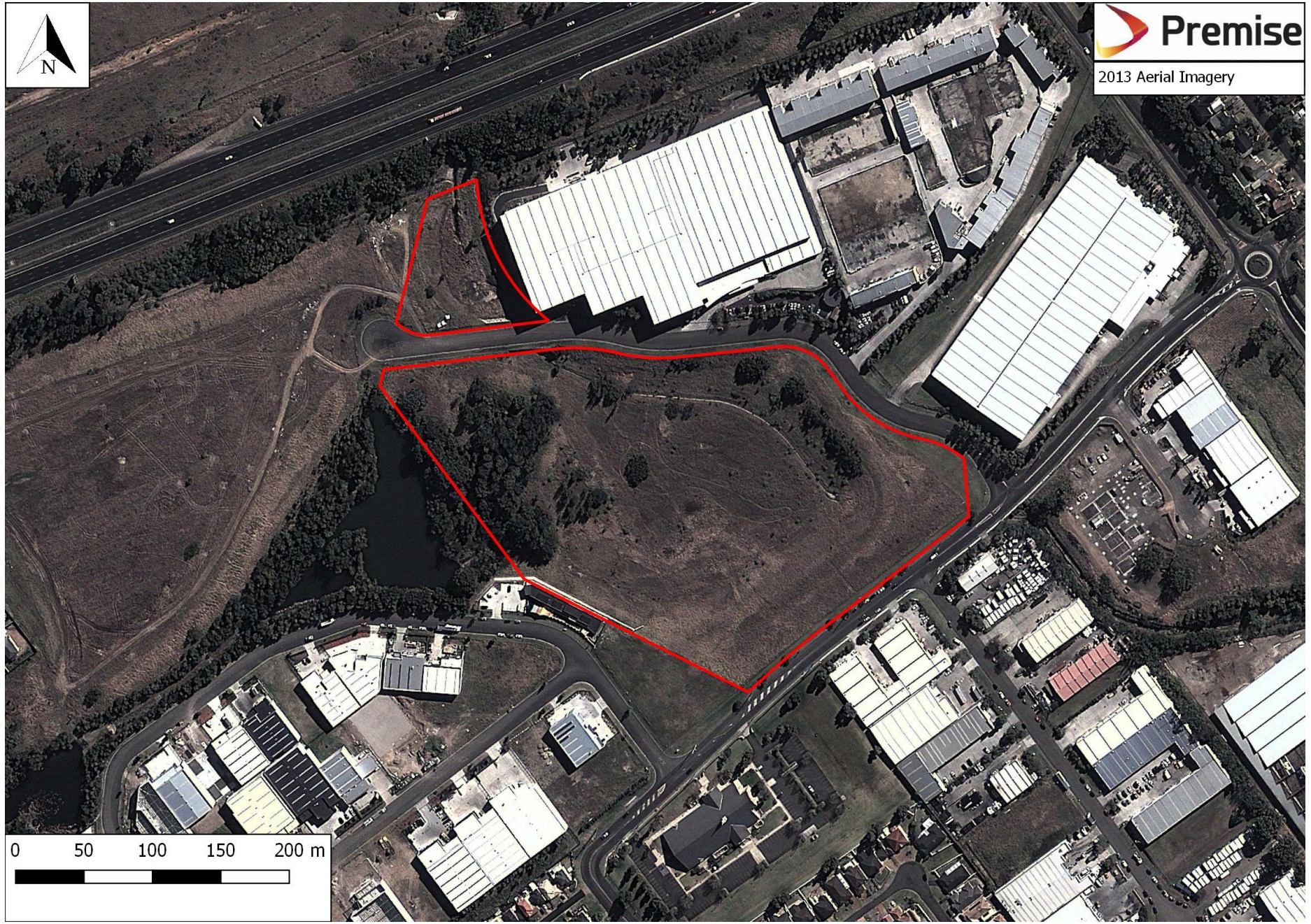

N
Premise
1979 Aerial Imagery
0
50
100
150
200 m


N
Premise
1983 Aerial Imagery
0
50
100
150
200 m


N
Premise
1990 Aerial Imagery
0
50
100
150
200 m


N
Premise
2002 Aerial Imagery
0
50
100
150
200 m


N
Premise
2009 Aerial Imagery
0
50
100
150
200 m


N
Premise
2013 Aerial Imagery
0
50
100
150
200 m


N
Premise
2018 Aerial Imagery
0
50
100
150
200 m

Appendix D

LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY DOCUMENTS

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 212514

Client Details

Client	Geolyse Pty Ltd
Attention	Brendan Stuart
Address	PO Box 1963, 154 Peisley St, ORANGE, NSW, 2800

Sample Details

Your Reference	**218439, CCC**
Number of Samples	4 Soil
Date samples received	01/03/2019
Date completed instructions received	01/03/2019

Analysis Details

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

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

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

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

Report Details

Date results requested by	08/03/2019
Date of Issue	07/03/2019

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 Identifier: Matt Tang
Authorised by Asbestos Approved Signatory: Matt Tang

Results Approved By
Jeremy Faircloth, Organics Supervisor
Ken Nguyen, Senior Chemist
Matthew Tang, Asbsestos Analyst
Nick Sarlamis, Inorganics Supervisor
Steven Luong, Senior Chemist

Authorised By

Jacinta Hurst, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		212514-1	212514-2	212514-3	212514-4
Your Reference	UNITS	Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	05/03/2019	05/03/2019	05/03/2019	05/03/2019
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	86	86	76

svTRH (C10-C40) in Soil					
Our Reference	UNITS	212514-1	212514-2	212514-3	212514-4
Your Reference		Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	05/03/2019	05/03/2019	05/03/2019	05/03/2019
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	110	200	100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	180	<100
TRH >C_{34} -C_{40}	mg/kg	<100	120	160	100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	340	100
Surrogate o-Terphenyl	%	93	93	94	95

PAHs in Soil					
Our Reference		212514-1	212514-2	212514-3	212514-4
Your Reference	UNITS	Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	06/03/2019	06/03/2019	06/03/2019	06/03/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	0.3
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	0.4
Pyrene	mg/kg	<0.1	<0.1	0.1	0.4
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2
Chrysene	mg/kg	<0.1	<0.1	0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.3
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.07	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	0.56	2.0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	116	121	112	120

Organochlorine Pesticides in soil					
Our Reference	UNITS	212514-1	212514-2	212514-3	212514-4
Your Reference		Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	99	101	100

PCBs in Soil					
Our Reference		212514-1	212514-2	212514-3	212514-4
Your Reference	UNITS	Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	101	99	101	100

Acid Extractable metals in soil					
Our Reference		212514-1	212514-2	212514-3	212514-4
Your Reference	UNITS	Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Arsenic	mg/kg	<4	6	8	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	13	15	11
Copper	mg/kg	2	21	53	45
Lead	mg/kg	7	19	24	22
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	8	14	13
Zinc	mg/kg	5	34	280	160

Misc Soil - Inorg					
Our Reference	UNITS	212514-1	212514-2	212514-3	212514-4
Your Reference		Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5

Moisture					
Our Reference		212514-1	212514-2	212514-3	212514-4
Your Reference	UNITS	Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/03/2019	04/03/2019	04/03/2019	04/03/2019
Date analysed	-	05/03/2019	05/03/2019	05/03/2019	05/03/2019
Moisture	%	2.8	8.7	12	4.1

Asbestos ID - soils					
Our Reference	UNITS	212514-1	212514-2	212514-3	212514-4
Your Reference		Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled		26/02/2019	26/02/2019	26/02/2019	26/02/2019
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	05/03/2019	05/03/2019	05/03/2019	05/03/2019
Sample mass tested	g	Approx. 55g	Approx. 45g	Approx. 35g	Approx. 40g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy 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
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date extracted	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			05/03/2019	1	05/03/2019	05/03/2019		05/03/2019	05/03/2019
TRH C_6 - C_9	mg/kg	25	Org-016	<25	1	<25	<25	0	86	94
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	1	<25	<25	0	86	94
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	82	90
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	83	91
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	89	95
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	89	96
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	89	95
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	90	1	92	91	1	83	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date extracted	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			05/03/2019	1	05/03/2019	05/03/2019		05/03/2019	05/03/2019
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	1	<50	<50	0	103	105
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	1	<100	<100	0	96	99
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	1	<100	<100	0	114	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	1	<50	<50	0	103	105
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	1	<100	<100	0	96	99
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	1	<100	<100	0	114	#
Surrogate o-Terphenyl	%		Org-003	91	1	93	93	0	101	93

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date extracted	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			06/03/2019	1	06/03/2019	06/03/2019		06/03/2019	06/03/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	105	99
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	112	104
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	112	104
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	106	99
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	108	100
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	113	105
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	<0.05	<0.05	0	111	104
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	124	1	116	119	3	120	113

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date extracted	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	98
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	81	84
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	78	84
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	90
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	93	98
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	89	93
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	110	114
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	81	91
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	84	89
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	71	75
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	97	1	101	102	1	111	112

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date extracted	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	112	114
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	97	1	101	102	1	97	85

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date prepared	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	112	92
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	110	86
Chromium	mg/kg	1	Metals-020	<1	1	6	6	0	111	92
Copper	mg/kg	1	Metals-020	<1	1	2	2	0	115	106
Lead	mg/kg	1	Metals-020	<1	1	7	7	0	117	96
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	107	107
Nickel	mg/kg	1	Metals-020	<1	1	<1	<1	0	110	86
Zinc	mg/kg	1	Metals-020	<1	1	5	5	0	111	85

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	212514-2
Date prepared	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Date analysed	-			04/03/2019	1	04/03/2019	04/03/2019		04/03/2019	04/03/2019
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	105	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.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Report Comments

TRH Soil C10-C40 NEPM - # Percent recovery is not possible to report due to interference from analytes (other than those being tested) in sample 2.

Asbestos: A portion of the supplied samples were sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples 212514-1 to 4 were sub-sampled from jars provided by the client.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 424 344

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph: 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories
16-18 Hayden Crt Myaree, WA 6154
Ph: 08 9317 2505 / lab@mpl.com.au

Melbourne Lab - Envirolab Services
1A Dalmore Drive Scoresby VIC 3179
Ph: 03 9763 2500 / melbourne@envirolab.com.au

Adelaide Office - Envirolab Services
7a The Parade, Norwood, SA 5067
Ph: 08 7087 6800 / adelaide@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
Ph: 07 3266 9532 / brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
Ph: 08 8967 1201 / darwin@envirolab.com.au

Client: Geolyse Pty Ltd	**Client Project Name / Number / Site etc (ie report title):** 218439 - CCC
Contact Person: Brendan Stuart	
Project Mgr: Brendan Stuart	**PO No.:**
Sampler: Brendan Stuart	**Envirolab Quote No. :**
Address: 154 Peisley St ORANGE NSW 2800	**Date results required:** **Or choose:** standard ~~/ same day / 1 day / 2 day / 3 day~~ *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 6393 5000 **Mob:** 0418 607 830	**Additional report format:** ESDAT ~~/ equis /~~
Email: bstuart@geolyse.com	**Lab Comments:**

Sample information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	TPH (C6-C36) / TRH (C6-C40)	8 Metals	PAHs	Total Phenols	OCPs	PCBs	Asbestos (pres / abs)									Provide as much information about the sample as you can
1	Sample 1		26/02/2019	Soil	X	X	X	X	X	X	X									
2	Sample 2		26/02/2019	Soil	X	X	X	X	X	X	X									
3	Sample 3		26/02/2019	Soil	X	X	X	X	X	X	X									
4	Sample 4		26/02/2019	Soil	X	X	X	X	X	X	X									

Relinquished by (Company): Geolyse	**Received by (Company):** RJS	***Lab Use Only***	
Print Name:	**Print Name:** Kevin Ng	**Job number:** 212514	**Cooling:** Ice / Ice pack / None
Date & Time:	**Date & Time:** 10:34 1/3/19	**Temperature:** 15.7	**Security seal:** Intact / Broken / None
Signature:	**Signature:**	**TAT Req - SAME day / 1 / 2 / 3 / 4 / STD**	