



# TARGETED PRELIMINARY SITE INVESTIGATION REPORT

**PROJECT:** Manly Warringah Gymnastics New Facility Project  
**CLIENT:** MWGA  
**DATE:** 09 October 2023  
**REPORT NO:** NE1762



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## EXECUTIVE SUMMARY

Geotesta was engaged by the MWGA to conduct a Targeted Preliminary Site Contamination Investigation (PSI) on the site referred to as the North Manly Bowling and Recreation Club with the Bowling Greens within the northeastern section 431 Pittwater Road, North Manly, NSW 2100 located (Lot/Section/Plan no: 2743/-/DP 752038), Manly Warringah Gymnastics New Facility Project.

The Targeted PSI was conducted in general accordance with *“Managing Land Contamination Planning Guidelines SEPP 55”* and this report compiled, taking into consideration the *NSW EPA Consultants reporting on Contaminated Land Guidelines update May 2020*. The Targeted PSI contains an appraisal of the site’s history, a report based on a visual site inspection and an assessment of analytes for contamination. All relevant information about the site was assessed to determine the potential for site contamination. To support the outcomes of the Targeted PSI a limited sampling and analysis program was implemented.

This report is based only on the information provided at the time of this report preparation and may not be valid if changes are made to the site conditions and/or soil and groundwater.

The objectives of this Targeted PSI are to:

- assess the past uses of the site and the potential environmental impacts that they may have had on the environmental condition of the site;
- conduct a limited soil sampling and analysis program to assess the current environmental condition;
- identify potential environmental risks associated with the site;
- assess the requirements for additional investigations; and
- address the requirements of the planning authority.

The following scope of works was implemented to achieve the objectives of the Targeted PSI.

The Targeted PSI was conducted in general accordance with the Australian Standard AS 4482.1 (2005) *Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non volatile and semi-volatile compounds*, the Australian Standard AS 4482.2-1999 *Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances*, the *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 No1*, and other relevant NSW guidelines and legislation, including the *NSW EPA, Contaminated Land Guidelines, Sampling Design – Application (2022)*.

The scope of works included the following:

- a site inspection;
- historical aerial photographs;

- public record search, such as Council, OEH, EPA etc;
- geological and hydrogeological review;
- conduct a limited soil sampling and analysis program; and
- production of this report on the contamination status of the site.

Reviewal of the historical aerial photographs, indicates that the site has been primarily used for recreational / commercial usage since 1955/1956 (latest). One (1) structure, one (1) shed and two (2) dwellings were constructed in the western section of the site since in 1955/1956. Recreational green areas were gradually constructed in the northern and eastern sections from 1955 to 1961. In 2000, external modification was constructed onto the dwelling located in the southwestern section and then demolished in 2007. Since then, the site remained unchanged.

Vehicles were observed parking in the western sections since 1970. Suspected earthworks were observed onsite in 1951, 1955/56, 2020 and 2023. Suspected stockpiles were observed since 1951. Agricultural usage was not observed across the site.

The site is expected to contain hazardous building materials (asbestos containing materials (ACM) and lead based paint systems) from the usage of buildings / structures which were constructed in an era to contain hazardous building materials. It is also suspected that the site contains contamination from past fill materials brought onto site and from past horticultural usage.

An intrusive groundwater assessment was not conducted as part of this Targeted PSI, as the risk of contamination from groundwater is considered negligible based on past uses and no identified sources of contamination that would impact groundwater.

A summary of the laboratory results is presented as the following:

- The laboratory analysis detected concentrations of Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, and Zinc within the soil samples recovered. All detected concentrations were reported by the laboratory to have concentrations within the adopted Site Assessment Criteria (SAC) – Health Investigation Levels (HIL C) and Ecological Investigation Levels (EIL).  
No concentrations of Nickel were reported above laboratory limits of reporting (LOR) in the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C and EIL).

- All detected concentrations of Organochlorine Pesticides (OCPs) were reported by the laboratory to be within the adopted Site Assessment Criteria (HIL C).  
No concentrations of the Organochlorine and Organophosphorus Pesticides (OCP / OPPs) were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C).
- No concentration of PAHs (Total) and Naphthalene were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C and EIL).
- No concentration of TRHs were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HSL, ESL and ML).
- No concentrations of BTEX within the samples analysed exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HSL and ESL).
- A concentration of Phenols was detected by the laboratory from the recovered sample # BH2 the reported concentration was within the Site Assessment Criteria (HIL C).  
No concentrations of Phenols within the remaining samples exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HIL C).
- No concentrations of PCB within the samples analysed exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HIL C).
- No asbestos was detected at the reporting limit of 0.001% w/w within the seven (7) samples analysed were therefore within the Site Assessment Criteria (HSL).

Based on the assessment undertaken, the following conclusions and recommendations can be made:

- All the contaminant concentrations of interest within the soil samples analysed were found to be within the Site Assessment Criteria (SAC).
- The limited soil sampling and analysis program conducted indicated a **low** risk of soil and groundwater contamination.
- It is the opinion of Geotesta, that the site can be made suitable for the proposed Development Application (DA) in the foreseeable future pending on the results of an additional Data Gap Contamination Assessment.
- Due to the existence of a data-gap in this investigation, a further Data Gap Assessment post demolition of the existing structures/dwellings is recommended to address further potential AECs identified previously and to determine if any contamination hotspots exist within the footprint of the former sheds and dwellings.



## 1. INTRODUCTION

Geotesta was engaged by the MWGA to conduct a Targeted Preliminary Site Contamination Investigation (Targeted PSI) on the site referred to as the North Manly Bowling and Recreation Club with the Bowling Greens within 431 Pittwater Road, North Manly, NSW 2100 located (Lot/Section/Plan no: 2743/-/DP 752038), Manly Warringah Gymnastics New Facility Project.

The Targeted PSI was conducted in general accordance with *“Managing Land Contamination Planning Guidelines SEPP 55”* and this report compiled, taking into consideration the *NSW EPA Consultants reporting on Contaminated Land Guidelines update May 2020*. The Targeted PSI contains an appraisal of the site’s history, a report based on a visual site inspection and an assessment of analytes for contamination. All relevant information about the site was assessed to determine the potential for site contamination. To support the outcomes of the Targeted PSI a limited sampling and analysis program was implemented.

This report is based only on the information provided at the time of this report preparation and may not be valid if changes are made to the site conditions and/or soil and groundwater.

## 2. PLANNING GUIDELINES

The land is to be developed for a standard recreational use - Gymnastics Facility. The planning authority must consider the possibility that the previous land use has the potential to cause contamination of the site as well as the potential risk to health or the environment from that contamination. The Targeted PSI is the first stage to determine if there is a potential for land contamination that has a potential to impact the development application (DA).

The Guidelines recommend that re-zonings, development control plans and development applications (DAs) are backed up by information demonstrating that the land is suitable for the proposed use or can be made suitable, either by remediation or by the way the land is used.

### 3. OBJECTIVE

The objectives of this Targeted PSI are to:

- assess the past uses of the site and the potential environmental impacts that they may have had on the environmental condition of the site;
- conduct a limited soil sampling and analysis program to assess the current environmental condition;
- identify potential environmental risks associated with the site;
- assess the requirements for additional investigations; and
- address the requirements of the planning authority.

#### 4. SCOPE OF WORKS

The following scope of works was implemented to achieve the objectives of the Targeted PSI.

The Targeted PSI was conducted in general accordance with the Australian Standard AS 4482.1 (2005) *Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non volatile and semi-volatile compounds*, the Australian Standard AS 4482.2-1999 *Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances*, the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 No1, and other relevant NSW guidelines and legislation, including the NSW EPA, *Contaminated Land Guidelines, Sampling Design – Application* (2022).

The scope of works included the following:

- a site inspection;
- historical aerial photographs;
- public record search, such as Council, OEHL, EPA etc;
- geological and hydrogeological review;
- conduct a limited soil sampling and analysis program; and
- production of this report on the contamination status of the site.

Activities undertaken to achieve the above objectives are reported and discussed in the following sections.

## 5. SITE DESCRIPTION

### 5.1 Site Identification

The site ('Area of Interest') under investigation is located at the North Manly Bowling and Recreation Club with the Bowling Greens within the northeastern section of 431 Pittwater Road, North Manly, NSW 2100 located (Lot/Section/Plan no: 2743/-/DP 752038), situated to the south of Kentwell Road and west of Pittwater Road, and is approximately 15.2 km to the northeast of Sydney CBD (by road). The site of the proposed development has a rectangular shape of approximately ~ 0.6 ha (Area of interest). The site is located within Northern Beaches Council. The site location is shown in Figures 1 & 2.

The site identification detail is presented in Table 1.

**Table 1: Site Identification**

Site Details	Site Observations
Address	North Manly Bowling and Recreation Club with the Bowling Greens, 431 Pittwater Road, North Manly, NSW 2100
Lot/Section/Plan no:	2743/-/DP 752038
Local Government Area	Northern Beaches Council
Site Area (approximate)	~ 26.7 ha
Area of interest	~ 0.6 ha
Zoning	RE1 - Public Recreation
Current Land Use	Vacant / Recreational



Figure 1. Site overview



Figure 2. Site Location and Features

## 5.2 Proposed Development

It is understood that the site is proposed for a recreational use - Gymnastics Facility. The site lies within an Public Recreation zone (RE1). Planning zones that are in the vicinity of the site include Local Centre zone (E1), General Industrial (E4), Low Density Residential zone (R2), Medium Density Residential zone (R3), Public Recreation zone (RE1) and Infrastructure zones (SP1 and SP2).

## 5.3 Site Details, Geology and Topography

The subject site contained one (1) structure as the North Manly Bowling and Recreation Club located in the western section of the site during the site investigation.

The local landscape features level to gently undulating plains with local relief <10 m and slope gradients <5%. In-filled coastal barrier dunes, lakes and lagoons as well as swale depressions in dunefields. Most drainage is by subsurface flow, with the watertable <200 cm.

The site was flat across the site (refer to Figure 1). Regional topographic maps indicate that the site is approximately 9 m above sea level, referenced to Australian Height Datum (AHD).

The local geology is of holocene silty to peaty quartz sand. Medium to fine marine sand with podzols. The site is underlain by Anthropogenic deposits (Q\_h) – Anthropocene deposits varying from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, with interstitial sand-sized to clay matrix. Details of the site geology information is shown in the Figure 3.



**Figure 3. Site Geology Map**

#### 5.4 Site Regional Meteorology and Hydrogeology

The following climate information from the Commonwealth Bureau of Meteorology website (<http://www.bom.gov.au/>) can be obtained:

- Mean maximum temperature of 20.8 °C from January to December 2022 at Terrey Hills AWS, approximately 10.2 km away from the site.



- Mean minimum temperature of 13.1 °C from January to December 2022 at Terrey Hills AWS, approximately 10.2 km away from the site.
- Mean annual rainfall of 2327.2 mm from January to December 2022 at Terrey Hills AWS, approximately 10.2 km away from the site.

NSW Environment and Heritage, eSpade application indicates 'no salting evident' located within approximate distance of 500 metre from the site.

The site is of porous, extensive aquifers of low to moderate productivity. The direction of the regional groundwater flow is expected to follow the slight slope of the regional topography. Water infiltrates through the deposits and flows downslope laterally along soil layers within the soil material and also vertically through the fractures and bedding plains. The lateral movement of subsurface waters may be impeded by a soil texture change at the change in slope.

## 5.5 Registered Bore Search

A search of Department Primary Industries - Office of Water records identified seventeen (17) existing groundwater wells located within an approximate distance of 500 metre from the site. The closest functioning bore was located on site with a bore depth of 60 m, salinity of 240 mg/L, yield of 1.8 L/s and SWL of 4.00 m bgl. Refer to Table 2 and Appendix C for the Lotsearch Report.

**Table 2: Groundwater Boreholes within 500 metre from the site**

NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
GW020813	Irrigation	Functioning	01/01/1957	2.7				0m	On-site
GW102334	Other	Functioning	01/10/1997	60	240	1.8	4	0m	On-site
GW108815	Water Supply	Functioning	11/05/2007	4	Good	0.5	2	82m	South East
GW106288	Water Supply	Functioning	02/08/2005	2				108m	South East
GW105760	Water Supply	Functioning	05/01/2004	3.66		1	1.52	122m	South East
GW107619	Water Supply	Functioning	21/11/2005	6.1		1	2.5	146m	South East
GW107190	Water Supply	Functioning	07/07/2005	6		0.5	2	157m	South East
GW107816	Irrigation	Unknown	05/09/2005	78.5	505	2.5	7	170m	West
GW109007	Water Supply	Unknown	09/07/2008	8				272m	South East
GW108968	Water Supply	Unknown	26/06/2008	8				277m	South East

GW111902	Water Supply	Functioning	04/09/2007	5.5	285	1	2.1	280m	South East
GW108909	Water Supply	Unknown	12/06/2008	5.5	280	0.8	21	281m	South East
GW109644	Water Supply	Unknown	03/10/2008	5.2	249	0.9	2.4	287m	South East
GW108714	Water Supply	Functioning	30/04/2007	5.2	280	1	2.1	300m	South East
GW108546	Water Supply	Functioning	29/01/2007	4	Good	0.5	2	326m	South East
GW110726	Water Supply	Unknown	06/03/2007	4	Good	0.5	2	422m	South East
GW106808	Water Supply	Functioning	08/12/2004	3	Good	0.5	1	457m	South East

## 5.6 Acid Sulphate Soils

The Department for Infrastructure, Planning and Natural Resources (DIPNR) Acid Sulphate Soils Risk Mapping (1997) and the NSW Environmental Acid Sulphate Soil Risk Mapping eSPADE application indicates that the Site lies in an area of Class 1 Acid Sulfate Soils (Acid sulfate soils are likely to be found on and below the natural ground surface).

## 5.7 Summary of Site History

### 5.7.1 Historical Background

Reviewal of the historical aerial photographs, indicates that the site has been primarily used for recreational / commercial usage since 1955/1956 (latest). One (1) structure, one (1) shed and two (2) dwellings were constructed in the western section of the site since in 1955/1956. Recreational green areas were gradually constructed in the northern and eastern sections from 1955 to 1961. In 2000, external modification was constructed onto the dwelling located in the southwestern section and then demolished in 2007. Since then, the site remained unchanged.

Vehicles were observed parking in the western sections since 1970. Suspected earthworks were observed onsite in 1951, 1955/56, 2020 and 2023. Suspected stockpiles were observed since 1951. Agricultural usage was not observed across the site.

The site is expected to contain hazardous building materials (asbestos containing materials (ACM) and lead based paint systems) from the usage of buildings / structures which were constructed in an era to contain hazardous building materials. It is also suspected that the site contains contamination from past fill materials brought onto site and from past horticultural usage.

### 5.7.2 Aerial Photograph Review

An aerial historical photograph search was conducted on 10 September 2023. The historical aerial photographs were viewed with observations presented in Table 3, refer to Appendix E Historical Imagery.

**Table 3: Aerial Photography Review**

Year	Site Observations	Surrounding Area
1930	<ul style="list-style-type: none"> <li>• Black and white photograph (poor quality)</li> <li>• Predominately vacant land</li> <li>• Suspected dams located in the southern section of the site</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph (poor quality)</li> <li>• Residential usage to the northeast</li> <li>• Agricultural usage in the surrounding areas</li> <li>• Roadways to the north</li> </ul>
1943	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• Vacant land</li> <li>• Suspected dams located in the southern section of the site - since filled</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph (poor quality)</li> <li>• Residential usage to the northeast – dwellings constructed</li> <li>• Recreational usage in the surrounding areas</li> <li>• Commercial structure constructed to the adjacent north</li> <li>• Newly excavated waterways to the adjacent west</li> <li>• Roadways to the north</li> </ul>
1951	<ul style="list-style-type: none"> <li>• Black and white photograph (poor quality)</li> <li>• Vacant land</li> <li>• Suspected earthwork across the site</li> <li>• Suspected stockpiles across the site</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph (poor quality)</li> <li>• Residential usage to the northeast – dwellings constructed</li> <li>• Recreational usage in the surrounding areas</li> <li>• Commercial usage to the adjacent north</li> <li>• Waterways to the adjacent west – suspected earthwork along the waterways</li> <li>• Roadways to the north</li> </ul>

<p>1955/1956</p>	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• One (1) structure and one (1) suspected shed constructed in the western section of the site</li> <li>• Two (2) dwellings constructed in the southwestern section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• Suspected earthwork and stockpiles located in the southern section of the site</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph (poor quality)</li> <li>• Residential usage to the northeast</li> <li>• Recreational usage in the surrounding areas</li> <li>• Commercial usage to the adjacent north</li> <li>• Waterways to the adjacent west</li> <li>• Roadways in the surrounding areas – roadways constructed to the adjacent west</li> </ul>
<p>1961</p>	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• Suspected stockpiles located in the southwestern section of the site</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• Residential usage to the northeast</li> <li>• Recreational usage in the surrounding areas</li> <li>• Commercial usage in the surrounding areas – commercial structures constructed to the adjacent west of the site</li> <li>• Waterways to the adjacent west – suspected earthwork along the waterways</li> <li>• Carparks to the adjacent west</li> <li>• Roadways in the surrounding areas</li> </ul>
<p>1965</p>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
<p>1970</p>	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• Suspected stockpiles located in the southwestern section of the site</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• Residential usage to the northeast</li> <li>• Recreational usage in the surrounding areas – structures constructed to the adjacent south of the site</li> <li>• Commercial usage in the surrounding areas</li> <li>• Waterways to the adjacent west – suspected earthwork along the waterways</li> </ul>

	<ul style="list-style-type: none"> <li>• Vehicles parking at the western section</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Carparks to the adjacent west</li> <li>• Roadways in the surrounding areas</li> </ul>
1978	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• Black and white photograph</li> <li>• Residential usage to the northeast</li> <li>• Recreational usage in the surrounding areas – structures constructed to the adjacent south of the site</li> <li>• Commercial usage in the surrounding areas</li> <li>• Waterways to the adjacent west</li> <li>• Carparks to the adjacent west</li> <li>• Roadways in the surrounding areas</li> </ul>
1982	<ul style="list-style-type: none"> <li>• Colour photograph (poor quality)</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• Vehicles parking at the western section</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• Colour photograph (poor quality)</li> <li>• Residential usage to the northeast</li> <li>• Recreational usage in the surrounding areas</li> <li>• Commercial usage in the surrounding areas</li> <li>• Waterways to the adjacent west</li> <li>• Carparks to the adjacent west</li> <li>• Roadways in the surrounding areas</li> </ul>
1986	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
1991	<ul style="list-style-type: none"> <li>• Colour photograph (poor quality)</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• Vehicles parking at the western section</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
1994	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>

<p>2000</p>	<ul style="list-style-type: none"> <li>• Colour photograph (poor quality)</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• External modification on the dwelling located in the southern section</li> <li>• Suspected containers located in the southwestern section</li> <li>• Suspected earthwork located near the suspected containers</li> <li>• Vehicles parking at the western section</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
<p>2007</p>	<ul style="list-style-type: none"> <li>• Colour photograph (poor quality)</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> <li>• Recreational green area located in the northern and eastern sections of the site</li> <li>• External modification on the dwelling located in the southern section – since demolished</li> <li>• Suspected containers located in the southwestern section</li> <li>• Suspected earthwork located near the suspected containers</li> <li>• Vehicles parking at the southwestern section</li> <li>• Sparse trees</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
<p>2011</p>	<ul style="list-style-type: none"> <li>• Colour photograph (poor quality)</li> <li>• One (1) structure, one (1) shed and two (2) dwellings located in the western section of the site</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>

	<ul style="list-style-type: none"> <li>• Recreational green area located in the northern and eastern sections of the site with stockpiles</li> <li>• Suspected containers located in the southwestern section</li> <li>• Vehicles parking at the western section</li> <li>• Sparse trees</li> </ul>	
2016	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
2020	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>
2023	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change from previous photograph</li> </ul>

## 5.8 Site Walkover

Results of the site walkover inspections carried out on 18 September 2023 are presented below.

No signs of asbestos containing materials (ACM), contamination, associated odours and vegetation 'dieback' were observed onsite at the time of the inspection. During the site investigation, it was observed:

- The western area, identified as North Manly Bowling and Recreational Club, contained one (1) recreational structure, two (2) single-storey dwellings and one (1) shed. The whole area was surrounded by steel wire fencing.
- The recreational structure was of full brick construction, approximately 800 m<sup>2</sup>. The structure was used as the recreational club. Two (2) single-storey dwellings of fair condition, approximately 40 m<sup>2</sup> and 60 m<sup>2</sup>, separately, were located to the adjacent south of the structure. The shed was located to the adjacent west of the structure, of good condition and approximately 35 m<sup>2</sup>. All of the buildings remained inaccessible during the site investigation and suspected hazardous materials could potentially be stored inside.
- One (1) concrete storage tank was located to the adjacent south of existing buildings within the fenced area.

- The northern and eastern sections of the site were vacant, used as the bowling green areas for the bowling club, with paved walk lanes and utility poles. This area, of approximately 4,300 m<sup>2</sup>, was surrounded by plant hedges along northern and eastern boundaries covered by healthy grasses.
- No evidence of existing agricultural usage was observed in this inspection.
- The site was flat.

Photographic log is provided in Appendix B.

### 5.9 POEO Public Register

No site was identified within the site (targeted area) or nearby surrounding areas (within 500 m) in the 'List of NSW contaminated sites notified to EPA', and no record was identified within the 'Contaminated Land: Records of Notice', refer to Appendix C for the Lotsearch Report.

One (1) EPA notice was identified on site, identified "s.91 Clean Up Notice", refer to Table 4, Appendix C for the Lotsearch Report and Appendix F 'Notice of Clean up Action' (S 91 POEO Act 1997) on Warringah Golf Club Ltd. The NSW EPA issued a 'Direction to take clean-up Action' to Warringah Golf Club Ltd.

Given the Azinphos-ethyl half-life time to reach the legal limit (0.05 mg/kg), Geotesta Pty Ltd is of the opinion, that post remediation during the 'Clean-up Notice' any remaining residue trace levels of Azinphos-ethyl would have decomposed to below the legal limit of exposure since 2001.

**Table 4: Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within 500 m from the site**

Type	Name	Status	Issued Date	Distance	Direction
S.91 Clean Up Notice	WARRINGAH GOLF CLUB LTD	Issued	23/02/2001	0m	On-site

'National Liquid Fuel Facilities' identified a Petrol Station (BP North Manly at 504 Pittwater Road) located 46 m north from the site.



No site was identified within the site (targeted area) or nearby surrounding areas (within 500 m) in the 'Licensed Activities under the POEO Act 1997', refer to Appendix C for the Lotsearch Report.

#### **5.10 Planning Certificate**

No Planning Certificate Under Section 10.7 for the site was sourced from Northern Beaches Council as part of this investigation.

#### **5.11 Historical Land Titles**

As part of the historical search, a historical land titles search was not conducted as part of this investigation.

#### **5.12 Salinity Mapping**

The NSW Government / Environment and Heritage Division eSPADE application indicated that the site's soil profile is in an area without known salinity assessment data. NSW Environment and Heritage, eSpade application indicates 'no salting evident' located within approximate distance of 500 metre from the site, refer to Appendix C for the Lotsearch Report.

The following observations/inspections were noted onsite:

- ✓ Vegetation growth appeared healthy across the site
- ✓ No water marks or salt crystals observed on the ground surface

## 6. CONCEPTUAL SITE MODEL

### 6.1 Areas of Environmental Concern

Our assessment of site AECs and COPCs (Table 5) is made based on available site history, aerial photograph interpretation and site walkovers.

**Table 5: Areas of Environmental Concern (AECs) and Contaminants of Primary Concern (COPCs)**

AEC	Potential for Contamination	COPC	Contamination Likelihood
A – Areas of current buildings / structures	Buildings / structures construction may include ACM and/or lead based paint systems. Pesticides may have been used underneath dwellings.	HM, OCP/OPP and Asbestos	High - Medium
B – Carpark Areas	Old equipment, engine releases and leakage from the vehicles might spill and contaminated the underlying soil	HM, BTEX, PAH and Asbestos	High - Medium
C – Unknown Fill Material	Contaminants from old equipment, earth fill, old generators, fuels and chemicals, rusted metal, wood, rubble material and general refuse may have spilled, leached or been distributed onto underlying soil.	HM, TRH, PAH, Phenols, BTEX, OCP/OPP, PCB, Phenol and Asbestos	High - Medium
D – Horticultural usage	Bowling greens used for recreational purposes would involve fertiliser use, chemical pesticides and herbicide use that may introduce heavy metals, pesticide chemicals and hydrocarbons into the soil and surface water.	HM, TRH and OCP/OPP	High - Medium
E – Adjacent Liquid Fuel facility (BP North Manly)	BP North Manly located at 504 Pittwater Road (46 m north from site). Possible underground Petroleum hydrocarbon contamination plume.	HM, TRH & BTEX,	Medium

## 6.2 Potential Receptors and Sensitive Environments

The residents and visitors/workers on site are identified as immediately sensitive environmental receptors. A summary of the identified potential receptors and sensitive environments is detailed below in Table 6.

**Table 6: Potential Receptors and Sensitive Environments**

Receptors/Environments	Potential Pathway
<b>Human Receptors:</b> <ul style="list-style-type: none"> <li>• Future site workers and visitors</li> <li>• Site labourers/workers</li> <li>• Residents of adjacent properties</li> <li>• Trespassers</li> </ul>	<ul style="list-style-type: none"> <li>• Direct skin contact</li> <li>• Ingestion of contaminated soil</li> <li>• Inhalation via airborne dust</li> </ul>
<b>Sensitive Environments:</b> <ul style="list-style-type: none"> <li>• Site fauna and flora</li> <li>• Brookvale Creek – 15 m to the east</li> </ul>	<ul style="list-style-type: none"> <li>• Migration via stormwater run-off or within groundwater</li> <li>• Migration into underlying soil</li> </ul>

## 6.3 Potential for migration and exposure of contamination

During the site investigation, several potential receptors for off-site migration of potential contamination has been raised. Site history information and onsite inspection observations indicated a potential for contaminants to present a direct contact and inhalation exposure risk on site. Exposure routes of contaminants could potentially be through direct contact with exposed soils (Heavy Metals, TPH, PAHs, Phenols, BTEX, OCP/OPP and PCB) or airborne dust (Asbestos). These exposure risks will “likely”, and potentially at its highest risk during any demolition, earthworks, or construction phases within the site.

There is a potential for these contaminants to be present within underlying soils and have the ability to migrate vertically (dispersed up into the atmosphere or infiltrate down into the groundwater) and migrate (through stormwater runoff pathways) from the proposed development. The site topography presents an even slope across the site, and potential groundwater flows into the Brookvale Creek located approximately 15 m to the adjacent east.

## 6.4 Assessment of Preliminary Site Investigation and Recommendations

Reviewal of the historical aerial photographs, indicates that the site has been primarily used for recreational / commercial usage since 1955/1956 (latest). One (1) structure, one (1) shed and two (2) dwellings were constructed in the western section of the site since in 1955/1956. Recreational green areas were gradually constructed in the northern and eastern sections from 1955 to 1961. In 2000, external modification was constructed onto the dwelling located in the southwestern section and then demolished in 2007.

Vehicles were observed parking in the western sections since 1970. Suspected earthworks were observed onsite in 1951, 1955/56, 2020 and 2023. Suspected stockpiles were observed since 1951. Agricultural usage was not observed across the site.

The site is expected to contain hazardous building materials (asbestos containing materials (ACM) and lead based paint systems) from the usage of buildings / structures which were constructed in an era to contain hazardous building materials. It is also suspected that the site contains contamination from past fill materials brought onto site and from past horticultural usage.

No signs of asbestos containing materials (ACM), contamination, associated odours and vegetation 'dieback' were observed onsite at the time of the inspection (17 July 2023).

Based on the site history and walkthrough, the site is considered to have the following environmental concerns of:

- Areas of current buildings / structures may previously have contained pesticides, heavy metals (from pesticide usage) and hazardous construction materials may include asbestos containing materials (ACM) and lead based paint systems.
- Carpark areas on site potentially spill contaminants onto the underlying soil. Contamination may include petroleum hydrocarbons, heavy metals and asbestos.
- Contaminants from the contents of imported unknown fill may have leached, spilled, or been distributed onto the underlying soil.
- Areas used as bowling greens used for recreational purposes would involve fertiliser, chemical pesticides and herbicide use that may introduce heavy metals, pesticide chemicals and hydrocarbons into the soil and surface water.
- BP North Manly located at 504 Pittwater Road (46 m north from site). Possible underground Petroleum hydrocarbon contamination plume.

To address identified AECs, intrusive soil/water sampling regime is recommended to determine what, if any, remediation is required to render the site fit for residential use. A soil sampling plan is to be developed based on a judgemental or systematic sampling pattern and risk-based assessment.

Assessment shall address each of the identified AECs and assess COPC identified for each AEC (Table 5). Results of the site testing shall be assessed against Site Acceptance Criteria (SAC) with reference to *ASC NEPM (1999, amended 2013)*.

## 7. SAMPLING AND ANALYSIS PROGRAM

A limited SAQP was developed to ensure that data collected for this Targeted PSI was representative and provided a robust basis for site assessment decisions considering the areas of environmental concerns identified in Section 6.

Preparation of the SAQP includes:

- Field Screening and Sampling Program;
- Sampling QA/QC;
- Sample Handling, Preservation and Storage Procedures;
- Analytical Program and Site Investigation Data Assessment

### 7.1 Field Screening and Sampling Program

#### 7.1.1 Data Quality Plan

Investigations at the Site included a review of the preliminary site investigation prior to the commencement of work. The sampling regime for the investigation area of the site was in accordance with the requirements as outlined in the *NSW EPA Guidelines for Consultants Reporting on Contaminated Sites*.

#### 7.1.2 Visual Inspection

During the sampling works a visual inspection was conducted for visible suspected asbestos containing materials (ACM), signs of contamination and odours. No visible ACM, contamination and odours were encountered on the site ground surfaces at the time of the inspection. The inspections for asbestos were undertaken in a systematic, back and forth fashion over the site to identify suspected ACM. No suspected ACM was encountered during the course of this investigation.

#### 7.1.3 Soil Sampling Techniques

All techniques used for soil sampling, are based on methods specified by the *National Environmental Protection (Assessment of Site Contamination) Measure (NEPM, 2013)*. Experienced personnel of Geotesta collected all the samples for delivery to NATA accredited laboratory of Eurofins MGT. Soil samples for chemical analysis were in a judgemental sampling pattern based on site history and AECs.

#### **7.1.4 Rationale for Sampling Program and Locations**

The justification of the sampling point regime for the assessment was based on the investigator's knowledge, operational requirements, experience and history of the Site (Judgement Sampling Pattern). All historical investigations and anecdotal evidence supported the sampling approach adopted and provided for samples to be collected in an unbiased manner. All the AECs including heavy metals, OCP/OPP, PCB, TRH, PAH, Phenol, BTEX and asbestos concentrations have been targeted. The borehole locations are shown in Figure 4.

#### **7.1.5 Sampling Program**

Fieldwork for this investigation was carried out on 18 September 2023 and included the drilling of seven (7) boreholes. Boreholes were advanced by a hand auger to a maximum depth of 0.5 m below ground level (bgl). The sampling locations are presented in Figure 4. Environmental soil samples were collected from the surface and at lower depths. Standard procedures were used for sampling and soil sampling methodology was completed to meet data quality objectives.

#### **7.1.6 Soil Logging**

Boreholes were logged by an experienced environmental/geotechnical engineer in accordance with Standard procedures. The borehole logs are presented in Appendix A.

### **7.2 Sampling Quality control (QC) / Quality Assurance (QA)**

#### **7.2.1 Sampling Procedures**

General soil sampling procedures included wearing of plastic disposable gloves when handling sampling equipment and soil and changed between collections of samples. All sampling equipment was clean prior to commencement of sampling. Equipment for soil sampling included a stainless-steel sampling shovel and a 7 mm sieve. The soil samples were collected from the auger via a sampling shovel and placed into sample jars and onto the 7 mm sieve for asbestos bag sampling after sieving. All equipment was decontaminated between samplings. The following measures have been utilized during the sampling to achieve the sampling quality controls.

### ***7.2.1.1 Sample Containers***

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

### ***7.2.1.2 Sample Tracking and Identification***

All samples were identified with a unique sample number and all sampling details were included on the sample label and were reproduced on the field sample log and chain of custody records.

### ***7.2.1.3 Decontamination***

All equipment used in the sampling program, which includes a vehicle-mounted auger, stainless steel sampling shovel and a 7 mm sieve were decontaminated prior to use and between samples to prevent cross contamination. Decontamination of equipment involved the following procedures:

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

### ***7.2.1.4 Sample Transport***

All samples were packed in ice from the time of collection and were transported under chain of custody from the Site to NATA registered laboratory identified as Eurofins Scientific located in 179 Magowar Road, Girraween New South Wales 2145. Collected samples were placed into an ice chilled cooler-box. During the project, the laboratory reported that all the samples arrived intact, with appropriate preservation medium and were analysed within their relative holding times for the respective analytes.

## **7.2.2 Analytical QA/QC Procedures**

Quality control is achieved by utilising NATA accredited laboratories, using standard methods supported by internal duplicates, the checking of high, abnormal, or otherwise anomalous results against background and other chemical results for the sample concerned.



Quality assurance is achieved by confirming field or anticipated results based upon the comparison of field observations with laboratory results. One (1) blind duplicate sample (BD1) was taken for one-day samplings and was duplicate sample of parent samples # BH1. Trip blank and trip spikes were incorporated into the QA/QC procedure.

The laboratory undertakes additional duplicate analysis as part of their internal quality assurance program. Chain of Custody documentations were used to ensure that sample tracking and custody can be cross-checked at any point in the transfer of samples from the field to hand-over to the laboratory.

## 8. SAMPLING PROGRAM

### 8.1 Field Investigation

Fieldwork for this investigation was carried out on 18 September 2023 and included the drilling of seven (7) boreholes. Boreholes were advanced by a hand auger to a maximum depth of 0.5 m below ground level (bgl). The sampling locations are provided in Figure 4. Environmental soil samples were collected from the near surface and at lower depths and held for selected analysis.

During the sampling works a visual inspection was also conducted to ensure no suspected asbestos containing materials (ACM) were visible. The inspections for asbestos were undertaken in a systematic, back and forth fashion over the site to identify suspected ACM.

### 8.2 Analytical Program

Samples were to be analysed to provide information for the characterisation of the most likely contaminated soils. This allowed the assessment of soils samples against the Site Acceptance Criteria. All analyses were to be carried out by NATA certified laboratory Eurofins MGT in accordance with Chain of Custody (CoC) instructions supplied by Geotesta. The samples were checked for heavy metals, OCP/OPP, PAH, TRH, BTEX and Asbestos. Summary of the soil and water laboratory analyses is presented in Table 7. The details of sample types and depths are provided in Table 8.

**Table 7: Summary of soil laboratory program**

COC	Number of samples analysed
Suite B7A <sup>1</sup>	7
Suite B15 <sup>2</sup>	7
Asbestos	7

Notes:

<sup>1</sup>Suite B7A: TRH, BTEX, PAH, Phenols, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Zinc, Mercury

<sup>2</sup>Suite B15: OCP, OPP, PCB

**Table 8: Samples Depth and Requested Lab Tests**

Sample ID	Depth (m)	Sample Type	Suite B7A <sup>1</sup>	Suite B15 <sup>2</sup>	Asbestos
BH1	0.2-0.3	Fill/Sand	x	x	x
BH2	0.2-0.3	Fill/Sand	x	x	x
BH3	0.2-0.3	Fill/Sand	x	x	x
BH4	0.2-0.3	Fill/Sand	x	x	x
BH5	0.2-0.3	Fill/Sand	x	x	x
BH6	0.2-0.3	Fill/Sand	x	x	x
BH7	0.2-0.3	Fill/Sand	x	x	x

<sup>1</sup>Suite B7A: **TRH, BTEX, PAH, Phenols, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Zinc, Mercury**

<sup>2</sup>Suite B15: **OCP, OPP, PCB**

Heavy Metals such as arsenic, copper, lead, etc., Total Recoverable Hydrocarbons - 1999 NEPM Fractions, TRH: Total recoverable hydrocarbons, PAH: Polycyclic aromatic hydrocarbons, BTEX: Benzene, toluene, ethyl benzene, xylene, Polychlorinated Biphenyls (PCB), Spectated Phenols, Total Recoverable Hydrocarbons - 2013 NEPM Fractions, Chromium (hexavalent), Cyanide (total) and Fluoride



Figure 4: Soil Sampling Locations

## 9. ASSESSMENT CRITERIA

### 9.1 Heavy metals, PAH, PCB, OCP/OPP, Phenols and Asbestos

Based on the proposed development, Health Investigation levels (HIL) of Residential A with soil access (*ASC NEPM 1999, amended 2013*) have been adopted as the Soil Assessment Criteria (SAC) for metals, OCP, OPP and PAH for this investigation.

The bonded asbestos Health Screening Levels (HSLs) in soils (*NEPM 2013*) were also adopted for the Site. In addition to soil samples tested for asbestos, the 'presence/absence' of asbestos in soil material has been adopted as the SAC. Site specific Ecological Investigation Levels (EILS) will also be used to assess the site to confirm suitability for the proposed residential land use.

For this Site, the intended land use is HSL C – Recreational including public open space. Table 9 presents HILs for heavy metals, PAH, pesticides (OCP/OPP) and HSLs asbestos.

**Table 9: Site Assessment Criteria for Soils (mg/kg)**

Analytes	HILs-Recreational C <sup>1</sup>	HSLs- Recreational C <sup>1</sup>
Arsenic	300	--
Cadmium	90	--
Chromium (VI)	300	--
Copper	17000	--
Lead	600	--
Mercury (inorganic)	80	--
Nickel	1200	--
Zinc	30000	--
Total PAHs	300	--
Benzo(a)pyrene TEQ	3	--
Phenols	40000	--
PCB	1	--
Pesticides:		
Aldrin/Dieldrin	10	--
Chlordane	70	--
DDT+DDE+DDD	400	--
Chlorpyrifos	250	--
Asbestos:		
Bonded ACM <sup>2</sup> ,	--	0.02%
Friable Asbestos <sup>3</sup> (FA), Asbestos Fines <sup>4</sup> (AF),	--	0.001%
Surface Asbestos (0.1m)	--	No Visible

1- Criteria adopted for residential areas of the Site

2- Bonded ACM (bonded Asbestos) - asbestos-containing-material which is in sound condition and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). Bonded ACM refers to, in this instance, material that cannot pass a 7 mm x 7 mm sieve.

3- Fibrous Asbestos - friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This material is in a degraded condition such that it can be broken or crumbled by hand pressure.

- 4- Asbestos Fines - AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

## 9.2 Total Recoverable Hydrocarbons (TRH) and Benzene Toluene Ethylbenzene Xylene (BTEX)

The NEPM (2013) provides Health Screening Levels (HSLs), Ecological Screening Levels (ESLs) and Management Limits (MLs) for TRH fractions in soil based on concerns regarding ecological impacts, inhalation of vapours and direct contact with contaminant sources. The Fraction Number (i.e. hydrocarbon compound range) is identified and compared against the prescribed HSL, ESL and ML values. HSLs, ESLs and MLs take into consideration the followings:

- ✓ Carbon number range, indicated by a Fraction Number (F1, F2, F3 or F4);
- ✓ Type of soil (sand, silt or clay);
- ✓ Depth to the source of contamination;
- ✓ Intended land-use

For this Site, the intended land use is HSL C – Recreational including public open space, and the soil type was sand within a depth range of 0-1.0 m, 1.0 - < 2.0 m and 2.0 - < 4.0 m. The criteria are summarised in Tables 10 and 11 below. They are obtained from Table 1A (3) (HSL A & HSL B), Table 1B(6) (fine soils) and Table 1B(7) (fine soils) in NEPM (2013).

**Table 10: NEPM 2013 BTEX and TRH Criteria – HSL Criteria for 0-1m, 1-<2m and 2-<4m**

Analytes	HSL-C (Sand)	HSL-C (Sand)	HSL-C (Sand)
	0 - < 1m	1 - < 2m	2 - < 4m
<b>Benzene</b>	NL	NL	NL
<b>Toluene</b>	NL	NL	NL
<b>Ethylbenzene</b>	NL	NL	NL
<b>Xylene</b>	NL	NL	NL
<b>F1: C6-C10 (minus BTEX)</b>	NL	NL	NL
<b>F2:C10-C16 (minus Naphthalene)</b>	NL	NL	NL
<b>F3: C16-C34</b>	N/A	N/A	N/A
<b>F4: C34-C40</b>	N/A	N/A	N/A

NL = Not Limiting (i.e. the soil vapour concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario).

N/A = Not applicable as F3 and F4 are non-volatile and hence are not of concern for vapour intrusion.

\*\*Fine' refers to the soil texture grading as per NEPM 1999.

1 NEPM 2013 Amendment Table 1A(3) – Soil HSLs for vapour intrusion – 0-1.0m

2 NEPM 2013 Amendment Table 1A(3) – Soil HSLs for vapour intrusion – 1-<2.0m

3 NEPM 2013 Amendment Table 1A(3) – Soil HSLs for vapour intrusion – 2-<4.0m

**Table 11: NEPM 2013 BTEX and TRH Criteria, ESL and ML Criteria for 0-1m, 1-<2m and 2-<4m**

Analytes	NEPM 2013 Amendment TRH Criteria (mg/kg dry wt.) ESL (Fine*)	NEPM 2013 Amendment TRH Criteria (mg/kg dry wt.) ML (Fine*)
<b>Benzene</b>	65	-
<b>Toluene</b>	105	-
<b>Ethylbenzene</b>	125	-
<b>Xylene</b>	45	-
<b>F1: C6-C10</b>	180	800
<b>F2: C10-C16</b>	120	1000
<b>F3: C16-C34</b>	1300	3500
<b>F4: C34-C40</b>	5600	10000

'Fine' refers to the soil texture grading as per NEPM 1999.

1 NEPM 2013 Amendment Table 1B(6) – ESLs for TPH fractions, BTEX and benzo(a)pyrene in soil.

2 NEPM 2013 Amendment Table 1B(7) – Management Limits for TPH fractions F1-F4 in soil.

### 9.3 Ecological Investigation Levels

Ecological Investigation Levels (EILs) were also used to assess the site to confirm suitability for the proposed residential land use.

The current version of the NEPM (2013) specifies default EILs for arsenic, lead, DDT and naphthalene.

NEPM (2013) specifies a methodology for the derivation of site-specific EILs for nickel, chromium III, copper and zinc. The derivation process requires determination of ambient background concentrations (ABC) and added contaminant limits (ACLs) for these chemicals, and the EIL is then calculated as the ABC plus the ACL.

Sample# BH4 soil properties were measured for site-specific derivation of ACLs for Cr (III), Cu, Ni and Zn. Soil properties include:

- pH,
- Cation Exchange Capacity (CEC) and
- % Clay.

Table 12 presents EILs derived from the measured mean soil properties in sample# BH4 for aged soils in Urban Residential/Public Open Space, utilising ABC levels derived from sample# EIL.

**Table 12: NEPM (2013) EILs for Urban Residential and Public Open Spaces**

Analyte	pH	CEC <sup>^</sup>	Clay Content <sup>†*</sup>	ABC	ACL	EIL
Zinc	6	4.6	-	15	230	245
Copper	6	4.6	-	< 5	142.5	143
Chromium (III)	-	-	2.9 %	< 5 <sup>2</sup>	250	250
Nickel	-	4.6	-	< 5	30	30
Lead	-	-	-	7.1	1,100	1,107
Arsenic	-	-	-	-	100	100
DDT	-	-	-	-	-	180
Naphthalene	-	-	-	-	-	170

Note(s):

1. ABC = ambient background concentrations, ACL = added contaminant limits, ESL = ecological screening levels, CEC = cation exchange capacity.
2. Total Chromium utilized.

#### 9.4 Statistical Evaluation

Samples results from each identified material were tabulated and grouped individually as distinct profiles to be assessed. To achieve compliance with the site adopted criteria, assessment of concentrations for each analyte across the site is performed. Where a sample result is beyond the SAC, non-compliant locations are defined as a hotspot. Hotspots are defined as localised areas where contaminant concentration is higher than in surrounding areas.



## 10. RESULTS

### 10.1 Subsurface Conditions

A summary of sub-surface soil conditions encountered in the site is presented below:

Based on the fieldwork results, the site contained approximately 0.3-0.5 m thick Fill layer in most boreholes, comprising of SAND - brown (colouration), trace gravels, rootlets was observed in most boreholes.

The material below the fill horizon was mostly SAND, dark brown (colouration), with clay. Bedrock was not encountered up to 0.5 m bgl. Groundwater was not encountered in any of the boreholes.

### 10.2 Laboratory Analytical Results

Selected soil samples were analysed for the COPCs. A summary of analytical results follows. The laboratory documentation is presented in Appendix D.

#### 10.2.1 Heavy Metals (HM)

A total of seven (7) soil samples were analysed for heavy metals. The results of the laboratory results for the heavy metal components are presented in Table 13. The 95% UCL was calculated as a statistical analysis of the heavy metal detections including minimum, maximum and average along with the adopted SAC, and is shown in Table 14.

**Table 13: Heavy Metal Detections in soil samples (mg/kg)**

	<b>Arsenic (As)</b>	<b>Cadmium (Cd)</b>	<b>Chromium (Cr)</b>	<b>Copper (Cu)</b>	<b>Lead (Pb)</b>	<b>Mercury (Hg)</b>	<b>Nickel (Ni)</b>	<b>Zinc (Zn)</b>
BH1 <sup>1</sup>	<b>28</b>	< 0.4	<b>8.1</b>	<b>13</b>	<b>24</b>	<b>2.4</b>	< 5	<b>37</b>
BH2	<b>7.2</b>	<b>1.0</b>	<b>6.4</b>	<b>22</b>	<b>37</b>	<b>7</b>	< 5	<b>54</b>
BH3	< 2	< 0.4	<b>7.4</b>	<b>6.1</b>	<b>9.3</b>	<b>0.9</b>	< 5	<b>15</b>
BH4	< 2	< 0.4	<b>10</b>	<b>7.3</b>	<b>9.4</b>	<b>0.5</b>	< 5	<b>16</b>
BH5	<b>2.4</b>	< 0.4	< 5	< 5	<b>7.9</b>	<b>0.5</b>	< 5	<b>13</b>
BH6	< 2	< 0.4	<b>6.5</b>	<b>5.7</b>	<b>8.6</b>	<b>0.9</b>	< 5	<b>19</b>
BH7	<b>2.2</b>	< 0.4	<b>11</b>	<b>9.2</b>	<b>9.6</b>	<b>0.7</b>	< 5	<b>18</b>

**Table 14: Statistical analysis of Heavy Metal Detections in Soil samples (mg/kg)**

	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
<b>Samples count</b> <sup>1</sup>	7	7	7	7	7	7	7	37
<b>Minimum</b> <sup>2</sup>	2.2	1.0 <sup>2</sup>	6.4	5.7	7.9	0.5	- <sup>4</sup>	13
<b>Maximum</b> <sup>2</sup>	<b>28</b>	<b>1.0</b> <sup>2</sup>	<b>11</b>	<b>22</b>	<b>37</b>	<b>7.0</b>	- <sup>4</sup>	<b>54</b>
<b>Average</b>	6.1	- <sup>4</sup>	7.4	9.4	15.1	1.8	- <sup>4</sup>	24.6
<b>Standard Deviation</b>	9.9	- <sup>4</sup>	2.8	6.4	11.2	2.4	- <sup>4</sup>	15.2
<b>Confidence Level (95%)</b> <sup>3</sup>	9.2	- <sup>4</sup>	2.6	6.0	10.3	2.2	- <sup>4</sup>	14.1
<b>HIL C</b>	<b>300</b>	<b>90</b>	<b>300</b> *	<b>17,000</b>	<b>600</b>	<b>80</b>	<b>1200</b>	<b>30,000</b>
<b>EIL</b>	<b>100</b>	-	<b>250</b> **	<b>143</b>	<b>1,107</b>	-	<b>30</b>	<b>245</b>
<b>No. of Exceedances</b>	0	0	0	0	0	0	0	0

\* Note: Hexavalent Chromium

\*\* Note: Trivalent Chromium

<sup>1</sup> Note: Highest analytical results within Parent (BH1) / Duplicate Sample (BD1) Pair is included in the results table.

<sup>2</sup> Note: Detected Concentrations only. Undetected concentrations were estimated using half LOR.

<sup>3</sup> Note: 95% Confidence Level calculated within Topsoil / Fill horizon.

<sup>4</sup> Note: Insufficient data points

The laboratory analysis detected concentrations of Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, and Zinc within the soil samples recovered. All detected concentrations were reported by the laboratory to have concentrations within the adopted Site Assessment Criteria (SAC) – Health Investigation Levels (HIL C) and Ecological Investigation Levels (EIL).

No concentrations of Nickel were reported above laboratory limits of reporting (LOR) in the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C and EIL).

### 10.2.2 Organochlorine Pesticides / Organophosphorus Pesticides (OCP/OPP)

A total of seven (7) samples were analysed for a range of Organochlorine and Organophosphorus pesticides. Table 15 shows the OCP/OPP detections.

**Table 15: OCP/OPP (Pesticides) Detections in soil samples (mg/kg)**

	DDT+DDE +DDD	Aldrin and Dieldrin	Endrin	Chlordanes Total	Toxaphene	Chlorpyrifos
BH1	< 0.05	<b>0.1</b>	< 0.05	< 0.1	< 0.5	< 0.2
BH2	< 0.5	< 0.5	< 0.5	< 1	< 10	< 0.5
BH3	<b>0.06</b>	<b>0.3</b>	< 0.05	<b>0.2</b>	< 0.5	< 0.2
BH4	< 0.05	< 0.05	< 0.05	< 0.1	< 0.5	< 0.2
BH5	< 0.05	< 0.05	< 0.05	< 0.1	< 0.5	< 0.2
BH6	< 0.05	<b>0.12</b>	< 0.05	<b>0.7</b>	< 0.5	< 0.2
BH7	< 0.05	< 0.05	< 0.05	< 0.1	< 0.5	< 0.2
<b>HIL C</b>	<b>400</b>	<b>10</b>	<b>20</b>	<b>70</b>	<b>30</b>	<b>250</b>
<b>No. of Exceedance s</b>	0	0	0	0	0	0

All detected concentrations of Organochlorine Pesticides (OCPs) were reported by the laboratory to be within the adopted Site Assessment Criteria (HIL C).

No concentrations of the Organochlorine and Organophosphorus Pesticides (OCP / OPPs) were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C).

### 10.2.3 Polycyclic Aromatic Hydrocarbons (PAH)

A total of seven (7) samples were analysed for a range of PAH. Total PAH detections are shown in Table 16.

**Table 16: Total PAH Detections in soil samples (mg/kg)**

	<b>Total PAH</b>	<b>Benzo(a) pyrene TEQ (Upper Bound)</b>	<b>Naphthalene</b>
BH1	< 0.5	1.2	< 0.5
BH2	< 0.5	1.2	< 0.5
BH3	< 0.5	1.2	< 0.5
BH4	< 0.5	1.2	< 0.5
BH5	< 0.5	1.2	< 0.5
BH6	< 0.5	1.2	< 0.5
BH7	< 0.5	1.2	< 0.5
<b>HIL C</b>	<b>300</b>	<b>3</b>	-
<b>EIL</b>	-	-	<b>170</b>
<b>No of Exceedances</b>	0	0	0

No concentration of PAHs (Total) and Naphthalene were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C and EIL).

#### 10.2.4 Total Recoverable Hydrocarbons (TRH) - 2013 NEPM Fractions

A total of seven (7) samples were analysed for TRH. TRH detections are presented in Table 17.

**Table 17: Total TRH Detections in soil samples (mg/kg)**

	<b>F1: C6-C10</b>	<b>F2: C10-C16</b>	<b>F3: C16-C34</b>	<b>F4: C34-C40</b>
BH1	< 20	< 50	< 100	< 100
BH2	< 20	< 50	< 100	< 100
BH3	< 20	< 50	< 100	< 100
BH4	< 20	< 50	< 100	< 100
BH5	< 20	< 50	< 100	< 100
BH6	< 20	< 50	< 100	< 100
BH7	< 20	< 50	< 100	< 100
<b>HSL<sup>1</sup></b>	<b>NL</b>	<b>NL</b>	<b>NL</b>	<b>NL</b>
<b>ESL<sup>1</sup></b>	<b>180</b>	<b>120</b>	<b>1300</b>	<b>5600</b>
<b>ML<sup>1</sup></b>	<b>800</b>	<b>1000</b>	<b>3500</b>	<b>10000</b>
<b>No of Exceedances</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup>Note: The NEPM (2013) provides Health Screening Levels (HSL-A) for Clay (0 - 1.0 m), Ecological Screening Levels (ESLs) for Residential / Fine Soils and Management Limits (MLs) for Residential / Fine Soils

No concentration of TRHs were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HSL, ESL and ML).

### 10.2.5 Benzene, Toluene, Ethyl Benzene and Xylene (BTEX) - 2013 NEPM Fractions

A total of seven (7) samples were analysed for BTEX. BTEX detections are presented in Table 18.

**Table 18: Total BTEX Detections in soil samples (mg/kg)**

	Benzene	Toluene	Ethylbenzene	Xylene
BH1	< 0.1	< 0.1	< 0.1	< 0.3
BH2	< 0.1	< 0.1	< 0.1	< 0.3
BH3	< 0.1	< 0.1	< 0.1	< 0.3
BH4	< 0.1	< 0.1	< 0.1	< 0.3
BH5	< 0.1	< 0.1	< 0.1	< 0.3
BH6	< 0.1	< 0.1	< 0.1	< 0.3
BH7	< 0.1	< 0.1	< 0.1	< 0.3
<b>HSL<sup>1</sup></b>	<b>NL</b>	<b>NL</b>	<b>NL</b>	<b>NL</b>
<b>ESL<sup>1</sup></b>	<b>65</b>	<b>105</b>	<b>125</b>	<b>45</b>
<b>No. of Exceedances</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup>Note: The NEPM (2013) provides Health Screening Levels (HSL-A) for Clay (0 - 1.0 m), Ecological Screening Levels (ESLs) for Residential / Fine Soils

No concentrations of BTEX within the samples analysed exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HSL and ESL).

### 10.2.6 Phenols

A total of seven (7) samples were analysed for Phenols. Phenol detections are presented in Table 19.

**Table 19: Phenol Detections in soil samples (mg/kg)**

	Phenols	Pentachlorophenol	Cresols
BH1	< 0.5	< 1	< 0.5
BH2	<b>0.9</b>	< 1	< 1
BH3	< 0.5	< 1	< 0.5
BH4	< 0.5	< 1	< 0.5
BH5	< 0.5	< 1	< 0.5
BH6	< 0.5	< 1	< 0.5
BH7	< 0.5	< 1	< 0.5
<b>HIL C</b>	<b>3000</b>	<b>100</b>	<b>400</b>
<b>No. of Exceedances</b>	0	0	0

A concentration of Phenols was detected by the laboratory from the recovered sample # BH2 the reported concentration was within the Site Assessment Criteria (HIL C).

No concentrations of Phenols within the remaining samples exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HIL C).

### 10.2.7 Other Organics – Polychlorinated Biphenyls (PCBs)

A total of seven (7) samples were analysed for PCBs. PCB detections are presented in Table 20.

**Table 20: PCB Detections in soil samples (mg/kg)**

	Total PCBs
BH1	< 0.1
BH2	< 1
BH3	< 0.1
BH4	< 0.1
BH5	< 0.1
BH6	< 0.1
BH7	< 0.1
<b>HIL C</b>	<b>1</b>
<b>No. of Exceedances</b>	0

No concentrations of PCB within the samples analysed exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HIL C).

### 10.2.8 Asbestos

No asbestos was detected at the reporting limit of 0.001% w/w within the seven (7) samples analysed were therefore within the Site Assessment Criteria (HSL).



### 10.3 Evaluation Analytical Quality Assurance

#### 10.3.1 Duplicate Sample

The laboratory quality control measures are assessed based on a duplicate sample which was collected during the field works. The Relative Percentage Difference (RPD) values between primary/parent sample# BH1 and the duplicate sample BD1 was calculated to assess the results. A zero RPD means perfect agreement of results between the primary and duplicate sample whilst an RPD above 200 % indicates total disagreement in results. Any value > 50 % RPD will be noted and discussed, as per Standards Australia requirements, with respect to its acceptability for inclusion in the dataset.

An acceptable RPD of 50 % was adopted for this assessment, however, in circumstances where one or both of the detected concentrations within the duplicate pair were within five (5) times the LOR, an RPD of 100 % was considered acceptable.

The following Table 21 presents the RPD results for the duplicate collected and pairs of results obtained above the laboratory detection limits.

**Table 21: Relative Percentage Difference against BH1 and BD1**

Chemical	LOR	BH1	BD1	RPD%
Arsenic	2	11	28	87.2
Cadmium	0.4	< 0.4	< 0.4	-
Chromium	5	5.9	8.1	31.4
Copper	5	12	13	8.0
Lead	5	22	24	8.7
Mercury	0.1	1.1	2.4	74.3
Nickel	5	< 5	< 5	-
Zinc	5	25	37	38.7

*Adapted from Eurofins Certificate of Analysis 1027498 -S (Appendix D)*

<sup>1</sup> Note: one or both of the detected concentrations within the duplicate pair were within five (5) times the LOR, an RPD of 100% was considered acceptable.

The RPD for the duplicate samples analysed by the primary laboratory (Eurofins MGT) were between 8.0 % and 87.2 %. RPD values could not be determined for Cadmium and Nickel as the both of the analytical results were below the laboratory LOR. The RPD result for Arsenic, and Mercury exceeded 50%, this is attributed to the non-homogenous nature of the sample.

The highest analytical results within the Parent (BH1) / Duplicate Sample (BD1) pair were utilized as the reported results. Based on the laboratory QA/QC and the duplicate results the data is considered suitable for use in this environmental assessment of the site.

### 10.3.2 Trip Spikes

One (1) trip spike was utilized during the QA/QC. Trip Spike samples assesses the loss of volatile compounds through field handling and transport procedures. The trip spike is a sand sample spiked with a known concentration of BTEX by the analytical laboratory. The sample is transported to and from the site with the primary samples and is analysed to determine the percentage of BTEX recovered.

Upon analysis, the recovery rates were at **100 %** of the known concentration (refer to Table 22). Therefore, the field and transport procedures were considered satisfactory for minimising the potential loss of volatile compounds from the primary samples.

**Table 22. Trip Spike Recovery (%)**

Sample	Benzene	Toluene	Ethylbenzene	o-Xylene	Xylene - Total
Trip Spike	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Assessment Criteria	70 – 130	70 – 130	70 – 130	70 – 130	70 – 130

*Adapted from Eurofins Certificate of Analysis 1027498-S (Appendix D)*

### 10.3.3 Trip Blanks

One (1) trip blank was utilized during the QAQC. The trip blank sample assesses the potential for the primary sample to be affected by external and environmental factors during transport between the site and laboratory. The trip blank sample consists of blank sand which is transported to and from the site and laboratory with the primary samples. Upon analysis, no concentrations of BTEX were detected (refer to Table 23). As such, there is a minimal potential for cross-contamination to have occurred during the field and trip handling procedures.

**Table 23. Trip Blank Sample Results (mg/kg)**

Analyte	TB
Benzene	< 0.1
Toluene	< 0.1
Ethylbenzene	< 0.1
o-Xylene	< 0.1
Xylene - Total	< 0.3

*Adapted from Eurofins Certificate of Analysis 1027498-S (Appendix D)*

## 11. DISCUSSION

### 11.1 Soil Contamination Summary

Reviewal of the historical aerial photographs, indicates that the site has been primarily used for recreational / commercial usage since 1955/1956 (latest). One (1) structure, one (1) shed and two (2) dwellings were constructed in the western section of the site since in 1955/1956. Recreational green areas were gradually constructed in the northern and eastern sections from 1955 to 1961. In 2000, external modification was constructed onto the dwelling located in the southwestern section and then demolished in 2007. Since then, the site remained unchanged.

Vehicles were observed parking in the western sections since 1970. Suspected earthworks were observed onsite in 1951, 1955/56, 2020 and 2023. Suspected stockpiles were observed since 1951. Agricultural usage was not observed across the site.

The site is expected to contain hazardous building materials (asbestos containing materials (ACM) and lead based paint systems) from the usage of buildings / structures which were constructed in an era to contain hazardous building materials. It is also suspected that the site contains contamination from past fill materials brought onto site and from past horticultural usage.

An intrusive groundwater assessment was not conducted as part of this Targeted PSI, as the risk of contamination from groundwater is considered negligible based on past uses and no identified sources of contamination that would impact groundwater.

A summary of the laboratory results is presented as the following:

- The laboratory analysis detected concentrations of Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, and Zinc within the soil samples recovered. All detected concentrations were reported by the laboratory to have concentrations within the adopted Site Assessment Criteria (SAC) – Health Investigation Levels (HIL C) and Ecological Investigation Levels (EIL).

No concentrations of Nickel were reported above laboratory limits of reporting (LOR) in the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C and EIL).

- All detected concentrations of Organochlorine Pesticides (OCPs) were reported by the laboratory to be within the adopted Site Assessment Criteria (HIL C).

No concentrations of the Organochlorine and Organophosphorus Pesticides (OCP / OPPs) were detected above the laboratory limits of reporting (LOR) within the

recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C).

- No concentration of PAHs (Total) and Naphthalene were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HIL C and EIL).
- No concentration of TRHs were detected above the laboratory limits of reporting (LOR) within the recovered samples and were therefore within the adopted Site Assessment Criteria (HSL, ESL and ML).
- No concentrations of BTEX within the samples analysed exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HSL and ESL).
- A concentration of Phenols was detected by the laboratory from the recovered sample # BH2 the reported concentration was within the Site Assessment Criteria (HIL C).

No concentrations of Phenols within the remaining samples exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HIL C).

- No concentrations of PCB within the samples analysed exceeded the Laboratory Limit of Reporting (LOR) and were therefore within the Site Assessment Criteria (HIL C).
- No asbestos was detected at the reporting limit of 0.001% w/w within the seven (7) samples analysed were therefore within the Site Assessment Criteria (HSL).

## 12. CONCLUSIONS AND RECOMMENDATIONS

The Targeted PSI conducted within the northeastern section of 431 Pittwater Road, North Manly, NSW 2100 located (Lot/Section/Plan no: 2743/-/DP 752038), Manly Warringah Gymnastics New Facility Project was undertaken by Geotesta to investigate the likelihood of the presence of contamination on the site.

Based on the assessment undertaken, the following conclusions and recommendations can be made:

- All the contaminant concentrations of interest within the soil samples analysed were found to be within the Site Assessment Criteria (SAC).
- The limited soil sampling and analysis program conducted indicated a **low** risk of soil and groundwater contamination.
- It is the opinion of Geotesta, that the site can be made suitable for the proposed Development Application (DA) in the foreseeable future pending on the results of an additional Data Gap Contamination Assessment.
- Due to the existence of a data-gap in this investigation, a further Data Gap Assessment post demolition of the existing structures/dwellings is recommended to address further potential AECs identified previously and to determine if any contamination hotspots exist within the footprint of the former sheds and dwellings.

***DOCUMENT CONTROL***

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<b>Date</b>	<b>Version</b>	<b>Report Prepared By:</b>	<b>Report Reviewed and Issued by:</b>
09 October 2023	Rev (0)	<b>Fang Bian</b> MSc (Env. Geo.)   BSc (Chem.) Environmental Consultant	<b>Victor Kirpichnikov</b> MEnv Studies, BSc (Hons), WHS Cert IV Senior Environmental Consultant

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### **Information about this report**

The report contains the results of a contamination investigation conducted for a specific purpose and client. The results should not be used by other parties, or for other purposes, as they may contain neither adequate nor appropriate information. In particular, the investigation does not cover contamination issues unless specifically required to do so by the client.

### **Test Hole Logging**

The information on the test hole logs (boreholes, test pits, exposures etc.) is based on a visual and tactile assessment, except at the discrete locations where test information is available (field and/or laboratory results). The test hole logs include both factual data and inferred information.

### **Groundwater**

Unless otherwise indicated, the water levels presented on the test hole logs are the levels of free water or seepage in the test hole recorded at the given time of measuring. The actual groundwater level may differ from this recorded level depending on material permeability (i.e. depending on response time of the measuring instrument). Further, variations of this level could occur with time due to such effects as seasonal, environmental and tidal fluctuations or construction activities. Confirmation of groundwater levels, phreatic surfaces or piezometric pressures can only be made by appropriate instrumentation techniques and monitoring programmes.

### **Interpretation of Results**

The discussion or recommendations contained within this report normally are based on a site evaluation from discrete test hole data. Generalized, idealized or inferred subsurface conditions (including any geotechnical cross-sections) have been assumed or prepared by interpolation and/or extrapolation of these data. As such these conditions are an interpretation and must be considered as a guide only.

### **Change in Conditions**

Local variations or anomalies in the generalized ground conditions do occur in the natural environment, particularly between discrete test hole locations. Additionally, certain design or construction procedures may have been assumed in assessing the soil-structure interaction behaviour of the site. Furthermore, conditions may change at the site from those encountered at the time of the geotechnical investigation through construction activities and constantly changing natural forces.

Any change in design, in construction methods, or in ground conditions as noted during construction, from those assumed or reported should be referred to GEOTESTA for appropriate assessment and comment.

### **Environmental Verification**

Verification of the environmental/contamination assumptions and/or model is an integral part of the design process-investigation, construction verification, and performance monitoring. Variability is a feature of the natural environment and, in many instances, verification of soil or rock quality, or foundation levels, is required. There may be a requirement to extend foundation depths, to modify a foundation system or to conduct monitoring as a result of this natural variability. Allowance for verification by geotechnical personnel accordingly should be recognized and programmed during construction.

### **Reproduction of Reports**

Where it is desired to reproduce, the information contained in our contamination report, or other technical information, for the inclusion in contract documents or engineering specification of the subject development, such reproductions should include at least all of the relevant test hole and test data, together with the appropriate standard description sheets and remarks made in the written report of a factual or descriptive nature. Reports are the subject of copyright and shall not be reproduced either totally or in part without the express permission of Geotesta.

# **Appendix A**

## Borehole Logs

**BH 1**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.4	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 1 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered

**BH 2**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.5	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 2 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered

**BH 3**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.4	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 4 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered
0.4-0.5	-	SAND: dark brown, with clay	Moist	Loose	

**BH 4**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.3	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 4 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered

**BH 5**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.4	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 5 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered

**BH 6**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.5	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 6 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered

**BH 7**

Depth (m)	Symbol	Material Description	Moisture	Consistency/Density	Field Notes
0.0-0.5	-	FILL: SAND, brown, trace gravels, rootlets	Moist	Loose	BH 7 sampled @ 0.2-0.3 m Asbestos sample sampled @ 0.2-0.3 m Groundwater not encountered

## **Appendix B**

# Photographic Logs



**Photograph 1:** View of the North Manly Bowling and Recreation Club.



**Photograph 2:** View of the Bowling Greens located to the adjacent north and east of the club structure.

## **Appendix C**

# Lotsearch Report



**LOTSEARCH**  
LOTSEARCH ENVIRO PROFESSIONAL

**Date: 18 Sep 2023 11:50:11**

**Reference: LS048038 EP**

**Address: Campbell Parade, Manly Vale, NSW 2093**

Disclaimer:

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.

You should obtain independent advice before you make any decision based on the information within the report.

The detailed terms applicable to use of this report are set out at the end of this report.



## Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	14/09/2023	14/09/2023	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	22/08/2022	22/08/2022	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	11/09/2023	08/09/2023	Monthly	1000m	0	1	7
Contaminated Land Records of Notice	Environment Protection Authority	28/06/2023	28/06/2023	Monthly	1000m	0	1	1
Former Gasworks	Environment Protection Authority	10/05/2023	14/07/2021	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority	26/07/2023	26/07/2023	Monthly	1000m	1	1	1
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	23/08/2022	13/07/2012	Annually	1000m	0	1	3
EPA PFAS Investigation Program	Environment Protection Authority	16/08/2023	23/09/2022	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	16/08/2023	16/08/2023	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	16/08/2023	16/08/2023	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	18/08/2023	18/08/2023	Monthly	2000m	0	0	0
Defence Controlled Areas	Department of Defence	08/06/2023	08/06/2023	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	16/06/2023	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Department of Defence	08/06/2023	08/06/2023	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	16/02/2022	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	15/08/2023	15/08/2023	Monthly	1000m	0	0	0
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	15/08/2023	15/08/2023	Monthly	1000m	0	0	2
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	15/08/2023	15/08/2023	Monthly	1000m	3	3	4
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	6	350	361
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	92	93
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	72	324
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	38	48
Points of Interest	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	11	19	90
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	23/05/2023	23/05/2023	Quarterly	1000m	0	1	30
State Forest	Forestry Corporation of NSW	16/08/2022	14/08/2022	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	16/02/2023	31/12/2022	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	29/08/2022	19/08/2019	As required	1000m	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	09/05/2023	23/02/2018	Annually	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	18/04/2023	13/07/2022	Annually	2000m	2	3	85
NSW Seamless Geology Single Layer: Rock Units	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	3	3	8
NSW Seamless Geology – Single Layer: Trendlines	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	0	0	3
NSW Seamless Geology – Single Layer: Geological Boundaries and Faults	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	18/08/2022	27/07/2020	Annually	1000m	2	3	6
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	31/08/2023	30/06/2023	Monthly	500m	4	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	3	3	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	15/05/2023	15/05/2023	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	25/08/2023	25/08/2023	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	25/08/2023	25/08/2023	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	25/08/2023	25/08/2023	Monthly	1000m	12	12	12
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	31/08/2023		Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	31/08/2023	25/08/2023	Monthly	1000m	1	12	76
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	06/09/2023	03/03/2023	Quarterly	1000m	0	0	1
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	31/08/2023	25/08/2023	Monthly	1000m	1	3	47
Bush Fire Prone Land	NSW Rural Fire Service	18/08/2023	31/05/2023	Monthly	1000m	0	0	3
NSW Native Vegetation Type Map	NSW Department of Planning and Environment	26/05/2023	12/12/2022	Quarterly	1000m	2	2	9
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	09/05/2023	01/11/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	6
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	9
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	13/09/2023	13/09/2023	Weekly	10000m	-	-	-

# Site Diagram

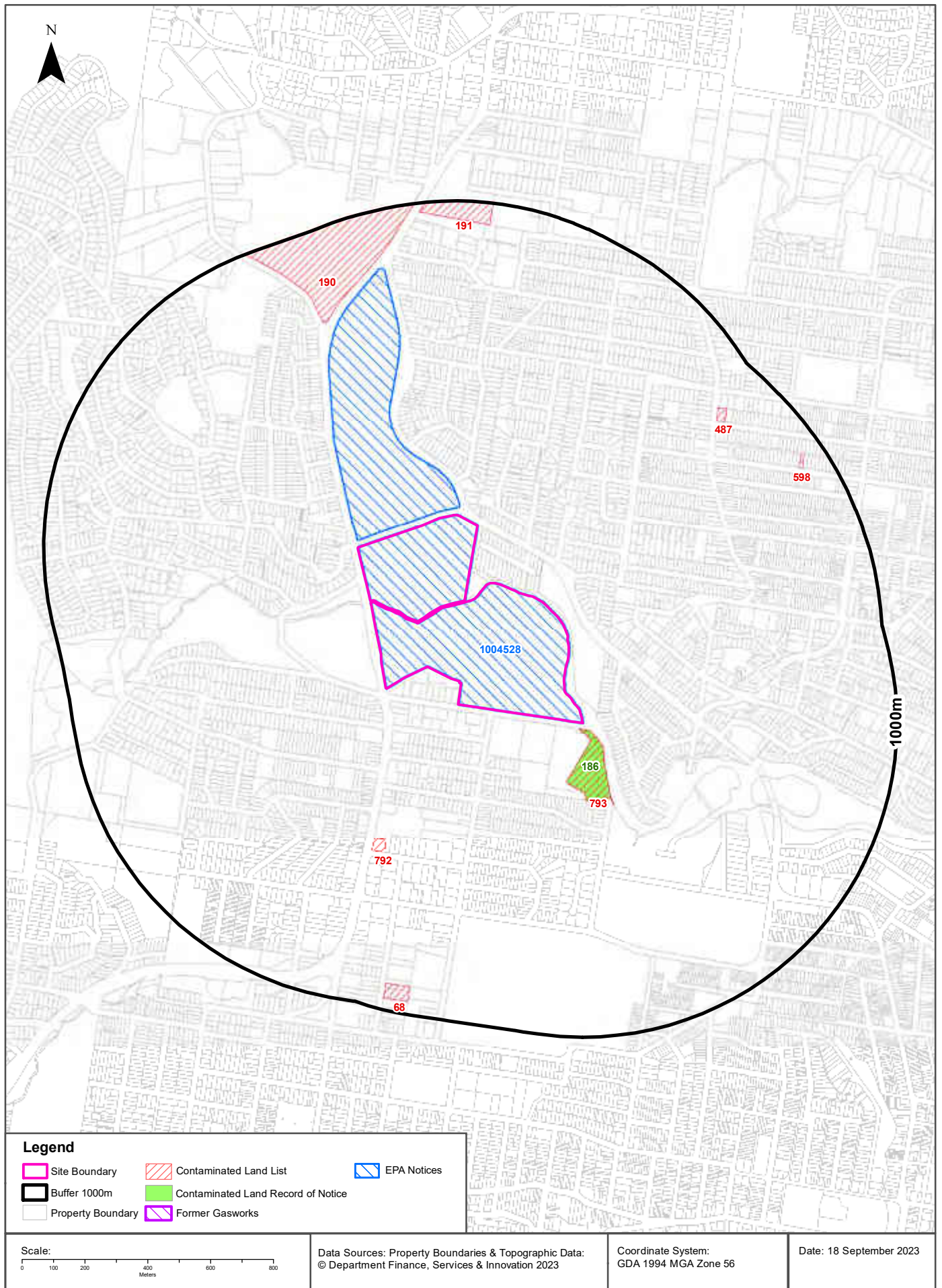
Campbell Parade, Manly Vale, NSW 2093



<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; border: 2px solid pink; margin-right: 5px;"></span> Site Boundary</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid pink; margin-right: 5px;"></span> Internal Parcel Boundaries</li> </ul>	<p><b>Total Area:</b> 267580m<sup>2</sup></p> <p><b>Total Perimeter:</b> 3.23km</p> <p><small>Disclaimers:</small></p> <p>Measurements are approximate only and may have been simplified or smaller lengths removed for readability.</p> <p>Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.</p>	<p><b>Scale:</b></p> <p>0 25 50 100 150 200 Meters</p> <hr/> <p>Data Source Aerial Imagery: © Aerometrex Pty Ltd</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Coordinate System: GDA 1994 MGA Zone 56</td> <td style="width: 50%;">Date: 18 September 2023</td> </tr> </table>	Coordinate System: GDA 1994 MGA Zone 56	Date: 18 September 2023
Coordinate System: GDA 1994 MGA Zone 56	Date: 18 September 2023			

# Contaminated Land

Campbell Parade, Manly Vale, NSW 2093



# Contaminated Land

Campbell Parade, Manly Vale, NSW 2093

## List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
793	Former Landfill Addiscombe Road	Addiscombe Road	Manly Vale	Landfill	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	20m	South East
792	Caltex Service Station Manly Vale	236-238 Condamine Street	Manly Vale	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	481m	South
190	Warringah Mall	Cnr Condamine Street, Old Pittwater Rd & Cross Street	Brookvale	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	709m	North
487	Prime Service Station Freshwater	117 Harbord Road	Freshwater	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	795m	North East
598	Former Dry Cleaners	121 Wyndora Avenue	Freshwater	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	896m	North East
68	Part of Manly Council Maintenance Depot	8-10 Roseberry Street	Balgowlah	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	914m	South
191	Brookvale Bus Depot	630-636 Pittwater Road	Brookvale	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	928m	North

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

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

EPA site management class	Explanation
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority  
 © State of New South Wales through the Environment Protection Authority

# Contaminated Land

Campbell Parade, Manly Vale, NSW 2093

## Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
186	Former Landfill Addiscombe Road	Addiscombe Road	Manly Vale	3 current and 2 former	3362	Premise Match	20m	South East

Contaminated Land Records of Notice Data Source: Environment Protection Authority  
© State of New South Wales through the Environment Protection Authority  
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit <http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm>

## Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority  
© State of New South Wales through the Environment Protection Authority

# Contaminated Land

Campbell Parade, Manly Vale, NSW 2093

## EPA Notices

Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

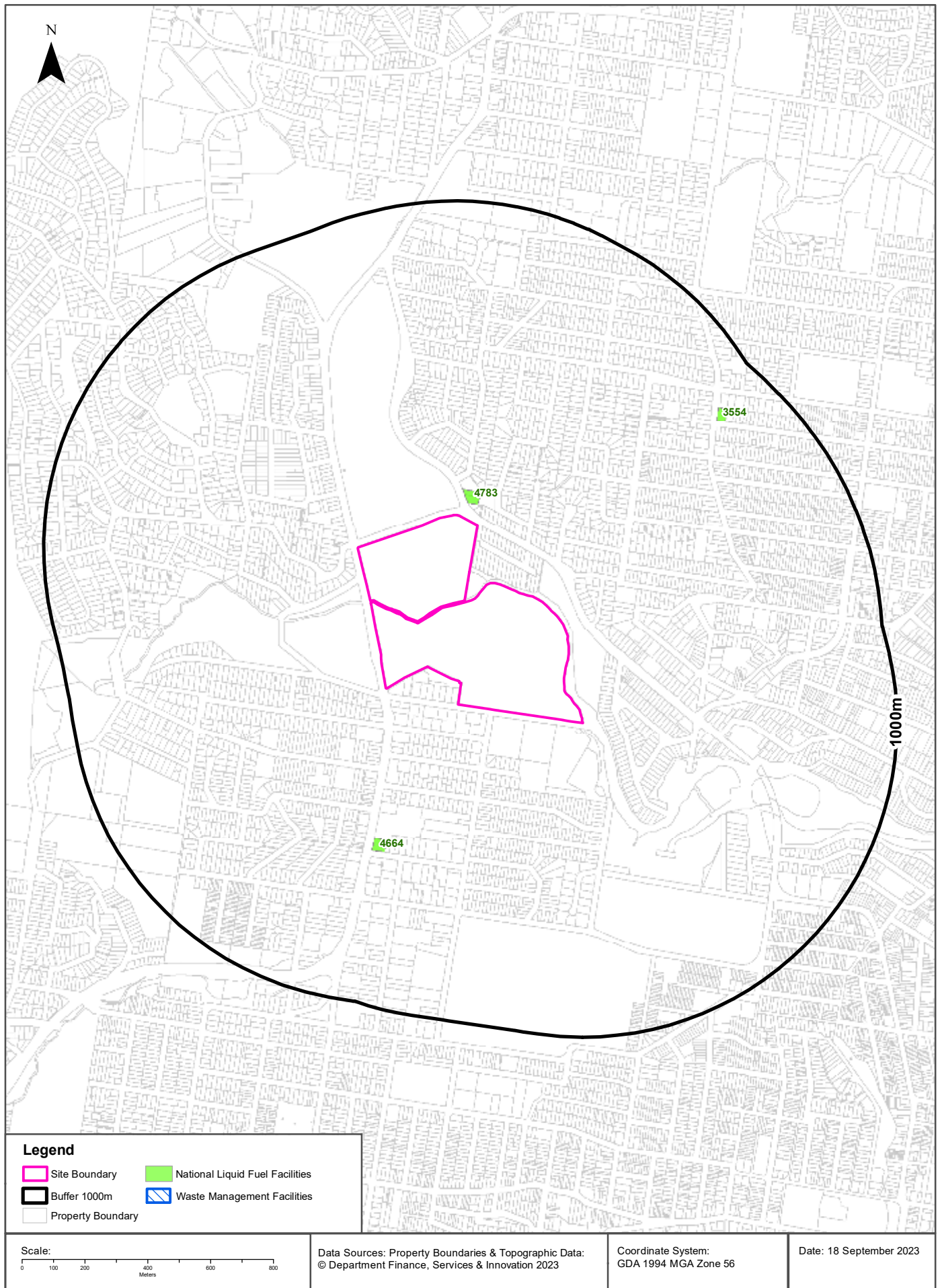
Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
<a href="#">1004528</a>	s.91 Clean Up Notice	WARRINGA H GOLF CLUB LTD		Issued	23/02/2001				Premise Match	0m	On-site

NSW EPA Notice Data Source: Environment Protection Authority  
© State of New South Wales through the Environment Protection Authority



# Waste Management & Liquid Fuel Facilities

Campbell Parade, Manly Vale, NSW 2093



# Waste Management & Liquid Fuel Facilities

Campbell Parade, Manly Vale, NSW 2093

## National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Geoscience Australia  
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

## National Liquid Fuel Facilities

National Liquid Fuel Facilities within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
4783	BP	BP North Manly	504 Pittwater Road	North Manly	Petrol Station	Operational		25/07/2011	Premise Match	46m	North
4664	Caltex	Caltex Manly Vale	236-238 Condamine Street	Manly Vale	Petrol Station	Operational		25/07/2011	Premise Match	481m	South
3554	Independent Fuel Supplies	Mobil Harbord	111 Wyuna Avenue	Freshwater	Petrol Station	Operational		25/07/2011	Premise Match	795m	North East

National Liquid Fuel Facilities Data Source: Geoscience Australia  
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

# PFAS Investigation & Management Programs

Campbell Parade, Manly Vale, NSW 2093

## EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority  
© State of New South Wales through the Environment Protection Authority

## Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

## Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

## Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

# Defence Sites and Unexploded Ordnance

Campbell Parade, Manly Vale, NSW 2093

## Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

Site ID	Location Name	Loc Conf	Dist	Dir
N/A	No records in buffer			

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

## Defence 3 Year Regional Contamination Investigation Program (RCIP)

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

## National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

# EPA Other Sites with Contamination Issues

Campbell Parade, Manly Vale, NSW 2093

## EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasmaico Lead Abatement Strategy Area

Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority  
© State of New South Wales through the Environment Protection Authority

## EPA Activities

Campbell Parade, Manly Vale, NSW 2093

## Licensed Activities under the POEO Act 1997

Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

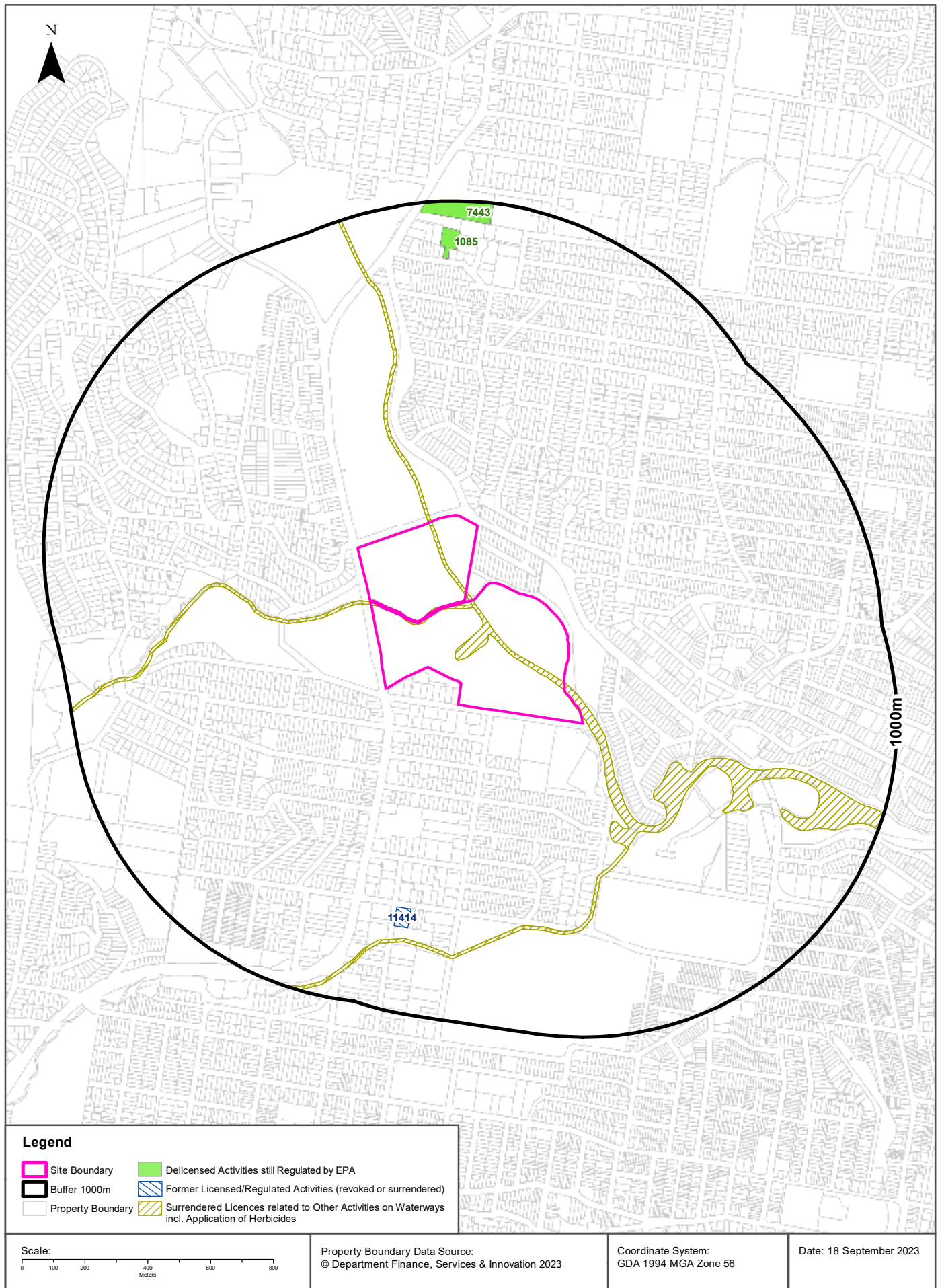
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

# Delicensed & Former Licensed EPA Activities

Campbell Parade, Manly Vale, NSW 2093



## EPA Activities

Campbell Parade, Manly Vale, NSW 2093

### Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
1085	HOLCIM (AUSTRALIA) PTY LTD	BROOKVALE CONCRETE	18 WILLIAM STREET	BROOKVALE	Concrete works	Premise Match	814m	North
7443	STATE TRANSIT AUTHORITY OF NSW	BROOKVALE BUS DEPOT	630-636 PITTWATER ROAD	BROOKVALE	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	928m	North

Delicensed Activities Data Source: Environment Protection Authority  
 © State of New South Wales through the Environment Protection Authority

### Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
11414	FIRMENICH LTD	73 Kenneth Road, BALGOWLAH, NSW 2093	Surrendered	24/04/2001	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	667m	South

Former Licensed Activities Data Source: Environment Protection Authority  
 © State of New South Wales through the Environment Protection Authority



# Historical Business Directories

Campbell Parade, Manly Vale, NSW 2093



<b>Legend</b> <ul style="list-style-type: none"> <li><span style="border: 1px solid pink; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Site Boundary</li> <li><span style="border: 2px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Buffer 150m</li> <li><span style="border: 1px solid grey; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Property Boundary</li> <li><span style="color: blue; font-weight: bold;">●</span> Business directory records mapped to a specific premise</li> <li><span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Business directory records mapped to a road intersection</li> <li><span style="color: orange; font-weight: bold;">▲</span> Business directory records mapped to a road corridor</li> <li><span style="background-color: #90EE90; border: 1px solid black; border-style: dashed; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Business directory records mapped to a general area</li> </ul>		Scale: 	Coordinate System: GDA 1994 MGA Zone 56  Date: 18 September 2023
Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018			

# Historical Business Directories

Campbell Parade, Manly Vale, NSW 2093

## Business Directory Records 1950-1991 Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	CLUBS & SPORTING BODIES (C487)	Manly Vale Bowling Club., Campbell Pde., Manly Vale	284406	1970	Premise Match	0m	On-site
	Clubs & Sporting Bodies	Manly Vale Bowling Club, Campbell Pde., Manly Vale	69078	1965	Premise Match	0m	On-site
	CLUBS & SPORTS BODIES	Manly Vale Bowling Club, Campbell Pde., Manly Vale	291615	1961	Premise Match	0m	On-site
2	CLUBS & SPORTING BODIES (C487)	North Manly Bowling Club Ltd., Cnr Pittwater & Kentwell Rds., North Manly	284501	1970	Premise Match	0m	On-site
	Clubs & Sporting Bodies	North Manly Bowling Club Ltd., Cnr. Pittwater & Kentwell Rds., North Manly	69168	1965	Premise Match	0m	On-site
	CLUBS & SPORTS BODIES	North Manly Bowling Club Ltd., Cnr. Pittwater & Kentwell Rds., North Manly	291685	1961	Premise Match	0m	On-site
3	Shop &/or Office Fittings Mfrs &/or Dist	AK Display Pty Ltd, B11/1 Campbell Pde Manly Vale 2093	62394	1991	Premise Match	20m	South East
	Display & Exhibition Equipment &/or Supplies	AK Display Pty. Ltd, B11/1 Campbell Pde, Manly Vale 2093	41484	1991	Premise Match	20m	South East
	Agricultural Machinery &/or Parts &/or Imps &/or Dist	Archer Industries Pty. Ltd., Unit A17/1 Campbell Pde., Manly Vale 2093	33640	1991	Premise Match	20m	South East
	Woodworkers	B S Woodturning, D15/1 Campbell Pde Manly Vale 2093	66441	1991	Premise Match	20m	South East
	Picture Frame Mfrs &/or Picture Framers	Barry's Framing, D1/1 Campbell Pde., Manly Vale. 2093	57532	1991	Premise Match	20m	South East
	Instrument Case Mfrs &/or Dist	Blue Berry Ash, A6/1 Campbell Pde., Manly Vale. 2093	49155	1991	Premise Match	20m	South East
	Motor Engineers	Bob Holden Motors Manly Vale, A1/1 Campbell Pde, Manly Vale 2093	53022	1991	Premise Match	20m	South East
	Compaction Equipment	C.P.L. Baler., B1/1 Campbell Pde, Manly Vale 2093	39786	1991	Premise Match	20m	South East
	Aluminum Fabricators	D & D Aluminum Balustrading Pty Ltd., A4/1 Campbell Pde, Manly Vale 2093	34349	1991	Premise Match	20m	South East
	Motor Trimmers	Davmark Pty Ltd, B6/1 Campbell Pde Manly Vale 2093	55432	1991	Premise Match	20m	South East
	Furniture Mfrs &/or W/salers Custom Built	Ed Wood Furniture, C7/1 Campbell Pde., Manly Vale.2093	46967	1991	Premise Match	20m	South East
	Engineers General	Edstar Pty Ltd, D2/1 Campbell Pde Manly Vale 2093	44041	1991	Premise Match	20m	South East
	Signs General	Gardner Signs, C9/1 Campbell Pde Manly Vale 2093	62508	1991	Premise Match	20m	South East
	Signs Writers	Gardner Signs, C9/1 Campbell Pde Manly Vale 2093	62656	1991	Premise Match	20m	South East
	Air Conditioning Industrial, Commercial &/or Domestic Specialists	Geometric Sheet Metal & Air Conditioning, A21/1 Campbell Pde., Manly Vale 2093	33942	1991	Premise Match	20m	South East
	Stainless Steel Fabricators	Hannan Stainless Industry Pty Ltd, A8/1 Campbell Pde, Manly Vale 2093	63053	1991	Premise Match	20m	South East
	Soap Mfrs &/or Dist	Hilmo Enterprises, D2Q/1 Campbell Pde Manly Vale 2093	62785	1991	Premise Match	20m	South East
	Display & Exhibition Equipment &/or Supplies	Jakaranda Enterprises, A6/1 Campbell Pde., Manly Vale 2093	41525	1991	Premise Match	20m	South East
	Kitchen Units Mfrs &/or Dist &/or Installers	Jarrah Kitchens, C10/1 Campbell Pde., Manly Vale. 2093	50207	1991	Premise Match	20m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	Stainless Steel Fabricators	Klittland's Fabrication Pty Ltd, A8/1 Campbell Pde Manly Vale 2093	63057	1991	Premise Match	20m	South East
	Motor Garages & Service Stations	Maloney, Peter Auto Repairs, C12/1 Campbell Pde., Manly Vale 2093	96256	1991	Premise Match	20m	South East
	Furniture Repairers &/or Remodellers	Manly Vale Stripping Co, B5/1 Campbell Pde., Manly Vale. 2093	47396	1991	Premise Match	20m	South East
	Plastic Moulders	McMechan J. Management Pty. Ltd., Trading as Jamac Plastics, C1/1 Campbell Pde., Manly Vale. 2093	58047	1991	Premise Match	20m	South East
	Plastic Goods Mfrs &/or Imps &/or Dists	McMechan, J. Management Pty. Ltd., Trading as Jamac Plastics, C1/1 Campbell Pde., Manly Vale. 2093	57933	1991	Premise Match	20m	South East
	Cabinet Makers	Muratorl's, S. Lorenti Pty. Ltd., A13/1 Campbell Pde., Manly Vale 2093	37878	1991	Premise Match	20m	South East
	Motor Transmission Specialists	Northshore Differential Service, C8/1 Campbell Pde Manly Vale 2093	55362	1991	Premise Match	20m	South East
	Motor Garages & Service Stations	Northside Imported Parts Pty. Ltd., C6/1 Campbell Pde., Manly Vale 2093	97818	1991	Premise Match	20m	South East
	Insulating Material Mfrs &/or Dists &/or Suppliers	P.C. Insulation Pty Ltd, D21/1 Campbell Pde., Manly Vale. 2093	49388	1991	Premise Match	20m	South East
	Ceramics Mfrs &/or Suppliers	Potters Field, The, B15/ 1 Campbell Pde., Manly Vale 2093	38737	1991	Premise Match	20m	South East
	Trophy Mfrs &/or Suppliers	Press Trophy Co, C13/1 Campbell Pde Manly Vale 2093	64951	1991	Premise Match	20m	South East
	Aluminum Fabricators	Rallx/ Donpress Pty. Ltd., A10/1 Campbell Pde., Manly Vale 2093	34369	1991	Premise Match	20m	South East
	Food Importers	Rosa Fine Foods., D11/1 Campbell Pde., Manly Vale 2093	46011	1991	Premise Match	20m	South East
	Screen Printers	Screen Printing Productions, A12/1 Campbell Pde Manly Vale 2093	61748	1991	Premise Match	20m	South East
	Motor Garages & Service Stations	T.M. Automotive Services, C11/1 Campbell Pde., Manly Vale 2093	53948	1991	Premise Match	20m	South East
	Staircase Builders	Tradition Stairs, Unit D16/1 Campbell Pde, Manly Vale 2093	63148	1991	Premise Match	20m	South East
	Machine Knife Mfrs &/or Dists	Treble T & K, D4/1 Campbell Pde., Manly Vale 2093	50951	1991	Premise Match	20m	South East
	Surfboards &/or Surfing Equipment Mfrs &/or Dist	White Pointer Australia, B 14/1 Campbell Pde Manly Vale 2093	63683	1991	Premise Match	20m	South East
	Candle Mfrs &/or Dists	Willie Winkie Candles, Unit A11/1 Campbell Pde., Manly Vale 2093	38007	1991	Premise Match	20m	South East
	Hotel &/or Motel Equipment &/or Supplies	Willie Winkie Candles, Unit A11/1 Campbell Pde., Manly Vale. 2093	48720	1991	Premise Match	20m	South East
	DISPLAY MODEL MFRS. &/OR SUPPLIERS.	AK Display and Kitchens Pty. Ltd., 811/1 Campbell Pde., Manly Vale. 2093	24336	1986	Premise Match	20m	South East
	DISPLAY FITTINGS & STANDS MFRS. &/OR DIST. &/OR SUPPLIERS.	AK Display and Kitchens Pty. Ltd., B11/1 Campbell Pde., Manly Vale. 2093	24269	1986	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Bakos, P. Body Repairs Pty. Ltd., C5/1 Campbell Pde., Manly Vale. 2093	66081	1986	Premise Match	20m	South East
	MOTOR ENGINEERS.	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093	63259	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093	64061	1986	Premise Match	20m	South East
	VALVES &/OR COCKS - STEAM, FLUID, ETC. - MFRS. &/OR DIST.	Bourke, John A. Pty. Ltd. 88/1 Campbell Pde. Manly Vale. 2093	96942	1986	Premise Match	20m	South East
	MARBLE &/OR GRANITE MERCHANTS.	Burcham Marble Pty. Ltd. Unit D16, 1 Campbell Parade, Manly Vale. 2093	52748	1986	Premise Match	20m	South East
	MARBLE &/OR GRANITE MERCHANTS.	Burcham Marble Pty. Ltd., D16/1 Campbell Pde., Manly Vale. 2093	52759	1986	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Car Doctor, The, D2/1 Campbell Pde., Manly Vale. 2093	66162	1986	Premise Match	20m	South East
	FRENCH POLISHERS	Davies Antique French Polishing, 1, B2 Campbell Parade, Manly Vale. 2093	35490	1986	Premise Match	20m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	FRENCH POLISHERS	Davies Antique French Polishing, B2/1 Campbell Pde., Manly Vale. 2093	35496	1986	Premise Match	20m	South East
	MOTOR TRIMMERS.	Davmack Pty. Ltd., B6/1 Campbell Pde., Manly Vale. 2093	68216	1986	Premise Match	20m	South East
	FOOD PROCESSING MACHINERY MFRS. &/OR DEALERS.	Doyle, J Engineering, A11/1 Campbell Pde., Manly Vale. 2093	34278	1986	Premise Match	20m	South East
	ENGINEERS—MAINTENANCE	Doyle, J. Engineering, A11/1 Campbell Pde., Manly Vale. 2093	30678	1986	Premise Match	20m	South East
	VENTILATION EQUIPMENT MFRS. &/OR DIS.	Edmonds Rotor Ventilator Co. A14, 1 Campbell Parade, Manly Vale. 2093	97125	1986	Premise Match	20m	South East
	VENTILATION EQUIPMENT MFRS. &/OR DIS.	Edmonds Rotor Ventilator Co. A14/1 Campbell Pde. Manly Vale. 2093	97140	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Erskine, T. J. Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	64601	1986	Premise Match	20m	South East
	SIGNWRITERS.	Gardner Signs, A8, 1 Campbell Pde., Manly Vale. 2093	86840	1986	Premise Match	20m	South East
	AIR CONDITIONING- INDUSTRIAL &/OR DOMESTIC.	Geometric Sheet Metal A21/1 Campbell Pde., Manly Vale.2093	2259	1986	Premise Match	20m	South East
	DUST COLLECTION &/OR FUME EXTRACTION EQUIPMENT MFRS. &/OR DIST.	Geometric Sheet Metal, A21/1 Campbell Pd., Manly Vale. 2093	25649	1986	Premise Match	20m	South East
	VENTILATION EQUIPMENT MFRS. &/OR DIS.	Geometric Sheet Metal, A21/1 Campbell Pde. Manly Vale. 2093	97145	1986	Premise Match	20m	South East
	INSULATING MATERIALS MFRS. &/OR DIST. &/OR SUPPLIERS.	Geometric Sheet Metal, A21/1 Campbell Pde., Manly Vale. 2093	48592	1986	Premise Match	20m	South East
	KITCHEN EQUIPMENT - INDUSTRIAL - MFRS. &/OR DIST.	Geometric Sheet Metal, A21/1 Campbell Pde., Manly Vale. 2093	50250	1986	Premise Match	20m	South East
	SHEET METAL WORKERS.	Geometric Sheet Metal, A21/1 Campbell Pde., Manly Vale. 2093	86041	1986	Premise Match	20m	South East
	SPRAY BOOTHS - PAINTERS MFRS.	Geometric Sheet Metal, A21/1 Campbell Pde., Manly Vale. 2093	87661	1986	Premise Match	20m	South East
	ARTIFICIAL FLOWER MFRS. &/OR DIST.	Growum Holdings Pty. Ltd., A9/1 Campbell Pde., Manly Vale. 2093	3821	1986	Premise Match	20m	South East
	BOAT, LAUNCH &/OR YACHT BUILDERS &/OR REPAIRERS.	Henderson, M. R., D14/1 Campbell Pde., Manly Vale. 2093	6317	1986	Premise Match	20m	South East
	FIBREGLASS PRODUCTS MFRS.	I. & J. Fibreglass, D11/1 Campbell Pde., Manly Vale. 2093	32399	1986	Premise Match	20m	South East
	TOOLMAKERS.	Inwin Pty. Ltd. Trading as Teutonia Tooling, 813/1 Campbell Pde., Manly Vale. 2093	94155	1986	Premise Match	20m	South East
	FIRE FIGHTING EQUIPMENT MFRS. &/OR DIST.	Josinet Pty. Ltd., D18/1 Campbell Pde., Manly Vale. 2093	32935	1986	Premise Match	20m	South East
	FIRE PROTECTION APPLIANCES MFRS. &/OR ENGINEERS.	Josinet Pty. Ltd., D18/1 Campbell Pde., Manly Vale. 2093	32978	1986	Premise Match	20m	South East
	PLASTIC EXTRUDERS.	Kirby & Carter Plastics Pty. Ltd. B1, 1 Campbell Parade, Manly Vale. 2093	74288	1986	Premise Match	20m	South East
	PLASTIC MFRS. - SHEETING.	Kirby & Carter Plastics Pty. Ltd. B1, 1 Campbell Parade, Manly Vale. 2093	74772	1986	Premise Match	20m	South East
	PLASTIC EXTRUDERS.	Kirby & Carter Plastics Pty. Ltd., B1/1 Campbell Pde., Manly Vale. 2093	74306	1986	Premise Match	20m	South East
	PLASTIC MFRS. - SHEETING.	Kirby & Carter Plastics Pty. Ltd., B1/1 Campbell Pde., Manly Vale. 2093	74782	1986	Premise Match	20m	South East
	MOTOR ELECTRICIANS.	Ladics Motor Body Works, D20/1 Campbell Pde., Manly Vale. 2093	62943	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Ladics Motor Body Works, D20/1 Campbell Pde., Manly Vale. 2093	64970	1986	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Ladics Motor Body Works, D20/1 Campbell Pde., Manly Vale. 2093	66472	1986	Premise Match	20m	South East
	SCREEN PROCESS PRINTERS.	Leapfrog Screen Supplies, E1/1 Campbell Pde., Manly Vale. 2093	85204	1986	Premise Match	20m	South East
	T-SHIRT - PRINTERS &/OR SUPPLIERS.	Leapfrog Screen Supplies, E1/1 Campbell Pde., Manly Vale. 2093.	90201	1986	Premise Match	20m	South East

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3	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Mahy, Terry Smash Repairs, D1/1 Campbell Pde., Manly Vale. 2093	66525	1986	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Mauro, J, Smash Repairs, D15/1 Campbell Pde., Manly Vale. 2093	66545	1986	Premise Match	20m	South East
	PLASTIC MFRS. &/OR MOULDERS.	McMechan, J. Management Pty. Ltd., C1/1 Campbell Pde., Manly Vale 2093	74684	1986	Premise Match	20m	South East
	TOOLMAKERS.	McMechan, J. Management Pty. Ltd., C1/1 Campbell Pde., Manly vale.2093	94176	1986	Premise Match	20m	South East
	PLASTIC GOODS MFRS. &/OR DISTS.	McMechan, J. Management Pty. Ltd., Trading as Jamac Plastics, C1/1 Campbell Pde., Manly Vale. 2093	74479	1986	Premise Match	20m	South East
	TYRE &/OR TUBE MFRS. &/OR DISTS.	McNaughton Scott Tire & Racing Service, B10/1 Campbell Pde., Manly Vale. 2093	96506	1986	Premise Match	20m	South East
	JOINERY MANUFACTURERS.	O'Connor, R. J., C4/1 Campbell Pde., Manly Vale. 2093	50185	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	O'Neill, G. B., C11/1 Campbell Pde., Manly Vale. 2093	65207	1986	Premise Match	20m	South East
	TROPHY MFRS. &/OR SUPPLIERS.	Press Trophy Co., A20/1 Campbell Pde., Manly Vale. 2093	95889	1986	Premise Match	20m	South East
	GOLF CLUB BAG & ACCESSORIES MFRS. &/OR W/SALERS.	Proline Sporting Products Pty. Ltd., 815/1 Campbell Pde., Manly Vale. 2093	40030	1986	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Stutchbury, J. N., D17/1 Campbell Pde., Manly Vale. 2093	66793	1986	Premise Match	20m	South East
	MACHINE KNIFE MFRS.	Treble, T. & K., D13/1 Campbell Pde., Manly Vale. 2093	51932	1986	Premise Match	20m	South East
	SAW &/OR KNIFE &/OR TOOL SHARPENER.	Treble, T. & K., D13/1 Campbell Pde., Manly Vale. 2093	84571	1986	Premise Match	20m	South East
	SAW BLADES - BAND, CIRCULAR, - MFRS. &/OR IMPS. &/OR DISTS.	Treble, T. & K., D13/1 Campbell Pde., Manly Vale. 2093	84532	1986	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Veress, A. Body Repairs, C3/1 Campbell Pde., Manly Vale. 2093	66855	1986	Premise Match	20m	South East
	KITCHEN UNIT MANUFACTURERS.(K0500)	AK Display and Kitchens Pty. Ltd., B11 /1 Campbell Pde., Manly Vale. 2093.	44111	1982	Premise Match	20m	South East
	DISPLAY FITTINGS & STANDS MFRS. &/OR DISTS. &/OR SUPPLIERS. (D4260)	AK Display and Kitchens Pty. Ltd., B11/1 Campbell Pde., Manly Vale. 2093.	21683	1982	Premise Match	20m	South East
	DISPLAY MODEL MFRS. &/OR SUPPLIERS. (D4350)	AK Display and Kitchens Pty. Ltd., B11/1 Campbell Pde., Manly Vale. 2093.	21759	1982	Premise Match	20m	South East
	MOTOR CAR DETAILERS. (M5445)	As New Vehicle Detailers, D2/1 Campbell Pde., Manly Vale. 2093	54559	1982	Premise Match	20m	South East
	MOTOR TRIMMERS. (M8260)	As New Vehicle Detailers, D2/1 Campbell Pde., Manly Vale. 2093.	59782	1982	Premise Match	20m	South East
	WOODWORKERS &/OR TURNERS.(W7720)	B. S. Woodturning Co., D19/1 Campbell Pde., Manly Vale. 2093.	85273	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Bakos, P., 1 Campbell Pde., Manly Vale. 2093.	58099	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093.	56135	1982	Premise Match	20m	South East
	DETERGENTS, DISINFECTANTS, CLEANING AIDS, MFRS. &/OR DISTS. (D2200)	Bracton Pty. Ltd., A12/1 Campbell Pde., Manly Vale, 2093.	21269	1982	Premise Match	20m	South East
	STEEL FABRICATORS, (S6105)	Buccaneer Steel Fabrication, D6/1 Campbell Pde., Manly Vale. 2093.	76849	1982	Premise Match	20m	South East
	WELDERS - ELECTRIC &/OR OXY.(W3160)	Buccaneer Steel Fabrication, D6/1 Campbell Pde., Manly Vale. 2093.	84080	1982	Premise Match	20m	South East
	WROUGHT IRON WORKERS. (W9440)	Buccaneer Steel Fabrication, D6/1 Campbell Pde., Manly Vale. 2093.	85463	1982	Premise Match	20m	South East
	ORNAMENTAL METAL WORKERS.(O4050)	Buccaneer Steel Fabrication. D6/1 Campbell Pde., Manly Vale. 2093.	61989	1982	Premise Match	20m	South East
	MARBLE &/OR GRANITE MERCHANTS. (M0920)	Burcham Marble Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093.	46440	1982	Premise Match	20m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	JOINERY MANUFACTURERS. (J1050)	CIBI Pty. Ltd., C4/1 Campbell Pde., Manly Vale. 2093.	43916	1982	Premise Match	20m	South East
	FIBREGLASS PRODUCTS MFRS. -MOULDING, FABRICATING EXTRUSIONS. (F1325)	Darryl Holmes Fibreglass, A16, No. 1 Campbell Pde., Manly Vale. 2093.	30273	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Erskine, T. J, Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093.	56670	1982	Premise Match	20m	South East
	SHEET METAL WORKERS. (S2595)	Geometric Sheet Metal, A21/1 Campbell Pde., Manly Vale. 2093.	74307	1982	Premise Match	20m	South East
	BOAT, LAUNCH &/OR YACHT BUILDERS &/OR REPAIRERS. (B3600)	Henderson, M. R., D14/1 Campbell Pde., Manly Vale. 2093.	7182	1982	Premise Match	20m	South East
	FIBREGLASS PRODUCTS MFRS. -MOULDING, FABRICATING EXTRUSIONS. (F1325)	Holmes, Darryl Fibreglass, A16/1 Campbell Pde., Manly Vale. 2093.	30289	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Ladics Motor Body Work, D20/1 Campbell Pde., Manly Vale. 2093.	57070	1982	Premise Match	20m	South East
	MOTOR ELECTRICIANS, (M6580)	Ladies Motor Body Works, D 20/1 Campbell Pde., Manly Vale. 2093.	55534	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Ladies Motor Body Works, D20/1 Campbell Pde., Manly Vale. 2093.	58457	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Mahy, Terry Smash Repairs, B8, 1 Campbell Pde., Manly Vale. 2093.	58504	1982	Premise Match	20m	South East
	JOINERY MANUFACTURERS. (J1050)	Mansunn Design, A4/1 Campbell Pde., Manly Vale. 2093.	43992	1982	Premise Match	20m	South East
	KITCHEN UNIT MANUFACTURERS. (K0500)	Mansunn Design, A4/1 Campbell Pde., Manly Vale. 2093.	44221	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Mauro, J, Smash Repairs, D15/1 Campbell Pde., Manly Vale. 2093.	58526	1982	Premise Match	20m	South East
	PLASTIC MFRS. &/OR MOULDERS. (P6080)	McMechan, J. Management Pty. Ltd., C1/1 Campbell Pde., Manly Vale. 2093.	64918	1982	Premise Match	20m	South East
	TOOLMAKERS. (T5575)	McMechan, J. Management Pty. Ltd., C1/1 Campbell Pde., Manly Vale. 2093.	80861	1982	Premise Match	20m	South East
	TYRE &/OR TUBE MFRS. &/OR DISTS. (T8975)	McNaughton Tyre & Racing Service, B10/1 Campbell Pde., Manly Vale. 2093.	82785	1982	Premise Match	20m	South East
	BOAT OAR MFRS. (B3740)	Ninham, R., 1 Campbell Pde., Manly Vale. 2093.	7390	1982	Premise Match	20m	South East
	BOAT, LAUNCH &/OR YACHT BUILDERS &/OR REPAIRERS. (B3600)	Ninham, R., 1 Campbell Pde., Manly Vale. 2093.	7222	1982	Premise Match	20m	South East
	SURFING EQUIPMENT MFRS. (S7875)	Nmham, R., 1 Campbell Pde., Manly Vale. 2093.	77601	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Northern Star Auto Services, D10/1 Campbell Pde., Manly Vale. 2093.	57306	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Northern Star Auto Services, D10/1 Campbell Pde., Manly Vale. 2093.	58571	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	O'Neill, G. B., C11/1 Campbell Pde., Manly Vale. 2093.	57318	1982	Premise Match	20m	South East
	SPORTING TROPHIES. (S4800)	Press Trophy Co., A18/1 Campbell Pde., Manly Vale. 2093.	75337	1982	Premise Match	20m	South East
	KITCHEN UNIT MANUFACTURERS. (K0500)	Roberta Ellen Designs, C13/1 Campbell St., Manly Vale. 2093	44248	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Stutchbury, J. N., D17/1 Campbell Pde., Manly Vale. 2093.	58755	1982	Premise Match	20m	South East
	TOOLMAKERS. (T5575)	Teutonia Tooling, B13/1 Campbell Pde., Manly Vale. 2093.	80917	1982	Premise Match	20m	South East

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3	MACHINE KNIFE MFRS. (M0060)	Treble, T. & K., D13/1 Campbell Pde., Manly Vale. 2093.	45662	1982	Premise Match	20m	South East
	SAW BLADES-BAND, CIRCULAR,- MFRS. &/OR IMPS. &/OR DISTS.(S0885)	Treble, T. & K., D13/1 Campbell Pde., Manly Vale. 2093.	73156	1982	Premise Match	20m	South East
	SAW KNIFE &/OR TOOL SHARPENERS. (S0930)	Treble, T. & K., D13/1 Campbell Pde., Manly Vale. 2093.	73188	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Walters, M. W. Smash Repairs, B2/1 Campbell Pde., Manly Vale. 2093.	57812	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Walters, M. W. Smash Repairs, B2/1 Campbell Pde., Manly Vale. 2093.	58818	1982	Premise Match	20m	South East
	BATTERY MFRS. &/OR DISTS. (B1740)	Warringah Batteries, C10/1 Campbell Pde., Manly Vale. 2093.	5000	1982	Premise Match	20m	South East
	BATTERY SALES &/OR SERVICE.(B1820)	Warringah Batteries, C10/1 Campbell Pde., Manly Vale. 2093.	5064	1982	Premise Match	20m	South East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Young, G. Smash Repairs, 1 Campbell Pde., Manly Vale. 2093.	58852	1982	Premise Match	20m	South East
	RUSTPROOFING SPECIALISTS.(R8610)	Ziebert Auto and Truck Rustproofing, 86/7, 1 Campbell Pde., Manly Vale. 2093.	72746	1982	Premise Match	20m	South East
	PAPER BAG SUPPLIES.	B. P. M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	55890	1978	Premise Match	20m	South East
	PAPER CONTAINER MFRS. &/OR DISTS.	B. P. M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	55914	1978	Premise Match	20m	South East
	PAPER WRAPPING MERCHANTS.	B. P. M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	56102	1978	Premise Match	20m	South East
	HABERDASHERY-WHOLESALE.	B.P.M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	34455	1978	Premise Match	20m	South East
	WOODWORKERS &/OR TURNERS.	B.S. Woodturning Co., 1 Campbell Pde., Manly Vale. 2093	75153	1978	Premise Match	20m	South East
	MOTOR BODY REPAIRS &/OR CONVERTERS.	Bakos. P., 1 Campbell Pde., Manly Vale. 2093	47793	1978	Premise Match	20m	South East
	MARBLE &/OR GRANITE MERCHANTS.	Burcham Marble Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	41550	1978	Premise Match	20m	South East
	ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Burcher. E., 1 Campbell Pde., Manly Vale. 2093	24947	1978	Premise Match	20m	South East
	WOODWORKERS &/OR TURNERS.	Decorline, 1 Campbell Pde., Manly Vale. 2093	75159	1978	Premise Match	20m	South East
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Decorline. 1 Campbell Pde., Manly Vale. 2093	31580	1978	Premise Match	20m	South East
	PAPER MFRS.	Ford & Inglis Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	56043	1978	Premise Match	20m	South East
	MOTOR PAINTERS.	Hutchbury, J. N., 1 Campbell Pde., Manly Vale. 2093	51468	1978	Premise Match	20m	South East
	MOTOR PANEL BEATERS	Hutchbury, J. N., 1 Campbell Pde., Manly Vale. 2093	52103	1978	Premise Match	20m	South East
	MOTOR PAINTERS.	Johnston, S., 1 Campbell Pde., Manly Vale. 2093	51480	1978	Premise Match	20m	South East
	MOTOR PANEL BEATERS	Johnston, S., 1 Campbell Pde., Manly Vale. 2093	52118	1978	Premise Match	20m	South East
	SURFING EQUIPMENT MFRS.	Knight, J. Surfboards, 1 Campbell Pde., Manly Vale. 2093	68747	1978	Premise Match	20m	South East
	MOTOR PANEL BEATERS	Ladics Motor Body Works, 1 Campbell Pde., Manly Vale. 2093	52148	1978	Premise Match	20m	South East
	MOTOR PAINTERS.	Mauro, J., 1 Campbell Pde., Manly Vale. 2093	51550	1978	Premise Match	20m	South East
	MOTOR PANEL BEATERS	Mauro. J., 1 Campbell Pde., Manly Vale. 2093	52201	1978	Premise Match	20m	South East
	CHARCOAL MFRS.	N.S.W. Charcoal Co. Pty. Ltd. The. 1 Campbell Pde., Manly Vale. 2093	12408	1978	Premise Match	20m	South East
	BOAT OAR MFRS.	Ninham, R., 1 Campbell Pde., Manly Vale. 2093	6411	1978	Premise Match	20m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	BOAT, LAUNCH &/OR YACHT BUILDERS &/OR REPAIRERS.	Ninham, R., 1 Campbell Pde., Manly Vale. 2093	6233	1978	Premise Match	20m	South East
	SURFING EQUIPMENT MFRS.	Ninham, R., 1 Campbell Pde., Manly Vale. 2093	68752	1978	Premise Match	20m	South East
	SPORTING TROPHIES.	Press Trophy Co., 1 Campbell Pde., Manly Vale. 2093	66763	1978	Premise Match	20m	South East
	MOTOR CYCLE REPAIRS &/OR SERVICE.	Pressley, B. Motor Cycle Repairs, Unit 33, 1 Campbell Pde., Manly Vale. 2093	48784	1978	Premise Match	20m	South East
	PRINTERS-FURNISHERS.	Printers Furniture Manufacturers, 1 Campbell Pde., Manly Vale. 2093	58840	1978	Premise Match	20m	South East
	SAW BLADES-BAND, CIRCULAR, MFRS. &/OR IMPS. &/OR DIST.	Treble, T. & K., 1 Campbell Pde., Manly Vale. 2093	64670	1978	Premise Match	20m	South East
	SAW MFRS. &/OR IMPS. &/OR DIST.	Treble, T. & K., 1 Campbell Pde., Manly Vale. 2093	64710	1978	Premise Match	20m	South East
	MACHINE KNIFE MFRS.	Treble, T. B. K., 1 Campbell Pde., Manly Vale. 2093	40653	1978	Premise Match	20m	South East
	SAW &/OR TOOL SHARPENERS.	Treble, T. & K., 1 Campbell Pde., Manly Vale. 2093	64732	1978	Premise Match	20m	South East
	HABERDASHERY-W/SALE	B P.M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	40250	1975	Premise Match	20m	South East
	PAPER CONTAINER MFRS. &/OR DIST.	B.P.M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale 2093	65888	1975	Premise Match	20m	South East
	PAPER WRAPPING MERCHANTS.	B.P.M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale 2093	66088	1975	Premise Match	20m	South East
	PAPER BAG SUPPLIES.	B.P.M. Trading Co. Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	65861	1975	Premise Match	20m	South East
	WOODWORKERS &/OR TURNERS.	B.S. Woodturning Co., 1 Campbell Pde., Manly Vale. 2093	87714	1975	Premise Match	20m	South East
	MOTOR BODY REPAIRS &/OR CONVERTERS.	Bakos, P., 1 Campbell Pde., Manly Vale. 2093	56608	1975	Premise Match	20m	South East
	MARBLE &/OR GRANITE MERCHANTS.	Burcham Marble Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093.	49101	1975	Premise Match	20m	South East
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Burcher, E., 1 Campbell St., Manly Vale. 2093	28848	1975	Premise Match	20m	South East
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Decorline, 1 Campbell Pde., Manly Vale. 2093	36689	1975	Premise Match	20m	South East
	WOODWORKERS &/OR TURNERS.	Decorline, 1 Campbell Pde., Manly Vale. 2093	87723	1975	Premise Match	20m	South East
	MOTOR PAINTERS.	Johnston, S., 1 Campbell Pde., Manly Vale. 2093	60214	1975	Premise Match	20m	South East
	MOTOR PANEL BEATERS.	Johnston, s., 1 Campbell Pde., Manly Vale. 2093	60879	1975	Premise Match	20m	South East
	MOTOR PANEL BEATERS.	Ladics Motor Body Work., 1 Campbell Pde., Manly Vale. 2093	60907	1975	Premise Match	20m	South East
	MOTOR BODY REPAIRS &/OR CONVERTERS.	Ladics Motor Body Works., 1 Campbell Pde., Manly Vale. 2093	56654	1975	Premise Match	20m	South East
	FURNITURE-GENERAL-MFRS. &/OR W/SALERS.	Modulus Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	36765	1975	Premise Match	20m	South East
	FURNITURE-UNIT MFRS. &/OR W/SALERS.	Modulus Pty. Ltd., 1 Campbell Pde., Manly Vale. 2093	37481	1975	Premise Match	20m	South East
	BOAT OAR MFRS.	Ninham, R., 1 Campbell Pde., Manly Vale. 2093	6845	1975	Premise Match	20m	South East
	BOAT, LAUNCH &/OR YACHTBUILDERS &/OR REPAIRERS.	Ninham, R., 1 Campbell Pde., Manly Vale. 2093	6664	1975	Premise Match	20m	South East
	SPORTING TROPHIES.	Press Trophy Co., 1 Campbell Pde., Manly Vale. 2093	78921	1975	Premise Match	20m	South East
	MOTOR CYCLE REPAIRS &/OR SERVICE.	Pressley, B. Motor Cycle Repairs., Unit 33., 1 Campbell Pde., Manly Vale. 2093.	57761	1975	Premise Match	20m	South East
	SAW &/OR TOOL SHARPENERS.	Treble T. & K., 1 Campbell Pde., Manly Vale. 2093	75734	1975	Premise Match	20m	South East
	MACHINE KNIFE MFRS.	Treble, T. & K., 1 Campbell Pde., Manly Vale. 2093	47987	1975	Premise Match	20m	South East



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3	SAW BLADES-BAND, CIRCULAR,- MFRS. &/OR IMPS. &/OR DISTS.	Treble, T. & K., 1 Campbell Pde., Manly Vale. 2093	75660	1975	Premise Match	20m	South East
	SAW MFRS. &/OR IMPS. &/OR DISTS.	Treble, T. & K., 1 Campbell Pde., Manly Vale. 2093	75706	1975	Premise Match	20m	South East
	FIBROUS PLASTER MFRS. &/OR FIXERS.	Waringah Fibrous Plaster Pty Ltd., Unit 48, 1 Campbell Pde., Manly Vale. 2093	31633	1975	Premise Match	20m	South East
	CABINETMAKERS (C006)	A. B. Wood Productions., Unit 63, 1 Campbell Pde., Manly Vale	275094	1970	Premise Match	20m	South East
	SPORTS GOODS MFRS. (S440)	A.B. Wood Production Unit 63, 1 Campbell St., Manly Vale	363292	1970	Premise Match	20m	South East
	DIE CASTERS (D250)	Achar Diecasting Pty. Ltd., 1 Campbell Pde., Manly Vale	289515	1970	Premise Match	20m	South East
	FURNITURE-GENERAL-MFRS. &/OR WHOLESALERS (F730)	Aristo Furniture., 1 Campbell Pde., Manly Vale	309153	1970	Premise Match	20m	South East
	FURNITURE-UNIT-MFRS. &/OR WHOLESALERS (F805)	Aristo Furniture., 1 Campbell Pde., Manly Vale	310112	1970	Premise Match	20m	South East
	KITCHENWARE MFRS. (K060)	Aristo Furniture., 1 Campbell Pde., Manly Vale	322051	1970	Premise Match	20m	South East
	PAPER CONTAINER MFRS. (P124)	B.P.M. Trading Co. Pty. Ltd., Unit 23, 1 Campbell Pde., Manly Vale	346995	1970	Premise Match	20m	South East
	KNITTING WOOL MFRS. (K200)	B.P.M. Trading Co. Pty. Ltd., Unit 25, 1 Campbell Pde., Manly Vale	322237	1970	Premise Match	20m	South East
	PAPER BAG SUPPLIERS (P114)	B.P.M. Trading Co. Pty. Ltd., Unit 25, 1 Campbell Pde., Manly Vale	346956	1970	Premise Match	20m	South East
	PAPER-WRAPPING-MERCHANTS(P158)	B.P.M. Trading Co. Pty. Ltd., Unit 25, 1 Campbell Pde., Manly Vale	347243	1970	Premise Match	20m	South East
	HABERDASHERY-WHOLESALE (H020)	B.P.M. Trading Co. Pty. Ltd., Unit 25., 1 Campbell Pde., Manly Vale	313517	1970	Premise Match	20m	South East
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Beaver Engineering Pty. Ltd., Unit 20-22., 1 Campbell Pde., Manly Vale	298819	1970	Premise Match	20m	South East
	ENGINEERS-PRODUCTION (E710)	Beaver Engineering Pty. Ltd., Unit 20-22., 1 Campbell Pde., Manly Vale	300501	1970	Premise Match	20m	South East
	ENGINEERS-REPETITION (E735)	Beaver Engineering Pty. Ltd., Unit 20-22., 1 Campbell Pde., Manly Vale	300696	1970	Premise Match	20m	South East
	FIBREGLASS PRODUCTS MFRS.(MOULDING, FABRICATING, EXTRUSIONS, CONVERTING, Etc.)	Blake Fibreglass., Unit 49, 1 Campbell Pde., Manly Vale	302428	1970	Premise Match	20m	South East
	MARBLE/GRANITE MERCH. (M120)	Burcham Marble., Unit 74, 1 Campbell Pde., Manly Vale	325462	1970	Premise Match	20m	South East
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Burcher, E. M., Unit 72, 1 Campbell Pde., Manly Vale	298920	1970	Premise Match	20m	South East
	ENGINEERS-REPETITION (E735)	Burcher, E. M., Unit 72., 1 Campbell Pde., Manly Vale	300706	1970	Premise Match	20m	South East
	BOAT, LAUNCH & YACHT BUILDERS &/OR REPAIRERS	Clymer, W., 1 Campbell Pde., Manly Vale	267499	1970	Premise Match	20m	South East
	BOAT, LAUNCH & YACHT SALES & SERVICE (B457)	Clymer, W., 1 Campbell Pde., Manly Vale	267666	1970	Premise Match	20m	South East
	SURFING EQUIPMENT MFRS. (S805)	Clymer, W., 1 Campbell Pde., Manly Vale	366264	1970	Premise Match	20m	South East
	CHEMICAL MANUFACTURERS &/OR DISTRIBUTORS (C268)	Hu-Chem Pty. Ltd., 1 Campbell Pde., Manly Vale	279409	1970	Premise Match	20m	South East
	CLEANSER & CLEANING PREPARATION MFRS. &/OR DISTS.(C392)	Hu-Chem Pty. Ltd., 1 Campbell Pde., Manly Vale	281953	1970	Premise Match	20m	South East
	COSMETIC MFRS. &/OR W'SALERS (C692)	Hu-Chem Pty. Ltd., 1 Campbell Pde., Manly Vale	286013	1970	Premise Match	20m	South East
	HAIR OIL MANUFACTURERS (H040)	Hu-Chem Pty. Ltd., 1 Campbell Pde., Manly Vale	313546	1970	Premise Match	20m	South East
	HAIRDRESSERS' SUPPLIES (H090)	Hu-Chem Pty. Ltd., 1 Campbell Pde., Manly Vale.	314615	1970	Premise Match	20m	South East
	ELECTRONIC EQUIPMENT MFRS.&/OR DISTRIBUTORS (E355)	Leak, H. J. (Aust.) Pty. Ltd., 1 Campbell Pde., Manly Vale	296402	1970	Premise Match	20m	South East

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3	ELECTRIC LAMP (BED, DESK, STANDARD Etc.) MFRS.	Modern Industries Co., 1 Campbell Pde., Manly Vale.	293794	1970	Premise Match	20m	South East
	ENGINEERS-ELECTRICAL (E570)	Modern Industries Co., 1 Campbell Pde., Manly Vale.	298236	1970	Premise Match	20m	South East
	ELECTRICAL TRANSMISSION LINE FITTINGS OR ACCESSORIES-MFRS.&/OR DISTS.(E338)	Modern Industries Co., 1 Campbell Pde., Manly Vale	296282	1970	Premise Match	20m	South East
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Modern Industries Co., 1 Campbell Pde., Manly Vale	299395	1970	Premise Match	20m	South East
	ENGINEERS-PRECISION (E705)	Muir Industries Pty. Ltd., 1 Campbell Pde., Manly Vale	300477	1970	Premise Match	20m	South East
	ENGINEERS-PRODUCTION (E710)	Muir Industries Pty. Ltd., 1 Campbell Pde., Manly Vale	300554	1970	Premise Match	20m	South East
	ENGINEERS-REPETITION (E735)	Muir Industries Pty. Ltd., 1 Campbell Pde., Manly Vale	300838	1970	Premise Match	20m	South East
	FLEXIBLE SHAFTING & TUBING MFRS. &/OR DISTS.	Muir Industries Pty. Ltd., 1 Campbell Pde., Manly Vale	304016	1970	Premise Match	20m	South East
	WELDERS-ELECTRIC &/OR OXY	Muir Industries Pty. Ltd., 1 Campbell Pde., Manly Vale	373849	1970	Premise Match	20m	South East
	BOAT, LAUNCH & YACHT BUILDERS &/OR REPAIRERS	N inham, R., Unit A, 1 Campbell Pde., Manly Vale	267574	1970	Premise Match	20m	South East
	BOAT, LAUNCH & YACHT RIGGING SPECIALISTS (B455)	Ninham, R., Unit A, 1 Campbell Pde., Manly Vale	267646	1970	Premise Match	20m	South East
	CHEMICAL MANUFACTURERS &/OR DISTRIBUTORS (C268)	Plateau Productions, 1 Campbell Pde., Manly Vale	279465	1970	Premise Match	20m	South East
	HAIRDRESSERS' SUPPLIES (H090)	Plateau Productions., 1 Campbell Pde., Manly Vale	314623	1970	Premise Match	20m	South East
	SPORTING TROPHIES (S437)	Press Trophy Co.Unit A., 1 Campbell Pde., Manly Vale	363286	1970	Premise Match	20m	South East
	CABINETMAKERS (C006)	Soundwood Prducts Pty. Ltd., Unit 66., 1 Campbell Pde., Manly Vale	275168	1970	Premise Match	20m	South East
	MACHINE KNIFE MFRS. (M010)	Treble, T. & K., 1 Campbell Pde., Unit 70-71., Manly Vale	323954	1970	Premise Match	20m	South East
	SAW BLADES-BAND, CIRCULAR, ETC.-MFRS. &/OR IMPORTERS/DISTRIBUTORS	Treble, T. & K., Unit 70-71, 1 Campbell Pde., Manly Vale	359199	1970	Premise Match	20m	South East
	SAW MFRS. &/OR REPAIRERS (S104)	Treble, T. & K., Unit 70-71, 1 Campbell Pde., Manly Vale	359259	1970	Premise Match	20m	South East
	SAW/TOOL SHARPENERS (S095)	Treble, T. & K., Unit 70-71, 1 Campbell Pde., Manly Vale	359290	1970	Premise Match	20m	South East
	BILLIARDS TABLES & EQUIPMENT MFRS&/OR DISTS(B345)	Wood, A. B. Production., Unit 63, 1 Campbell Pde., Manly Vale	267011	1970	Premise Match	20m	South East
	JEWELLERY CASE MFRS./DIST. (J080)	Young, E. V., Unit 33, 1 Campbell Pde., Manly Vale	321713	1970	Premise Match	20m	South East
	Die Casters	Achar Diecasting Pty. Ltd., 1 Campbell Pde., Manly Vale	74167	1965	Premise Match	20m	South East
	Furniture - General - Mfrs. &/or Wholesalers	Aristo Furniture., 1 Campbell Pde., Manly Vale	93200	1965	Premise Match	20m	South East
	Furniture - Unit - Mfrs. &/or Wholesalers	Aristo Furniture, 1 Campbell Pde., Manly Vale	94292	1965	Premise Match	20m	South East
	Kitchenware Manufacturers	Aristo Furniture, 1 Campbell Pde., Manly Vale	106745	1965	Premise Match	20m	South East
	Motor Painters	B. & M. Body Works, Unit 54-56, 1 Campbell Rd., Manly Vale	123696	1965	Premise Match	20m	South East
	Motor Panel Beaters	B. & M. Body Works, Unit 54-56, 1 Campbell Rd., Manly Vale	124421	1965	Premise Match	20m	South East
	Engineers - Production	Beaver Supply Co. Pty. Ltd., Unit 20-21, 1 Campbell Pde., Manly Vale	83716	1965	Premise Match	20m	South East
	Engineers General &/or Mfrg. &/or Mechanical	Beaver Supply Co. Pty. Ltd., Unit 20-21, 1 Campbell Pde., Manly Vale	82133	1965	Premise Match	20m	South East
	Engineers - Repetition	Beaver Supply Co. Pty. Ltd., Units 20-21, 1 Campbell Pde., Manly Vale	83914	1965	Premise Match	20m	South East
	Boat, Launch & Yacht Builders & Repairers	Clymer, W., 1 Campbell Rd., Manly Vale	52049	1965	Premise Match	20m	South East

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3	SURFING EQUIPMENT MFRS.	Clymer, W., 1 Campbell Rd., Manly Vale	149176	1965	Premise Match	20m	South East
	Motor Garages & Engineers	Eldershaw, R. M. Unit 66-67., 1 Campbell Pde., Manly Vale	122967	1965	Premise Match	20m	South East
	SPORTS GOODS MFRS.	Fast-Play Products, 1 Campbell Pde., Manly Vale	146349	1965	Premise Match	20m	South East
	Chemical Manufacturers &/or Distributors	Gay Way Products, 1 Campbell Pde., Manly Vale	64153	1965	Premise Match	20m	South East
	Hairdressers' Supplies	Gay-Way Products., 1 Campbell Pde., Manly Vale	98706	1965	Premise Match	20m	South East
	Plastic Converters	Holley Plastics, 1 Campbell Pde., Manly Vale	133660	1965	Premise Match	20m	South East
	Plastic Goods Manufacturers	Holley Plastics, 1 Campbell Pde., Manly Vale	133919	1965	Premise Match	20m	South East
	Plastic Signs, Letter Manufacturers	Holley Plastics, 1 Campbell Pde., Manly Vale	134292	1965	Premise Match	20m	South East
	Plastic Display Units	Holley Plastics., 1 Campbell Pde., Manly Vale	133724	1965	Premise Match	20m	South East
	Plastic Fabricators & Vacuum Formers	Holley Plastics., 1 Campbell Pde., Manly Vale	133788	1965	Premise Match	20m	South East
	Plastic Manufacturers &/or Moulders	Holley Plastics., 1 Campbell Pde., Manly Vale	134088	1965	Premise Match	20m	South East
	Chemical Manufacturers &/or Distributors	Hu-Chem Pty. Ltd., 1 Campbell Pde., Manly Vale	64175	1965	Premise Match	20m	South East
	Cleaner & Cleaning Preparation Mfrs. &/or Dists.	Hu-Chem. Pty. Ltd., 1 Campbell Pde., Manly Vale	66515	1965	Premise Match	20m	South East
	Electric Jug Mfrs.	Modern Industries Co., Unit 14, 1 Campbell Pde., Manly Vale	77599	1965	Premise Match	20m	South East
	Engineers - Production	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly vale	83765	1965	Premise Match	20m	South East
	Engineers - Repetition	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly Vale	84043	1965	Premise Match	20m	South East
	Engineers - Steam	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly Vale	84203	1965	Premise Match	20m	South East
	Engineers -Precision	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly Vale	83637	1965	Premise Match	20m	South East
	Flexible Metal Tubing Mfrs. &/or Distributors	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly Vale	87340	1965	Premise Match	20m	South East
	Flexible Shafting & Tubing Mfrs. &/or Dists.	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly Vale	87351	1965	Premise Match	20m	South East
	Welders - Electric &/or Oxy	Muir Engineering Pty. Ltd., Unit 6, 1 Campbell Pde., Manly Vale	156679	1965	Premise Match	20m	South East
	Hairdresser's Supplies Mfrs.	Plateau Gay Pty Ltd 1 Campbell Pde., Manly Vale	98739	1965	Premise Match	20m	South East
	Chemical Manufacturers &/or Distributors	Plateau Gay Pty. Ltd., Unit 59-60, 1 Campbell Pde., Manly Vale	64231	1965	Premise Match	20m	South East
	Cleaner & Cleaning Preparation Mfrs. &/or Dists.	Plateau Gay Pty. Ltd., Unit 59-60, 1 Campbell Pde., Manly Vale	66549	1965	Premise Match	20m	South East
	Hairdressers' Supplies	Plateau Gay Pty. Ltd., Unit 59-60, 1 Campbell Pde., Manly Vale	98720	1965	Premise Match	20m	South East
	Chemical Manufacturers &/or Distributors	Plateau Productions, 1 Campbell Pde., Manly Vale	64232	1965	Premise Match	20m	South East
Rubber Stamp Mfrs.	Smith, D. O., 1 Campbell Pde., Manly Vale	141546	1965	Premise Match	20m	South East	
Saw Blades - Band, Circular, Etc. - Mfrs. &/or Imports./Dist.	Treble, T. & K., Unit 70-71, 1 Campbell Pde., Manly Vale	142448	1965	Premise Match	20m	South East	
Machine Knife Manufacturers	Treble, T. & K., Unit 70-71., 1 Campbell Pde., Manly Vale	108505	1965	Premise Match	20m	South East	
Saw Manufacturers	Treble, T. & K., Unit 70-71., 1 Campbell Pde., Manly Vale	142504	1965	Premise Match	20m	South East	
Saw/Tool Sharpeners	Treble, T. & K., Unit 70-71, 1 Campbell Pde., Manly Vale	142408	1965	Premise Match	20m	South East	
4	EARTH-MOVING CONTRACTORS (E010)	Lang, B. J. Pty. Ltd., 38 Gordon St., Manly Vale	293161	1970	Premise Match	20m	South
	CARRIERS & CARTAGE CONTRACTORS (C150)	Lang, B.J Pty. Ltd., 38 Gordon St., Manly Vale	278171	1970	Premise Match	20m	South

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4	Carriers & Cartage Contractors	Lang, B. J. Pty. Ltd., 38 Gordon St., Manly Vale	63125	1965	Premise Match	20m	South
	Haulage Contractors	Lang, B. J. Pty. Ltd., 38 Gordon St., Manly Vale	99801	1965	Premise Match	20m	South
	CARRIERS & CARTAGE CONTRACTORS	Lang, B. J. Pty. Ltd., 38 Gordon St., Manly Vale	284981	1961	Premise Match	20m	South
	HAULAGE CONTRACTORS	Lang, B. J. Pty. Ltd., 38 Gordon St., Manly Vale	323917	1961	Premise Match	20m	South
5	CLUBS & SPORTING BODIES (C487)	Warringah Golf Club Ltd., Condamine St., North Manly	284732	1970	Premise Match	20m	North West
	Clubs & Sporting Bodies	Warringah Golf Club Ltd., Condamine St., North Manly	69376	1965	Premise Match	20m	North West
	CLUBS & SPORTS BODIES	Warringah Golf Club Ltd., Condamine St., North Manly	291832	1961	Premise Match	20m	North West
	CLUBS & SPORTS BODIES	Warringah Golf Course Co., Condamine St., North Manly	25457	1950	Premise Match	20m	North West
6	Motor Car Wash Installations	BP North Star, 504 Pittwater Rd, North Manly 2100	52831	1991	Premise Match	46m	North
	MOTOR CAR WASH INSTALLATIONS.	B.P. North Star, 504 Pittwater Rd., North Manly. 2100	62435	1986	Premise Match	46m	North
	MOTOR GARAGES & SERVICE STATIONS.	BP North Star, 504 Pittwater Rd., North Manly. 2100	64194	1986	Premise Match	46m	North
	MOTOR CAR WASH INSTALLATIONS. (M6015)	Kellys, J & P. Service Station, 504 Pittwater Rd., North Manly. 2100.	55172	1982	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Kellys, J. & P. Service Station, 504 Pittwater Rd., North Manly. 2100.	57032	1982	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kellys, J. & P. Service Station, 504 Pittwater Rd., North Manly. 2095	50314	1978	Premise Match	46m	North
	MOTOR CAR WASH INSTALLATIONS.	Kellys, J. & P. Service Station, 504 Pittwater Rd., North Manly. 2095	48638	1978	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS.	Kelly's, J. & P Service Station., 504 Pittwater Rd., North Manly. 2100	59099	1975	Premise Match	46m	North
	MOTOR CAR WASH INSTALLATIONS.	Kelly's, J. & P. Service Station., 504 Pittwater Rd., North Manly. 2100.	57575	1975	Premise Match	46m	North
	FURNITURE REMOVALISTS/STORAGE (F785)	O'Halloran, H. E., 504 Pittwater Rd., North Manly	308857	1970	Premise Match	46m	North
7	SQUASH COURTS.	Walker, K., North Manly Squash, Pittwater Rd., North Manly. 2100	87916	1986	Premise Match	79m	North
	SQUASH COURTS. (S5160)	Walker, K., North Manly Squash, Pittwater & Kentwell Rds., North Manly. 2100.	75987	1982	Premise Match	79m	North
	SQUASH COURTS.	Walker, K., North Manly Squash, Pittwater & Kent Well Rds., North Manly. 2100	67291	1978	Premise Match	79m	North
	SQUASH COURTS.	North Manly Squash, Pittwater Rd., North Manly. 2100	79493	1975	Premise Match	79m	North
	SQUASH COURTS (S475)	North Manly Squash Courts, Cnr, Pittwater & Kentwell Rds., North Manly	363956	1970	Premise Match	79m	North
	SQUASH COURTS	North Manly Squash Courts, Cnr, Pittwater & Kentwell Rds., North Manly	146928	1965	Premise Match	79m	North
	SQUASH COURTS	North Manly Squash Courts, Cnr, Pittwater & Kentwell Rds., North Manly	252554	1961	Premise Match	79m	North
8	Carriers & Cartage Contractors	Shaw, J., 284 Condamine St., Manly Vale	63306	1965	Premise Match	79m	South West
	CARRIERS & CARTAGE CONTRACTORS	Shaw, J., 284 Condamine St., Manly Vale	285316	1961	Premise Match	79m	South West
	FURNITURE-GENERAL-MFRS. &/OR WHOLESALERS	Shaw, J., 284 Condamine St., Manly Vale	317621	1961	Premise Match	79m	South West
9	HEALTH CENTRES &/OR CLINICS.	Brookvale Baby Health Centre, 514 Pittwater Rd., Brookvale. 2100	45020	1986	Premise Match	82m	North
	TAKE-AWAY FOODS.	Hungry Man, The, 1 Corrie Rd., North Manly. 2100.	91018	1986	Premise Match	82m	North
	GARDENERS SUPPLIES-RETAIL.	North Manly Garden Centre, 516 Pittwater Rd., North Manly. 2100	38384	1986	Premise Match	82m	North

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
9	HAIRDRESSER LADIES &/OR BEAUTY SALONS	Williams, H. Haircare, 1 Corrie Rd., North Manly. 2100	43435	1986	Premise Match	82m	North
	TAKE-AWAY FOODS. (T0235)	Hungry Man, The, 1 Corrie Rd., North Manly. 2100.	78461	1982	Premise Match	82m	North
	GARDENERS SUPPLIES - RETAIL(G0750)	North Manly Garden Centre, 516 Pittwater Rd., North Manly. 2100.	35759	1982	Premise Match	82m	North
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS. (B2000)	Williams, H. Haircare, 1 Corrie Rd., North Manly. 2100.	6770	1982	Premise Match	82m	North
	BUTCHERS-RETAIL.	Hill. A.L., 1 Corrie Rd., North Manly. 2100	9326	1978	Premise Match	82m	North
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Williams, H. Haircare, 1 Corrie Rd., North Manly. 2100	5751	1978	Premise Match	82m	North
	MIXED BUSINESSES.	Allfoods Grocery Centre., 514 Pittwater Rd., North Manly. 2100	54422	1975	Premise Match	82m	North
	BUTCHERS-RETAIL	Hill, A. C., 1 Corrie Rd., North Manly. 2100	10550	1975	Premise Match	82m	North
	MIXED BUSINESSES.	North Manly P.O. Newsagency., 510 Pittwater Rd., North Manly. 2100	55373	1975	Premise Match	82m	North
	NEWSAGENTS-GENERAL	North Manly P.O. Newsagency., 510 Pittwater Rd., North Manly. 2100	63744	1975	Premise Match	82m	North
	STATIONERS-RETAIL	North Manly P.O. Newsagency., 510 Pittwater Rd., North Manly. 2100	80104	1975	Premise Match	82m	North
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Williams, H. Haircare, 1 Corrie Rd., North Manly. 2100	6124	1975	Premise Match	82m	North
	STATIONERS-RETAIL (S516)	North Manly Newsagency (Cards), 510-512 Pittwater Rd., North Manly	364707	1970	Premise Match	82m	North
	NEWSAGENTS (N100)	North Manly Newsagency., 512 Pittwater Rd., North Manly	343736	1970	Premise Match	82m	North
	MIXED BUSINESSES (M408)	Robinson, N. W., 514 Pittwater Rd., North Manly	333706	1970	Premise Match	82m	North
	Mixed Businesses	Jones, C. J., 510-512 Pittwater Rd., North Manly	117688	1965	Premise Match	82m	North
	STATIONERS—RETAIL	North Manly Newsagency (Cards), 510-512 Pittwater Rd., North Manly	147632	1965	Premise Match	82m	North
	Newsagents	North Manly Newsagency, 512 Pittwater Rd., North Manly	128356	1965	Premise Match	82m	North
	Mixed Businesses	Robinson, N. W., 514 Pittwater Rd., North Manly	118491	1965	Premise Match	82m	North
	MIXED BUSINESS	Jones, C. J., 510-512 Pittwater Rd., North Manly	341374	1961	Premise Match	82m	North
NEWSAGENTS	North Manly Newsagency, 512 Pittwater Rd., North Manly	353345	1961	Premise Match	82m	North	
MIXED BUSINESS	Vink, G. J. & J. E., 514 Pittwater Rd., North Manly	342650	1961	Premise Match	82m	North	
10	Builders & Contractors	Mackey & Son., 363 Condamine St., Manly Vale	55455	1965	Premise Match	91m	South West
	BUILDERS & CONTRACTORS-(M.M.B.A.)	Mackey & Son 363 Condamine St MANLY VALE	277346	1961	Premise Match	91m	South West
11	FRUITERERS & GREENGROCERS	Kennington, H. R., Cnr. Corrie and Pittwater Rds., North Manly	50429	1950	Road Intersection	101m	North
12	CARRIERS & CARTAGE CONTRACTORS	Hart, W. H., Cnr. Condamine and Gordon Sts., Balgowlah	18989	1950	Road Intersection	121m	South West
13	VETERINARY HOSPITALS.	North Manly Animal Hospital, 518 Pittwater Rd. North Manly. 2100	97188	1986	Premise Match	128m	North
	VETERINARY HOSPITALS, (V1800)	North Manly Animal Hospital, 518 Pittwater Rd., North Manly. 2100.	83347	1982	Premise Match	128m	North
	VETERINARY HOSPITALS.	North Manly Animal Hospital, 518 Pittwater Rd., North Manly.2100	73478	1978	Premise Match	128m	North
	VETERINARY HOSPITALS.	North Manly Animal Hospital, 518 Pittwater Rd., North Manly. 2100	86163	1975	Premise Match	128m	North
14	CLUBS & SPORTING BODIES (C487)	Manly-Warringah District Hockey Club., 4 Western Ave., North Manly	284409	1970	Premise Match	146m	North East
	Clubs & Sporting Bodies	Manly-Warringah District Hockey Club, 4 Western Ave., North Manly	69080	1965	Premise Match	146m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
15	BUILDERS & CONTRACTORS-(M.M.B.A.)	Curtis, H. A. & J. Pty. Ltd 40 Lovett St. MANLY VALE	277010	1961	Premise Match	148m	South
16	SASH & DOOR MANUFACTURERS	Martyn, Peter, 9 Corrie Rd., North Manly	100556	1950	Premise Match	149m	North
	CARPENTERS & JOINERS	Martyn, Peter, 9 Corrie Rd., North. Manly	17948	1950	Premise Match	149m	North

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## Business Directory Records 1950-1991 Road or Area Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
17	Tube Metal Mfrs &/or Dists	Alcan Aluminum Centre, Condamine St Manly Vale 2093	65060	1991	Road Match	0m
	Aluminum Products Mfrs &/or Dists	Alcan Aluminum Centre, Condamine St, Manly Vale 2093	34384	1991	Road Match	0m
	Aluminum &/or Aluminum Alloy Mfrs &/or Dists	Alcan Aluminum Centre, Condamine St., Manly Vale 2093	34295	1991	Road Match	0m
	FURNITURE-GARDEN &/OR ORNAMENTAL MFRS. &/OR DISTS. &/OR W/SALERS.	Alcan Aluminium Centre, Condamine St., Manly Vale 2093	37366	1986	Road Match	0m
	ALUMINIUM DISTRIBUTORS.	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093	2672	1986	Road Match	0m
	WINDOW FRAME MFRS. &/OR DISTS.	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093.	98961	1986	Road Match	0m
	ALUMINIUM DISTRIBUTORS. (A4980)	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093.	2343	1982	Road Match	0m
	FURNITURE-GARDEN &/OR ORNAMENTAL MFRS. &/OR DISTS.&/OR W/SALERS. (F7650)	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093.	34887	1982	Road Match	0m
	WINDOW FRAME MFRS. &/OR DISTS. (W5240)	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093.	84462	1982	Road Match	0m
	PROPERTY MANAGEMENT. (P9060)	Haven Real Estate Pty. Ltd., Condamine St., Manly Vale. 2093.	67340	1982	Road Match	0m
	REAL ESTATE AGENTS. (R2555)	Haven Real Estate Pty. Ltd., Condamine St., Manly Vale. 2093.	69063	1982	Road Match	0m
	CLOTHING - SPORTSWEAR MFRS.&/OR W/SALERS. (C5701)	Manly Vale Garment Co., Condamine St., Manly Vale. 2093.	17099	1982	Road Match	0m
	WINDOW FRAME MFRS. &/OR DISTS.	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093	74562	1978	Road Match	0m
	FURNITURE - GARDEN &/OR ORNAMENTAL MFRS. &/OR DISTS. &/OR W/SALERS.	Alcan Aluminium Centre, Condamine St, Manly Vale. 2093	31513	1978	Road Match	0m
	ALUMINIUM DISTRIBUTORS	Alcan Aluminium Centre, Condamine St., Manly Vale. 2093	2219	1978	Road Match	0m
	CLOTHING - SPORTSWEAR MFRS. &/OR W/SALERS.	Manly Vale Garment Co., Condamine St., Manly Vale. 2093	15403	1978	Road Match	0m
	RESTAURANTS.	Hartees., Condamine St., Manly Vale. 2093	73803	1975	Road Match	0m
	TAKE-AWAY FOODS.	Hartees., Condamine St., Manly Vale. 2093	81905	1975	Road Match	0m
	CLOTHING-SPORTSWEAR LADIES MFRS.&/OR W/SALERS	Manly Vale Garment Co., Condamine St., Manly Vale. 2093	17821	1975	Road Match	0m
	Motor Service Stations - Petrol, Oil, Etc.	A.C. Motor Servicentre, 377 Condamine St. Manly Vale	125877	1965	Road Match	0m
	Motor Towing Services	Manly Vale Auto Centre, 288 Condamine St., Manly Vale	127111	1965	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Hart, W. H., Condamine St., Manly Vale	284861	1961	Road Match	0m
	INK MFRS. &/OR IMPORTERS	Mander Kidd Printing Ink (Aust.) Pty. Ltd., Condamine St., Manly Vale	327091	1961	Road Match	0m
	PLUMBERS, GASFITTERS & DRAINLAYERS	Trinder, R., Condamine St. MANLY	359670	1961	Road Match	0m
	FRUITERERS & GREENGROCERS	Crook, N., Condamine St., Manly Vale	49887	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
17	MIXED BUSINESSES & GENERAL STORES	Green, A., Condamine St., Manly Vale	80055	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Hart, Geo., Condamine St., Manly Vale	83850	1950	Road Match	0m
	BUTCHERS-RETAIL	Hews, J. M., Condamine St., Manly Vale	13687	1950	Road Match	0m
	CLOTHING MFRS. &/OR WHOLESALERS WATERPROOF	Le Roy, E. (Aust.) Pty. Ltd., Condamine St., Manly Vale	24424	1950	Road Match	0m
	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Leermont Engineering Co, Condamine St., Manly Vale	40937	1950	Road Match	0m
	GROCERS-RETAIL	Manly Vale Store, Condamine St., Manly Vale	58188	1950	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Shaw, J., Condamine St., Manly Vale	19762	1950	Road Match	0m
	DANCING TEACHERS & STUDIOS	Whytock, Sheila, "The Orchard," Condamine St., Manly	30284	1950	Road Match	0m
18	MOTOR PAINTERS.	Young, G. Smash Repairs, 45 Campbell Pde., Manly Vale. 2093	51773	1978	Road Match	0m
	MOTOR PANEL BEATERS	Young, G. Smash Repairs. 45 Campbell Pde., Manly Vale. 2093	52479	1978	Road Match	0m
	MOTOR TRIMMERS (M748)	Kasawczenko, C., 33 Campbell Pde., Manly Vale	342647	1970	Road Match	0m
	Dry Cleaners, Pressers/Dyers	Henry's Dry Cleaners, 45 Campbell Pde., Manly Vale	76191	1965	Road Match	0m
	DRY CLEANERS, PRESSERS / DYERS	Henry's Dry Cleaners, 45 Campbell Pde., Manly Vale	299135	1961	Road Match	0m
	DRY CLEANERS, PRESSERS / DYERS	Henry's Dry Cleaners 45 Campbell Pde., Manly Vale	299134	1961	Road Match	0m
	INSURANCE AGENTS	Connors, J., Campbell Pde., Balgowlah	64806	1950	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Henrys Dry Cleaners, 45 Campbell Pde., Manly Vale	35285	1950	Road Match	0m
	TRANSPORT SERVICES-INTERSTATE	Lang and Lang (Interstate), Campbell Pde., Manly Vale	110256	1950	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Lang and Lang, Campbell Pde., Manly Vale	19191	1950	Road Match	0m
19	MEDICAL PRACTITIONERS.	George, J., Kentwell Rd., North Manly. 2100.	50365	1975	Road Match	0m
	Plumbers, Gasfitters/Drainlayers	Sims, A. H., Kentwell Rd., North Manly	134712	1965	Road Match	0m
	PLUMBERS, GASFITTERS & DRAINLAYERS	Sims, A. H., Kentwell Rd., North Manly	359669	1961	Road Match	0m
	ARCHITECTS	Wilson, R. M., Kentwell Rd., North Manly	2515	1950	Road Match	0m
20	MIXED BUSINESSES.	Jolly Friendly Corner., Pittwater Rd., Harbord. 2096	55060	1975	Road Match	0m
	NEWSAGENTS-GENERAL	Jolly Friendly Corner., Pittwater Rd., Harbord. 2096	63638	1975	Road Match	0m
	PHOTOGRAPHIC SUPPLIES.	Milversen Camera Supplies., Pittwater Rd., Harbord. 2096	66984	1975	Road Match	0m
	PHOTOGRAPHIC EQUIPMENT DEALERS &/OR IMPS.	Milversens Camera Supplies., Pittwater Rd., Harbord 2096	66867	1975	Road Match	0m
	CUSTOMS AGENTS	Wild, R. J. & Sons Pty. Ltd., Pittwater Rd., North Manly	286578	1970	Road Match	0m
	FURNITURE REMOVALISTS/STORAGE (F785)	Wild, R. J. & Sons Pty. Ltd., Pittwater Rd., North Manly	308884	1970	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS-MASTER (C147)	Wild, R.J & Sons Pty. Ltd., Pittwater Rd., North Manly	278581	1970	Road Match	0m
	GROCERS-RETAIL	Bunny and McLaws (North Manly Newsagency), Pittwater Rd., North Manly	56602	1950	Road Match	0m
	NEWSAGENTS	Bunny and McLaws (North Manly Newsagency), Pittwater Rd., North Manly	87875	1950	Road Match	0m
	ENGINEERS-REFRIGERATION	Cockbill, Wm., 117 Pittwater Rd., North Manly	42044	1950	Road Match	0m
	TIMBER MERCHANTS	Hayman and Ellis Pty. Ltd., Pittwater Rd., North Manly	78041	1950	Road Match	0m



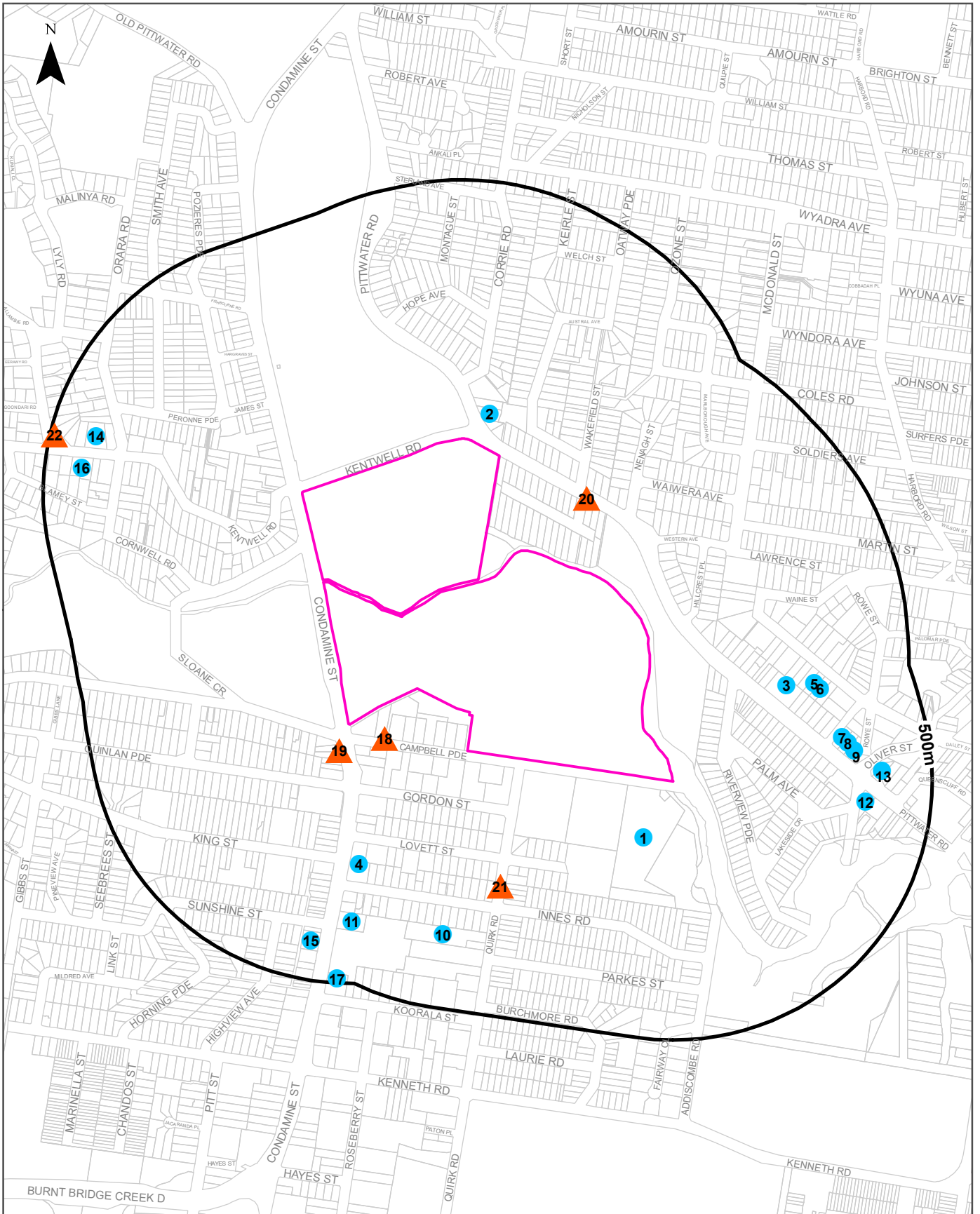
Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
20	GROCERS-RETAIL	Hill, P., 11 Pittwater Rd., North Manly	57748	1950	Road Match	0m
	BUTCHERS-RETAIL	Hodge, C., 9 Pittwater Rd., North Manly	13702	1950	Road Match	0m
	POULTRY FARMERS	Kennedy, G. P., 185 Pittwater Rd., North Manly	94109	1950	Road Match	0m
	MEDICAL PRACTITIONERS	Kilgour, K. A. M., Pittwater Rd., North Manly	73210	1950	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Tudor Dry Cleaners, 23 Pittwater Rd., Harbord	35800	1950	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Tudor Industries Pty. Ltd., 23 Pittwater Rd., Harbord	35802	1950	Road Match	0m
21	PAINTERS,PAPERHANGERS/DECORATORS (P092)	Kiss, B. A., Condamine St., North Manly	346685	1970	Road Match	0m
	Painters, Paperhangers/Decorators	Kiss, B. A., Condamine St., North Manly	131255	1965	Road Match	0m
	PAINTERS, PAPERHANGERS/DECORATORS	Kiss, B. A., Condamine St., North Manly	356189	1961	Road Match	0m
	CLUBS & SPORTS BODIES	North Manly Golf Club, Condamine St., North Manly	291686	1961	Road Match	0m
	PHOTOGRAPHERS-PORTRAIT	Jones, J. H., Condamine St., North Manly	91883	1950	Road Match	0m
	TYRE RETREADERS & VULCANISERS	Pioneer Retread, Condamine St., North Manly	111030	1950	Road Match	0m
	TYRE & TUBE DEALERS	Pioneer Retreads, Condamine St., Manly North	110874	1950	Road Match	0m
	GROCERS-RETAIL	Thompson, C. J., Cnr. Condamine and North Condamine Sts., North Manly	55899	1950	Road Match	0m
22	ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL. (E7140)	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale. 2093.	27880	1982	Road Match	20m
	TRANSMISSION EQUIPMENT MFRS&/OR DIST. (T7275)	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale. 2093.	81671	1982	Road Match	20m
	VALVES &/ OR COCKS - STEAM, FLUID ETC., - MFRS &/ OR DIST. (V0900)	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale. 2093.	83136	1982	Road Match	20m
	TRANSMISSION EQUIPMENT MFRS. &/OR DIST.	Burco Engineering (NSW) Pty. Ltd, Quirk Rd, Manly Vale. 2093	72167	1978	Road Match	20m
	ENGINEERS- GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale. 2093	24949	1978	Road Match	20m
	VALVES &/OR COCKS - STEAM, FLUID, ETC. - MFRS. &/OR DIST.	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale.2093	73303	1978	Road Match	20m
	PRINTERS-LETTERPRESS.	Anderson, S. J. & Sons., Quirk Rd., Manly Vale. 2093	69297	1975	Road Match	20m
	PRINTERS-LITHOGRAPHIC (OFFSET).	Anderson, S. J. & Sons., Quirk Rd., Manly Vale. 2093	69774	1975	Road Match	20m
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale. 2093	28850	1975	Road Match	20m
	VALVES &/OR COCKS.,STEAM, FLUID, ETC.,MFRS. &/OR DIST.	Burco Engineering (NSW) Pty. Ltd., Quirk Rd., Manly Vale. 2093	85981	1975	Road Match	20m
	TEXTILE AGENTS (T230)	Carr, Glen & Partners Pty. Ltd, Quirk Rd, Manly Vale	367900	1970	Road Match	20m
	LOCK MANUFACTURERS &/OR DISTRIBUTORS (L640)	Carr, Glen & Partners Pty. Ltd., Quirk Rd., Manly Vale	323794	1970	Road Match	20m
	MANUFACTURERS' AGENTS (M112)	Carr, Glen & Partners Pty. Ltd., Quirk Rd., Manly Vale	324743	1970	Road Match	20m
	PUTTY MANUFACTURERS (P910)	Carr, Glen & Partners Pty. Ltd., Quirk Rd., Manly Vale	353860	1970	Road Match	20m
	Clubs & Sporting Bodies	Manly Women's Bowling Club Ltd., Quirk Rd., Manly Vale	69083	1965	Road Match	20m
	CONCRETE BRICK & BLOCK MFRS.	B.D.V. Brickworks, Quirk St., Manly Vale	292146	1961	Road Match	20m
CLUBS & SPORTS BODIES	Manly Women's Bowling Club Ltd., Quirk Rd., Manly Vale	291617	1961	Road Match	20m	

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
23	NURSERYMEN	Skan, Reg, Sloane Cres., Manly Vale	354208	1961	Road Match	32m
24	ENGINEERS-HOT WATER, HEATING/VENTILATING	Coleman, S. J., Gordon St., Manly Vale	307335	1961	Road Match	92m
	ENGINEERS-HOT WATER, HEATING & VENTILATING	Coleman, S. J, Gordon St., Manly Vale	41506	1950	Road Match	92m
25	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS (B260)	Judy's Beauty Salon., Corrie Rd., North Manly	266095	1970	Road Match	105m

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# Dry Cleaners, Motor Garages & Service Stations

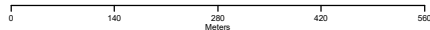
Campbell Parade, Manly Vale, NSW 2093



### Legend

- Site Boundary
- Buffer 500m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- ▲ Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale:



Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

# Historical Business Directories

Campbell Parade, Manly Vale, NSW 2093

## Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR GARAGES & SERVICE STATIONS.	Holden. Bob Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093	19020	1993	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Maloney. Peter Auto Repairs, C12/1 Campbell Pde., Manly Vale. 2093	19089	1993	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Northside Imported Parts Pty Ltd., C6/1 Campbell Pde., Manly Vale. 2093	19199	1993	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	T M Automotive Services, C11/1 Campbell Pde, Manly Vale. 2093	25490	1993	Premise Match	20m	South East
	Motor Garages & Service Stations	Maloney, Peter Auto Repairs, C12/1 Campbell Pde., Manly Vale 2093	96256	1991	Premise Match	20m	South East
	Motor Garages & Service Stations	Northside Imported Parts Pty. Ltd., C6/1 Campbell Pde., Manly Vale 2093	97818	1991	Premise Match	20m	South East
	Motor Garages & Service Stations	T.M. Automotive Services, C11/1 Campbell Pde., Manly Vale 2093	53948	1991	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Maloney, Peter Auto Repairs, C12/1 Campbell Pde., Manly Vale. 2093	11806	1990	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Northside Imported Parts Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	11940	1990	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	T.M. Automotive Services, C11/1 Campbell Pde, Manly Vale. 2093	18313	1990	Premise Match	20m	South East
	MOTOR GARAGE & SERVICE STATIONS.	Bob Holden Motors Manly Vale, A1/1 Campbell Pde, Manly Vale. 2093	64498	1989	Premise Match	20m	South East
	MOTOR GARAGE & SERVICE STATIONS.	Maloney Peter Auto Repairs, C12/1 Campbell Pde., Manly Vale. 2093	5212	1989	Premise Match	20m	South East
	MOTOR GARAGE & SERVICE STATIONS.	Northside Imported Parts Pty. Ltd., C6/1 Campbell Pde, Manly Vale. 2093	5349	1989	Premise Match	20m	South East
	MOTOR GARAGE & SERVICE STATIONS.	O'Neill G. B., C11/1 Campbell Pde, Manly Vale. 2093	5358	1989	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093	53606	1988	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Ladics Motor Body Works, D20/1 Campbell Pde., Manly Vale. 2093	59513	1988	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Northside Imported Parts Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	59721	1988	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	O Neill G. B., C11/1 Campbell Pde., Manly Vale. 2093	59730	1988	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093	64061	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Erskine, T. J., Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	64601	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Ladics Motor Body Works, D20/1 Campbell Pde., Manly Vale. 2093	64970	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	O'Neill, G. B., C11/1 Campbell Pde., Manly Vale. 2093	65207	1986	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Bob Holden Motors Manly Vale., A1/1 Campbell Pde., Manly Vale. 2093	39075	1985	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Erskine, T. J., Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	39603	1985	Premise Match	20m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR GARAGES & SERVICE STATIONS.	Ladics Motor Body Works., D20/1 Campbell Pde., Manly Vale. 2093	45072	1985	Premise Match	20m	South East
	MOTOR GARAGES & SERVICE STATIONS.	O'Neill G. B., C 11/1 Campbell Pde., Manly Vale. 2093	45311	1985	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093	27682	1984	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Erskine T. J Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale 2093	28183	1984	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ladies Motor Body Works., D20/1 Campbell Pde., Manly Vale. 2093	28571	1984	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	O'Neill G. B., C11/1 Campbell Pde., Manly Vale. 2093	33886	1984	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Bob Holden Motors Manly Vale A1 /1 Campbell Pde., Manly Vale 2093	9042	1983	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Erskine T. J Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	14607	1983	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ladics Motor Body Works., D20/1 Campbell Pde., Manly Vale 2093	15000	1983	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Northern Star Auto Services., D10/1 Campbell Pde., Manly Vale 2093	15226	1983	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	O'Neill, G.B., C11/1 Campbell Pde., Manly Vale. 2093	65782	1983	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Walters M. W. Smash Repairs., B2/1 Campbell Pde., Manly Vale 2093	21810	1983	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Bob Holden Motors Manly Vale, A1/1 Campbell Pde., Manly Vale. 2093.	56135	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Erskine, T. J, Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093.	56670	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Ladics Motor Body Work, D20/1 Campbell Pde., Manly Vale. 2093.	57070	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Northern Star Auto Services, D10/1 Campbell Pde., Manly Vale. 2093.	57306	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	O'Neill, G. B., C11/1 Campbell Pde., Manly Vale. 2093.	57318	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Walters, M. W. Smash Repairs, B2/1 Campbell Pde., Manly Vale. 2093.	57812	1982	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Bob Holden Motors Manly Vale., A1/1 Campbell Pde., Manly vale. 2093	63808	1981	Premise Match	20m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Erskine, T. J. Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093.	3223	1981	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ladics Motor Body Works., D 20/1 Campbell Pde., Manly Vale 2093	3623	1981	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Northern Star Auto Services., D10/1 Campbell Pde., Manly Vale 2093	3859	1981	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	O'Neill G. B., C11/1 Campbell Pde., Manly Vale 2093	3870	1981	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Walters M. W. Smash Repairs. B2/1 Campbell Pde., Manly Vale 2093	8383	1981	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Automotive And Marine Services., A3/1 Campbell Pde., Manly Vale. 2093	50202	1980	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Bob Holden Motors Manly Vale., B4/1 Campbell Pde., Manly Vale. 2093	50282	1980	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Erskine, T. J Mechanical Repairs Pty. Ltd., C6/1 Campbell Pde., Manly Vale. 2093	52872	1980	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ladics Motor Body Works., D20/1 Campbell Pde., Manly Vale. 2093	58357	1980	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Northern Star Auto Serysces., D10/1 Campbell Pde., Manly Vale. 2093	58606	1980	Premise Match	20m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	O'Neill G B., C11/1 Campbell Pde., Manly Vale. 2100	58615	1980	Premise Match	20m	South East
	Motor Garages & Engineers	Eldershaw, R. M. Unit 66-67., 1 Campbell Pde., Manly Vale	122967	1965	Premise Match	20m	South East
	2	MOTOR GARAGES & SERVICE STATIONS.	BP North Star, 504 Pittwater Rd., North Manly. 2100	18676	1993	Premise Match	46m
MOTOR GARAGES & SERVICE STATIONS.		BP North Star, 504 Pittwater Rd., North Manly. 2100	11185	1990	Premise Match	46m	North
MOTOR GARAGE & SERVICE STATIONS.		BP North Star, 504 Pittwater Rd., North Manly. 2100	64618	1989	Premise Match	46m	North
MOTOR GARAGES & SERVICE STATIONS.		BP North Star, 504 Pittwater Rd., North Manly. 2100	53733	1988	Premise Match	46m	North
MOTOR GARAGES & SERVICE STATIONS.		BP North Star, 504 Pittwater Rd., North Manly. 2100	64194	1986	Premise Match	46m	North
MOTOR GARAGES & SERVICE STATIONS.		Kellys J. & P. Service Station, 504 Pittwater Rd., North Manly. 2100	45036	1985	Premise Match	46m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.		Kellys J. & P. Service Station, 504 Pittwater Rd., North Manly. 2100	28535	1984	Premise Match	46m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.		Kellys J & P Service Station., 504 Pittwater Rd., North Manly 2100	14964	1983	Premise Match	46m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)		Kellys, J. & P. Service Station, 504 Pittwater Rd., North Manly. 2100.	57032	1982	Premise Match	46m	North

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2	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kellys. J. & P. Service Station., 504 Pittwater Rd., North Manly 2100	3584	1981	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kellys, J. & P. Service Station., 504 Pittwater Rd., North Manly. 2100	58315	1980	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kellys J. & P. Service Station., 504 Pittwater Rd., North Manly. 2100.	41781	1979	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kellys, J. & P. Service Station, 504 Pittwater Rd., North Manly. 2095	50314	1978	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kellys. J. & P Sevice Station., 504 Pittwater Rd., North Manly 2100	30312	1976	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS.	Kelly's, J. & P Service Station., 504 Pittwater Rd., North Manly. 2100	59099	1975	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS.	Norris D., 504 Pittwater Rd., North Manly	12740	1972	Premise Match	46m	North
	MOTOR GARAGES &/OR ENGINEERS.	Rose N. & Co., 506 Pittwater Rd North Manly	62416	1971	Premise Match	46m	North
3	MOTOR GARAGE & SERVICE STATIONS.	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100	64616	1989	Premise Match	224m	East
	MOTOR GARAGES & SERVICE STATIONS.	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100	53732	1988	Premise Match	224m	East
	MOTOR GARAGES & SERVICE STATIONS.	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100	64193	1986	Premise Match	224m	East
	MOTOR GARAGES & SERVICE STATIONS.	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100	39199	1985	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100	27802	1984	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly 2100	14239	1983	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100.	56267	1982	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly. 2100	63946	1981	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly. 2100	51446	1980	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly. 2100.	41046	1979	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station, 410 Pittwater Rd., North Manly. 2100	49585	1978	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly 2100	25299	1976	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly. 2100	58542	1975	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS.	BP North Manly Service Station., 410 Pittwater Rd North Manly	12738	1972	Premise Match	224m	East

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3	MOTOR GARAGES &/OR ENGINEERS.	BP North Manly Service Station., 410 Pittwater Rd North Manly	62414	1971	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP North Manly Service Station., 410 Pittwater Rd., North Manly	2433	1971	Premise Match	224m	East
	MOTOR GARAGES &/OR ENGINEERS.	BP North Manly Service Station., 410 Pittwater Rd., North Manly 2100	62412	1971	Premise Match	224m	East
	MOTOR GARAGES & ENGINEERS(M6S6)	BP North Manly Service Station., 410 Pittwater Rd., NORTH MANLY	337390	1970	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL,OIL, Etc.	BP North Manly Service Station., 410 Pittwater Rd., NORTH MANLY	340878	1970	Premise Match	224m	East
	MOTOR GARAGES & ENGINEERS.	BP North Manly Service Station., 410 Pittwater Rd North Manly	46927	1969	Premise Match	224m	East
	MOTOR GARAGES & ENGINEERS.	BP North Manly Service Station., 410 Pittwater Rd North Manly	46926	1969	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP North Manly Service Station., 410 Pittwater Rd North Manly	50547	1969	Premise Match	224m	East
	MOTOR GARAGES & ENGINEERS	BP North Manly Service Station., 410 Pittwater Rd North Manly	26243	1968	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP North Manly Service Station., 410 Pittwater Rd North Manly	32574	1968	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP North Manly Service Station., 410 Pittwater Rd North Manly	16033	1967	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	North Manly Service Station., 410 Pittwater Rd North Manly	1606	1966	Premise Match	224m	East
	Motor Service Stations - Petrol, Oil, Etc.	North Manly Service Station, 410 Pittwater Rd. North Manly	125971	1965	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	North Manly Service Station., 410 Pittwater Rd North Manly	52242	1964	Premise Match	224m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	North Manly Service Station., 410 Pittwater Rd North Manly	38492	1962	Premise Match	224m	East
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	North Manly Service Station, 410 Pittwater Rd., NORTH MANLY	350909	1961	Premise Match	224m	East
MOTOR GARAGES & ENGINEERS.	North Manly Service Station., 410 Pittwater Rd Harbord	19270	1959	Premise Match	224m	East	
4	MOTOR GARAGES & SERVICE STATIONS.	Harts Garage, 272 Condamine St., Manly Vale. 2093	44954	1985	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harts Garage, 272 Condamine St., Manly Vale. 2093	28453	1984	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harts Garage., 272 Condamine St., Manly Vale. 2093	14881	1983	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Harts Garage, 272 Condamine St., Manly Vale. 2093.	56947	1982	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harts Garage., 272 Condamine St., Manly Vale 2093	3501	1981	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harts Garage., 272 Condamine St., Manly Vale. 2093	58234	1980	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harts Garage., 272 Condamine St., Manly Vale. 2093.	41696	1979	Premise Match	226m	South West



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4	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harts Garage, 272 Condamine St., Manly Vale. 2093	50235	1978	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Hart's Garage., 272 Condamine St., Manly Vale 2093	30234	1976	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Hart's Garage., 272 Condamine St., Manly Vale. 2095	59031	1975	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Hart's Garage., 272 Condamine St Manly Vale	12556	1972	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Hart's Garage., 272 Condamine St Manly Vale	62240	1971	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS(M6S6)	Hart's Garage., 272 Condamine St., MANLY VALE	337989	1970	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS.	Hart's Garage., 272 Condamine St Manly Vale	42589	1969	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS	Hart's Garage., 272 Condamine St., Manly Vale	26074	1968	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS.	Hart's Garage., 272 Condamine St Manly Vale	10572	1967	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS.	Hart's Garage., 272 Condamine St Manly Vale	60319	1966	Premise Match	226m	South West
	Motor Garages & Engineers	Hart, G., 272 Condamine St. Manly Vale	122968	1965	Premise Match	226m	South West
	Motor Service Stations - Petrol, Oil, Etc.	Hart, G., 272 Condamine St. Manly Vale	125879	1965	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS	Hart G., 272 Condamine St Manly Vale	48242	1964	Premise Match	226m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart G., 272 Condamine St Manly Vale	52150	1964	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS.	Hart G., 272 Condamine St Manly Vale	32901	1962	Premise Match	226m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart G., 272 Condamine St Manly Vale	38394	1962	Premise Match	226m	South West
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Hart, G., 272 Condamine St., MANLY	350677	1961	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS	Hart, G., 272 Condamine St., MANLY VALE	347334	1961	Premise Match	226m	South West
	MOTOR GARAGES & ENGINEERS.	Hart Geo., 272 Condamine St., Manly Vale	19502	1959	Premise Match	226m	South West
	MOTOR GARAGE/ENGINEERS.	Hart Geo., 272 Condamine St Manly Vale	4247	1958	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Hart Geo., 272 Condamine St Manly Vale	57773	1956	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Hart Geo., 272 Condamine St Manly Vale	44625	1954	Premise Match	226m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Hart Geo., Condamine St., manly Vale	49375	1954	Premise Match	226m	South West
5	MOTOR GARAGES &/OR ENGINEERS.	Harbord Motors., 14 Waine St Harbord	12304	1972	Premise Match	293m	East
	MOTOR GARAGES &/OR ENGINEERS.	Harbord Motors., 14 Waine St Harbord	56916	1971	Premise Match	293m	East
	MOTOR GARAGES & ENGINEERS(M6S6)	Harbord Motors., 14 Waine St., HARBORD	337975	1970	Premise Match	293m	East
	MOTOR GARAGES & ENGINEERS.	Harbord Motors., 14 Waine St Harbord	42336	1969	Premise Match	293m	East
	MOTOR GARAGES & ENGINEERS	Harbord Motors., 14 Waine St Harbord	25852	1968	Premise Match	293m	East
6	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harrison. H. A. & Gibson. H. J.; 12 Waine St., Harbord. 2096	50232	1978	Premise Match	300m	East

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6	MOTOR GARAGES &/OR ENGINEERS.	Harrison H. A. & Gibson H. J., 12 Waine St., Harbord	12306	1972	Premise Match	300m	East
	MOTOR GARAGES &/OR ENGINEERS.	Harrison H. A. & Gibson H. J., 12 Waine St Harbord	56918	1971	Premise Match	300m	East
7	MOTOR GARAGE & SERVICE STATIONS.	George Steel Automotives, 386 Pittwater Rd., North Manly. 2100	65097	1989	Premise Match	315m	East
	MOTOR GARAGES & SERVICE STATIONS.	George Steel Automotives, 386 Pittwater Rd., North Manly. 2100	59324	1988	Premise Match	315m	East
	MOTOR GARAGES & SERVICE STATIONS.	George Steel Automotives, 386 Pittwater Rd., North Manly. 2100	64736	1986	Premise Match	315m	East
	MOTOR GARAGES & SERVICE STATIONS.	George Steel Automotives., 386 Pittwater Rd., North Manly. 2100	39740	1985	Premise Match	315m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	George Steel Automotives, 386 Pittwater Rd., North Manly. 2100	28317	1984	Premise Match	315m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	George Steel Automotives., 386 Pittwater Rd., North Manly 2100	14740	1983	Premise Match	315m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M68860)	George Steel Automotives, 386 Pittwater Rd., North Manly. 2100.	56801	1982	Premise Match	315m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	George Steel Automotives., 386 Pittwater Rd., North Manly. 2100	3357	1981	Premise Match	315m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	George Steel Automotives., 386 Pittwater Rd., North Manly. 2100	58091	1980	Premise Match	315m	East
	8	DRY CLEANERS, PRESSERS &/OR DYERS.	Esquire Valet Service Pty. Ltd., 384 Pittwater Rd., North Manly	2879	1972	Premise Match	323m
DRY CLEANERS, PRESSERS &/OR DYERS		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd North Manly	51032	1971	Premise Match	323m	East
DRY CLEANERS,PRESSERS /DYERS (D710)		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd., North Manly	292290	1970	Premise Match	323m	East
DRY CLEANERS, PRESSERS/ DYERS		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd., North Manly	37083	1969	Premise Match	323m	East
DRY CLEANERS, PRESSERS/DYERS		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd North Manly	20556	1968	Premise Match	323m	East
DRY CLEANERS, PRESSERS/ DYERS		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd North Manly	6114	1967	Premise Match	323m	East
DRY CLEANERS, PRESSERS/ DYERS		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd North Manly	52646	1966	Premise Match	323m	East
Dry Cleaners, Pressers/Dyers		Esquire Valet Service Pty. Ltd., 384 Pittwater Rd., North Manly	76152	1965	Premise Match	323m	East
DRY CLEANERS, PRESSERS/ DYERS.		Esquire North Shore Dry Cleaners (Factory)., 384 Pittwater Rd Harbord	43002	1964	Premise Match	323m	East
DRY CLEANERS, PRESSERS/DYERS.		Top Value Dry Cleaners., 384 Pittwater Rd North Manly	24943	1962	Premise Match	323m	East
DRY CLEANERS, PRESSERS / DYERS		Top Value Dry Cleaners, 384 Pittwater Rd., North Manly	299299	1961	Premise Match	323m	East
DRY CLEANERS, PRESSERS/DYERS		Top Value Dry Cleaners., 384 Pittwater Rd Harbord	13287	1959	Premise Match	323m	East
9	MOTOR GARAGE & SERVICE STATIONS.	Mackellar Service Centre, 380 Pittwater Rd., North Manly. 2100	5203	1989	Premise Match	333m	East
	MOTOR GARAGE & SERVICE STATIONS.	Thompson Mark Automotives, 10/380 Pittwater Rd., North Manly. 2100	5648	1989	Premise Match	333m	East
	MOTOR GARAGES & SERVICE STATIONS.	Mackellar Service Centre, 380 Pittwater Rd., North Manly. 2100	59558	1988	Premise Match	333m	East
	MOTOR GARAGES & SERVICE STATIONS.	Thompson Mark Automotives, 10/380 Pittwater Rd., North Manly. 2100	60053	1988	Premise Match	333m	East
	MOTOR GARAGES & SERVICE STATIONS.	Mackellar Service Centre, 380 Pittwater Rd., North Manly. 2100	65019	1986	Premise Match	333m	East

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9	MOTOR GARAGES & SERVICE STATIONS.	Thompson, Mark Automotives, 10/380 Pittwater Rd., North Manly. 2100	65570	1986	Premise Match	333m	East
10	MOTOR GARAGES &/OR ENGINEERS.	Acme Body Works Pty. Ltd., 35 Quirk Rd., Manly Vale. 2095	58306	1975	Premise Match	342m	South
	MOTOR GARAGES &/OR ENGINEERS.	Condamine Motors Pty. Ltd., 35 Quirk Rd., Manly Vale	12554	1972	Premise Match	342m	South
	MOTOR GARAGES &/OR ENGINEERS.	Condamine Motors Pty. Ltd., 35 Quirk Rd., Manly Vale	62238	1971	Premise Match	342m	South
11	MOTOR GARAGES & SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	11809	1990	Premise Match	361m	South West
	MOTOR GARAGE & SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	5215	1989	Premise Match	361m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	59572	1988	Premise Match	361m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	65034	1986	Premise Match	361m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	45138	1985	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	33718	1984	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station., 254 Condamine St., Manly Vale 2093	15067	1983	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093.	57138	1982	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station., 254 Condamine St., Manly Vale 2093	3702	1981	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station., 254 Condamine St., Manly Vale. 2093	58437	1980	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station., 254 Condamine St., Manly Vale. 2093.	45915	1979	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2093	50424	1978	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Manly Vale Service Station., 254 Condamine St., Manly Vale 2093	30417	1976	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Manly Vale Service Station, 254 Condamine St., Manly Vale. 2095	59193	1975	Premise Match	361m	South West
	MOTOR SERVICE STATIONS - PETROL, OIL	Manly Vale Smash Repairs., 254 Condamine St., Manly Vale, 2093	61851	1975	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Manly Vale Service Station., 254 Condamine St., Manly Vale	12559	1972	Premise Match	361m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Manly Vale Smash Repairs., 254 Condamine St., Manly Vale	16861	1972	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Manly Vale Service Station., 254 Condamine St Manly Vale	62243	1971	Premise Match	361m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Manly Vale Smash Repairs., 254 Condamine St Manly Vale	2326	1971	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS(M6S6)	Manly Vale Service Station., 254 Condamine St., MANLY VALE	338201	1970	Premise Match	361m	South West
MOTOR GARAGES & ENGINEERS.	Manly Vale Service Station., 254 Condamine St Manly Vale	42591	1969	Premise Match	361m	South West	

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
11	MOTOR GARAGES & ENGINEERS	Manly Vale Service Station., 254 Condamine St Manly Vale	26076	1968	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS.	Manly Vale Service Station., 254 Condamine St Manly Vale	10574	1967	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS.	Manly Vale Service Statism., 254 Condamine St., Manly Vale	60321	1966	Premise Match	361m	South West
	Motor Garages & Engineers	Manly Vale Service Station, 254 Condamine St. Manly Vale	122969	1965	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS	Freshwater Motors Pty. Ltd., 254-258 Condamine St Manly Vale	48241	1964	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS	Manly Vale Service Station., 254 Condamine St Manly Vale	48243	1964	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS.	Freshwater Motors Pty. Ltd., 254-258 Condamine St Manly Vale	32900	1962	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS.	Manly Vale Service Station., 254 Condamine St Manly Vale	32902	1962	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS	Freshwater Motors Pty. Ltd., 254-258 Condamine St. MANLY VALE	347176	1961	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS	Manly Vale Service Station, 254 Condamine St. MANLY VALE	347632	1961	Premise Match	361m	South West
	MOTOR GARAGES & ENGINEERS.	Walden Motors., 254 Condamine St., Manly Vale	19505	1959	Premise Match	361m	South West
	MOTOR GARAGE/ENGINEERS.	Walden Motors., 254 Condamine St Manly Vale	9232	1958	Premise Match	361m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Walden Motors., 254 Condamine St Manly Vale	61643	1956	Premise Match	361m	South West
12	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Excelsior Garage. 369 Pittwater Rd., North Manly. 2095	50031	1978	Premise Match	364m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Excelsior Garage., 369 Pittwater Rd., North Manly	12739	1972	Premise Match	364m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Excelsior Garage., 369 Pittwater Rd., North Manly	62415	1971	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS(M6S6)	Excelsior Garage., 369 Pittwater Rd., HARBORD	337779	1970	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS.	Excelsior Garage., 369 Pittwater Rd Harbord	42333	1969	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS	Excelsior Garage., 369 Pittwater Rd Harbord	25849	1968	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS.	Excelsior Garage., 369 Pittwater Rd Harbord	10352	1967	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS.	Excelsior Garage., 369 Pittwater Rd Harbord	60100	1966	Premise Match	364m	South East
	Motor Garages & Engineers	Excelsior Garage, 369 Pittwater Rd. Harbord	122761	1965	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS	Excelsior Garage., 369 Pittwater Rd., Harbord	48030	1964	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS.	Excelsior Garage., 369 Pittwater Rd Harbord	29574	1962	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS	Excelsior Garage, 369 Pittwater Rd. HARBORD	347109	1961	Premise Match	364m	South East
	MOTOR GARAGES & ENGINEERS.	Exceislror Garage., 369 Pittwater Rd Harbord	14224	1959	Premise Match	364m	South East
	MOTOR GARAGE/ENGINEERS.	Excelsior Garage., 369 Pittwater Rd Harbord	4073	1958	Premise Match	364m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Excelsior Garage., 369 Pittwater Rd Harbord	57616	1956	Premise Match	364m	South East
13	MOTOR GARAGE & SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	65168	1989	Premise Match	384m	East
	MOTOR GARAGES & SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	59409	1988	Premise Match	384m	East
	MOTOR GARAGES & SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	64845	1986	Premise Match	384m	East
	MOTOR GARAGES & SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	44947	1985	Premise Match	384m	East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
13	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	28446	1984	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	14874	1983	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100.	56939	1982	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly 2100	3493	1981	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	58226	1980	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100.	41688	1979	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	50226	1978	Premise Match	384m	East
	MOTOR GARAGES &/OR ENGINEERS.	Harbord Motors & Accessories Pty. Ltd., 378 Pittwater Rd., North Manly. 2100	59024	1975	Premise Match	384m	East
14	MOTOR GARAGES & SERVICE STATIONS.	Caltex Allambie Service Station, 48 Kentwell Rd., North Manly. 2100	18730	1993	Premise Match	387m	North West
	Motor Garages & Service Stations	Caltex Allambie, 48 Kentwell Rd., North Manly 2100	53651	1991	Premise Match	387m	North West
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Allambie, 48 Kentwell Rd., North Manly. 2100	11264	1990	Premise Match	387m	North West
	MOTOR GARAGE & SERVICE STATIONS.	Caltex Allambie, 48 Kentwell Rd., North Manly. 2100	64704	1989	Premise Match	387m	North West
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Allambie, 48 Kentwell Rd., North Manly. 2100	53829	1988	Premise Match	387m	North West
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Allambie, 48 Kentwell Rd., North Manly. 2100	64301	1986	Premise Match	387m	North West
	MOTOR GARAGES & SERVICE STATIONS.	Irvine Nigel Caltex Allambie., 48 Kentwell Rd., North Manly. 2100	44996	1985	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Irvine Nigel Caltex Allambie., 48 Kentwell Rd., North Manly. 2100	28497	1984	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Irvine Nigel Caltex Allambie., 48 Kentwell Rd., North Manly 2100	14925	1983	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Irvine, Nigel, Caltex Allambie, 48 Kentwell Rd., North Manly. 2100.	56991	1982	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Irvine Nigel Caltex Allambie., 48 Kentwell Rd., North Manly 2100	3546	1981	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Irvine Nigel Caltex Allambie., 48 Kentwell Rd., North Manly. 2100	58281	1980	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Irvine Nigel Caltex Allambie., 48 Kentwell Rd., North Manly. 2100.	41747	1979	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Irvine, Nigel Automotive, 50 Kentwell Rd., North Manly. 2095	50282	1978	Premise Match	387m	North West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Druerys Service Centre., 50 Kentwell Rd., North Manly 2100	29852	1976	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Druery's Service Centre., 50 Kentwell Rd., North Manly. 2100	58770	1975	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Rudge G. & B., 50 Kentwell Rd., North Manly	12741	1972	Premise Match	387m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Rudge G & B., 50 Kentwell Rd., North Manly	62417	1971	Premise Match	387m	North West
15	MOTOR GARAGES & SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	18874	1993	Premise Match	406m	South West
	Motor Garages & Service Stations	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale 2093	97393	1991	Premise Match	406m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	11452	1990	Premise Match	406m	South West
	MOTOR GARAGE & SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	64897	1989	Premise Match	406m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	59100	1988	Premise Match	406m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	64496	1986	Premise Match	406m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	39495	1985	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Condamine Street Shell Auto Port, 307 Condamine St., Manly Vale. 2093	28080	1984	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Condamine Street Auto Port., 307 Condamine St., Manly Vale 2093	14498	1983	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Condamine Street Auto Port, 307 Condamine St., Manly Vale. 2093.	56555	1982	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Condamine Street Auto Port., 307 Condamine St., Manly Vale. 2093.	3108	1981	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Cdocordla Street Auto Port., 307 Condamine St., Manly Vale. 2093	52750	1980	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Condamine Street Auto Port., 307 Condamine St., Manly Vale. 2093.	41300	1979	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Condamine Street Auto Port, 307 Condamine St., Manly Vale. 2093	49832	1978	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Condamine Street Auto Port., 307 Condamine St., Manly Vale 2093	29760	1976	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Condamine Street Auto Port., 307 Condamine St., Manly Vale. 2093	58689	1975	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Sunshine Auto Port., 307-317 Condamine St., Manly Vale	12560	1972	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St., Manly Vale	16862	1972	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	2327	1971	Premise Match	406m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Sunshine Auto Port., 307-317 Condamine St., Manly Vale	62244	1971	Premise Match	406m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Sunshine Auto Port., 307-317 Condamine St., Manly Vale	338683	1970	Premise Match	406m	South West	

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
15	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Sunshine Auto Port., 307-317 Condamine St., MANLY VALE	341511	1970	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	50431	1969	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	32465	1968	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	15925	1967	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS.	Condamine Motors Pty. Ltd., 303-317 Condamine St Manly Vale	60318	1966	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	1500	1966	Premise Match	406m	South West
	Motor Garages & Engineers	Condamine Motors Pty. Ltd., 303-317 Condamine St. Manly Vale	122966	1965	Premise Match	406m	South West
	Motor Garages & Engineers	Sunshine Auto Port, 307-317 Condamine St. Manly Vale	122970	1965	Premise Match	406m	South West
	Motor Service Stations - Petrol, Oil, Etc.	Sunshine Auto Port, 307-317 Condamine St. Manly Vale	125881	1965	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS	Sunshine Auto Port., 307-317 Condamine St Manly Vale	48244	1964	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St., Manly Vale	52151	1964	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	32903	1962	Premise Match	406m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sunshine Auto Port., 307-317 Condamine St Manly Vale	38396	1962	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS	Sunshine Auto Port 307-317 Condamine St., MANLY VALE	348235	1961	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS	Sunshine Auto Port 307-317 Condamine St., MANLY VALE	348236	1961	Premise Match	406m	South West
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Sunshine Auto Port, 307-317 Condamine St. MANLY	351139	1961	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS.	Condamine Motors Service Division., 303-309 Condamine St Manly Vale	19498	1959	Premise Match	406m	South West
	MOTOR GARAGES & ENGINEERS.	Condamine Motors., 303-319 Condamine St., Manly Vale	19501	1959	Premise Match	406m	South West
16	MOTOR GARAGES & SERVICE STATIONS.	Ampol Allambie Service Station, 41 Kentwell Rd., North Manly. 2100	18438	1993	Premise Match	408m	West
	Motor Garages & Service Stations	Ampol Allambie, 41 Kentwell Rd., North Manly. 2100	53457	1991	Premise Match	408m	West
	MOTOR GARAGES & SERVICE STATIONS.	Ampol Allambie, 41 Kentwell Rd., North Manly. 2100	5796	1990	Premise Match	408m	West
	MOTOR GARAGE & SERVICE STATIONS.	Ampol Allambie, 41 Kentwell Rd., North Manly. 2100	64284	1989	Premise Match	408m	West
	MOTOR GARAGES & SERVICE STATIONS.	Ampol Anemia, 41 Kentwell Rd., North Manly. 2100	53389	1988	Premise Match	408m	West
	MOTOR GARAGES & SERVICE STATIONS.	Ampol Allambie, 41 Kentwell Rd., North Manly. 2100	63906	1986	Premise Match	408m	West
	MOTOR GARAGES & SERVICE STATIONS.	Ampol North Manly Service Station, 41 Kentwell Rd., North Manly. 2100	38962	1985	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol North Manly Service Station, 41 Kentwell Rd., North Manly. 2100	22343	1984	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol North Manly Service Station., 41 Kentwell Rd., North Manly 2100	8935	1983	Premise Match	408m	West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
16	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Ampol North Manly Service Station, 41 Kentwell Rd., North Manly. 2100.	56019	1982	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol North Manly Service Station., 41 Kentwell Rd., North Manly. 2100	63691	1981	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol North Manly Service Station., 41 Kentwell Rd., North Manly. 2100	50163	1980	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol North Manly Service Station, 41 Kentwell Rd., North Manly. 2095	49284	1978	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol North Manly Service Station., 41 Kentwell Rd., North Manly 2100	23983	1976	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS.	Ampol North Manly Service Station., 41 Kentwell Rd., North Manly. 2100	58355	1975	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS.	Ampol Kentwell Road Service Station., 41 Kentwell Rd North Manly	12737	1972	Premise Match	408m	West
	MOTOR GARAGES &/OR ENGINEERS.	Ampol Kentwell Road Service Station., 41 Kentwell Rd., North Manly	62413	1971	Premise Match	408m	West
17	MOTOR GARAGES & SERVICE STATIONS.	Caltex Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	18791	1993	Premise Match	481m	South
	Motor Garages & Service Stations	Caltex Manly Vale Service Station, 236 Condamine St., Manly Vale 2093	97560	1991	Premise Match	481m	South
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	11329	1990	Premise Match	481m	South
	MOTOR GARAGE & SERVICE STATIONS.	Caltex Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	64769	1989	Premise Match	481m	South
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	53889	1988	Premise Match	481m	South
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	64358	1986	Premise Match	481m	South
	MOTOR GARAGES & SERVICE STATIONS.	Golden Fleece Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	44861	1985	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093	28360	1984	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Manly Vale Service Station., 236 Condamine St., Manly Vale. 2093	14783	1983	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Golden Fleece Manly Vale Service Station, 236 Condamine St., Manly Vale. 2093.	56845	1982	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Manly Vale Service Station., 236 Condamine St., Manly Vale 2093	3405	1981	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Manly Vale Service Station., 236 Condamine St., Manly Vale. 2093	58139	1980	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station., 236 Condamine St., Manly Vale. 2093.	41607	1979	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station, 236 Condamine St., Manly Vale. 2093	50136	1978	Premise Match	481m	South



Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
17	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station., 236 Condamine St., Manly Vale 2093	30114	1976	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS.	Golden Fleece Service Station., 236 Condamine St., Manly Vale. 2093	58940	1975	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS.	Golden Fleece Service Station., 236 Condamine St., Manly Vale	12555	1972	Premise Match	481m	South
	MOTOR GARAGES &/OR ENGINEERS.	Golden Fleece Service Station., 236 Condamine St., Manly Vale	62239	1971	Premise Match	481m	South

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## Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
18	DRY CLEANERS, PRESSERS/ DYERS	Henry's Dry Cleaners., 45 Campbell Pde Manly Vale	37147	1969	Road Match	0m
	DRY CLEANERS, PRESSERS/ DYERS	Henry's Dry Cleaners., 45 Campbell Pde Manly Vale	6163	1967	Road Match	0m
	DRY CLEANERS, PRESSERS/ DYERS	Henry's Dry Cleaners., 45 Campbell Pde., Manly Vale	52690	1966	Road Match	0m
	Dry Cleaners, Pressers/Dyers	Henry's Dry Cleaners, 45 Campbell Pde., Manly Vale	76191	1965	Road Match	0m
	DRY CLEANERS, PRESSERS/ DYERS.	Henry's Dry Cleaners., 45 Campbell Pde Manly Vale	43038	1964	Road Match	0m
	DRY CLEANERS, PRESSERS/DYERS.	Henry's Dry Cleaners., 45 Campbell Pde Manly Vale	24786	1962	Road Match	0m
	DRY CLEANERS, PRESSERS / DYERS	Henry's Dry Cleaners, 45 Campbell Pde., Manly Vale	299135	1961	Road Match	0m
	DRY CLEANERS, PRESSERS / DYERS	Henry's Dry Cleaners 45 Campbell Pde., Manly Vale	299134	1961	Road Match	0m
	DRY CLEANERS, PRESSERS/DYERS	Henry's Dry Cleaners., 45 Campbell Pde Manly Vale	10075	1959	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Henry's Dry Cleaners., 45 Campbell Pde Manly Vale	264	1958	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Henry's Dry Cleaners., 45 Campbell Pde., Manly Vale	54855	1956	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Henrys Dry Cleaners., 45 Campbell Pde Manly Vale	44387	1954	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Henrys Dry Cleaners., 45 Campbell Pde Manly Vale	36202	1953	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Henrys Drycleaners., 45 Campbell Pde Manly Vale	27088	1952	Road Match	0m
DRY CLEANERS, PRESSERS & DYERS	Henrys Dry Cleaners, 45 Campbell Pde., Manly Vale	35285	1950	Road Match	0m	
19	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	A.C. Motor Servicentre., 377 Condamine St Manly Vale	32462	1968	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	A.C. Motor Servicentre., 377 Condamine St Manly Vale	15922	1967	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	A.C. Motor Servicentre., 377 Condamine St Manly Vale	1497	1966	Road Match	0m
	Motor Service Stations - Petrol, Oil, Etc.	A.C. Motor Servicentre, 377 Condamine St. Manly Vale	125877	1965	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Golden Fleece Service Station., Condamine St Manly Vale	52149	1964	Road Match	0m
	MOTOR GARAGE/ENGINEERS.	Sunshine Service Station., Condamine St Manly Vale	5045	1958	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Sunshine Service Station., Condamine St Manly Vale	61541	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Hart Geo., Condamine St., Manly Vale	40100	1953	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Little's Of Manly., Condamine St., Manly Vale	36247	1953	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
19	MOTOR GARAGES &/OR ENGINEERS.	Hart Geo., Condamine St Manly Vale	31729	1952	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Hart, Geo., Condamine St., Manly Vale	83850	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Hart Geo., Condamine St Manly Vale	22428	1948-49	Road Match	0m
20	DRY CLEANERS, PRESSERS & DYERS	Tudor Dry Cleaners., 23 Pittwater Rd Harbord	414	1958	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Tudor Dry Cleaners., 23 Pittwater Rd Harbord	55002	1956	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Tudor Dry Cleaners., 23 Pittwater Rd Harbord	54766	1956	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Tudor Dry Cleaners., 23 Pittwater Rd., Harbord	27320	1952	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Tudor Industries Pty Ltd., 23 Pittwater Rd Harbord	27321	1952	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Tudor Dry Cleaners, 23 Pittwater Rd., Harbord	35800	1950	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Tudor Industries Pty. Ltd., 23 Pittwater Rd., Harbord	35802	1950	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS.	Tudor Industries Pty. Ltd., 23 Pittwater Rd Harbord	17567	1948-49	Road Match	0m
21	MOTOR GARAGES & ENGINEERS	Condamine Motors Pty. Ltd. (Service Division) , Quirk Rd Manly Vale	26073	1968	Road Match	20m
	MOTOR GARAGES & ENGINEERS.	Condamine Motors Pty. Ltd. (Service Division) , Quirk Rd Manly Vale	10571	1967	Road Match	20m
	MOTOR GARAGES & ENGINEERS.	Condamine Motors Pty Ltd., Quirk Rd., Manly Vale	60317	1966	Road Match	20m
22	DRY CLEANERS & PRESSERS.	Allambie Dry Cleaners, Shopping Center, Allambie Rd., Allambie Heights. 2100	52983	1988	Road Match	473m
	DRY CLEANERS & PRESSERS.	Elite Dry Cleaners Shopping Centre, Allambie Rd., Allambie Heights. 2100	34508	1985	Road Match	473m
	DRY CLEANERS & PRESSERS.	Elite Dry Cleaners, Shopping Centre., Allambie Rd., Allambie Heights. 2100	63302	1981	Road Match	473m
	DRY CLEANERS, PRESSERS &/OR DYERS.	Elite Dry Cleaners, Shopping Centre., Allambie Rd., Allambie Heights. 2100	46734	1980	Road Match	473m
	DRY CLEANERS, PRESSERS &/OR DYERS.	Elite Dry Cleaners Shopping Centre., Allambie Rd., Allambie Heights. 2100.	35331	1979	Road Match	473m
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	BP Allambie Heights Service Station., Allambie Rd., ALLAMBIE HEIGHTS	340867	1970	Road Match	473m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Allambie Heights Service Station., Allambie Rd., Allambie Heights	47419	1969	Road Match	473m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Allambie Heights Service Station., Allambie Rd., Allambie Heights	30844	1968	Road Match	473m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Allambie Heights Service Station., Allambie Rd	15323	1967	Road Match	473m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	BP Allambie Heights Service Station., Allambie Rd	60989	1966	Road Match	473m



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# Aerial Imagery 2023

Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

Scale:  
0 70 140 210 280  
Meters

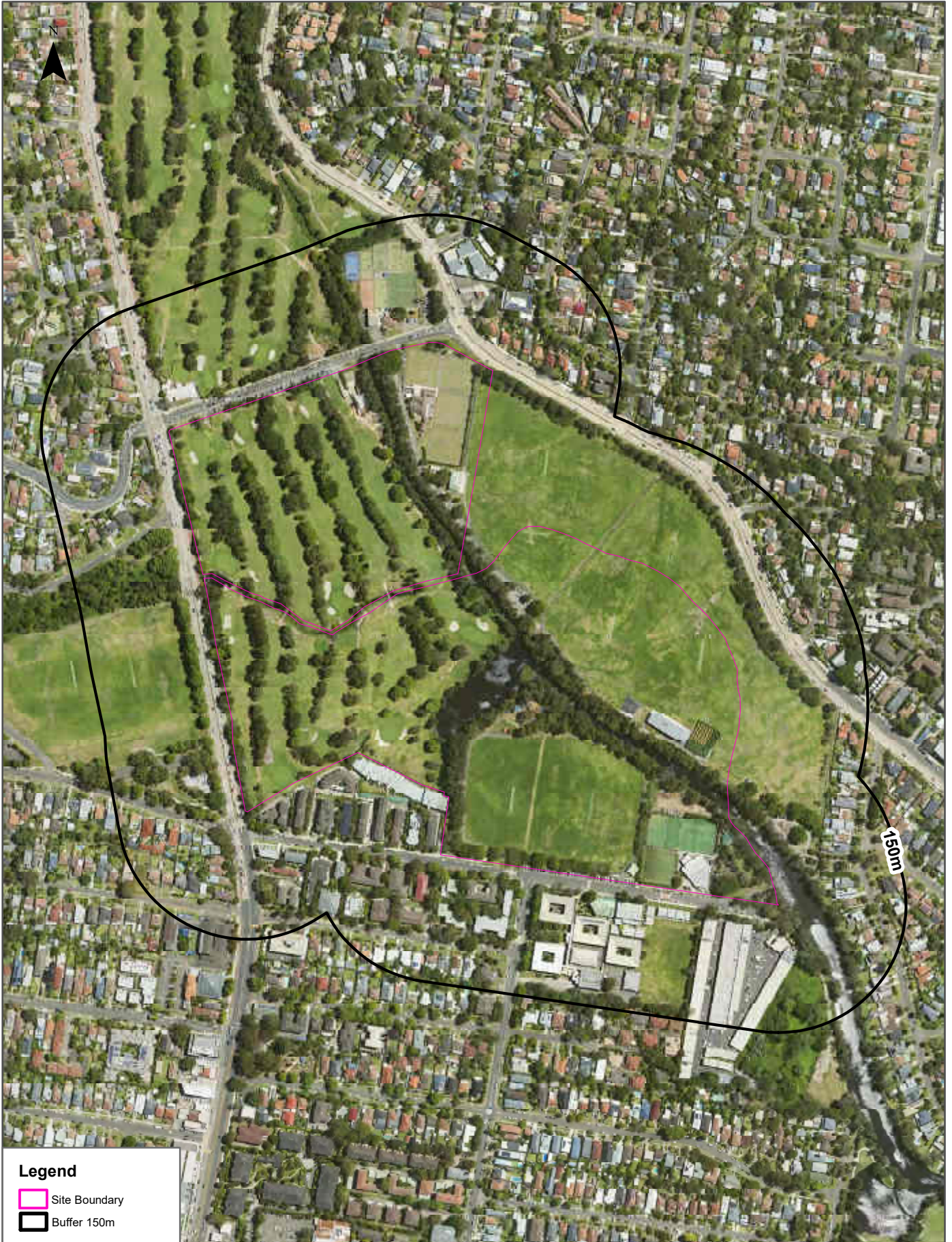
Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56



Date: 18 September 2023

# Aerial Imagery 2020

Campbell Parade, Manly Vale, NSW 2093



### Legend

-  Site Boundary
-  Buffer 150m

Scale:  
0 70 140 210 280  
Meters

Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56


Date: 18 September 2023

# Aerial Imagery 2016

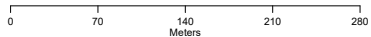
Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

Scale:



Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56



Date: 18 September 2023

# Aerial Imagery 2011

Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

Scale:  
0 70 140 210 280  
Meters

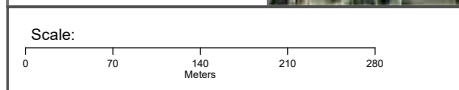
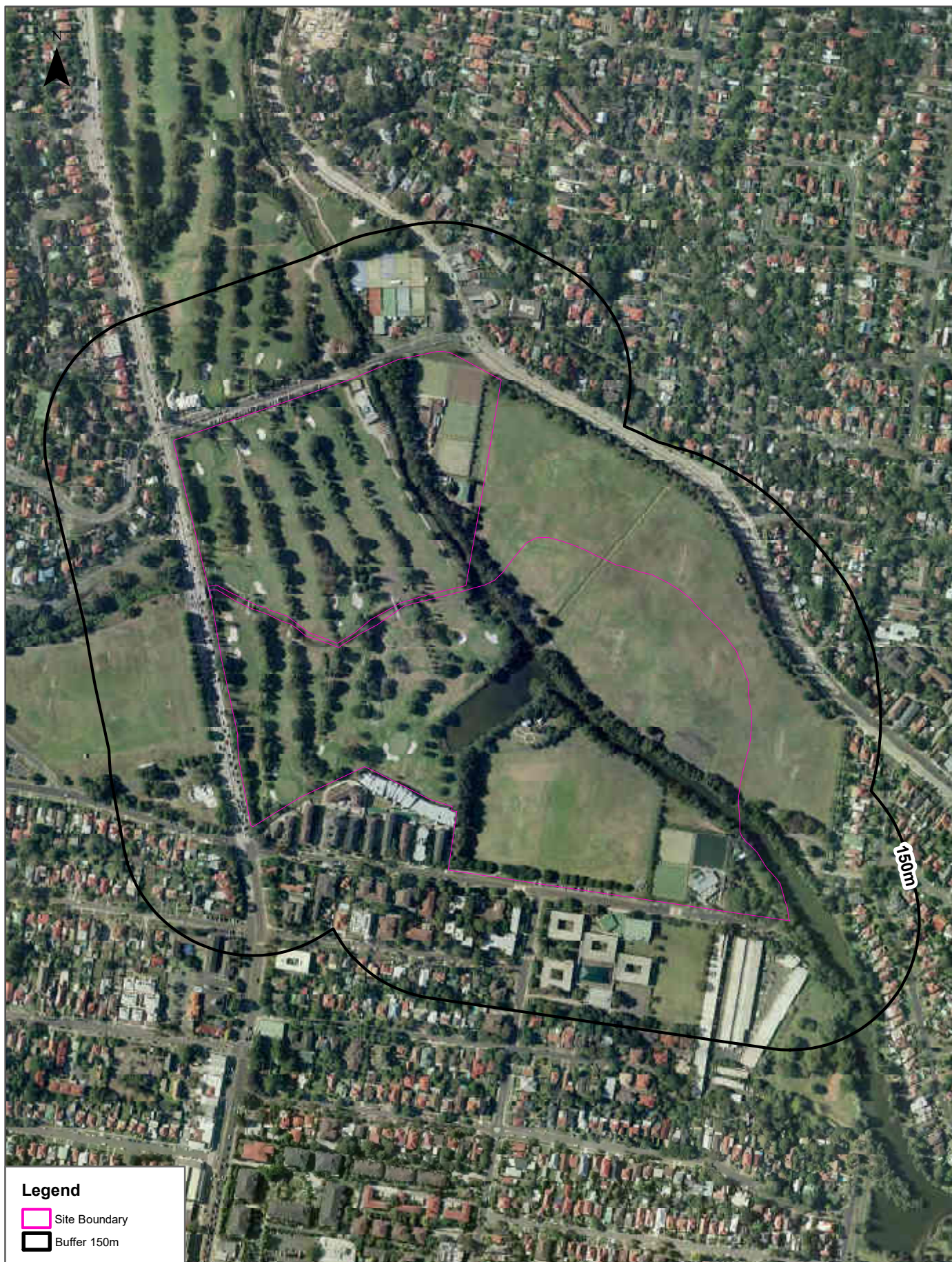
Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

# Aerial Imagery 2007

Campbell Parade, Manly Vale, NSW 2093



Data Source Aerial Imagery:  
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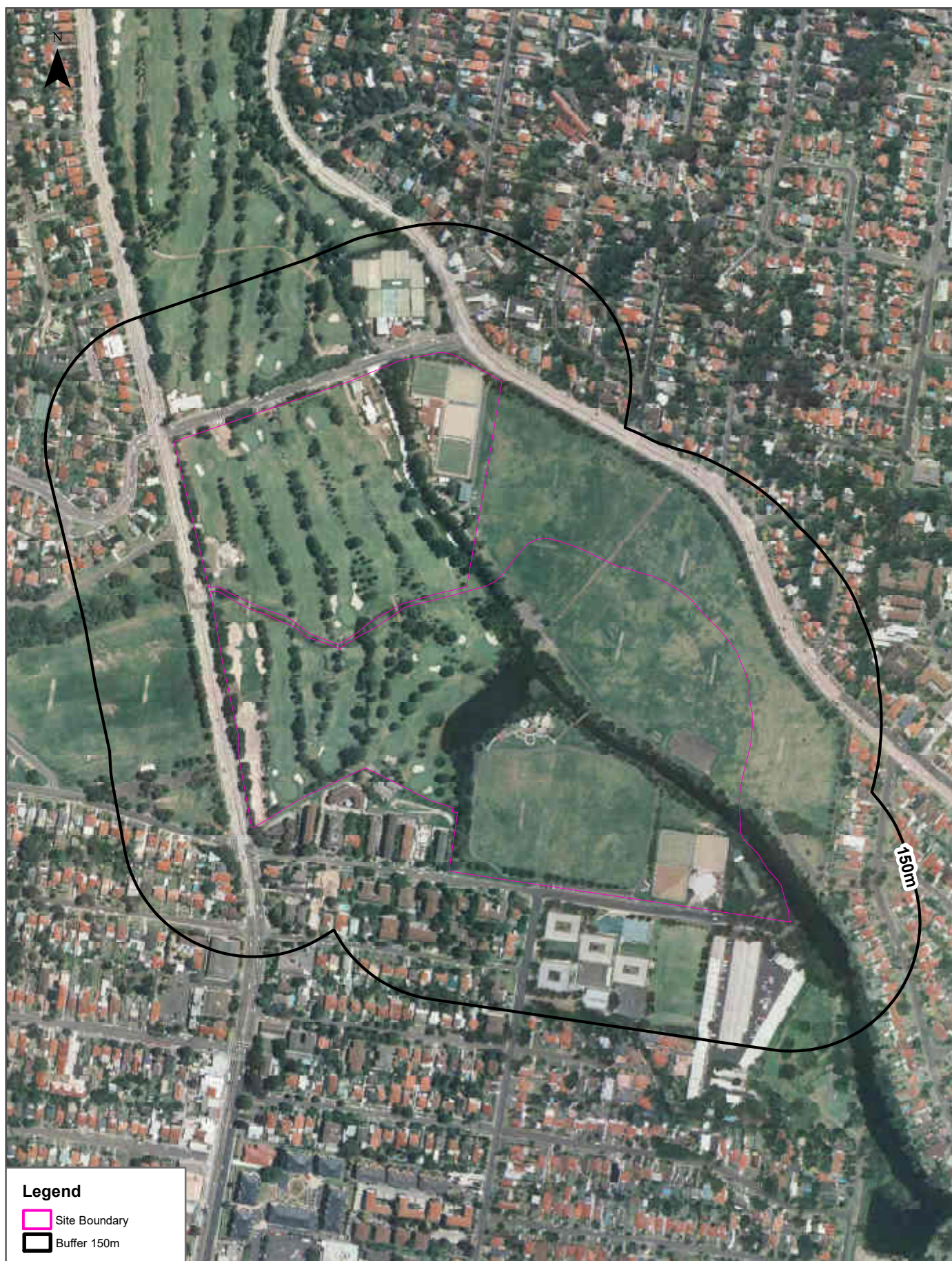
Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023





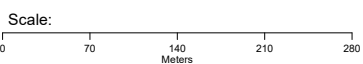
# Aerial Imagery 2000

Campbell Parade, Manly Vale, NSW 2093



### Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56



Date: 18 September 2023

# Aerial Imagery 1994

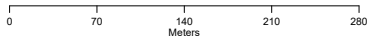
Campbell Parade, Manly Vale, NSW 2093



### Legend

-  Site Boundary
-  Buffer 150m

Scale:



Data Sources: Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56



Date: 18 September 2023

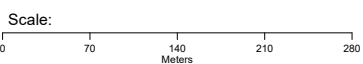
# Aerial Imagery 1991

Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m



Data Sources: Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

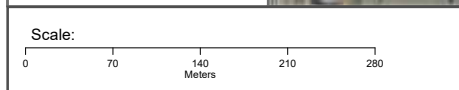
# Aerial Imagery 1986

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1982

Campbell Parade, Manly Vale, NSW 2093



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Coordinate System:  
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Date: 18 September 2023

# Aerial Imagery 1978

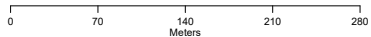
Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

Scale:



Data Sources: Aerial Imagery:  
© NSW Department of Customer Service

Coordinate System:  
GDA 1994 MGA Zone 56



Date: 18 September 2023

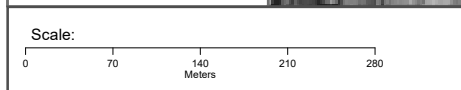
# Aerial Imagery 1970

Campbell Parade, Manly Vale, NSW 2093



**Legend**

-  Site Boundary
-  Buffer 150m



Data Sources: Aerial Imagery:  
© NSW Department of Customer Service

Coordinate System:  
GDA 1994 MGA Zone 56

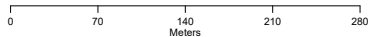
Date: 18 September 2023

# Aerial Imagery 1965

Campbell Parade, Manly Vale, NSW 2093



Scale:



Data Sources: Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023





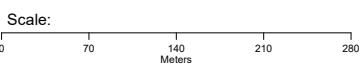
# Aerial Imagery 1961

Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m



Data Sources: Aerial Imagery:  
© NSW Department of Customer Service

Coordinate System:  
GDA 1994 MGA Zone 56


Date: 18 September 2023

# Aerial Imagery 1955, 1956

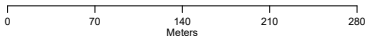
Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

Scale:



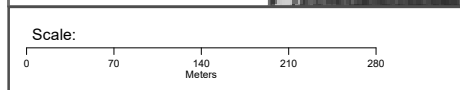
Data Sources: Aerial Imagery:  
© NSW Department of Customer Service

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

# Aerial Imagery 1951

Campbell Parade, Manly Vale, NSW 2093



Data Sources: Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

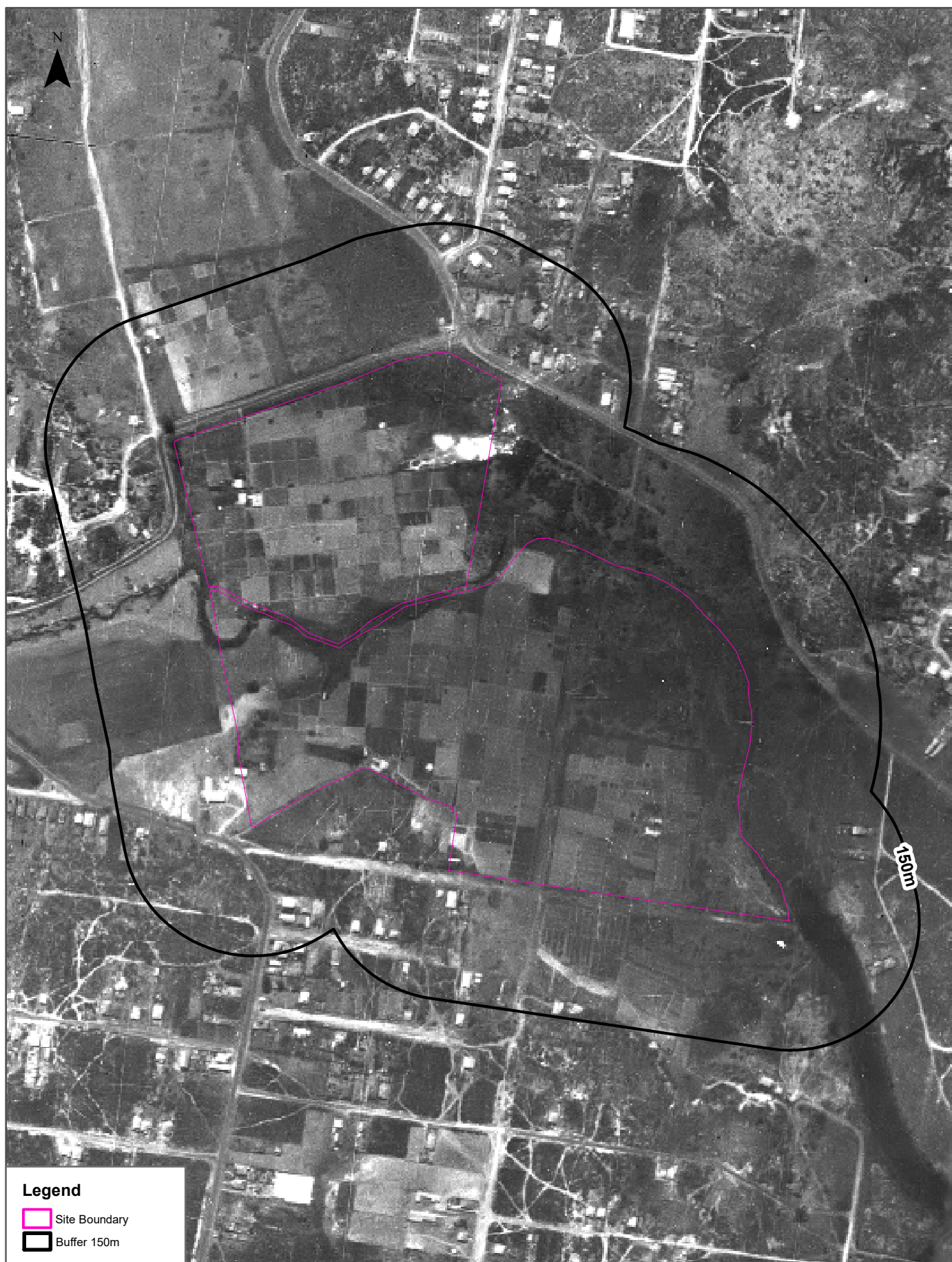
# Aerial Imagery 1943

Campbell Parade, Manly Vale, NSW 2093





# Aerial Imagery 1930

Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

Scale:  
0 70 140 210 280  
Meters

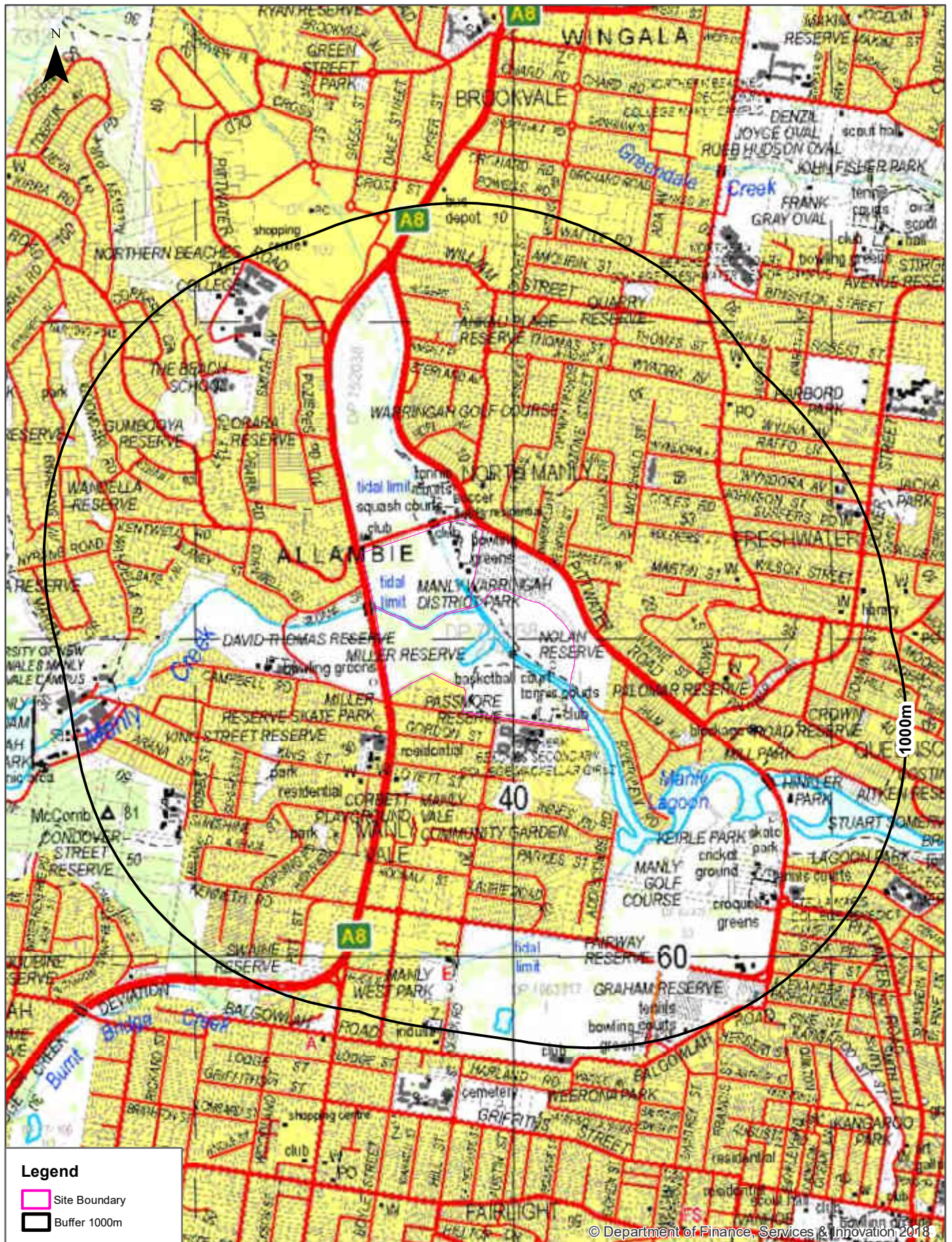
Data Sources: Aerial Imagery:  
© Geoscience Australia

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

# Topographic Map 2015

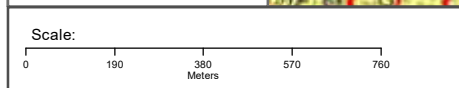
Campbell Parade, Manly Vale, NSW 2093



**Legend**

- Site Boundary
- Buffer 1000m

© Department of Finance, Services & Innovation 2018



Data Sources: Topographic Map Data  
© NSW Land and Property Information

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

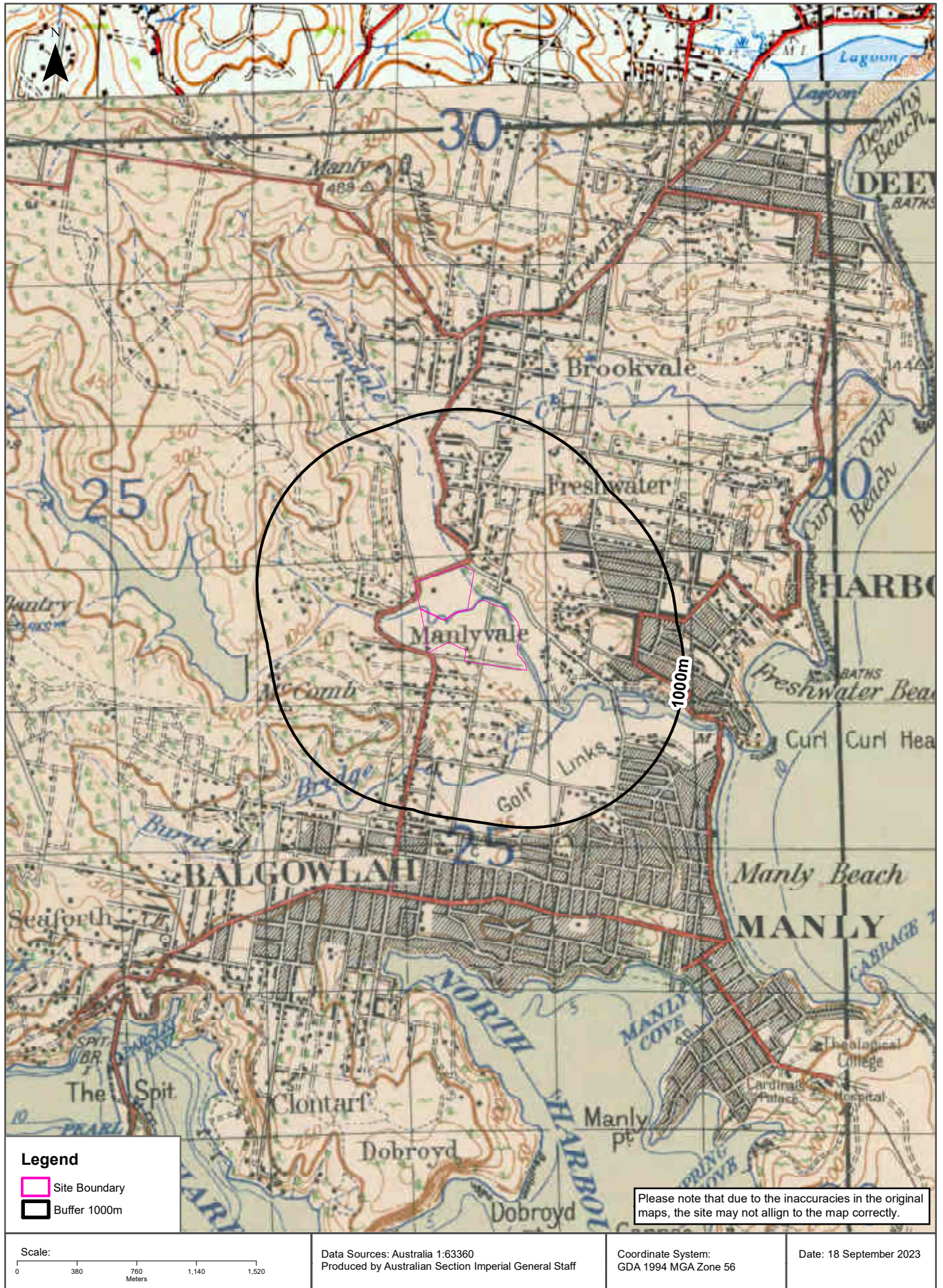
# Historical Map 1975

Campbell Parade, Manly Vale, NSW 2093



# Historical Map 1936 - 1942

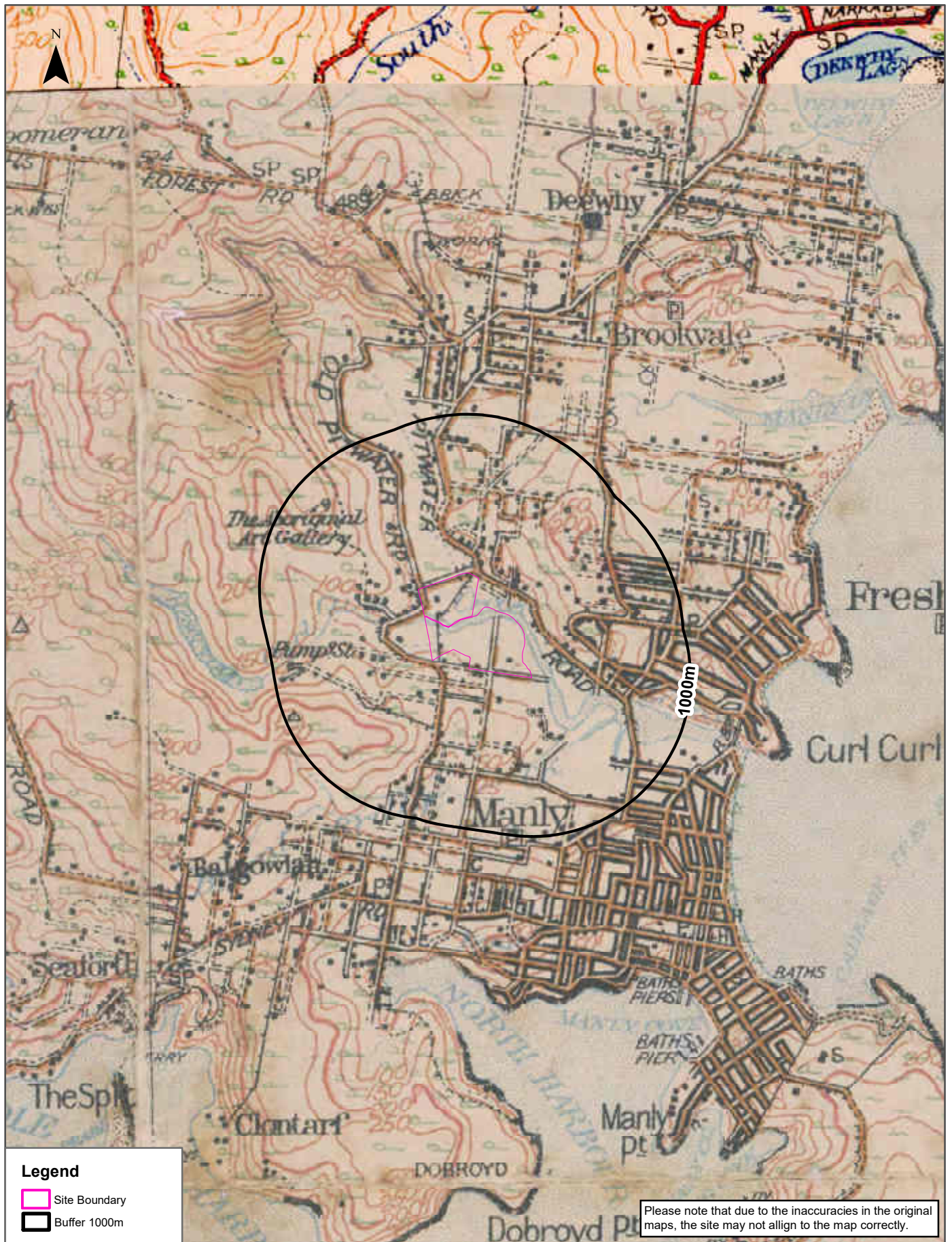
Campbell Parade, Manly Vale, NSW 2093





# Historical Map 1917 - 1920

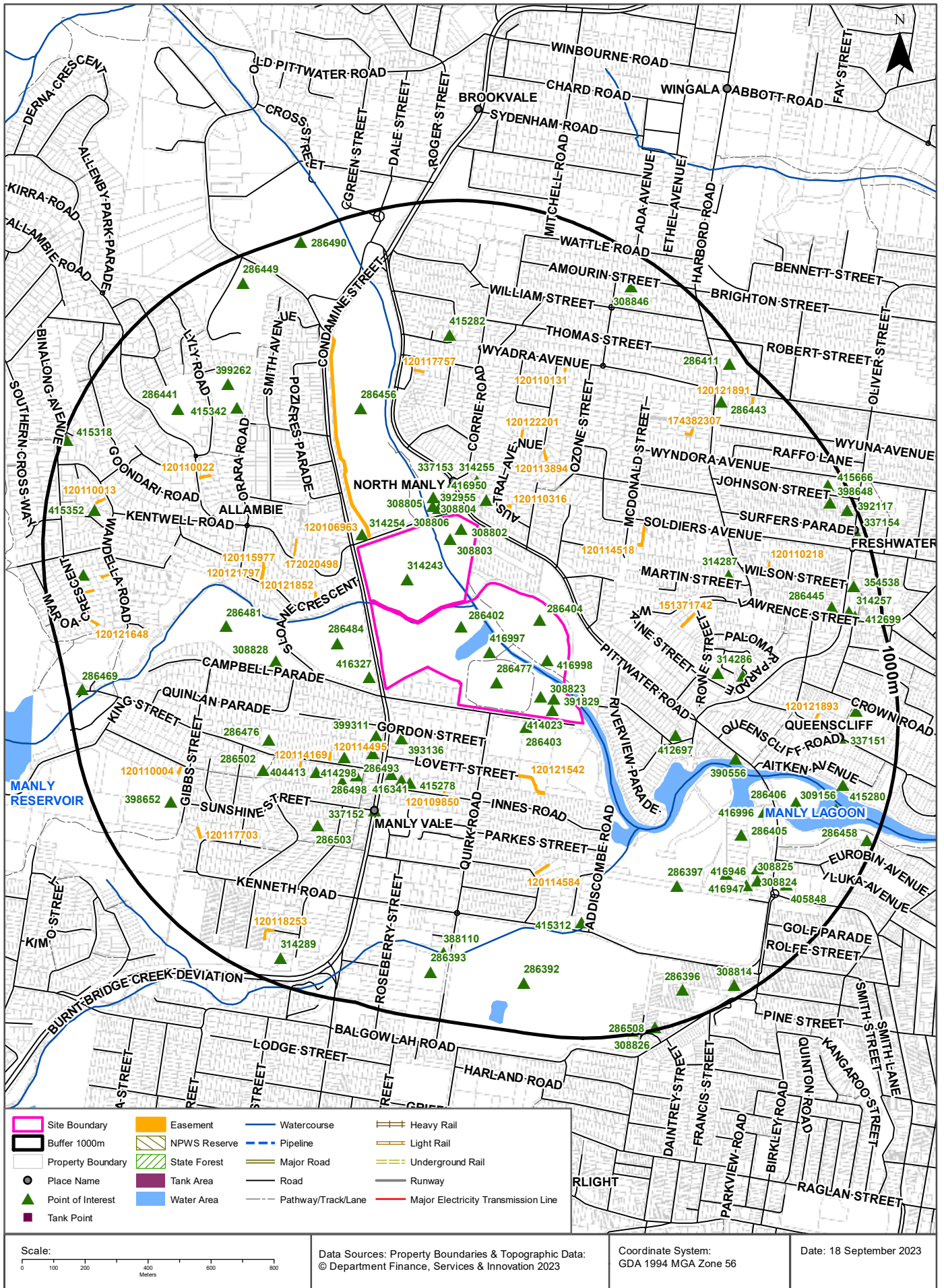
Campbell Parade, Manly Vale, NSW 2093



<b>Scale:</b> 0 380 760 1,140 1,520 Meters	Data Sources: Australia 1:63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 18 September 2023
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# Topographic Features

Campbell Parade, Manly Vale, NSW 2093



# Topographic Features

Campbell Parade, Manly Vale, NSW 2093

## Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
416997	Park	PASSMORE RESERVE PLAYGROUND	0m	On-site
286404	Park	NOLAN RESERVE	0m	On-site
308802	Sports Field	BOWLING GREENS	0m	On-site
416998	Sports Court	BASKETBALL COURT	0m	On-site
308823	Sports Field	BOWLING GREENS	0m	On-site
314243	Park	MANLY WARRINGAH DISTRICT PARK	0m	On-site
308803	Club	NORTH MANLY BOWLING AND RECREATION CLUB	0m	On-site
286477	Park	PASSMORE RESERVE	0m	On-site
286402	Golf Course	WARRINGAH GOLF COURSE	0m	On-site
414023	Club	MANLY VALE CALABRIA BOWLING SPORTS AND SOCIAL CLUB	0m	On-site
391829	Sports Court	TENNIS COURTS	0m	On-site
308806	Community Facility	WARRINGAH RECREATION CENTRE	32m	North
314254	Club	WARRINGAH GOLF CLUB	36m	North West
286403	High School	NORTHERN BEACHES SECONDARY COLLEGE MACKELLAR GIRLS CAMPUS	37m	South East
308805	Sports Centre	SQUASH COURTS	45m	North
416327	Sports Court	MILLER RESERVE SKATE PARK	46m	South West
416950	Sports Field	SOCCER FIELDS	66m	North
308804	Sports Court	TENNIS COURTS	70m	North
392955	Nursing Home	MANLY HILLSIDE CARE COMMUNITY	84m	North
337153	Suburb	NORTH MANLY	107m	North
314255	Place Of Worship	BAPTIST CHURCH	123m	North
286484	Park	MILLER RESERVE	127m	West
399311	Primary School	ST KIERAN'S CATHOLIC PRIMARY SCHOOL	153m	South West
393136	Nursing Home	MANLY VALE NURSING HOME	162m	South West
286493	Place Of Worship	CATHOLIC CHURCH	209m	South West
414298	Retirement Village	SANTA MONICA VILLAGE	256m	South West
416341	Community Facility	MANLY VALE COMMUNITY CENTRE	271m	South West
286498	Place Of Worship	ANGLICAN CHURCH	291m	South West
415278	Park	MANLY VALE COMMUNITY GARDEN	291m	South
397733	Park	CORBETT PLAYGROUND	293m	South
412697	Community Medical Centre	QUEENSCLIFF COMMUNITY HEALTH CENTRE	295m	South East

Map Id	Feature Type	Label	Distance	Direction
391868	Nursing Home	ESTIA HEALTH MANLY VALE	326m	South West
308828	Sports Field	BOWLING GREENS	331m	West
404413	Retirement Village	KINGS COURT CHRISTIAN VILLAGE	345m	South West
337152	Suburb	MANLY VALE	389m	South West
286476	Park	KING STREET RESERVE	406m	South West
286456	Golf Course	WARRINGAH GOLF COURSE	416m	North West
314286	Place Of Worship	JEHOVAHS WITNESSES CHURCH	455m	East
286481	Park	DAVID THOMAS RESERVE	463m	West
286502	Park	Park	467m	South West
337163	Urban Place	ALLAMBIE	468m	North West
286503	Park	Park	485m	South West
390556	Park	MILL PARK	496m	South East
415343	Park	PALOMAR RESERVE	529m	East
314287	Place Of Worship	SEVENTH DAY ADVENTIST CHURCH	546m	East
415282	Park	ANKALI PLACE RESERVE	574m	North
415342	Park	ORARA RESERVE	588m	North West
286397	Golf Course	MANLY GOLF COURSE	595m	South East
286405	Park	KEIRLE PARK	614m	South East
415312	Park	FAIRWAY RESERVE	631m	South
416996	Sports Court	SKATE PARK	640m	South East
416947	Sports Field	CRICKET GROUND	660m	South East
399262	Special School	THE BEACH SCHOOL	664m	North West
308824	Sports Court	TENNIS COURTS	720m	South East
286406	Park	HINKLER PARK	720m	South East
286441	Park	GUMBOOYA RESERVE	723m	North West
416946	Sports Field	CROQUET GREENS	729m	South East
308825	Sports Field	BOWLING GREENS	745m	South East
398652	Primary School	MANLY VALE PUBLIC SCHOOL	773m	South West
388110	SES Facility	MANLY SES	786m	South
337151	Suburb	QUEENSCLIFF	817m	East
405848	High School	STELLA MARIS COLLEGE BENEDICT CAMPUS	824m	South East
286445	Place Of Worship	ANGLICAN CHURCH	843m	East
286392	Golf Course	MANLY GOLF COURSE	843m	South
415352	Park	WANDELLA RESERVE	845m	West
415280	Park	AITKEN RESERVE	847m	South East
309156	Natural Waterbody	MANLY LAGOON	848m	South East
286393	Park	MANLY WEST PARK	851m	South

Map Id	Feature Type	Label	Distance	Direction
286443	Post Office	HARBORD WEST POST OFFICE	854m	North East
416324	Park	CROWN ROAD RESERVE	868m	East
415338	Park	MAROA RESERVE	876m	West
314257	Library	HARBORD COMMUNITY LIBRARY	896m	East
308846	Park	QUARRY RESERVE	902m	North East
286396	Park	GRAHAM RESERVE	904m	South East
412699	Community Medical Centre	FRESHWATER COMMUNITY HEALTH CENTRE	914m	East
286449	TAFE College	NORTHERN BEACHES TAFE COLLEGE	916m	North West
314289	Park	SWAINE RESERVE	920m	South West
354538	Community Facility	WAVES YOUTH CLUB	922m	East
398648	Primary School	ST JOHN THE BAPTIST CATHOLIC PRIMARY SCHOOL	931m	East
415666	Primary School	ST JOHN THE BAPTIST CATHOLIC PRIMARY SCHOOL	949m	East
286411	Place Of Worship	MORMON CHURCH	951m	North East
286469	University	UNIVERSITY OF NEW SOUTH WALES MANLY VALE CAMPUS	952m	West
308814	Swimming Pool Facility	MANLY ANDREW BOY CHARLTON POOL	961m	South East
337154	Suburb	FRESHWATER	971m	East
392117	Place Of Worship	CATHOLIC CHURCH	973m	East
286458	Park	LAGOON PARK	975m	South East
286490	Shopping Centre	WARRINGAH MALL	978m	North West
415318	Park	GILAI RESERVE	986m	North West
308826	Sports Field	BOWLING GREEN	988m	South
286508	Sports Court	TENNIS COURTS	993m	South East

Topographic Data Source: © Land and Property Information (2015)

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# Topographic Features

Campbell Parade, Manly Vale, NSW 2093

## Tanks (Areas)

What are the Tank Areas located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

## Tanks (Points)

What are the Tank Points located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)

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## Major Easements

What Major Easements exist within the dataset buffer?

Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120106963	Primary	Undefined		21m	North West
120110316	Primary	Undefined		107m	North
120121852	Primary	Undefined		161m	West
120121542	Primary	Undefined		192m	South East
172020498	Primary	Right of way	1.76	196m	North West
120109850	Primary	Undefined		260m	South
120114495	Primary	Undefined		268m	South West
120121887	Primary	Undefined		269m	South
120121797	Primary	Undefined		298m	West
120113894	Primary	Undefined		300m	North East
120115977	Primary	Undefined		302m	West
120122201	Primary	Undefined		307m	North
120114518	Primary	Undefined		342m	North East
120114169	Primary	Undefined		356m	South West

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
151371742	Primary	Right of way	4m and Variable	360m	East
120114584	Primary	Undefined		459m	South
120117757	Primary	Undefined		462m	North
120110022	Primary	Undefined		520m	North West
120110131	Primary	Undefined		563m	North
120110218	Primary	Undefined		671m	East
120110004	Primary	Undefined		697m	South West
174382307	Primary	Right of way	Variable	700m	North East
120121893	Primary	Undefined		734m	East
120117703	Primary	Undefined		742m	South West
120110028	Primary	Undefined		781m	West
120110013	Primary	Undefined		817m	West
120118253	Primary	Undefined		846m	South West
120118413	Primary	Undefined		849m	West
120121648	Primary	Undefined		856m	West
120121891	Primary	Undefined		907m	North East

Easements Data Source: © Land and Property Information (2015)

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# Topographic Features

Campbell Parade, Manly Vale, NSW 2093

## State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)  
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## National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

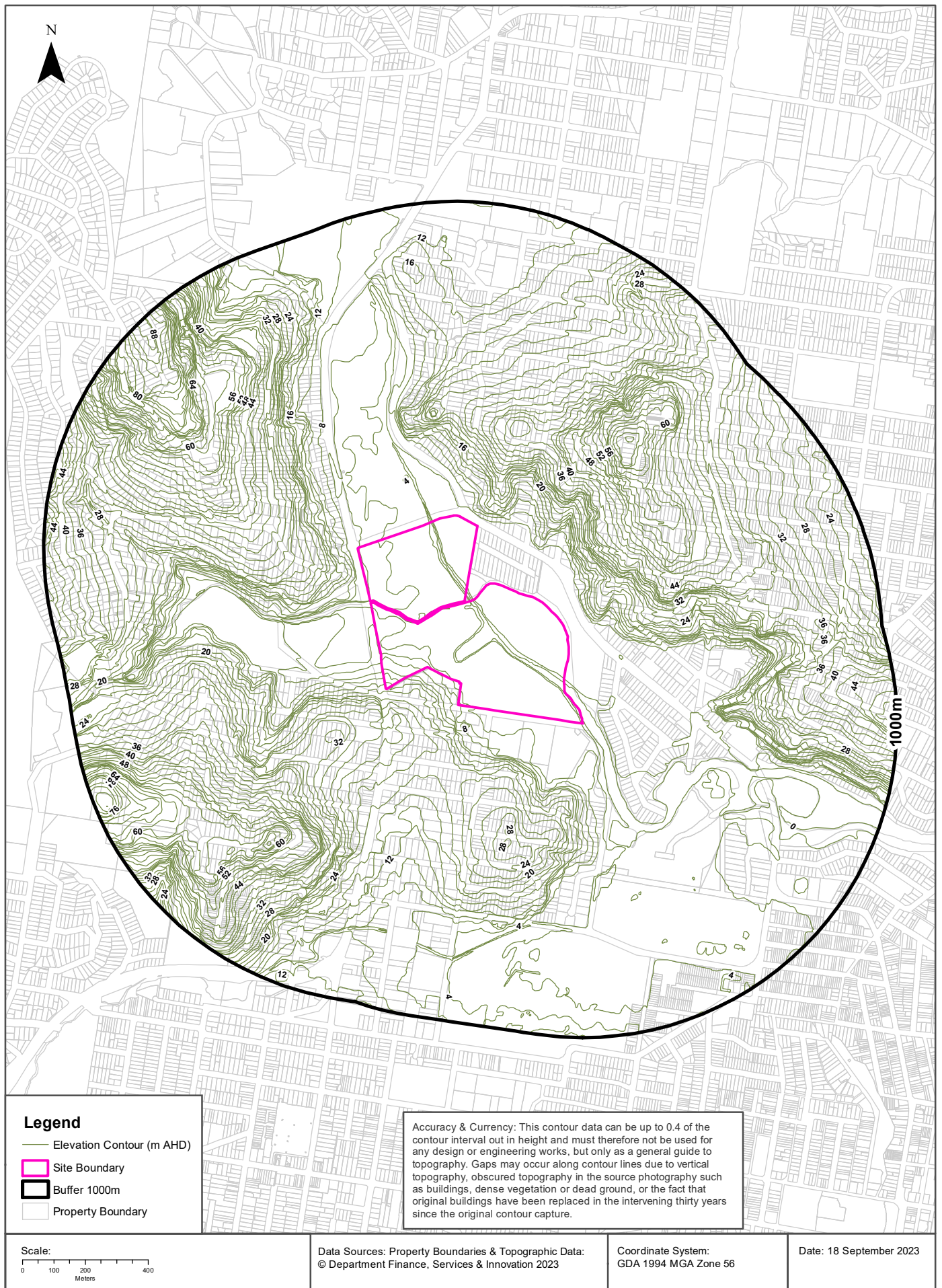
Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)  
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# Elevation Contours (m AHD)

Campbell Parade, Manly Vale, NSW 2093



# Hydrogeology & Groundwater

Campbell Parade, Manly Vale, NSW 2093

## Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)  
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## Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

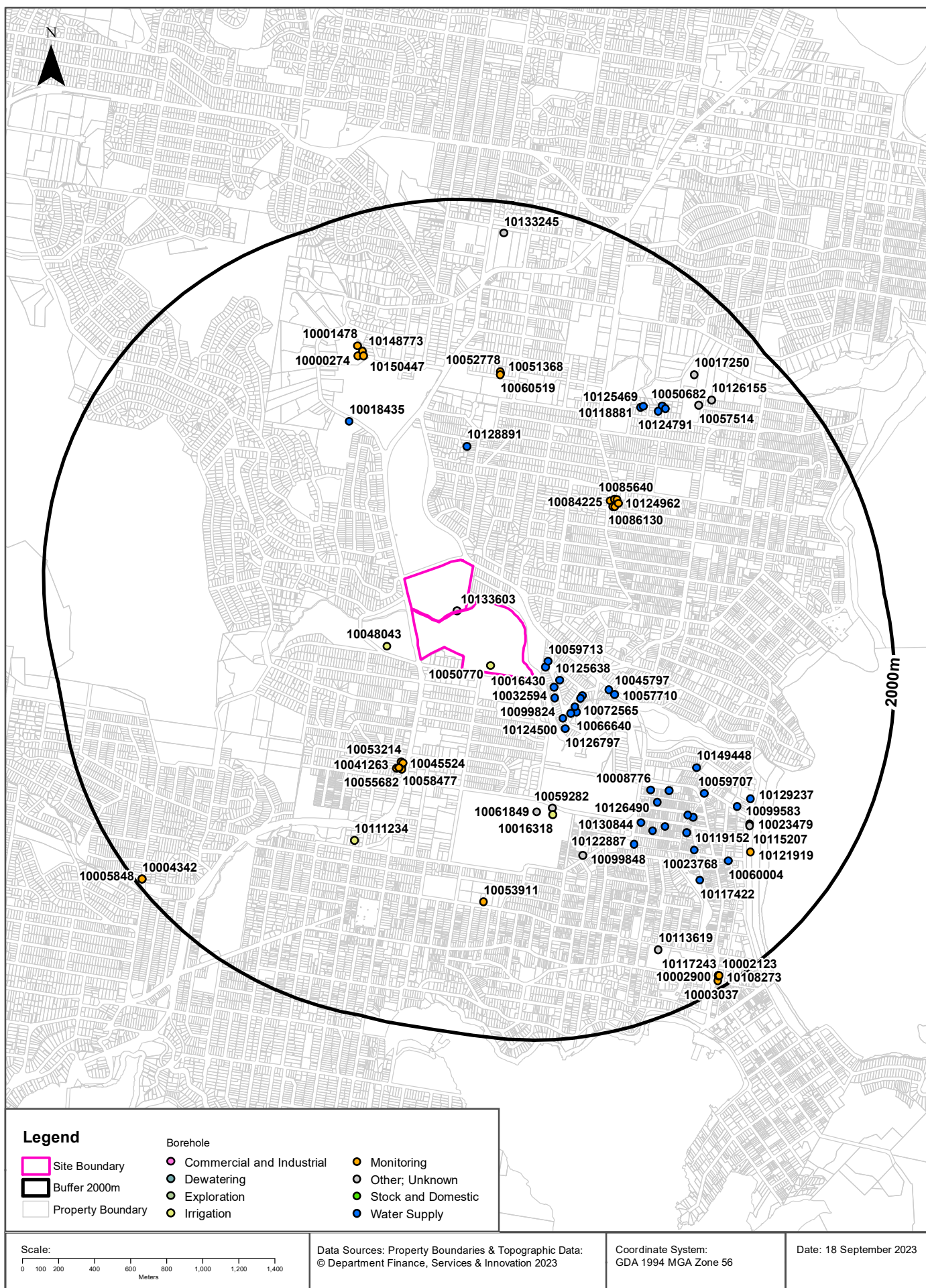
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

# Groundwater Boreholes

Campbell Parade, Manly Vale, NSW 2093



# Hydrogeology & Groundwater

Campbell Parade, Manly Vale, NSW 2093

## Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10050770	GW020813	Irrigation	Functioning	01/01/1957	2.70		AHD				0m	On-site
10133603	GW102334	Other	Functioning	01/10/1997	60.00		AHD	240	1.800	4.00	0m	On-site
10016430	GW108815	Water Supply	Functioning	11/05/2007	4.00		AHD	Good	0.500	2.00	82m	South East
10059713	GW106288	Water Supply	Functioning	02/08/2005	2.00		AHD				108m	South East
10032594	GW105760	Water Supply	Functioning	05/01/2004	3.66		AHD		1.000	1.52	122m	South East
10125638	GW107619	Water Supply	Functioning	21/11/2005	6.10		AHD		1.000	2.50	146m	South East
10099824	GW107190	Water Supply	Functioning	07/07/2005	6.00		AHD		0.500	2.00	157m	South East
10048043	GW107816	Irrigation	Unknown	05/09/2005	78.50		AHD	505	2.500	7.00	170m	West
10124500	GW109007	Water Supply	Unknown	09/07/2008	8.00		AHD				272m	South East
10072565	GW108968	Water Supply	Unknown	26/06/2008	8.00		AHD				277m	South East
10096697	GW111902	Water Supply	Functioning	04/09/2007	5.50		AHD	285	1.000	2.10	280m	South East
10121488	GW108909	Water Supply	Unknown	12/06/2008	5.50		AHD	280	0.800	21.00	281m	South East
10118693	GW109644	Water Supply	Unknown	03/10/2008	5.20		AHD	249	0.900	2.40	287m	South East
10066640	GW108714	Water Supply	Functioning	30/04/2007	5.20		AHD	280	1.000	2.10	300m	South East
10126797	GW108546	Water Supply	Functioning	29/01/2007	4.00		AHD	Good	0.500	2.00	326m	South East
10045797	GW110726	Water Supply	Unknown	06/03/2007	4.00		AHD	Good	0.500	2.00	422m	South East
10057710	GW106808	Water Supply	Functioning	08/12/2004	3.00		AHD	Good	0.500	1.00	457m	South East
10053214	GW112115	Monitoring	Functional	25/11/2002	6.00		AHD				577m	South West
10057406	GW112112	Monitoring	Functional	25/11/2002	6.20		AHD				584m	South West
10045524	GW112113	Monitoring	Functional	25/03/2013	6.20		AHD				603m	South West
10058477	GW103768	Monitoring	Unknown	07/04/1995	3.60		AHD				613m	South West
10058552	GW103769	Monitoring	Unknown	07/04/1995	3.50		AHD				613m	South West
10059606	GW103767	Monitoring	Unknown	03/09/1991	2.10		AHD				613m	South West
10059936	GW103765	Monitoring	Unknown	03/09/1991	5.00		AHD				613m	South West
10060492	GW103766	Monitoring	Unknown	03/09/1991	2.40		AHD				613m	South West
10055682	GW112114	Monitoring	Functional	26/11/2002	6.20		AHD				617m	South West
10041263	GW112111	Monitoring	Functional	27/11/2002	6.20		AHD				618m	South West
10128891	GW107745	Water Supply	Functioning	13/10/2005	15.00		AHD	270	0.800	9.00	631m	North
10059282	GW107823	Other	Unknown	20/01/1977	15.20		AHD		4.500	1.80	722m	South East

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10061849	GW107822	Other	Unknown	01/01/1980			AHD				735m	South
10016318	GW037353	Irrigation	Unknown	01/11/1973	13.70		AHD				759m	South East
10086130	GW113277	Monitoring	Functional	02/04/2013	6.00		AHD				806m	North East
10118867	GW113218	Monitoring	Functional	13/11/2013	5.00		AHD				813m	North East
10084225	GW113276	Monitoring	Functional	01/04/2003	6.00		AHD				818m	North East
10125691	GW113219	Monitoring	Functional	03/04/2003	3.00		AHD				838m	North East
10085640	GW113275	Monitoring	Functional	01/04/2003	7.00		AHD				843m	North East
10124962	GW113220	Monitoring	Functional	13/11/2013	4.50		AHD				851m	North East
10008776	GW025701	Water Supply	Unknown	01/12/1965	2.70		AHD				895m	South East
10018435	GW108944	Water Supply	Unknown	19/06/2008	120.00		AHD	352	0.500	13.00	922m	North West
10126490	GW108289	Water Supply	Functioning	20/10/2006	4.00		AHD		0.500	2.00	967m	South East
10060867	GW023992	Water Supply	Unknown	01/05/1966	4.20		AHD	Good			972m	South East
10130844	GW108530	Water Supply	Functioning	23/01/2007	4.00		AHD	Good	0.500	2.00	995m	South East
10099848	GW106691	Other	Unknown	23/11/2004	30.50		AHD	440	7.800	4.20	1014m	South East
10149448	GW017206	Water Supply	Functioning	01/01/1958	3.30		AHD	Good			1029m	South East
10060519	GW114517	Monitoring	Functional	17/04/2013	3.50		AHD				1050m	North
10051368	GW114516	Monitoring	Functional	17/04/2013	4.00		AHD				1056m	North
10052778	GW114515	Monitoring	Functional	17/04/2013	4.00		AHD				1066m	North
10111234	GW016945	Irrigation	Unknown	01/12/1957	3.90		AHD	Good			1068m	South West
10062625	GW108845	Water Supply	Unknown	30/04/2007	12.00		AHD				1070m	South East
10122887	GW110443	Water Supply	Unknown	12/03/2009	8.00		AHD				1071m	South East
10093607	GW110630	Water Supply	Unknown	04/01/2010	6.25		AHD	225	0.900	2.70	1095m	South East
10059707	GW106151	Water Supply	Functioning	18/06/2004	7.00		AHD		0.500	5.00	1140m	South East
10119998	GW108424	Water Supply	Unknown	04/02/2007	8.00		AHD				1141m	South East
10071949	GW111499	Water Supply	Functioning	31/01/2011	2.50		AHD				1169m	South East
10119152	GW111691	Water Supply	Functioning	04/10/2010	9.00		AHD				1202m	South East
10150447	GW115096	Monitoring	Functional	09/10/2015	8.50		AHD				1240m	North
10000274	GW115099	Monitoring	Functional	09/10/2015	10.00		AHD				1251m	North
10053911	GW108323	Monitoring	Unknown	13/12/2005	162.50		AHD	248	0.400	8.00	1261m	South
10148773	GW115097	Monitoring	Functional	09/10/2015	8.50		AHD				1267m	North
10118881	GW107867	Water Supply	Functioning	06/03/2006	4.00		AHD		1.000	2.10	1280m	North East
10125469	GW107782	Water Supply	Functioning	19/01/2006	3.00		AHD	509	0.500	1.20	1294m	North East
10001478	GW115098	Monitoring	Functional	09/10/2015	10.00		AHD				1303m	North
10023768	GW108941	Water Supply	Unknown	19/06/2008	10.00		AHD				1303m	South East
10099583	GW108231	Water Supply	Functioning	18/10/2006	7.70		AHD		1.000	4.50	1333m	South East

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10124791	GW107362	Water Supply	Functioning	10/08/2005	5.00		AHD	Good	0.500	3.00	1339m	North East
10050682	GW107814	Water Supply	Removed	05/12/2005	4.00		AHD				1373m	North East
10129237	GW106839	Water Supply	Functioning	05/02/2004	7.93		AHD	Good	1.000	5.49	1374m	South East
10127595	GW108029	Water Supply	Functioning	19/04/2006	6.00		AHD		0.500	2.00	1378m	North East
10023479	GW109320	Other	Unknown	10/09/2008	7.50		AHD	300	0.500	5.50	1444m	South East
10115207	GW106339	Other	Unknown	02/04/2004	7.50		AHD	300	0.500	5.50	1447m	South East
10117422	GW108919	Water Supply	Unknown	17/06/2008	6.10		AHD	250	0.900	4.00	1447m	South East
10060004	GW108848	Water Supply	Unknown	18/05/2007	12.00		AHD				1477m	South East
10057514	GW072222	Other	Functioning	30/11/1994	10.00		AHD	7001-10000 ppm	1.000	1.00	1537m	North East
10121919	GW109652	Monitoring	Unknown	27/07/2008	6.00		AHD	130		2.70	1537m	South East
10126155	GW111038	Other	Unknown	11/08/2010	90.00		AHD	350	1.000	2.00	1612m	North East
10017250	GW107655	Other	Unknown	14/01/2005	78.00		AHD	220	3.000	3.00	1621m	North East
10113619	GW106341	Other	Unknown	14/04/2004	42.50		AHD	374	3.100	18.30	1652m	South East
10133245	GW108144	Other	Unknown	20/01/2005	150.00		AHD	200	1.000	15.00	1826m	North
10002123	GW116139	Monitoring	Functional	14/08/2017	12.60		AHD				1937m	South East
10002900	GW116139	Monitoring	Functional	14/08/2017	12.60		AHD				1937m	South East
10108273	GW116140	Monitoring	Functional	14/08/2017	13.00		AHD				1939m	South East
10117243	GW116138	Monitoring	Functional	15/08/2017	13.20		AHD				1939m	South East
10003037	GW116659	Monitoring	Functioning	15/08/2017	13.20		AHD				1960m	South East
10004342	GW116827	Monitoring	Functioning	26/05/2017	39.00		AHD				1967m	South West
10005848	GW116827	Monitoring	Functioning	26/05/2017	39.00		AHD				1967m	South West

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

# Hydrogeology & Groundwater

Campbell Parade, Manly Vale, NSW 2093

## Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

NGIS Bore ID	Drillers Log	Distance	Direction
10133603	0.00m-0.50m Topsoil 0.50m-3.00m SAND YELLOW 3.00m-7.00m MARINE DARK GREY/CLAY-VERY GREASY 7.00m-11.00m MARINE WITH 15%SHELL FRAG.QUARTZ. 11.00m-17.00m MARINE NO QUARTZ 17.00m-23.00m MARINE/5%SHELL FRAGMENT 23.00m-26.00m MARINE/10%SHELL FRAGMENT 26.00m-28.00m MARINE/15%SHELL FRAGMENT 28.00m-30.00m SANDSTONE/BROWN/ GRAIN 30.00m-31.00m SANDSTONE/BROWN/R. QUARTZ 31.00m-35.00m SANDSTONE/GREY/F/G/BIT CLAY MATRIX 35.00m-40.00m CLAY STONE GREY 40.00m-60.00m SANDSTONE/WHITE BIT OF QUARTZ	0m	On-site
10016430	0.00m-0.30m topsoil' 0.30m-2.20m sand, brown 2.20m-4.00m sand, grey	82m	South East
10032594	0.00m-3.66m sand, fine unconsolidated	122m	South East
10125638	0.00m-6.10m sand	146m	South East
10099824	0.00m-6.00m sand	157m	South East
10048043	0.00m-1.40m SANDY CLAY L/BROWN 1.40m-4.70m RED CLAY 4.70m-13.80m GREY SANDSTONE 13.80m-14.30m SANDSTONE FRACTURED,GREY 14.30m-22.30m SANDSTONE L/GREY 22.30m-23.00m SANDSTONE GREY,CLAY GREY 23.00m-26.40m GREY SANDSTONE 26.40m-27.20m BROWN SANDSTONE,QUARTZ 27.20m-27.50m SANDSTONE GREY 27.50m-28.00m BROWN SANDSTONE,QUARTZ 28.00m-29.50m L/GREY SANDSTONE 29.50m-29.60m GREY CLAY 29.60m-30.30m BROWN SANDSTONE,QUARTZ 30.30m-34.00m DARK GREY SANDSTONE 34.00m-34.70m DARK BROWN G/SANDSTONE 34.70m-48.10m DARK GREY SANDSTONE 48.10m-48.90m DARK GREY SHALE 48.90m-78.50m SANDSTONE GREY/L/GREY	170m	West
10096697	0.00m-0.20m TOPSOIL 0.20m-2.10m SAND GREY 2.10m-5.50m SAND GREY / SHELLS	280m	South East
10118693	0.00m-0.10m TOPSOIL 0.10m-0.25m RUBBLE 0.25m-0.50m WHITE SAND 0.50m-1.00m SAND 1.00m-2.50m SAND/TOPSOIL 2.50m-4.00m DARK SAND 4.00m-5.20m SAND/ SHELLS	287m	South East
10066640	0.00m-2.00m topsoil 2.00m-2.10m sand, grey 2.10m-5.20m sand, grey and shells	300m	South East
10126797	0.00m-0.30m Topsoil 0.30m-1.50m Sand, yellow 1.50m-4.00m Sand, grey	326m	South East
10045797	0.00m-2.00m SAND YELLOW 2.00m-4.00m SAND LIGHT BROWN	422m	South East
10057710	0.00m-0.30m topsoil 0.30m-1.50m silty sand, brown 1.50m-3.00m sand, grey	457m	South East
10058477	0.00m-0.10m CONCRETE/FILL BROWN 0.10m-1.00m SAND MUSTARD BROWN 1.00m-3.60m SAND WEATHERED PINKISH/GREY/GREY	613m	South West

NGIS Bore ID	Drillers Log	Distance	Direction
10058552	0.00m-0.10m CONCRETE 0.10m-0.50m FILL,BROWN 0.50m-2.40m SAND ORANGE,BROWN,GREY,CLAYEY 2.40m-3.50m SANDSTONE,WHITE,FINE	613m	South West
10059606	0.00m-1.20m SAND TANK PIT BACKFILL 1.20m-2.10m CLAY/GREY/YELLOW/PLASTIC	613m	South West
10059936	0.00m-1.00m CLAY,MEDIUM BROWN 1.00m-2.00m CLAY REDDISH BROWN 2.00m-2.30m CLAY GREY 2.30m-3.00m CLAY WEATHERED 3.00m-4.00m CLAY GREY FINE 4.00m-5.00m CLAY MOIST SEMIPLASTIC	613m	South West
10060492	0.00m-1.20m SAND CLEAN NO ODOUR 1.20m-2.40m SAND STAINED, STRONG HYDROCARBON ODOUR	613m	South West
10128891	0.00m-15.00m sand	631m	North
10059282	0.00m-0.90m BLACK SANDY SOIL 0.90m-4.60m GREY SAND (W.B) 4.60m-5.50m GREY CLAY 5.50m-9.50m GREY AND BROWN SAND( W.B ) 9.50m-12.80m GREY SAND WITH FINE PEATY SANDS 12.80m-15.20m GREY SAND WITH BANDS OF CLAY	722m	South East
10016318	0.00m-0.91m Soil Black Sandy 0.91m-4.72m Sand Grey Water Supply 4.72m-5.49m Clay Grey 5.49m-9.45m Sand Grey Water Supply 9.45m-12.80m Sand Grey Some Peaty Fine Water Supply 12.80m-13.72m Sand Grey 12.80m-13.72m Clay Bands	759m	South East
10008776	0.00m-1.82m Sand Grey 0.00m-1.82m Clay Grey 1.82m-2.74m Sand White Grey Water Supply	895m	South East
10126490	0.00m-0.30m topsoil 0.30m-3.20m sand, grey 3.20m-4.00m sand, brown	967m	South East
10060867	0.00m-0.91m Sand 0.91m-2.13m Clay White 2.13m-4.26m Sand Grey Black Water Supply	972m	South East
10130844	0.00m-0.30m Topsoil 0.30m-2.50m Sand, yellow 2.50m-4.00m Sand, brown	995m	South East
10099848	0.00m-4.60m SAND L/GREY 4.60m-6.80m DARK SANDSTONE AND QUARTZ 6.80m-12.20m L/GREY SANDSTONE 12.20m-12.80m DARK SANDSTONE AND QUARTZ 12.80m-18.20m L/GREY SANDSTONE 18.20m-19.50m GREY SANDSTONE AND QUARTZ (W) 19.50m-20.30m GREY SANDSTONE 20.30m-22.00m BROWN SANDSTONE,COARSE 22.00m-27.30m L/GREY SANDSTONE 27.30m-28.00m L/GREY SANDSTONE AND QUARTZ 28.00m-29.00m GREY SANDSTONE 29.00m-29.80m GREY SANDSTONE COARSE GRAINED 29.80m-30.50m L/GREY SANDSTONE	1014m	South East
10149448	0.00m-3.35m Sand Water Supply	1029m	South East
10060519	0.00m-0.18m CONCRETE 0.18m-0.70m SILTY SAND,FINE TO MED.GRAINED,LIGHT BROWN 0.70m-1.00m SILTY SAND,ORANGE BROWN 1.00m-2.20m SILTY SAND LIGHT GREY,RED BROWN 2.20m-3.00m SANDY CLAY MED.PLASTICITY GREY MOT. 3.00m-4.00m SAND FINE TIO MED.GRAINED,LIGHT GREY	1050m	North
10051368	0.00m-0.21m CONCRETE 0.21m-0.70m FILL SILTY SAND FINE TO MED. GRAINED 0.70m-1.00m SILTY SAND ORANGE BROWN MOIST 1.00m-1.50m SAND.FINE TO MED.GRAINED,MOIST TO WET 1.50m-2.00m SILTY SAND FINE TO MED.GRAINED 2.00m-4.30m SAND LIGHT GREY MOIST TO WET 4.30m-4.50m SANDY CLAY MED.PLASTICITY,DARK GREY	1056m	North
10052778	0.00m-0.23m CONCRETE 0.23m-0.50m FILL.SILTY SAND,FINE TO MED.GRAINED 0.50m-1.50m SAND FINE TO MED.GRAINED,YELLOW BROWN AND GREY 1.50m-4.50m SAND FINE TO MED.GRAINED,LIGHT GREY,SILT	1066m	North
10111234	0.00m-2.74m Loam Water Supply 2.74m-3.96m Sand Water Supply	1068m	South West
10062625	0.00m-12.00m sand	1070m	South East



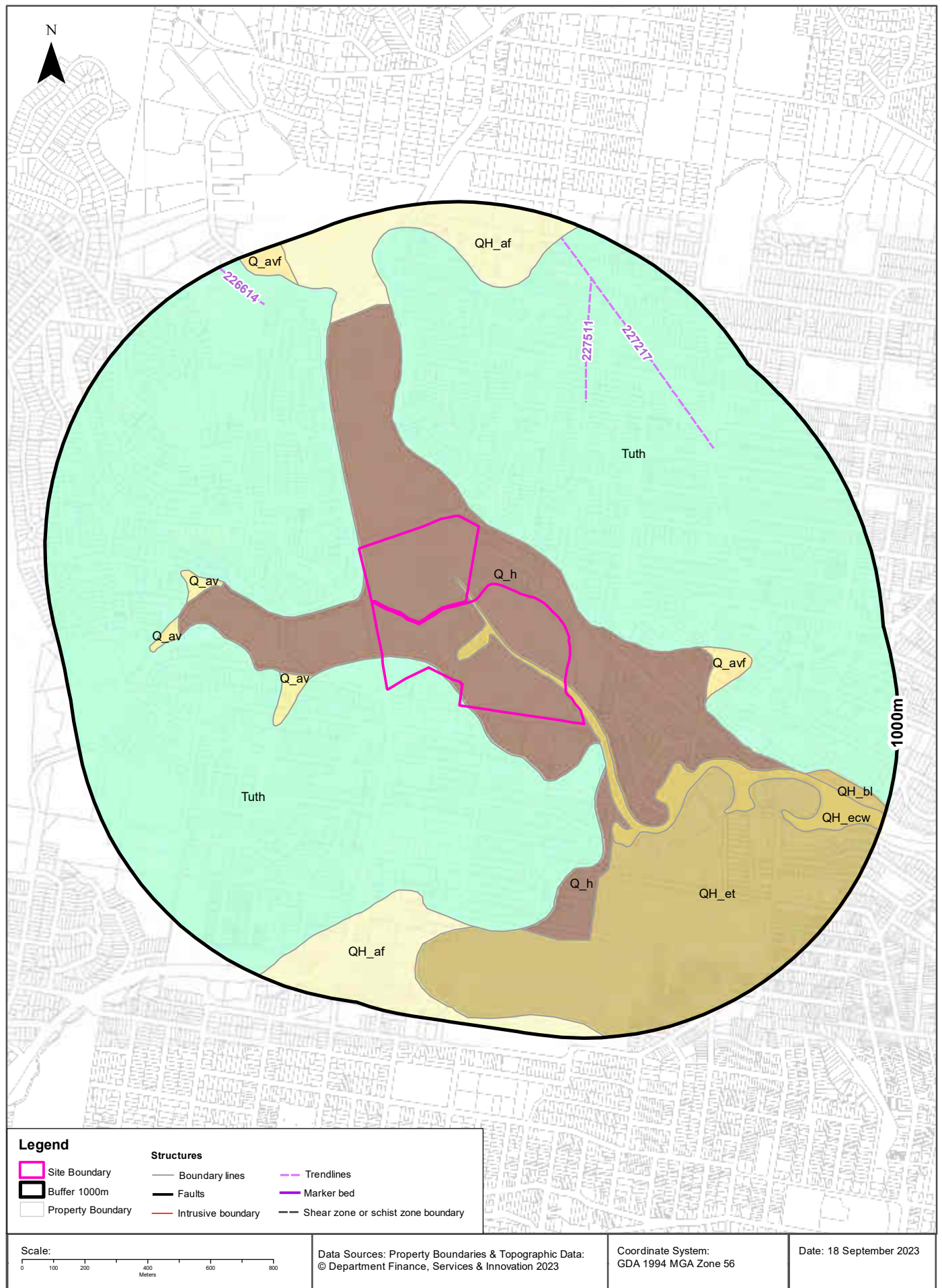
NGIS Bore ID	Drillers Log	Distance	Direction
10122887	0.00m-5.00m SAND 5.00m-8.00m CLAY	1071m	South East
10093607	0.00m-0.40m TOPSOIL 0.40m-0.60m SAND DARK 0.60m-1.00m WHITE SAND 1.00m-2.50m SAND MIXED 2.50m-2.70m DARK SOIL 2.70m-6.25m SAND MIXED	1095m	South East
10059707	0.00m-0.30m topsoil 0.30m-5.00m sand, yellow 5.00m-7.00m sand, yellow with small shells	1140m	South East
10119998	0.00m-8.00m Sand	1141m	South East
10119152	0.00m-9.00m SAND	1202m	South East
10150447	0.00m-0.20m CONCRETE 0.20m-0.70m CLAY FIRM GREY BROWN,BRICK AND SHALE 0.70m-1.20m CLAY SOFT BROWN AND BLACK 1.20m-1.30m CLAY FIRM BROWN GREY ORANGE 1.30m-2.50m CLAY SOFT GREY,ORANGE MOTTLED 2.50m-2.60m SHALE FRACTURED WEATHERED 2.60m-2.80m CLAY FIRM GREY 2.80m-3.60m SHALE HIGHLY FRACTURED RED TO ORANGE 3.60m-3.80m SHALE FRACTURED BROWN 3.80m-8.50m SHALE BROWN	1240m	North
10000274	0.00m-0.20m CONCRETE 0.20m-0.50m SAND 0.50m-0.60m CLAYEY SAND 0.60m-1.20m NO RECOVERY 1.20m-1.90m CLAYEY SAND COARSE 1.90m-2.60m CLAY FIRM , GREY 2.60m-3.00m SHALE RED, WEATHERED 3.00m-3.30m CLAY FIRM GREY 3.30m-3.80m SHALE WEATHERED GREY 3.80m-10.00m SHALE BROWN	1251m	North
10053911	0.00m-0.50m SAND 0.50m-2.50m CLAY 2.50m-11.00m SANDSTONE L/BROWN 11.00m-16.00m SANDSTONE GREY 16.00m-17.00m SANDSTONE BROWN 17.00m-18.00m SANDSTONE D/G 18.00m-27.00m SANDSTONE QUARTZ BANDS 27.00m-27.50m QUARTZ COURSE 27.50m-45.00m SANDSTONE GREY 45.00m-45.10m SANDSTONE FRACTURED 45.10m-68.00m SANDSTONE G.D/G 68.00m-76.00m SILTSTONE, D/G 76.00m-142.00m SANDSTONE GREY 142.00m-151.00m SANDSTONE D/G 151.00m-155.00m SANDSTONE GREY 155.00m-162.50m SANDSTONE D/G	1261m	South
10148773	0.00m-0.20m CONCRETE 0.20m-0.80m CLAY FIRM,BROWN,MOTTLED RED AND BLACK 0.80m-1.40m CLAY GREY MOTTLED WITH ORANGE FRAG. 1.40m-2.00m SHALE RED WETHERED 2.00m-2.70m SHALE BROWN, HIGHLY FRACTURED 2.70m-3.10m CLAY STIFF, GREY MOTTLED WITH RED 3.10m-8.50m SHALE BROWN	1267m	North
10118881	0.00m-4.00m sand 4.00m-5.00m clay	1280m	North East
10125469	0.00m-3.00m sand 3.00m-4.00m clay	1294m	North East
10001478	0.00m-0.20m CONCRETE 0.20m-0.30m CLAY SOFT DARK BROWN 0.30m-0.40m CONCRETE 0.40m-0.50m SANDY CLAY 0.50m-1.00m CLAY FIRM ,GREY AND BROWN 1.00m-1.50m CLAY ORANGE 1.50m-2.30m SHALE WEATHERED 2.30m-2.40m CLAY STIFF GREY 2.40m-3.30m SHALE RED AND GREY 3.30m-3.60m SHALE HIGHLY WEATERED 3.60m-3.80m SHALE FRACTURED BROWN 3.80m-10.00m SHALE BROWN	1303m	North
10099583	0.00m-1.00m topsoil 1.00m-7.70m sand, yellow	1333m	South East
10124791	0.00m-0.30m topsoil 0.30m-3.50m sand, white 3.50m-5.00m sand, yellow silty	1339m	North East

NGIS Bore ID	Drillers Log	Distance	Direction
10050682	0.00m-0.50m topsoil 0.50m-2.00m sand, white 2.00m-3.50m sand, yellow silty 3.50m-4.00m clay, grey	1373m	North East
10129237	0.00m-7.93m Sand, unconsolidated	1374m	South East
10127595	0.00m-0.30m topsoil 0.30m-2.50m sand, grey 2.50m-4.20m sand, grey silty 4.20m-6.00m sand, grey	1378m	North East
10023479	0.00m-1.00m BROWN SANDY LOAM 1.00m-5.50m SAND 5.50m-7.50m SAND	1444m	South East
10115207	0.00m-1.00m BROWN SANDY LOAM 1.00m-5.50m SAND 5.50m-7.50m SAND	1447m	South East
10060004	0.00m-12.00m sand	1477m	South East
10057514	0.00m-1.00m SAND 1.00m-19.00m SANDY CLAY 19.00m-27.50m SANDSTONE L/BROWN 27.50m-27.70m SANDSTONE SOFT 27.70m-46.50m SANDSTONE GREY 46.50m-48.00m SANDSTONE DARK GREY 48.00m-64.30m SANDSTONE GREY 64.30m-64.70m SANDSTONE FINE QUARTZ 64.70m-83.00m SANDSTONE GREY 83.00m-83.50m SANDSTONE FINE QUARTZ 83.50m-96.30m SANDSTONE GREY 96.30m-96.40m SANDSTONE FRACTURED 96.40m-120.00m SANDSTONE DARK GREY	1537m	North East
10121919	0.00m-4.00m SAND YELLOW 4.00m-6.00m SAND HARD	1537m	South East
10126155	0.00m-5.00m FILL / RUBBISH 5.00m-30.00m SAND , GRAVEL 30.00m-80.00m SANDSTONE 80.00m-81.00m SHALE 81.00m-90.00m SANDSTONE	1612m	North East
10017250	0.00m-26.00m SAND 26.00m-33.00m SAND/CLAY 33.00m-43.00m SAND/CLAY/QUARTZ 43.00m-71.00m SANDSTONE 71.00m-78.00m SHALE	1621m	North East
10113619	0.00m-2.50m FILL AND ROCKS 2.50m-25.00m SANDSTONE L/BROWN,SOFT BANDS 25.00m-26.50m SANDSTONE FINE QUARTZ 26.50m-28.50m SANDSTONE QUARTZ 28.50m-29.00m SANDSTONE GREY 29.00m-29.50m QUARTZ 29.50m-36.00m SANDSTONE GREY 36.00m-36.20m SANDSTONE QUARTZ 36.20m-36.60m SANDSTONE GREY 36.60m-36.70m SANDSTONE FRACTURED 36.70m-40.00m SANDSTONE GREY 40.00m-42.50m SANDSTONE DARK GREY	1652m	South East
10133245	0.00m-4.00m SAND 4.00m-15.00m RED CLAY BANDS 15.00m-21.00m SANDSTONE YELLOW 21.00m-25.00m SHALE 25.00m-68.00m SANDSTONE/SHALE 68.00m-75.00m SHALE 75.00m-86.00m SANDSTONE/SHALE 86.00m-91.00m SHALE 91.00m-131.00m SANDSTONE/SHALE 131.00m-143.00m SHALE 143.00m-146.00m SANDSTONE/SHALE 146.00m-150.00m SHALE	1826m	North

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

# Geology

Campbell Parade, Manly Vale, NSW 2093



# Geology

Campbell Parade, Manly Vale, NSW 2093

## Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Q_h	Anthropogenic deposits	Anthropocene deposits varying from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, with interstitial sand-sized to clay matrix.	/Anthropogenic deposits///	Quaternary (base) to Now (top)	Anthropogenic material	0m
QH_ecw	Estuarine channel deposits (subaqueous)	Fine- to medium-grained lithic-carbonate-quartz sand (marine-deposited), silt, clay, shell, gravel.	/Estuarine deposits//Estuarine channel deposits//Estuarine channel deposits (subaqueous)/	Holocene (base) to Now (top)	Clastic sediment	0m
Tuth	Hawkesbury Sandstone	Medium- to coarse-grained quartz sandstone with minor shale and laminite lenses.	/Ungrouped Triassic units//Hawkesbury Sandstone//	Anisian (base) to Anisian (top)	Sandstone	0m
Q_av	Alluvial valley deposits	Silt, clay, (fluvially deposited) lithic to quartz-lithic sand, gravel.	/Alluvium//Alluvial valley deposits//	Quaternary (base) to Now (top)	Clastic sediment	222m
QH_et	Estuarine tidal-delta flat	Fine- to medium-grained lithic-carbonate-quartz sand (marine-deposited), silt, clay, shell material, polymictic gravel.	/Estuarine deposits//Estuarine tidal-delta flat//	Holocene (base) to Now (top)	Clastic sediment	372m
Q_avf	Alluvial fan deposits	Fluvially-deposited quartz-lithic sand, silt, gravel, clay.	/Alluvium//Alluvial valley deposits//Alluvial fan deposits/	Quaternary (base) to Now (top)	Clastic sediment	388m
QH_af	Alluvial floodplain deposits	Silt, very fine- to medium-grained lithic to quartz-rich sand, clay.	/Alluvium//Alluvial floodplain deposits//	Holocene (base) to Now (top)	Clastic sediment	609m
QH_bl	Coastal deposits - lagoon facies	Organic-rich mud, silt, clay, very fine- to fine-grained quartz-lithic-carbonate sand (marine-deposited), shell and shell grit.	/Coastal deposits//Coastal deposits - lagoon facies//	Holocene (base) to Now (top)	Organic rich sediment	724m

## Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
227511	Dyke or vein	Sydney 1:100,000 Geological Sheet	523m
227217	Dyke or vein	Sydney 1:100,000 Geological Sheet	729m
226614	Dyke or vein	Sydney 1:100,000 Geological Sheet	832m

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW  
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# Naturally Occurring Asbestos Potential

Campbell Parade, Manly Vale, NSW 2093

## Naturally Occurring Asbestos Potential

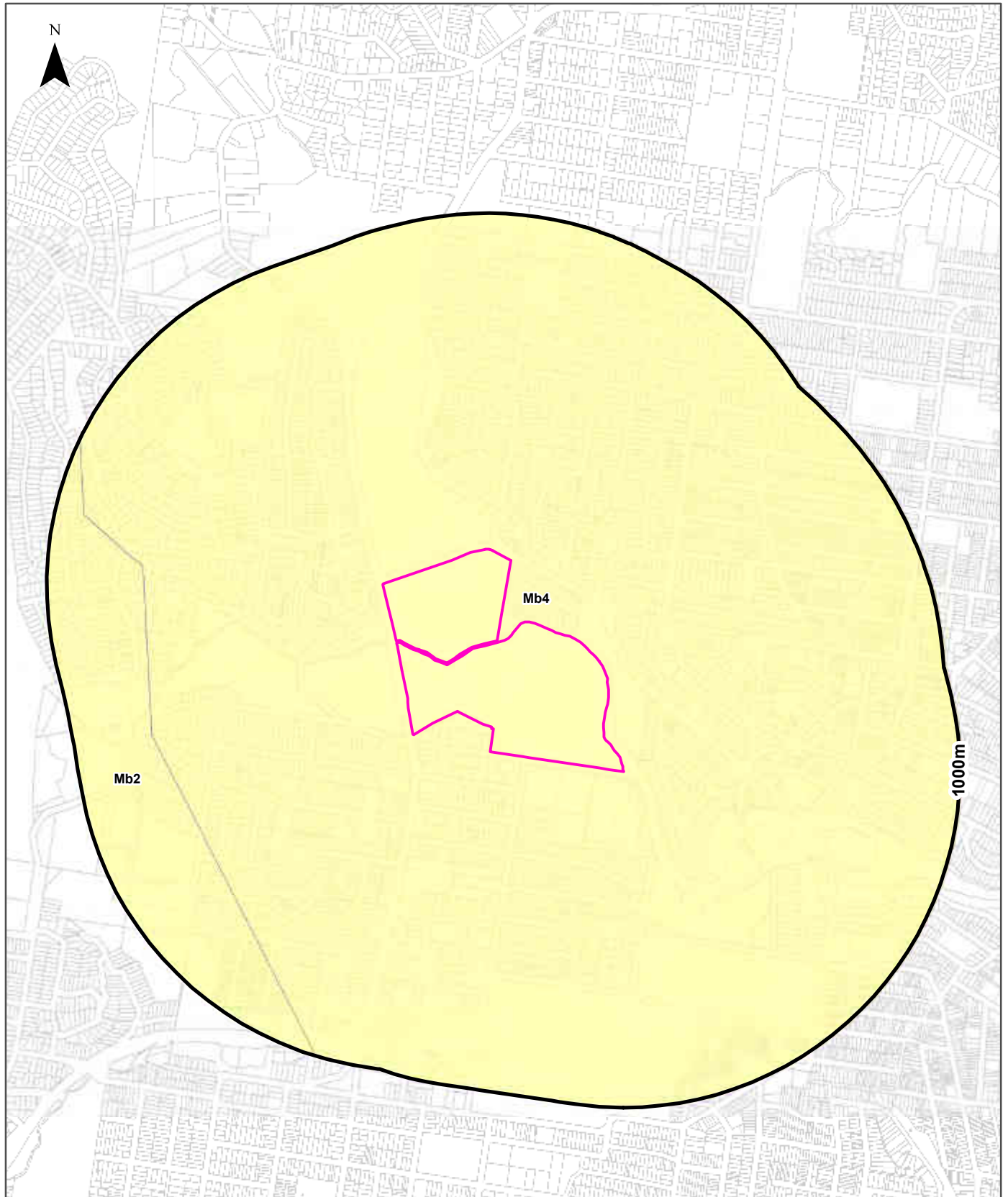
Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

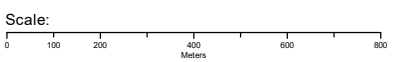
Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

# Atlas of Australian Soils

Campbell Parade, Manly Vale, NSW 2093



<b>Legend</b>		<b>Australian Soil Classification Orders</b>				
Site Boundary	Anthrosol	Dermosol	Kandosol	Podosol	Tenosol	No Data
Buffer 1000m	Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol	
Property Boundary	Chromosol	Hydrosol	Organosol	Sodosol	Lake	



Data Sources: Property Boundaries & Topographic Data:  
© Department Finance, Services & Innovation 2023

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

## Soils

Campbell Parade, Manly Vale, NSW 2093

### Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

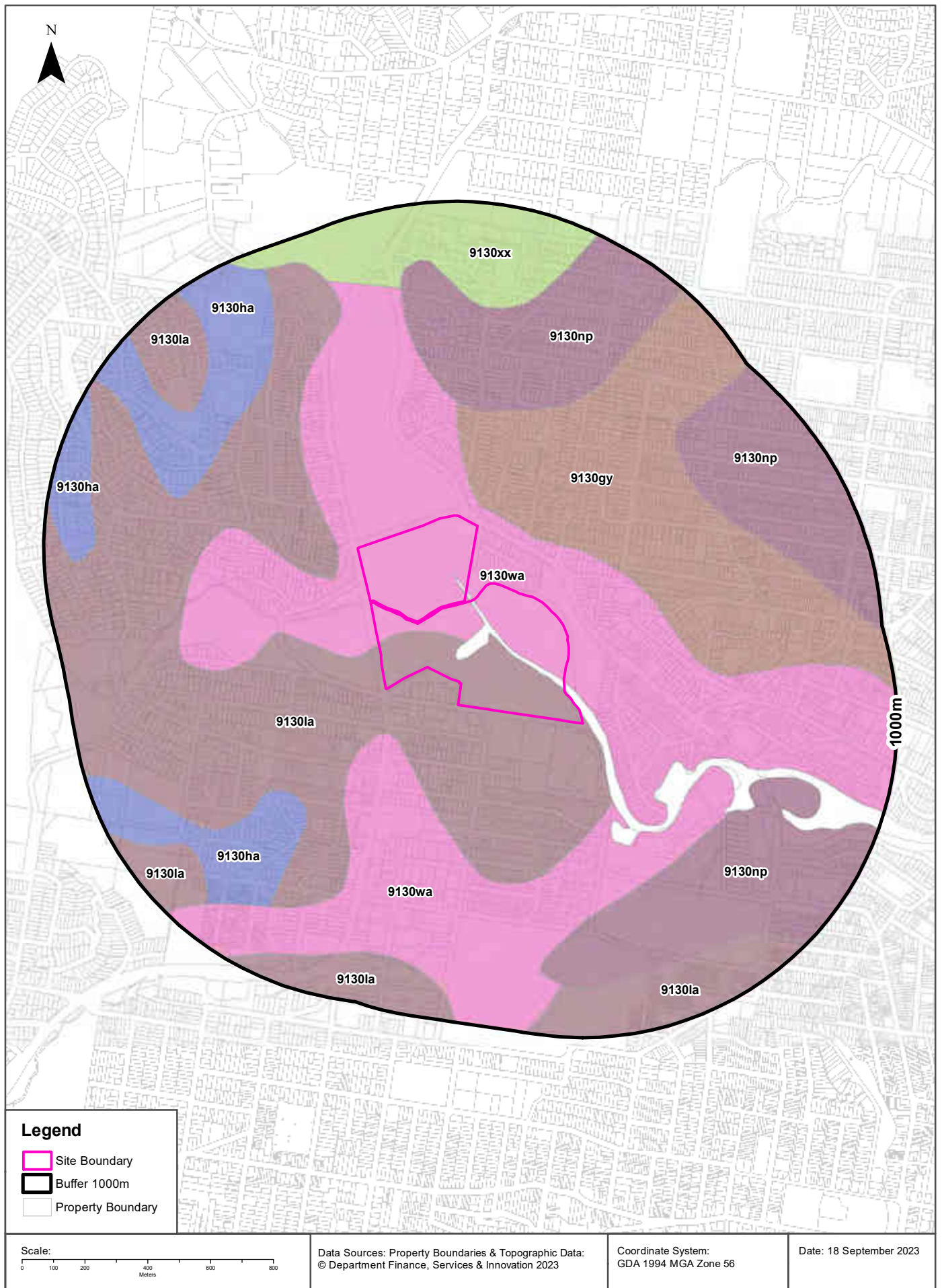
Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Mb4	Kandosol	Coastal complex: chief soils are acid yellow leached earths (Gn2.74) and (Gn2.34), hard acidic yellow mottled soils (Dy3.41), and hard acidic red soils (Dr2.21). This unit includes headlands and rugged coastal areas of unit Mb2; ridges and slopes of unit Tb35; low-lying coastal areas of unit Cb27; and some swampy areas.	0m	On-site
Mb2	Kandosol	Dissected sandstone plateau of moderate to strong relief with sandstone pillars, ledges, and slabs-- level to undulating ridges, irregularly benched slopes, steep ridges, cliffs, canyons, narrow sandy valleys: chief soils are (i) on areas of gentle to moderate relief, acid yellow leached earths (Gn2.74) and (Gn2.34) and acid leached yellow earths (Gn2.24)- sometimes these soils contain ironstone gravel; and (ii) on, or adjacent to, areas of strong relief, siliceous sands (Uc1.2), leached sands (Uc2.12) and (Uc2.2), and shallow forms of the above (Gn2) soils. Associated are: (i) on flat to gently undulating remnants of the original plateau surface, leached sands (Uc2.3), siliceous sands (Uc1.2), sandy earths (Uc5.22), and (Gn2) soils as for (i) above (these areas are in part comparable with unit Cb29); (ii) on flat ironstone gravelly remnants of the original plateau surface, (Gn2) soils as for unit Mb5(i); (iii) on gently undulating ridges where interbedded shales are exposed, shallow, often stony (Dy3.41), (Dr2.21), and related soils similar to unit Tb35; (iv) narrow valleys of (Uc2.3) soils flanked by moderate slopes of (Dy3.41) soils; (v) escarpments of steep hills with shallow (Dy) and (Dr) soils between sandstone pillars; and (vi) shallow (Um) soils, such as (Um6.21) on steep hills of basic rocks. As mapped, minor areas of units Mg20, Mm1, and Mw8 are included. Data are limited.	693m	West

Atlas of Australian Soils Data Source: CSIRO

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# Soil Landscapes of Central and Eastern NSW

Campbell Parade, Manly Vale, NSW 2093





# Soils

Campbell Parade, Manly Vale, NSW 2093

## Soil Landscapes of Central and Eastern NSW

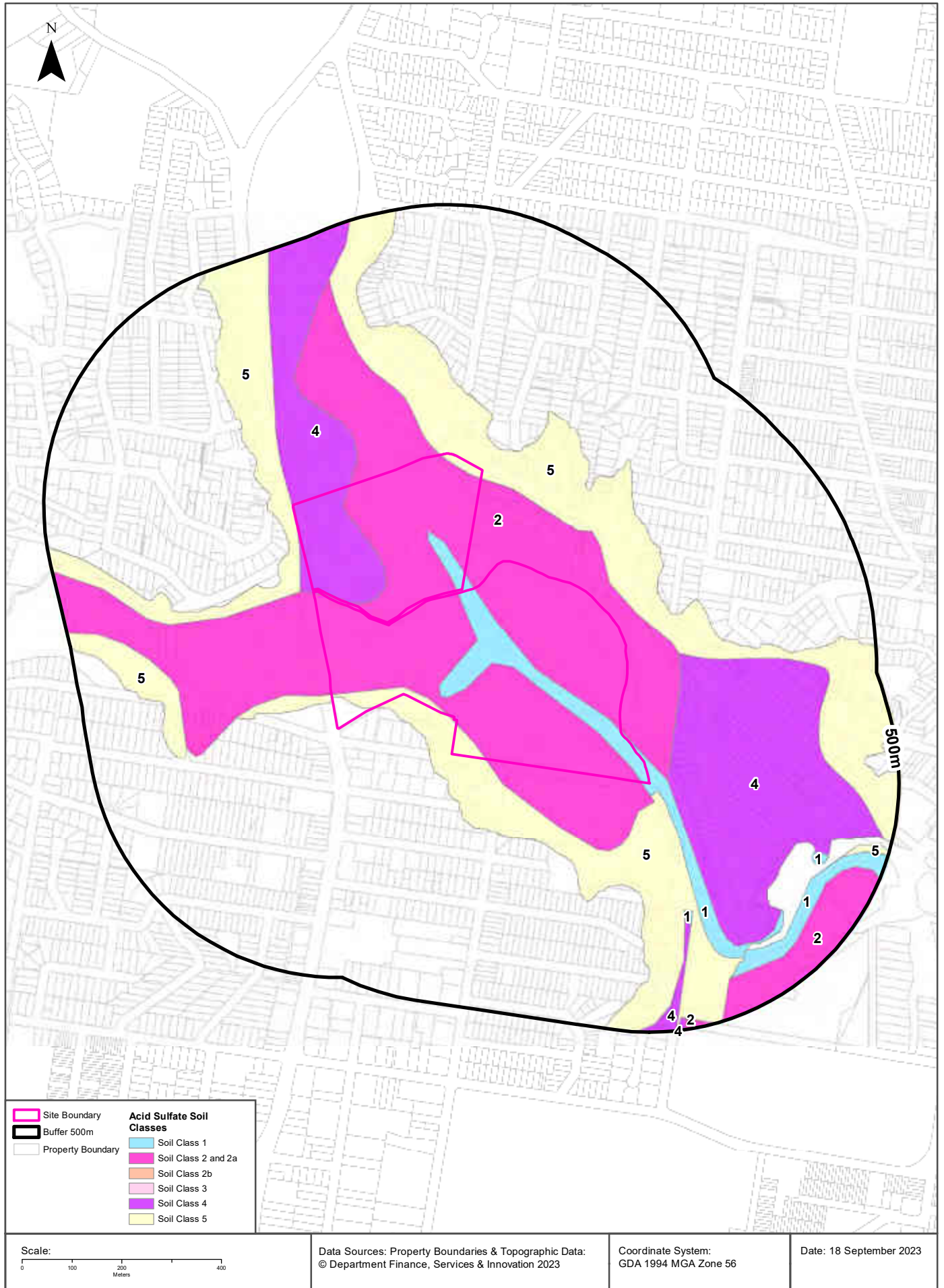
Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
<a href="#">9130wa</a>	Warriewood	0m	On-site
<a href="#">9130la</a>	Lambert	0m	On-site
<a href="#">9130gy</a>	Gymea	61m	North East
<a href="#">9130np</a>	Newport	340m	North
<a href="#">9130ha</a>	Hawkesbury	445m	South West
<a href="#">9130xx</a>	Disturbed Terrain	669m	North

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment  
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# Acid Sulfate Soils

Campbell Parade, Manly Vale, NSW 2093



# Acid Sulfate Soils

Campbell Parade, Manly Vale, NSW 2093

## Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
1	Any works present an environmental risk	Warringah Local Environmental Plan 2011

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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# Atlas of Australian Acid Sulfate Soils

Campbell Parade, Manly Vale, NSW 2093



<b>Legend</b>		<b>Probability of occurrence of Acid Sulfate Soils</b>	
Site Boundary	A. High (>70%)	C. Extremely Low (1-5%)	No Data
Buffer 1000m	B. Low (6-70%)	D. No Chance (0%)	
Property Boundary			

<b>Scale:</b> 	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2023	Coordinate System: GDA 1994 MGA Zone 56	Date: 18 September 2023
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## Acid Sulfate Soils

Campbell Parade, Manly Vale, NSW 2093

### Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m	On-site
A	High Probability of occurrence. >70% chance of occurrence.	0m	On-site
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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# Dryland Salinity

Campbell Parade, Manly Vale, NSW 2093

## Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

**No**

Is there Dryland Salinity - National Assessment data within the dataset buffer?

**No**

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A		

Dryland Salinity Data Source : National Land and Water Resources Audit

The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.

In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

# Mining

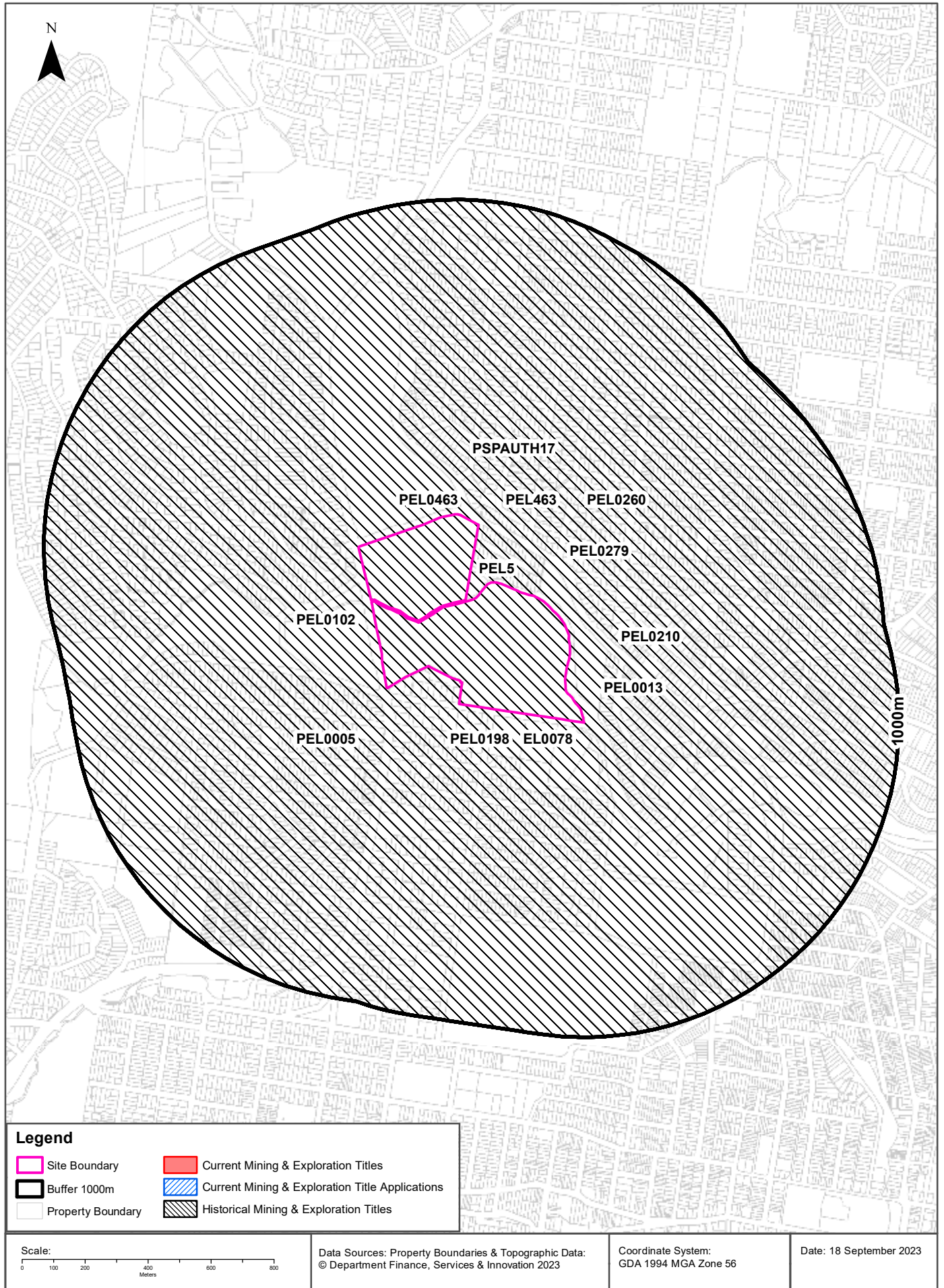
Campbell Parade, Manly Vale, NSW 2093

## Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)  
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# Mining

Campbell Parade, Manly Vale, NSW 2093

## Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

## Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

# Mining

Campbell Parade, Manly Vale, NSW 2093

## Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0279	THE ELECTRICITY COMMISSION OF NSW (TRADING AS PACIFIC POWER)	19910504	19931111	PETROLEUM	Petroleum	0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	19810909	19930803	PETROLEUM	Petroleum	0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	20091010	20150603	PETROLEUM	Petroleum	0m	On-site
PSPAUTH17	MACQUARIE ENERGY PTY LTD	20070803	20080703	PETROLEUM	Petroleum	0m	On-site
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
EL0078	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site
PEL0013	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0005	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20150403	PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD	20081022	20130227	MINERALS		0m	On-site
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20011210	MINERALS		0m	On-site

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

# State Environmental Planning Policy

Campbell Parade, Manly Vale, NSW 2093

## State Significant Precincts

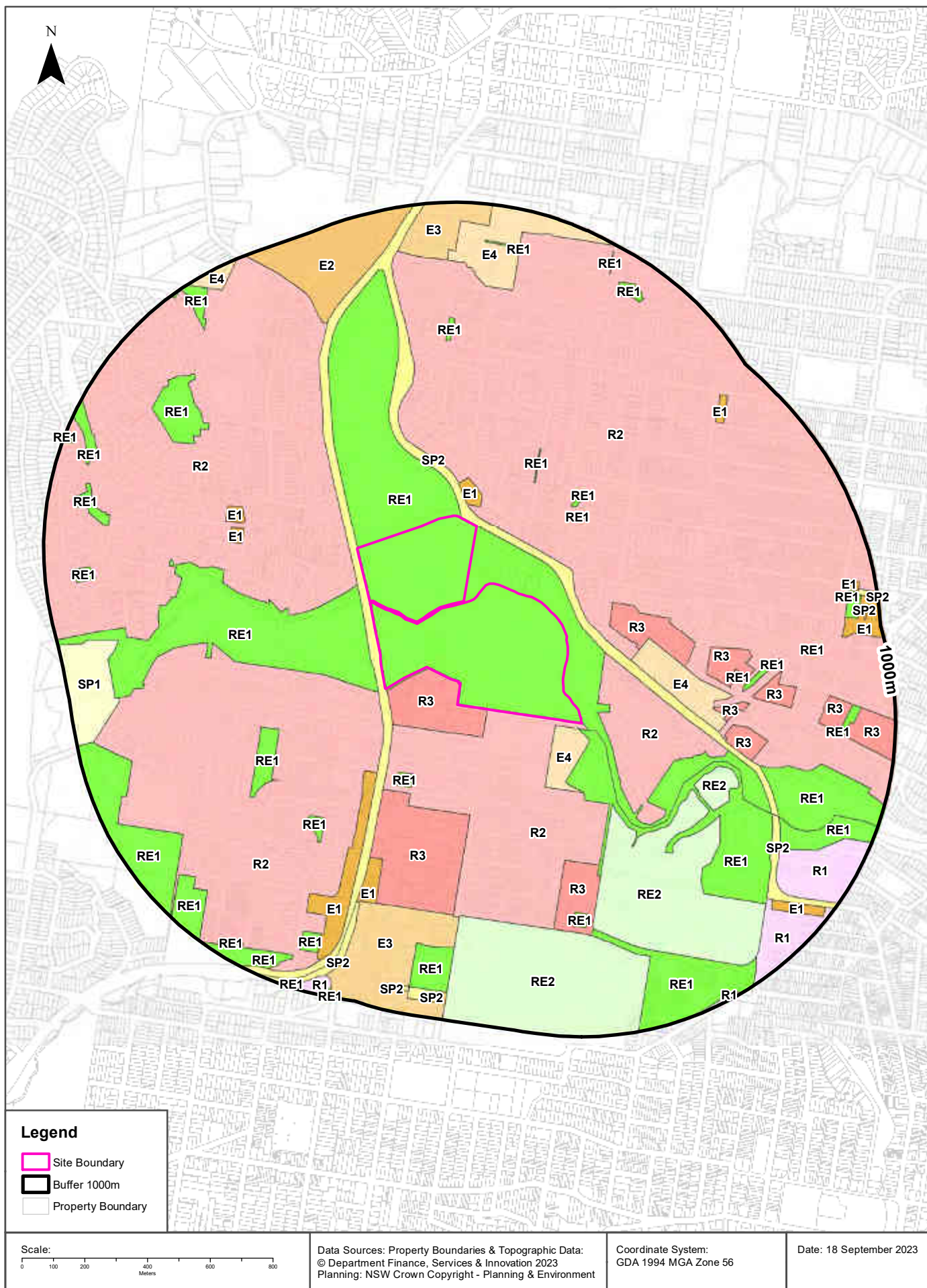
What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No records in buffer							

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment  
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# EPI Planning Zones

Campbell Parade, Manly Vale, NSW 2093



# Environmental Planning Instrument

Campbell Parade, Manly Vale, NSW 2093

## Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	0m	On-site
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	0m	South
SP2	Infrastructure		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	0m	North
R2	Low Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	0m	South
RE1	Public Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	20m	South East
E4	General Industrial		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	20m	South East
R2	Low Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	26m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	26m	West
R2	Low Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	26m	North East
R2	Low Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	27m	South West
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	46m	North
R2	Low Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	54m	South East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	137m	East
E4	General Industrial		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	198m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	228m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	265m	South
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	270m	South West
RE2	Private Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	275m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	283m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	305m	North East

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	321m	South
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	364m	South West
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	368m	West
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	369m	North West
RE2	Private Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	405m	South East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	416m	East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	421m	East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	442m	South East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	452m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	459m	South West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	514m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	517m	East
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	542m	South
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	547m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	556m	North
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	579m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	604m	South
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	606m	North West
RE1	Public Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	657m	South East
RE2	Private Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	664m	South
E3	Productivity Support		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	665m	South
SP2	Infrastructure	Classified Road	Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	667m	South East
RE1	Public Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	692m	South East
E2	Commercial Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	709m	North

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
E4	General Industrial		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	739m	North
R1	General Residential		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	744m	South East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	748m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	755m	East
RE1	Public Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	770m	South
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	795m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	795m	West
R1	General Residential		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	808m	South East
SP1	Special Activities		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	808m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	809m	South West
E3	Productivity Support		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	814m	North
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	815m	East
E1	Local Centre		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	826m	South East
R3	Medium Density Residential		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	830m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	840m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	847m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	854m	South West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	863m	North East
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	866m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	873m	North
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	875m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	885m	East
SP2	Infrastructure		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	906m	East
E1	Local Centre		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	907m	East

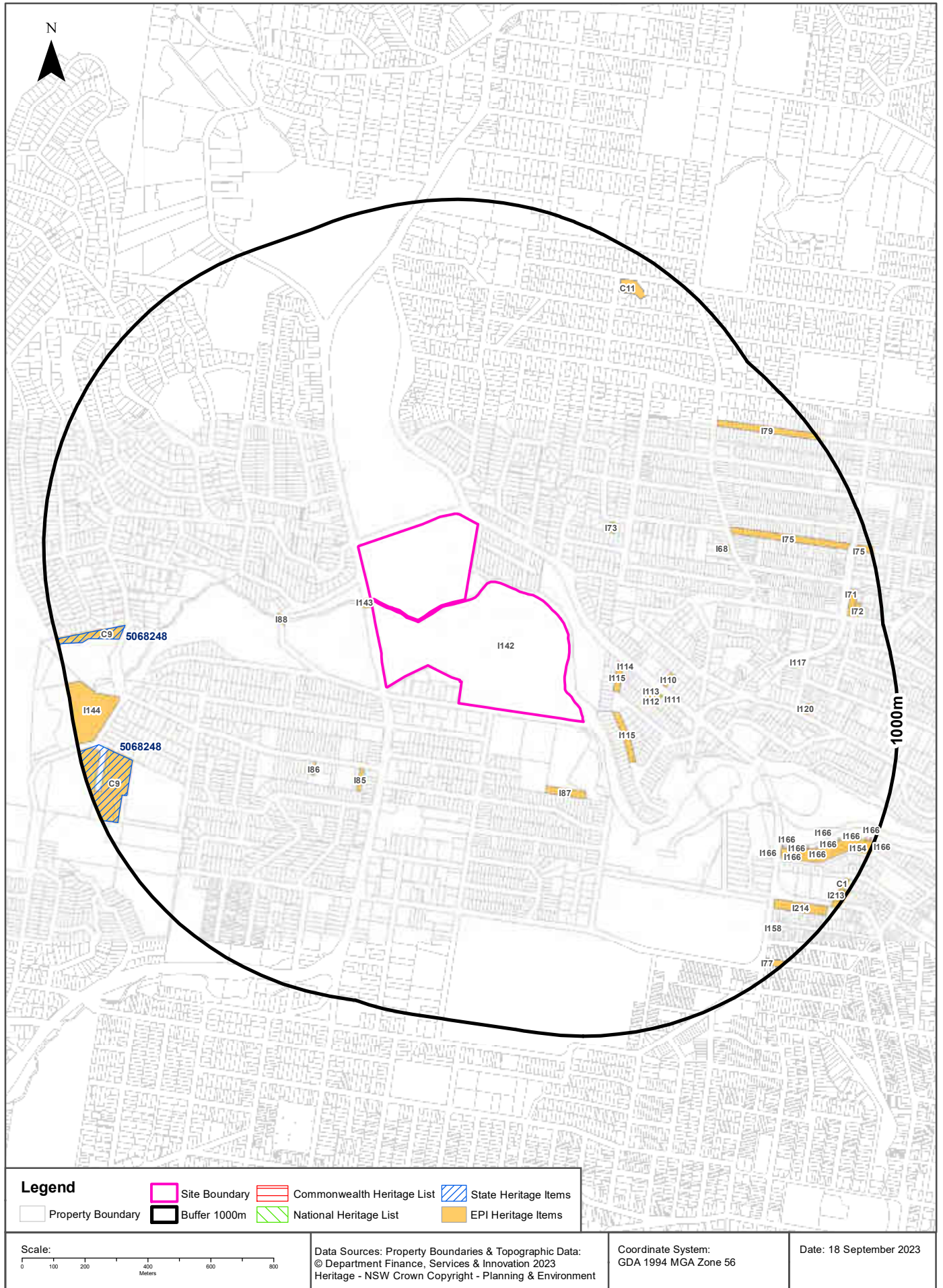
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	908m	North
SP2	Infrastructure	Electricity Supply	Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	914m	South
E4	General Industrial		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	929m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	932m	South West
SP2	Infrastructure		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	936m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 3	963m	North West
RE1	Public Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	966m	South
RE1	Public Recreation		Manly Local Environmental Plan 2013	14/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	984m	South West

Environmental Planning Instrument Data Source: NSW Crown Copyright - Planning & Environment  
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# Heritage Items

Campbell Parade, Manly Vale, NSW 2093



## Heritage

Campbell Parade, Manly Vale, NSW 2093

### Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch  
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### National Heritage List

What are the National Heritage List Items located within the dataset buffer?

Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch  
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### State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5068248	Manly Warringah War Memorial Park	Manly Warringah War Memorial Park	NORTHERN BEACHES	13/01/2023	02073	3299	779m	West

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage  
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### Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I142	Timber jetty remnants and marine bollards	Item - Landscape	Local	Warringah Local Environmental Plan 2011	30/05/2014	30/05/2014	30/06/2017	0m	On-site
I143	Manly Creek Bridge	Item - General	Local	Warringah Local Environmental Plan 2011	30/05/2014	30/05/2014	30/06/2017	5m	West
I115	Street Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	93m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I115	Street Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	116m	East
I114	Bus Shelter	Item - General	Local	Warringah Local Environmental Plan 2011	30/05/2014	30/05/2014	30/06/2017	177m	East
I113	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	203m	East
I112	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	211m	East
I111	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	219m	East
I87	Former Ridley House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	220m	South East
I110	Shop Building known as Prime Cleaning Supplier Pty Ltd	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	269m	East
I85	St Peters Church Hall	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	272m	South West
I88	Bridge	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	279m	West
I73	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	299m	North East
I86	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	328m	South West
I68	House known as 'Melrose'	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	539m	East
I75	Street Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	601m	East
I117	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	689m	East
I120	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	694m	East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	742m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	743m	South East
I154	Group of 2 storey residential flat buildings	Item - General	Local	Manly Local Environmental Plan 2013	05/04/2013	19/04/2013	02/11/2018	744m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	750m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	756m	South East
I79	Street Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	779m	North East
C9	Manly Dam and Surrounds	Conservation Area - Landscape	Local	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	779m	West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	783m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	797m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	809m	South East
I214	Former tram depot complex and associated buildings	Item - General	Local	Manly Local Environmental Plan 2013	05/04/2013	19/04/2013	02/11/2018	826m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	835m	South East
I144	Manly Hydraulics Laboratory	Item - General	Local	Warringah Local Environmental Plan 2011	30/05/2014	30/05/2014	30/06/2017	841m	West
C9	Manly Dam and Surrounds	Conservation Area - Landscape	Local	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	841m	South West
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	854m	South East
C11	Park	Conservation Area - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	863m	North East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	865m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	875m	South East
I158	Sewerage Pumping Station No 36	Item - General	Local	Manly Local Environmental Plan 2013	02/11/2018	02/11/2018	02/11/2018	876m	South East
I71	Building known as Harbord Literary Institute	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	885m	East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	887m	South East
I72	Building known as Early Childhood Health Centre	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	904m	East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	920m	South East
I75	Street Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	949m	East
I77	Street trees	Item - Landscape	Local	Manly Local Environmental Plan 2013	05/04/2013	19/04/2013	02/11/2018	951m	South East
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	964m	South East
C1	The Pittwater Road Conservation Area	Conservation Area - General	Local	Manly Local Environmental Plan 2013	09/10/2015	09/10/2015	02/11/2018	967m	South East
I213	Sewage pumping station No 37	Item - General	Local	Manly Local Environmental Plan 2013	02/11/2018	02/11/2018	02/11/2018	969m	South East

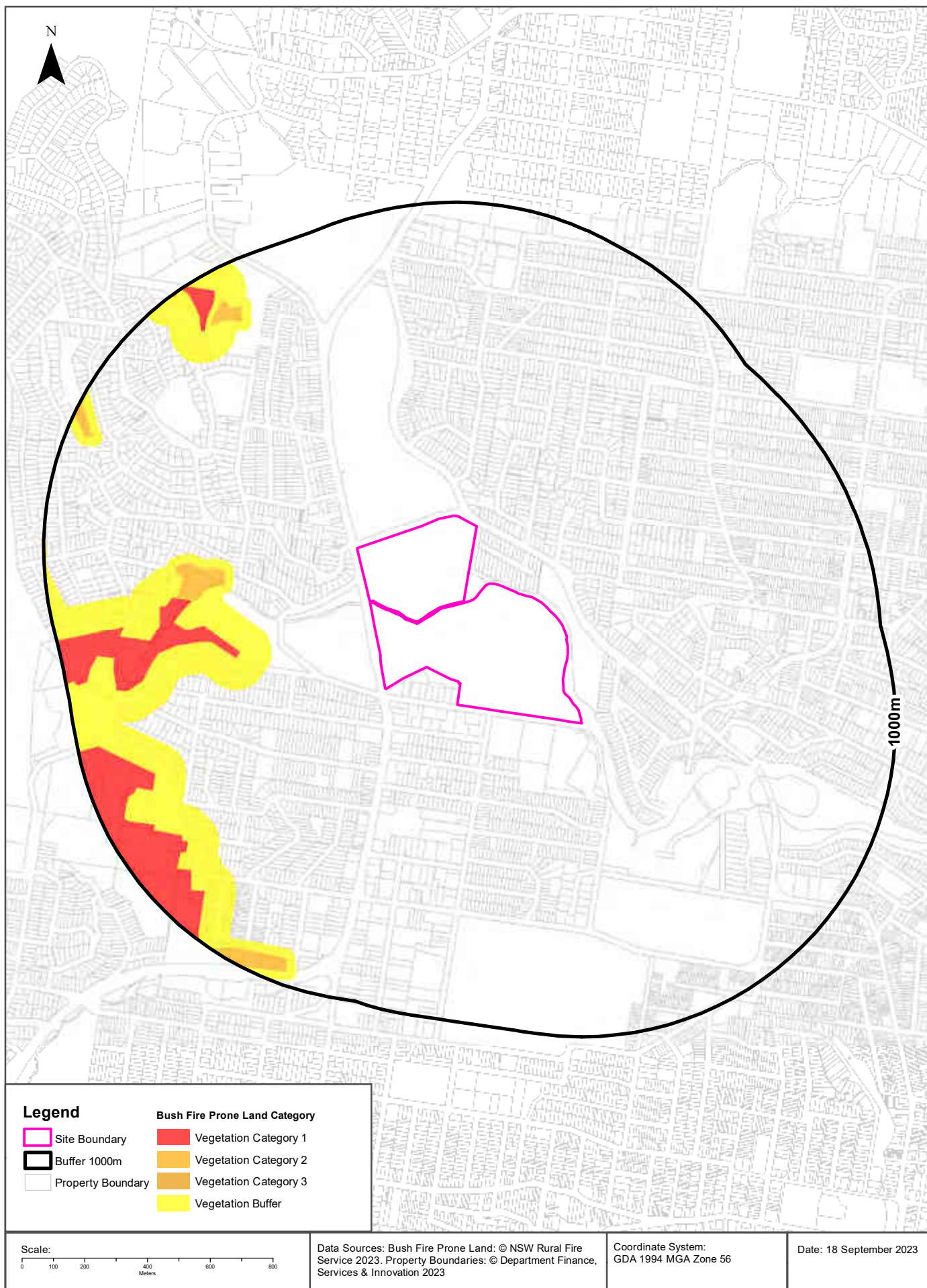
Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I166	Row of Norfolk Island Pine trees (Araucaria heterophylla)	Item - Landscape	Local	Manly Local Environmental Plan 2013	25/09/2015	25/09/2015	02/11/2018	979m	South East

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# Natural Hazards - Bush Fire Prone Land

Campbell Parade, Manly Vale, NSW 2093



# Natural Hazards

Campbell Parade, Manly Vale, NSW 2093

## Bush Fire Prone Land

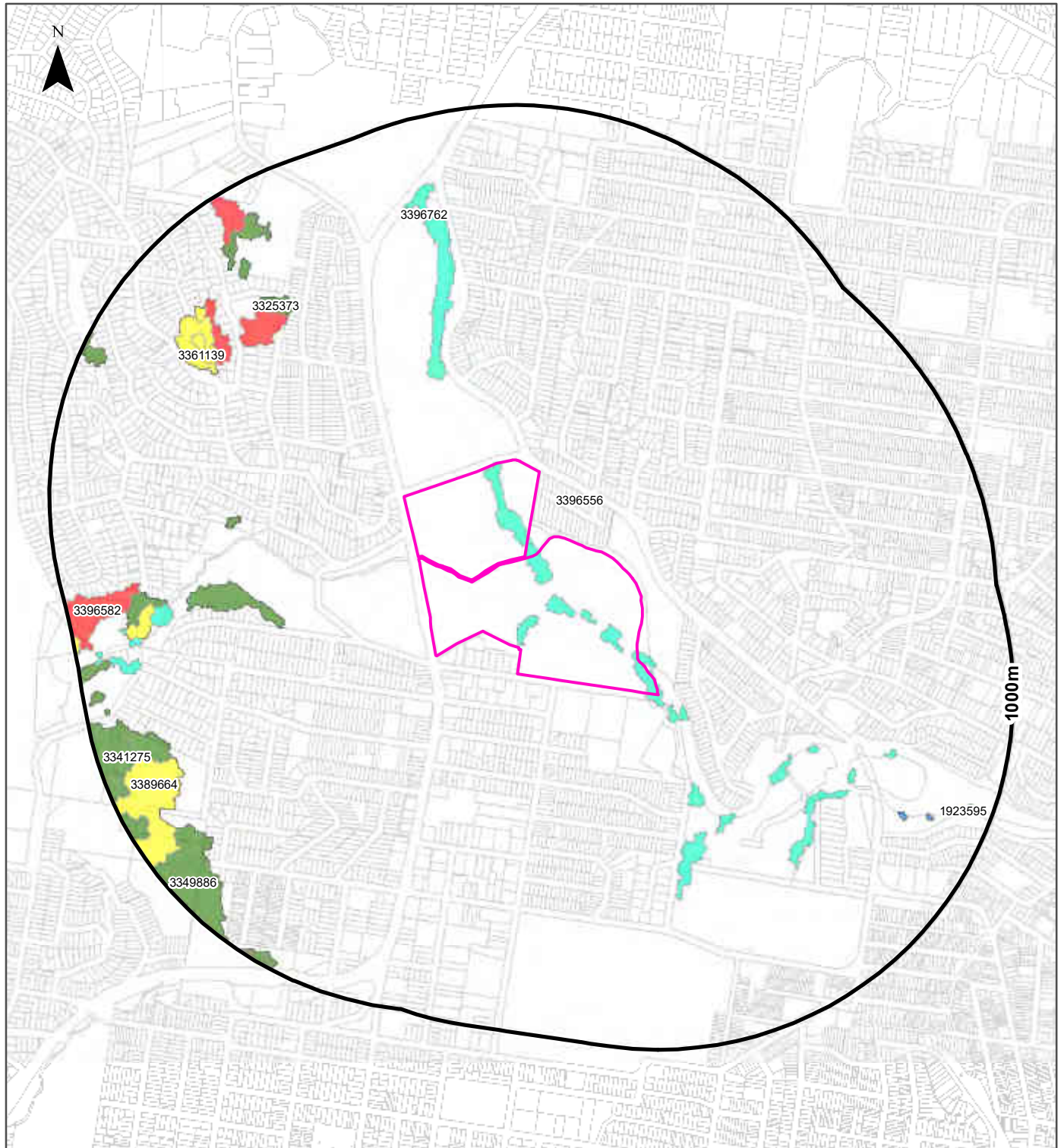
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	336m	West
Vegetation Category 2	430m	West
Vegetation Category 1	436m	South West

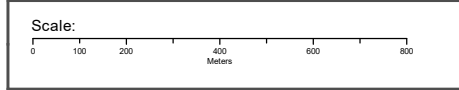
NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

# Ecological Constraints - Vegetation & Ramsar Wetlands

Campbell Parade, Manly Vale, NSW 2093



Site Boundary	Dry Sclerophyll Forests (Shrub/grass sub-formation)	Semi-arid Woodlands (Grassy sub-formation)
Report Buffer	Dry Sclerophyll Forests (Shrubby sub-formation)	Semi-arid Woodlands (Shrubby sub-formation)
Property Boundary	Forested Wetlands	Wet Sclerophyll Forests (Grassy sub-formation)
Ramsar Wetland	Freshwater Wetlands	Wet Sclerophyll Forests (Shrubby sub-formation)
<b>Native Vegetation</b>		
Alpine Complex	Grasslands	Non vegetated
Arid Shrublands (Acacia sub-formation)	Grassy Woodlands	Unattributed
Arid Shrublands (Chenopod sub-formation)	Heathlands	Not classified
	Rainforests	Other
	Saline Wetlands	



Data Sources: Property Boundaries & Topographic Data:  
© Department Finance, Services & Innovation 2023

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023



## Ecological Constraints

Campbell Parade, Manly Vale, NSW 2093

### Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
3396556	Not classified	(Not classified) Not classified	Not classified	0m	On-site
3396762	Forested Wetlands	(Forested Wetlands) Estuarine Swamp Oak Twig-rush Forest	Coastal Floodplain Wetlands	0m	On-site
3349886	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Sandstone Gully Forest	Sydney Coastal Dry Sclerophyll Forests	405m	South West
3396582	Rainforests	(Rainforests) Sydney Coastal Coachwood Gallery Rainforest	Northern Warm Temperate Rainforests	568m	North West
3325373	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Enriched Sandstone Forest	Sydney Coastal Dry Sclerophyll Forests	606m	North West
3389664	Heathlands	(Heathlands) Woronora Plateau Heath-Mallee	Sydney Coastal Heaths	630m	West
3361139	Heathlands	(Heathlands) Southern Sydney Rockplate Heath	Sydney Coastal Heaths	649m	North West
1923595	Freshwater Wetlands	(Freshwater Wetlands) Estuarine Reedland	Coastal Freshwater Lagoons	748m	South East
3341275	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Sandstone Bloodwood Shrub Forest	Sydney Coastal Dry Sclerophyll Forests	875m	West

Native Vegetation Type Map : NSW Department of Planning and Environment 2022

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### Ramsar Wetlands

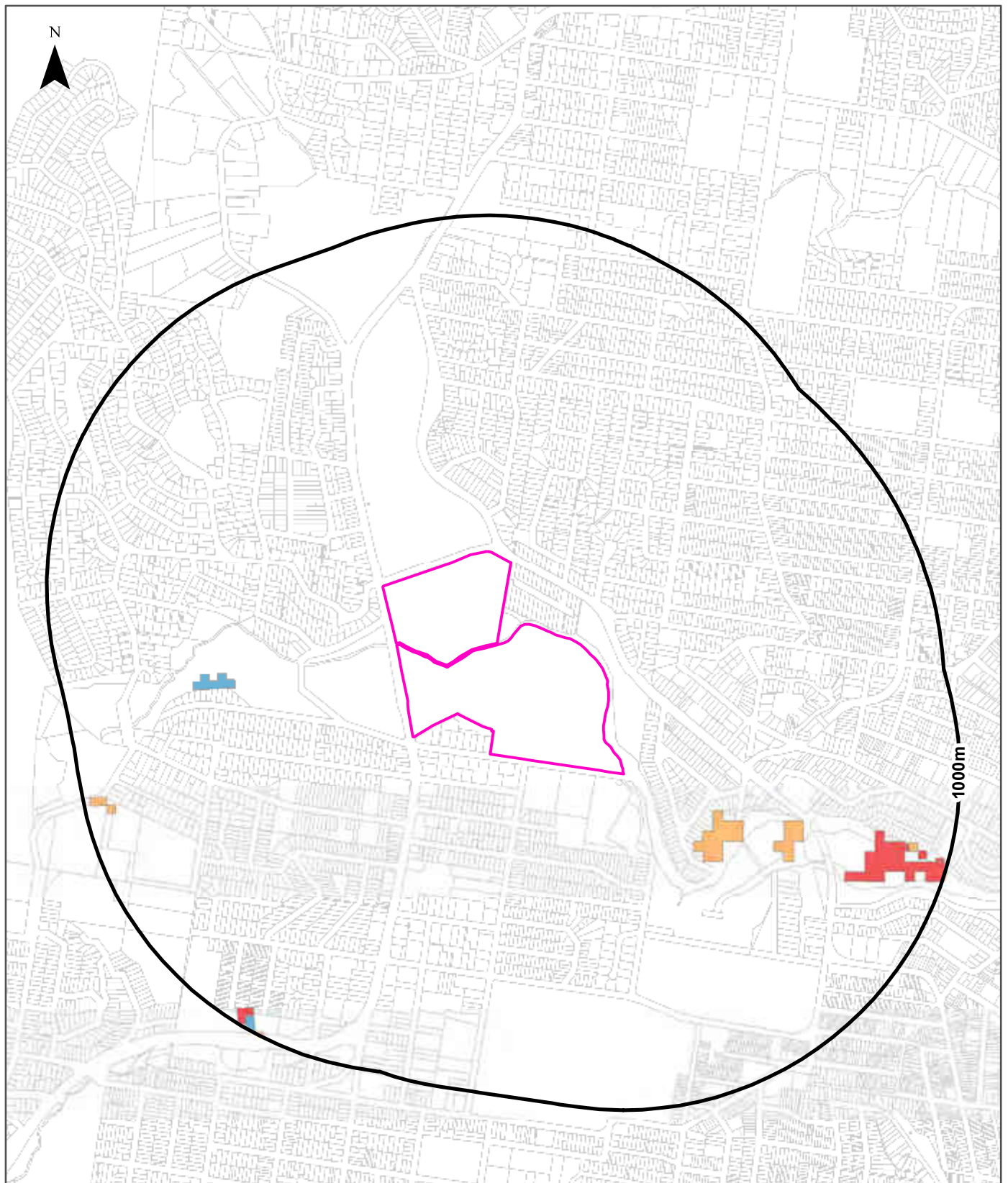
What Ramsar Wetland areas exist within the dataset buffer?

Map Id	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

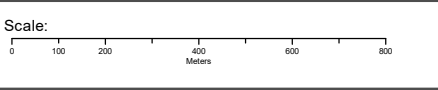
# Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Campbell Parade, Manly Vale, NSW 2093



## Legend

Site Boundary	High potential GDE - from national assessment	Low potential GDE - from national assessment
Buffer 1000m	High potential GDE - from regional studies	Low potential GDE - from regional studies
Property Boundaries	Moderate potential GDE - from national assessment	Known GDE - from regional studies
	Moderate potential GDE - from regional studies	Unclassified potential GDE - from national assessment
		Unclassified potential GDE - from regional studies



Data Sources: Property Boundaries & Topographic Data:  
© Department Finance, Services & Innovation 2023

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

# Ecological Constraints

Campbell Parade, Manly Vale, NSW 2093

## Groundwater Dependent Ecosystems Atlas

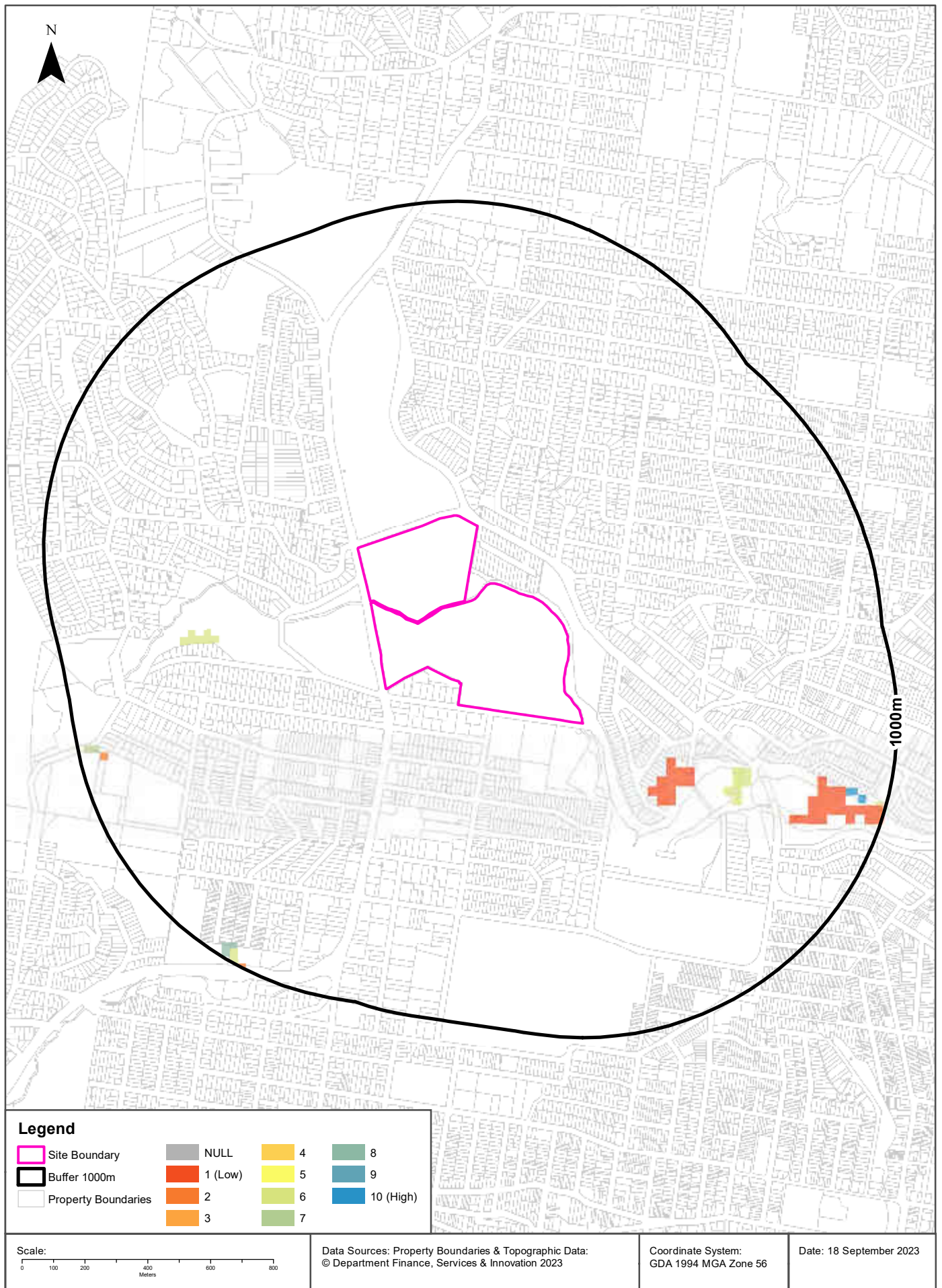
Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Wetland		284m	South East
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Unconsolidated sedimentary	495m	West
Aquatic	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Wetland		714m	South East
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	845m	South East
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	869m	South East
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Unconsolidated sedimentary	985m	South West

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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# Ecological Constraints - Inflow Dependent Ecosystems Likelihood

Campbell Parade, Manly Vale, NSW 2093



# Ecological Constraints

Campbell Parade, Manly Vale, NSW 2093

## Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	1	Deeply dissected sandstone plateaus.	Wetland		284m	South East
Aquatic	6	Deeply dissected sandstone plateaus.	Wetland		486m	South East
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Unconsolidated sedimentary	495m	West
Terrestrial	10	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	845m	South East
Terrestrial	2	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	909m	West
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	930m	West
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	935m	South West
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	956m	South East
Terrestrial	2	Deeply dissected sandstone plateaus.	Vegetation	Unconsolidated sedimentary	985m	South West

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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# Ecological Constraints

Campbell Parade, Manly Vale, NSW 2093

## NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anous stolidus	Common Noddy	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Category 2	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Endangered	
Animalia	Aves	Calonectris leucomelas	Streaked Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calyptorhynchus banksii banksii	Red-tailed Black-Cockatoo (coastal subspecies)	Critically Endangered	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	<i>Calyptorhynchus lathamii lathamii</i>	South-eastern Glossy Black-Cockatoo	Vulnerable	Category 2	Vulnerable	
Animalia	Aves	<i>Charadrius leschenaultii</i>	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Charadrius mongolus</i>	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Chlidonias leucopterus</i>	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Chthonicola sagittata</i>	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Cuculus optatus</i>	Oriental Cuckoo	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Daphoenositta chrysoptera</i>	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Diomedea exulans</i>	Wandering Albatross	Endangered	Not Sensitive	Endangered	
Animalia	Aves	<i>Esacus magnirostris</i>	Beach Stone-curlew	Critically Endangered	Not Sensitive	Not Listed	
Animalia	Aves	<i>Eudyptula minor</i>	Little Penguin	Endangered Population	Not Sensitive	Not Listed	
Animalia	Aves	<i>Falco subniger</i>	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Fregata ariel</i>	Lesser Frigatebird	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Gallinago hardwickii</i>	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	<i>Glossopsitta pusilla</i>	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Gygis alba</i>	White Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Haematopus fuliginosus</i>	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Haematopus longirostris</i>	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Hieraetus morphnoides</i>	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Hirundapus caudacutus</i>	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Hydroprogne caspia</i>	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	<i>Ixobrychus flavicollis</i>	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Lathamus discolor</i>	Swift Parrot	Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	<i>Limosa lapponica</i>	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Lophoictinia isura</i>	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	<i>Macronectes giganteus</i>	Southern Giant Petrel	Endangered	Not Sensitive	Endangered	
Animalia	Aves	<i>Macronectes halli</i>	Northern Giant-Petrel	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	<i>Menura alberti</i>	Albert's Lyrebird	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Neophema pulchella</i>	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	<i>Ninox connivens</i>	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	<i>Ninox strenua</i>	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	<i>Numenius madagascariensis</i>	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pachycephala olivacea	Olive Whistler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Phaethon lepturus	White-tailed Tropicbird	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Phaethon rubricauda	Red-tailed Tropicbird	Vulnerable	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Philomachus pugnax	Ruff	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Phoebastria fusca	Sooty Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Vulnerable	Not Sensitive	Endangered	
Animalia	Aves	Pterodroma solandri	Providence Petrel	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Puffinus assimilis	Little Shearwater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stercorarius longicaudus	Long-tailed Jaeger	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Stercorarius maccormicki	South Polar Skua	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sula dactylatra	Masked Booby	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Sula leucogaster	Brown Booby	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Thalassarche bulleri	Buller's Albatross	Not Listed	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche cauta	Shy Albatross	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Thalassarche chrysostoma	Grey-headed Albatross	Not Listed	Not Sensitive	Endangered	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	



Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	<i>Thalasseus bergii</i>	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	<i>Thinornis cucullatus cucullatus</i>	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	<i>Todiramphus chloris</i>	Collared Kingfisher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	<i>Tringa brevipes</i>	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Tringa incana</i>	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	<i>Tringa nebularia</i>	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Tringa stagnatilis</i>	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	<i>Tyto novaehollandiae</i>	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	<i>Tyto tenebricosa</i>	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	<i>Xenus cinereus</i>	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Gastropoda	<i>Meridolum corneovirens</i>	Cumberland Plain Land Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Gastropoda	<i>Pommerhelix duralensis</i>	Dural Land Snail	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Arctocephalus forsteri</i>	New Zealand Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Balaenoptera musculus</i>	Blue Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Cercartetus nanus</i>	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Dasyurus viverrinus</i>	Eastern Quoll	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Dugong dugon</i>	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Eubalaena australis</i>	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern)	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Miniopterus australis</i>	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Myotis macropus</i>	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Perameles nasuta</i>	Long-nosed Bandicoot	Endangered Population	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Petaurus norfolcensis</i>	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Endangered	Not Sensitive	Vulnerable	
Animalia	Mammalia	<i>Phascolarctos cinereus</i>	Koala	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	<i>Phoniscus papuensis</i>	Golden-tipped Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Physeter macrocephalus</i>	Sperm Whale	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	<i>Pseudomys novaehollandiae</i>	New Holland Mouse	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	<i>Vespadelus trougtoni</i>	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	<i>Aspidites ramsayi</i>	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	<i>Caretta caretta</i>	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	<i>Chelonia mydas</i>	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	<i>Dermochelys coriacea</i>	Leatherback Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	Not Listed	Not Sensitive	Vulnerable	
Animalia	Reptilia	<i>Myuchelys bellii</i>	Western Sawshelled Turtle, Bell's Turtle	Endangered	Not Sensitive	Vulnerable	
Animalia	Reptilia	<i>Tiliqua occipitalis</i>	Western Blue-tongued Lizard	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	<i>Uvidicolus sphyrurus</i>	Border Thick-tailed Gecko	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	<i>Varanus rosenbergi</i>	Rosenberg's Goanna	Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	<i>Camarophyllopsis kearneyi</i>		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe anomala</i> var. <i>ianthinomarginata</i>		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe aurantipes</i>		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe austropratensis</i>		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe collucera</i>		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe griseoramosa</i>		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe lanecovensis</i>		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	<i>Hygrocybe reesia</i>		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	<i>Acacia bynoeana</i>	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Acacia terminalis</i> subsp. <i>Eastern Sydney</i>	Sunshine wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	<i>Allocastrum portuense</i>	Nielsen Park She-oak	Endangered	Category 3	Endangered	
Plantae	Flora	<i>Amperea xiphoclada</i> var. <i>pedicellata</i>		Extinct	Not Sensitive	Extinct	
Plantae	Flora	<i>Asterolasia buxifolia</i>		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Baeckea kandos</i>		Endangered	Category 3	Endangered	
Plantae	Flora	<i>Caladenia tessellata</i>	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	<i>Callistemon linearifolius</i>	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	<i>Chamaesyce psammogeton</i>	Sand Spurge	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Darwinia biflora</i>		Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Davidsonia jerseyana	Davidson's Plum	Endangered	Category 2	Endangered	
Plantae	Flora	Deyeuxia appressa		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Epacris purpurascens var. purpurascens		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Euphrasia collina subsp. muelleri	Mueller's Eyebright	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Genoplesium baueri	Bauer's Midge Orchid	Endangered	Category 2	Endangered	
Plantae	Flora	Grammitis stenophylla	Narrow-leaf Finger Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	Grevillea caleyi	Caley's Grevillea	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Haloragodendron lucasii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia superans		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Category 3	Extinct	
Plantae	Flora	Lasiopetalum joyceae		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leptospermum deanei		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Melaleuca biconvexa	Biconvex Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Microtis angusii	Angus's Onion Orchid	Endangered	Category 2	Endangered	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Persoonia laxa		Extinct	Not Sensitive	Extinct	
Plantae	Flora	Pimelea curviflora var. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Prasophyllum fuscum	Slaty Leek Orchid	Critically Endangered	Category 2	Vulnerable	
Plantae	Flora	Prostanthera densa	Villous Mint-bush	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Sarcophilus hartmannii	Hartman's Sarcophilus	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Senecio spathulatus	Coast Groundsel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetradlea glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Tetradlea juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Thesium australe	Austral Toadflax	Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Triplarina imbricata	Creek Triplarina	Endangered	Not Sensitive	Endangered	

Data does not include NSW category 1 sensitive species.

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## Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading "LC" or "LocConf". These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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## **Appendix D**

# Laboratory Documentation



### CHAIN OF CUSTODY RECORD

CLIENT DETAILS Page 1 of 2

Company Name: <b>Geotesta</b>	Contact Name: <b>Victor Kirpichnikov / Dr. Mohammad Bazyar</b>	Purchase Order: <b>N.E1762</b>	DOC Number:
Office Address: <b>Unit 06, 20-22 Foundry Road, Seven Hills 2147</b>	Project Manager: <b>Victor Kirpichnikov / Dr. Mohammad Bazyar</b>	PROJECT Number: <b>NE1762</b>	Eurofins   mgt quote ID:
Phone: <b>452454418</b>	Email for results: <b>vk@geotesta.com.au, mb@geotesta.com.au</b>	PROJECT Name: <b>Manly Warringah Gymnasitics New Facility Project</b>	Date output format:

Some common holding times (with correct preservation). For further information contact the lab.

Analytes		Waters				Soils			
		BTEX, WAH, VOC	14 days	BTEX, WAH, VOC	14 days				
TRH, PAH, Pherols, Pesticides		7 days		4.1. PAH, Pherols, Pesticides	14 days				
Heavy Metals		3 months		Heavy Metals	6 months				
Mercury, CrV		28 days		Mercury, CrV	28 days				
Microbiological testing		24 hours		Microbiological testing	72 hours				
BOD, Nitrate, NH4-N, Total N		2 days		Amcns	28 days				
Solids - ISS, TSS etc		7 days		SPOCAS, pH, Fek and FOX, CTS	24 hours				
Ferrous Iron		7 days		ASIP, TCLP	7 days				

Sample ID	Date	Matrix	ETA & B15	Asbestos ID in soil - NEPM & WA Guidelines - D.001 % ww	Heavy Metal MB	PH	CEC	% Clay	BTEX and Volatile TRH's	Containers:								Sample comments:	
										50P	250P	125P	0m plast	40ml wa	100ml gla	Jar	5 L can		
1	BH1	18/09/2023	Soil	X	X														7mm sieved
2	BH2	18/09/2023	Soil	X	X														7mm sieved
3	BH3	18/09/2023	Soil	X	X														7mm sieved
4	BH4	18/09/2023	Soil	X	X		X	X	X										7mm sieved
5	BH5	18/09/2023	Soil	X	X														7mm sieved
6	BH6	18/09/2023	Soil	X	X														7mm sieved
7	BH7	18/09/2023	Soil	X	X														7mm sieved
8	BD1	18/09/2023	Soil			X													7mm sieved
9	ER Background	18/09/2023	Soil			X													
10	TopSpike and Trip Blank	18/09/2023	QACC						X						XX				2 x QACC vials
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			

Relinquished By: <b>Victor Kirpichnikov</b>	Received by: <i>[Signature]</i>	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival: <b>9.9</b>
Date & Time: <b>18/09/23</b>	Date & Time: <b>18/09/23 5:15</b>		1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>	<input checked="" type="checkbox"/> Courier <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal Courier Consignment #:	Report number: <b>1027498</b>
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>		5 DAY <input checked="" type="checkbox"/> 10 DAY <input type="checkbox"/>		

**Eurofins Environment Testing Australia Pty Ltd**

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289

**Eurofins ARL Pty Ltd**

ABN: 91 05 0159 898

Perth
46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370

**Eurofins Environment Testing NZ Ltd**

NZBN: 9429046024954

Auckland	Christchurch	Tauranga
35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402

## Sample Receipt Advice

<b>Company name:</b>	Geotesta Pty Ltd (NSW)
<b>Contact name:</b>	Victor Kirpichnikov (GEOTESTA)
<b>Project name:</b>	MANLY WARRINGAH GYMNASTICS NEW FACILITY PROJECT
<b>Project ID:</b>	NE1762
<b>Turnaround time:</b>	5 Day
<b>Date/Time received</b>	Sep 18, 2023 5:15 PM
<b>Eurofins reference</b>	1027498

## Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

## Notes

## Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

**Asim Khan on phone : or by email: [AsimKhan@eurofins.com](mailto:AsimKhan@eurofins.com)**

Results will be delivered electronically via email to Victor Kirpichnikov (GEOTESTA) - [vk@geotesta.com.au](mailto:vk@geotesta.com.au).

*Note: A copy of these results will also be delivered to the general Geotesta Pty Ltd (NSW) email address.*

Geotesta Pty Ltd (NSW)  
Unit 6, 20/22 Foundry Road  
Seven Hills  
NSW 2147



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025 – Testing  
NATA is a signatory to the ILAC Mutual Recognition  
Arrangement for the mutual recognition of the  
equivalence of testing, medical testing, calibration,  
inspection, proficiency testing scheme providers and  
reference materials producers reports and certificates.

**Attention:** Victor Kirpichnikov (GEOTESTA)

**Report** 1027498-S  
Project name **MANLY WARRINGAH GYMNASTICS NEW FACILITY PROJECT**  
Project ID **NE1762**  
Received Date **Sep 18, 2023**

Client Sample ID			BH1	<sup>G01</sup> BH2	BH3	BH4
Sample Matrix	LOR	Unit	Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044906	S23-Se0044907	S23-Se0044908	S23-Se0044909
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	73	73	81	76
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH1	<sup>G01</sup> BH2	BH3	BH4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044906	S23-Se0044907	S23-Se0044908	S23-Se0044909
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	145	118	112	108
p-Terphenyl-d14 (surr.)	1	%	139	128	107	105
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1	0.2	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5	0.06	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.10	< 0.5	0.30	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 10	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.1	< 0.5	0.3	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5	0.06	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.1	< 1	0.56	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 1	0.2	< 0.1
Dibutylchloroendate (surr.)	1	%	124	90	117	127
Tetrachloro-m-xylene (surr.)	1	%	146	140	109	107
<b>Organophosphorus Pesticides</b>						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 5	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2

Client Sample ID			BH1	<sup>G01</sup> BH2	BH3	BH4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044906	S23-Se0044907	S23-Se0044908	S23-Se0044909
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Organophosphorus Pesticides</b>						
Dimethoate	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 5	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 5	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	143	113	120	120
<b>Polychlorinated Biphenyls</b>						
Aroclor-1016	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	124	90	117	127
Tetrachloro-m-xylene (surr.)	1	%	146	140	109	107
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			BH1	<sup>G01</sup> BH2	BH3	BH4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044906	S23-Se0044907	S23-Se0044908	S23-Se0044909
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 1	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 1	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	0.9	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	130	108	100	96
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	11	7.2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	1.0	< 0.4	< 0.4
Chromium	5	mg/kg	5.9	6.4	7.4	10
Copper	5	mg/kg	12	22	6.1	7.3
Lead	5	mg/kg	22	37	9.3	9.4
Mercury	0.1	mg/kg	1.1	7.0	0.9	0.5
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	25	54	15	16
<b>Sample Properties</b>						
% Moisture	1	%	12	8.5	5.8	1.1
% Clay	2.5	%	-	-	-	2.9
Conductivity (1:5 aqueous extract at 25 °C as rec.)	10	uS/cm	-	-	-	< 10
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	-	-	-	6.0
<b>Cation Exchange Capacity</b>						
Cation Exchange Capacity*	0.5	meq/100g	-	-	-	4.6

Client Sample ID			BH5	BH6	BH7	BD1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044910	S23-Se0044911	S23-Se0044912	S23-Se0044913
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-

Client Sample ID			BH5	BH6	BH7	BD1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044910	S23-Se0044911	S23-Se0044912	S23-Se0044913
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	82	78	112	-
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	105	82	107	-
p-Terphenyl-d14 (surr.)	1	%	103	78	104	-
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	0.1	mg/kg	< 0.1	0.7	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	0.12	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-

Client Sample ID			BH5	BH6	BH7	BD1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044910	S23-Se0044911	S23-Se0044912	S23-Se0044913
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Organochlorine Pesticides</b>						
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.12	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	0.82	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.7	< 0.1	-
Dibutylchloroendate (surr.)	1	%	121	90	124	-
Tetrachloro-m-xylene (surr.)	1	%	103	80	105	-
<b>Organophosphorus Pesticides</b>						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Coumaphos	2	mg/kg	< 2	< 2	< 2	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Monocrotophos	2	mg/kg	< 2	< 2	< 2	-
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Omethoate	2	mg/kg	< 2	< 2	< 2	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	113	85	110	-



Client Sample ID			BH5	BH6	BH7	BD1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Se0044910	S23-Se0044911	S23-Se0044912	S23-Se0044913
Date Sampled			Sep 18, 2023	Sep 18, 2023	Sep 18, 2023	Sep 18, 2023
Test/Reference	LOR	Unit				
<b>Polychlorinated Biphenyls</b>						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchloroendate (surr.)	1	%	121	90	124	-
Tetrachloro-m-xylene (surr.)	1	%	103	80	105	-
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenol-d6 (surr.)	1	%	92	72	96	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	2.4	< 2	2.2	28
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	6.5	11	8.1
Copper	5	mg/kg	< 5	5.7	9.2	13
Lead	5	mg/kg	7.9	8.6	9.6	24
Mercury	0.1	mg/kg	0.5	0.9	0.7	2.4
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	13	19	18	37
<b>Sample Properties</b>						
% Moisture	1	%	6.8	6.7	8.2	12

Client Sample ID			<b>EIL BACKGROUND D</b>	<b>TRIP SPIKE</b>	<b>TRIP BLANK</b>
<b>Sample Matrix</b>			<b>Soil</b>	<b>Trip Spike (solid)</b>	<b>Trip Blank (solid)</b>
<b>Eurofins Sample No.</b>			<b>S23-Se0044914</b>	<b>S23-Se0044915</b>	<b>S23-Se0044916</b>
<b>Date Sampled</b>			<b>Sep 18, 2023</b>	<b>Sep 18, 2023</b>	<b>Sep 18, 2023</b>
Test/Reference	LOR	Unit			
<b>Total Recoverable Hydrocarbons</b>					
TRH C6-C9	20	mg/kg	-	-	< 20
TRH C6-C10	20	mg/kg	-	-	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	-	-	< 20
<b>BTEX</b>					
Benzene	0.1	mg/kg	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	89
<b>Heavy Metals</b>					
Arsenic	2	mg/kg	< 2	-	-
Cadmium	0.4	mg/kg	1.0	-	-
Chromium	5	mg/kg	< 5	-	-
Copper	5	mg/kg	< 5	-	-
Lead	5	mg/kg	7.1	-	-
Mercury	0.1	mg/kg	2.5	-	-
Nickel	5	mg/kg	< 5	-	-
Zinc	5	mg/kg	15	-	-
<b>Sample Properties</b>					
% Moisture	1	%	9.1	-	-
<b>Total Recoverable Hydrocarbons</b>					
TRH C6-C10	1	%	-	100	-
Naphthalene <sup>N02</sup>	0.5	mg/kg	-	-	< 0.5
<b>Total Recoverable Hydrocarbons</b>					
Naphthalene	1	%	-	89	-
TRH C6-C9	1	%	-	100	-
<b>BTEX</b>					
Benzene	1	%	-	100	-
Ethylbenzene	1	%	-	100	-
m&p-Xylenes	1	%	-	100	-
o-Xylene	1	%	-	100	-
Toluene	1	%	-	100	-
Xylenes - Total	1	%	-	100	-
4-Bromofluorobenzene (surr.)	1	%	-	91	-

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Sep 22, 2023	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Sep 22, 2023	14 Days
Total Recoverable Hydrocarbons - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Sep 22, 2023	14 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Sydney	Sep 22, 2023	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Sep 22, 2023	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Sep 22, 2023	14 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Sep 22, 2023	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Sep 22, 2023	14 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Sep 22, 2023	28 Days
Eurofins Suite B15			
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Sep 22, 2023	14 Days
Organophosphorus Pesticides - Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS	Sydney	Sep 22, 2023	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Sep 22, 2023	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Sep 20, 2023	14 Days
% Clay - Method: LTM-GEN-7040 Percentage clay, silt and sand by Hydrometer	Brisbane	Sep 26, 2023	14 Days
pH (1:5 Aqueous extract at 25 °C as rec.) - Method: LTM-GEN-7090 pH by ISE	Sydney	Sep 22, 2023	7 Days
Conductivity (1:5 aqueous extract at 25 °C as rec.) - Method: LTM-INO-4030 Conductivity	Sydney	Sep 22, 2023	7 Days
Cation Exchange Capacity - Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage	Melbourne	Sep 27, 2023	28 Days

<b>Melbourne</b> 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	<b>Geelong</b> 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	<b>Sydney</b> 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	<b>Canberra</b> Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	<b>Brisbane</b> 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	<b>Newcastle</b> 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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<b>Perth</b> 46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370	<b>Auckland</b> 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	<b>Christchurch</b> 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	<b>Tauranga</b> 1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402
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**Company Name:** Geotesta Pty Ltd (NSW)  
**Address:** Unit 6, 20/22 Foundry Road  
 Seven Hills  
 NSW 2147

**Order No.:**  
**Report #:** 1027498  
**Phone:** 1300852 216  
**Fax:**

**Received:** Sep 18, 2023 5:15 PM  
**Due:** Sep 25, 2023  
**Priority:** 5 Day  
**Contact Name:** Victor Kirpichnikov (GEOTESTA)

**Project Name:** MANLY WARRINGAH GYMNASISTICS NEW FACILITY PROJECT  
**Project ID:** NE1762

**Eurofins Analytical Services Manager : Asim Khan**

Sample Detail						% Clay	Asbestos - WA guidelines	pH (1:5 Aqueous extract at 25 °C as rec.)	Metals M8	Eurofins Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>												X			
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>							X	X	X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>						X									
<b>External Laboratory</b>															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	BH1	Sep 18, 2023		Soil	S23-Se0044906		X		X	X		X			
2	BH2	Sep 18, 2023		Soil	S23-Se0044907		X		X	X		X			
3	BH3	Sep 18, 2023		Soil	S23-Se0044908		X		X	X		X			
4	BH4	Sep 18, 2023		Soil	S23-Se0044909	X	X	X	X	X	X	X	X		
5	BH5	Sep 18, 2023		Soil	S23-Se0044910		X		X	X		X			
6	BH6	Sep 18, 2023		Soil	S23-Se0044911		X		X	X		X			
7	BH7	Sep 18, 2023		Soil	S23-Se0044912		X		X	X		X			
8	BD1	Sep 18, 2023		Soil	S23-Se0044913				X	X					
9	EIL BACKGROUND	Sep 18, 2023		Soil	S23-Se0044914				X	X					
10	TRIP SPIKE	Sep 18, 2023		Trip Spike	S23-Se0044915										X

<b>Melbourne</b> 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	<b>Geelong</b> 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	<b>Sydney</b> 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	<b>Canberra</b> Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	<b>Brisbane</b> 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	<b>Newcastle</b> 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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<b>Auckland</b> 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	<b>Christchurch</b> 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	<b>Tauranga</b> 1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402
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 web: www.eurofins.com.au  
 email: EnviroSales@eurofins.com

<b>Company Name:</b>	Geotesta Pty Ltd (NSW)	<b>Order No.:</b>		<b>Received:</b>	Sep 18, 2023 5:15 PM
<b>Address:</b>	Unit 6, 20/22 Foundry Road Seven Hills NSW 2147	<b>Report #:</b>	1027498	<b>Due:</b>	Sep 25, 2023
		<b>Phone:</b>	1300852 216	<b>Priority:</b>	5 Day
		<b>Fax:</b>		<b>Contact Name:</b>	Victor Kirpichnikov (GEOTESTA)
<b>Project Name:</b>	MANLY WARRINGAH GYMNASSTICS NEW FACILITY PROJECT				
<b>Project ID:</b>	NE1762				
<b>Eurofins Analytical Services Manager : Asim Khan</b>					

Sample Detail				% Clay	Asbestos - WA guidelines	pH (1:5 Aqueous extract at 25 °C as rec.)	Metals M8	Eurofins Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>										X			
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>					X	X	X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>				X									
			(solid)										
11	TRIP BLANK	Sep 18, 2023	Trip Blank (solid)									X	
<b>Test Counts</b>				1	7	1	2	7	9	1	7	1	1

## Internal Quality Control Review and Glossary

### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

### Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

### Units

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres
<b>CFU:</b> Colony forming unit		

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

### QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>BTEX</b>							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Organophosphorus Pesticides</b>							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
<b>Method Blank</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	



Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Total PCB*	mg/kg	< 0.1		0.1	Pass	
<b>Method Blank</b>						
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5		0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1		1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1		1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5		0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1		1	Pass	
Pentachlorophenol	mg/kg	< 1		1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10		10	Pass	
<b>Method Blank</b>						
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20		20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5		5	Pass	
2-Nitrophenol	mg/kg	< 1		1	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5		0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5		5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2		0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4		0.4	Pass	
4-Nitrophenol	mg/kg	< 5		5	Pass	
Dinoseb	mg/kg	< 20		20	Pass	
Phenol	mg/kg	< 0.5		0.5	Pass	
<b>Method Blank</b>						
<b>Heavy Metals</b>						
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.1		0.1	Pass	
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
<b>Method Blank</b>						
Conductivity (1:5 aqueous extract at 25 °C as rec.)	uS/cm	< 10		10	Pass	
<b>Method Blank</b>						
<b>Cation Exchange Capacity</b>						
Cation Exchange Capacity*	meq/100g	< 0.5		0.5	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	%	78		70-130	Pass	
TRH C10-C14	%	81		70-130	Pass	
TRH C6-C10	%	79		70-130	Pass	
TRH >C10-C16	%	82		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>BTEX</b>						
Benzene	%	78		70-130	Pass	
Toluene	%	77		70-130	Pass	
Ethylbenzene	%	77		70-130	Pass	
m&p-Xylenes	%	79		70-130	Pass	
o-Xylene	%	84		70-130	Pass	
Xylenes - Total*	%	81		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>						

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	77			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	105			70-130	Pass	
Acenaphthylene	%	106			70-130	Pass	
Anthracene	%	102			70-130	Pass	
Benz(a)anthracene	%	101			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&i)fluoranthene	%	94			70-130	Pass	
Benzo(g,h,i)perylene	%	97			70-130	Pass	
Benzo(k)fluoranthene	%	106			70-130	Pass	
Chrysene	%	107			70-130	Pass	
Dibenz(a,h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	102			70-130	Pass	
Fluorene	%	103			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	95			70-130	Pass	
Naphthalene	%	104			70-130	Pass	
Phenanthrene	%	97			70-130	Pass	
Pyrene	%	104			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	89			70-130	Pass	
4,4'-DDD	%	86			70-130	Pass	
4,4'-DDE	%	92			70-130	Pass	
4,4'-DDT	%	101			70-130	Pass	
a-HCH	%	91			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-HCH	%	88			70-130	Pass	
d-HCH	%	91			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	86			70-130	Pass	
Endosulfan II	%	86			70-130	Pass	
Endosulfan sulphate	%	92			70-130	Pass	
Endrin	%	98			70-130	Pass	
Endrin aldehyde	%	96			70-130	Pass	
Endrin ketone	%	85			70-130	Pass	
g-HCH (Lindane)	%	93			70-130	Pass	
Heptachlor	%	98			70-130	Pass	
Heptachlor epoxide	%	90			70-130	Pass	
Hexachlorobenzene	%	90			70-130	Pass	
Methoxychlor	%	92			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organophosphorus Pesticides</b>							
Diazinon	%	109			70-130	Pass	
Dimethoate	%	89			70-130	Pass	
Ethion	%	113			70-130	Pass	
Fenitrothion	%	81			70-130	Pass	
Methyl parathion	%	101			70-130	Pass	
Mevinphos	%	96			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1016	%	87			70-130	Pass	
Aroclor-1260	%	86			70-130	Pass	
<b>LCS - % Recovery</b>							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Phenols (Halogenated)</b>								
2-Chlorophenol	%	103			25-140	Pass		
2,4-Dichlorophenol	%	100			25-140	Pass		
2,4,5-Trichlorophenol	%	91			25-140	Pass		
2,4,6-Trichlorophenol	%	98			25-140	Pass		
2,6-Dichlorophenol	%	104			25-140	Pass		
4-Chloro-3-methylphenol	%	99			25-140	Pass		
Pentachlorophenol	%	83			25-140	Pass		
Tetrachlorophenols - Total	%	96			25-140	Pass		
<b>LCS - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>								
2-Cyclohexyl-4,6-dinitrophenol	%	87			25-140	Pass		
2-Methyl-4,6-dinitrophenol	%	80			25-140	Pass		
2-Nitrophenol	%	101			25-140	Pass		
2,4-Dimethylphenol	%	101			25-140	Pass		
2,4-Dinitrophenol	%	76			25-140	Pass		
2-Methylphenol (o-Cresol)	%	95			25-140	Pass		
3&4-Methylphenol (m&p-Cresol)	%	98			25-140	Pass		
4-Nitrophenol	%	89			25-140	Pass		
Dinoseb	%	90			25-140	Pass		
Phenol	%	102			25-140	Pass		
<b>LCS - % Recovery</b>								
<b>Heavy Metals</b>								
Arsenic	%	112			80-120	Pass		
Cadmium	%	115			80-120	Pass		
Chromium	%	114			80-120	Pass		
Copper	%	114			80-120	Pass		
Lead	%	111			80-120	Pass		
Mercury	%	119			80-120	Pass		
Nickel	%	113			80-120	Pass		
Zinc	%	116			80-120	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C10-C14	N23-Se0038453	NCP	%	72		70-130	Pass	
TRH >C10-C16	S23-Se0044297	NCP	%	97		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Benz(a)anthracene	N23-Se0041543	NCP	%	86		70-130	Pass	
Benzo(a)pyrene	N23-Se0041543	NCP	%	73		70-130	Pass	
Benzo(k)fluoranthene	N23-Se0041543	NCP	%	103		70-130	Pass	
Chrysene	N23-Se0041543	NCP	%	109		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	N23-Se0041543	NCP	%	107		70-130	Pass	
4,4'-DDD	N23-Se0041543	NCP	%	91		70-130	Pass	
4,4'-DDE	S23-Se0041457	NCP	%	85		70-130	Pass	
4,4'-DDT	S23-Se0041457	NCP	%	99		70-130	Pass	
a-HCH	S23-Se0041457	NCP	%	80		70-130	Pass	
Aldrin	N23-Se0041543	NCP	%	72		70-130	Pass	
b-HCH	S23-Se0041457	NCP	%	87		70-130	Pass	
d-HCH	S23-Se0041457	NCP	%	84		70-130	Pass	
Dieldrin	N23-Se0041543	NCP	%	78		70-130	Pass	
Endosulfan I	S23-Se0041457	NCP	%	90		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	N23-Se0041543	NCP	%	115		70-130	Pass	
Endosulfan sulphate	N23-Se0041543	NCP	%	81		70-130	Pass	
Endrin	S23-Se0041457	NCP	%	119		70-130	Pass	
Endrin aldehyde	S23-Se0041457	NCP	%	89		70-130	Pass	
Endrin ketone	S23-Se0041457	NCP	%	81		70-130	Pass	
g-HCH (Lindane)	S23-Se0041457	NCP	%	88		70-130	Pass	
Heptachlor	S23-Se0041457	NCP	%	94		70-130	Pass	
Heptachlor epoxide	N23-Se0041543	NCP	%	98		70-130	Pass	
Hexachlorobenzene	S23-Se0041457	NCP	%	84		70-130	Pass	
Methoxychlor	S23-Se0041457	NCP	%	74		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organophosphorus Pesticides</b>				Result 1				
Diazinon	N23-Se0041543	NCP	%	111		70-130	Pass	
Dimethoate	N23-Se0041543	NCP	%	87		70-130	Pass	
Methyl parathion	N23-Se0041543	NCP	%	74		70-130	Pass	
Mevinphos	N23-Se0041543	NCP	%	92		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polychlorinated Biphenyls</b>				Result 1				
Aroclor-1016	S23-Se0041457	NCP	%	78		70-130	Pass	
Aroclor-1260	S23-Se0041457	NCP	%	102		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2,4-Dichlorophenol	N23-Se0041543	NCP	%	93		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	S23-Se0038656	NCP	%	121		75-125	Pass	
Cadmium	S23-Se0038656	NCP	%	120		75-125	Pass	
Chromium	S23-Se0038656	NCP	%	116		75-125	Pass	
Copper	N23-Se0038906	NCP	%	86		75-125	Pass	
Lead	S23-Se0038656	NCP	%	110		75-125	Pass	
Mercury	S23-Se0038656	NCP	%	104		75-125	Pass	
Nickel	S23-Se0038656	NCP	%	84		75-125	Pass	
Zinc	N23-Se0038906	NCP	%	101		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	S23-Se0044910	CP	%	106		70-130	Pass	
Acenaphthylene	S23-Se0044910	CP	%	106		70-130	Pass	
Anthracene	S23-Se0044910	CP	%	102		70-130	Pass	
Benzo(g,h,i)perylene	S23-Se0044910	CP	%	94		70-130	Pass	
Dibenz(a,h)anthracene	S23-Se0044910	CP	%	100		70-130	Pass	
Fluoranthene	S23-Se0044910	CP	%	104		70-130	Pass	
Fluorene	S23-Se0044910	CP	%	106		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S23-Se0044910	CP	%	99		70-130	Pass	
Naphthalene	S23-Se0044910	CP	%	105		70-130	Pass	
Phenanthrene	S23-Se0044910	CP	%	96		70-130	Pass	
Pyrene	S23-Se0044910	CP	%	105		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	S23-Se0044910	CP	%	101		30-130	Pass	
2,4,5-Trichlorophenol	S23-Se0044910	CP	%	93		30-130	Pass	
2,4,6-Trichlorophenol	S23-Se0044910	CP	%	100		30-130	Pass	
2,6-Dichlorophenol	S23-Se0044910	CP	%	106		30-130	Pass	
4-Chloro-3-methylphenol	S23-Se0044910	CP	%	102		30-130	Pass	
Pentachlorophenol	S23-Se0044910	CP	%	94		30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tetrachlorophenols - Total	S23-Se0044910	CP	%	103			30-130	Pass	
<b>Spike - % Recovery</b>									
<b>Phenols (non-Halogenated)</b>				Result 1					
2-Cyclohexyl-4,6-dinitrophenol	S23-Se0044910	CP	%	107			30-130	Pass	
2-Methyl-4,6-dinitrophenol	S23-Se0044910	CP	%	93			30-130	Pass	
2-Nitrophenol	S23-Se0044910	CP	%	106			30-130	Pass	
2,4-Dimethylphenol	S23-Se0044910	CP	%	102			30-130	Pass	
2,4-Dinitrophenol	S23-Se0044910	CP	%	78			70-130	Pass	
2-Methylphenol (o-Cresol)	S23-Se0044910	CP	%	103			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S23-Se0044910	CP	%	99			30-130	Pass	
4-Nitrophenol	S23-Se0044910	CP	%	97			30-130	Pass	
Dinoseb	S23-Se0044910	CP	%	102			30-130	Pass	
Phenol	S23-Se0044910	CP	%	104			30-130	Pass	
<b>Spike - % Recovery</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1					
TRH C6-C9	S23-Se0050493	NCP	%	76			70-130	Pass	
TRH C6-C10	S23-Se0050493	NCP	%	76			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>BTEX</b>				Result 1					
Benzene	S23-Se0050493	NCP	%	82			70-130	Pass	
Toluene	S23-Se0050493	NCP	%	70			70-130	Pass	
Ethylbenzene	S23-Se0050493	NCP	%	86			70-130	Pass	
m&p-Xylenes	S23-Se0050493	NCP	%	85			70-130	Pass	
o-Xylene	S23-Se0050493	NCP	%	84			70-130	Pass	
Xylenes - Total*	S23-Se0050493	NCP	%	85			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1					
Naphthalene	S23-Se0050493	NCP	%	74			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C6-C9	N23-Se0038451	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	N23-Se0038451	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
<b>Duplicate</b>									
<b>BTEX</b>				Result 1	Result 2	RPD			
Benzene	N23-Se0038451	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N23-Se0038451	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N23-Se0038451	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N23-Se0038451	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N23-Se0038451	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N23-Se0038451	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>				Result 1	Result 2	RPD			
Naphthalene	N23-Se0038451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
<b>Duplicate</b>									
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD			
Toxaphene	S23-Se0031600	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
<b>Duplicate</b>									
<b>Heavy Metals</b>				Result 1	Result 2	RPD			
Arsenic	S23-Se0044908	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S23-Se0044908	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Se0044908	CP	mg/kg	7.4	7.2	2.7	30%	Pass	
Copper	S23-Se0044908	CP	mg/kg	6.1	5.7	5.5	30%	Pass	
Lead	S23-Se0044908	CP	mg/kg	9.3	9.1	2.2	30%	Pass	

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Mercury	S23-Se0044908	CP	mg/kg	0.9	0.9	1.8	30%	Pass
Nickel	S23-Se0044908	CP	mg/kg	< 5	< 5	<1	30%	Pass
Zinc	S23-Se0044908	CP	mg/kg	15	14	4.5	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	S23-Se0044909	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S23-Se0044909	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S23-Se0044909	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	S23-Se0044909	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S23-Se0044909	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S23-Se0044909	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S23-Se0044909	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	S23-Se0044909	CP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	S23-Se0044909	CP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	S23-Se0044909	CP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	S23-Se0044909	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	S23-Se0044909	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	S23-Se0044909	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	S23-Se0044909	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	S23-Se0044909	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	S23-Se0044909	CP	mg/kg	< 10	< 10	<1	30%	Pass

<b>Duplicate</b>				Result 1	Result 2	RPD		
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	S23-Se0044909	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	S23-Se0044909	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	S23-Se0044909	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	S23-Se0044909	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	S23-Se0044909	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	S23-Se0044909	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	S23-Se0044909	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	S23-Se0044909	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	S23-Se0044909	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
<b>Duplicate</b>				Result 1	Result 2	RPD		
Conductivity (1:5 aqueous extract at 25 °C as rec.)	S23-Se0038656	NCP	uS/cm	30	31	5.1	30%	Pass
pH (1:5 Aqueous extract at 25 °C as rec.)	S23-Se0038656	NCP	pH Units	8.3	8.3	<1	30%	Pass
<b>Duplicate</b>				Result 1	Result 2	RPD		
<b>Cation Exchange Capacity</b>				Result 1	Result 2	RPD		
Cation Exchange Capacity*	S23-Se0051547	NCP	meq/100g	8.2	7.2	13	30%	Pass
<b>Duplicate</b>				Result 1	Result 2	RPD		
<b>Sample Properties</b>				Result 1	Result 2	RPD		
% Moisture	S23-Se0044911	CP	%	6.7	6.6	3.0	30%	Pass



**Comments**
**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Qualifier Codes/Comments**

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

**Authorised by:**

Adam Bateup	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Inorganic
Laxman Dias	Senior Analyst-Asbestos
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic



**Glenn Jackson**  
**Managing Director**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**Geotesta Pty Ltd (NSW)**  
**Unit 6, 20/22 Foundry Road**  
**Seven Hills**  
**NSW 2147**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025—Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** Victor Kirpichnikov (GEOTESTA)  
**Report** 1027498-AID  
**Project Name** MANLY WARRINGAH GYMNASTICS NEW FACILITY PROJECT  
**Project ID** NE1762  
**Received Date** Sep 18, 2023  
**Date Reported** Sep 28, 2023

### Methodology:

Asbestos Fibre  
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

*NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*

Unknown Mineral  
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

*NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*

Subsampling Soil  
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

*NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*

Bonded asbestos-  
 containing material  
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

*NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

*NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

**Project Name** MANLY WARRINGAH GYMNASTICS NEW FACILITY PROJECT  
**Project ID** NE1762  
**Date Sampled** Sep 18, 2023  
**Report** 1027498-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH1	23-Se0044906	Sep 18, 2023	Approximate Sample 425g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH2	23-Se0044907	Sep 18, 2023	Approximate Sample 590g Sample consisted of: Brown fine-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH3	23-Se0044908	Sep 18, 2023	Approximate Sample 597g Sample consisted of: Brown fine-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH4	23-Se0044909	Sep 18, 2023	Approximate Sample 637g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH5	23-Se0044910	Sep 18, 2023	Approximate Sample 610g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH6	23-Se0044911	Sep 18, 2023	Approximate Sample 673g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH7	23-Se0044912	Sep 18, 2023	Approximate Sample 765g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Asbestos - LTM-ASB-8020	Sydney	Sep 20, 2023	Indefinite

<b>Melbourne</b> 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	<b>Geelong</b> 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	<b>Sydney</b> 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	<b>Canberra</b> Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	<b>Brisbane</b> 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	<b>Newcastle</b> 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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<b>Perth</b> 46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370
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<b>Auckland</b> 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	<b>Christchurch</b> 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	<b>Tauranga</b> 1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402
---	--	--

**Company Name:** Geotesta Pty Ltd (NSW)  
**Address:** Unit 6, 20/22 Foundry Road  
 Seven Hills  
 NSW 2147

**Order No.:**  
**Report #:** 1027498  
**Phone:** 1300852 216  
**Fax:**

**Received:** Sep 18, 2023 5:15 PM  
**Due:** Sep 25, 2023  
**Priority:** 5 Day  
**Contact Name:** Victor Kirpichnikov (GEOTESTA)

**Project Name:** MANLY WARRINGAH GYMNASISTICS NEW FACILITY PROJECT  
**Project ID:** NE1762

**Eurofins Analytical Services Manager : Asim Khan**

Sample Detail						% Clay	Asbestos - WA guidelines	pH (1:5 Aqueous extract at 25 °C as rec.)	Metals M8	Eurofins Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>												X			
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>							X	X	X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>						X									
<b>External Laboratory</b>															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID										
1	BH1	Sep 18, 2023		Soil	S23-Se0044906		X			X	X		X		
2	BH2	Sep 18, 2023		Soil	S23-Se0044907		X			X	X		X		
3	BH3	Sep 18, 2023		Soil	S23-Se0044908		X			X	X		X		
4	BH4	Sep 18, 2023		Soil	S23-Se0044909	X	X	X		X	X	X	X		
5	BH5	Sep 18, 2023		Soil	S23-Se0044910		X			X	X		X		
6	BH6	Sep 18, 2023		Soil	S23-Se0044911		X			X	X		X		
7	BH7	Sep 18, 2023		Soil	S23-Se0044912		X			X	X		X		
8	BD1	Sep 18, 2023		Soil	S23-Se0044913				X		X				
9	EIL BACKGROUND	Sep 18, 2023		Soil	S23-Se0044914				X		X				
10	TRIP SPIKE	Sep 18, 2023		Trip Spike	S23-Se0044915										X

web: www.eurofins.com.au  
 email: EnviroSales@eurofins.com

<b>Melbourne</b> 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	<b>Geelong</b> 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	<b>Sydney</b> 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	<b>Canberra</b> Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	<b>Brisbane</b> 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	<b>Newcastle</b> 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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<b>Company Name:</b>	Geotesta Pty Ltd (NSW)	<b>Order No.:</b>		<b>Received:</b>	Sep 18, 2023 5:15 PM
<b>Address:</b>	Unit 6, 20/22 Foundry Road Seven Hills NSW 2147	<b>Report #:</b>	1027498	<b>Due:</b>	Sep 25, 2023
		<b>Phone:</b>	1300852 216	<b>Priority:</b>	5 Day
		<b>Fax:</b>		<b>Contact Name:</b>	Victor Kirpichnikov (GEOTESTA)
<b>Project Name:</b>	MANLY WARRINGAH GYMNASSTICS NEW FACILITY PROJECT				
<b>Project ID:</b>	NE1762				
<b>Eurofins Analytical Services Manager : Asim Khan</b>					

Sample Detail				% Clay	Asbestos - WA guidelines	pH (1:5 Aqueous extract at 25 °C as rec.)	Metals M8	Eurofins Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>										X			
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>					X	X	X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>				X									
			(solid)										
11	TRIP BLANK	Sep 18, 2023	Trip Blank (solid)									X	
<b>Test Counts</b>				1	7	1	2	7	9	1	7	1	1

## Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour blue indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

## Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

## Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/field	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

## Calculations

Airborne Fibre Concentration: 
$$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right)$$

Asbestos Content (as asbestos): 
$$\% w/w = \frac{(m \times PA)}{M}$$

Weighted Average (of asbestos): 
$$\%_{WA} = \frac{\sum (m \times PA)_x}{x}$$

## Terms

<b>%asbestos</b>	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (PA)</i> .
<b>ACM</b>	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
<b>AF</b>	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
<b>AFM</b>	Airborne Fibre Monitoring, e.g. by the MFM.
<b>Amosite</b>	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
<b>AS</b>	Australian Standard.
<b>Asbestos Content (as asbestos)</b>	Total % w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
<b>Chrysotile</b>	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
<b>COC</b>	Chain of Custody.
<b>Crocidolite</b>	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
<b>Dry</b>	Sample is dried by heating prior to analysis.
<b>DS</b>	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
<b>FA</b>	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
<b>Fibre Count</b>	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
<b>Fibre ID</b>	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
<b>Friable</b>	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
<b>HSG248</b>	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
<b>HSG264</b>	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
<b>ISO (also ISO/IEC)</b>	International Organization for Standardization / International Electrotechnical Commission.
<b>K Factor</b>	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
<b>LOR</b>	Limit of Reporting.
<b>MFM (also NOHSC:3003)</b>	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
<b>NEPM (also ASC NEPM)</b>	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
<b>Organic</b>	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
<b>PCM</b>	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
<b>PLM</b>	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
<b>Sampling</b>	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
<b>SMF</b>	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
<b>SRA</b>	Sample Receipt Advice.
<b>Trace Analysis</b>	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
<b>UK HSE HSG</b>	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
<b>UMF</b>	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
<b>WA DOH</b>	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
<b>Weighted Average</b>	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% <sub>WA</sub> ).

**Comments**

23-Se0044906: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Asbestos Counter/Identifier:**

Sayeed Abu Senior Analyst-Asbestos

**Authorised by:**

Laxman Dias Senior Analyst-Asbestos



**Glenn Jackson**  
**Managing Director**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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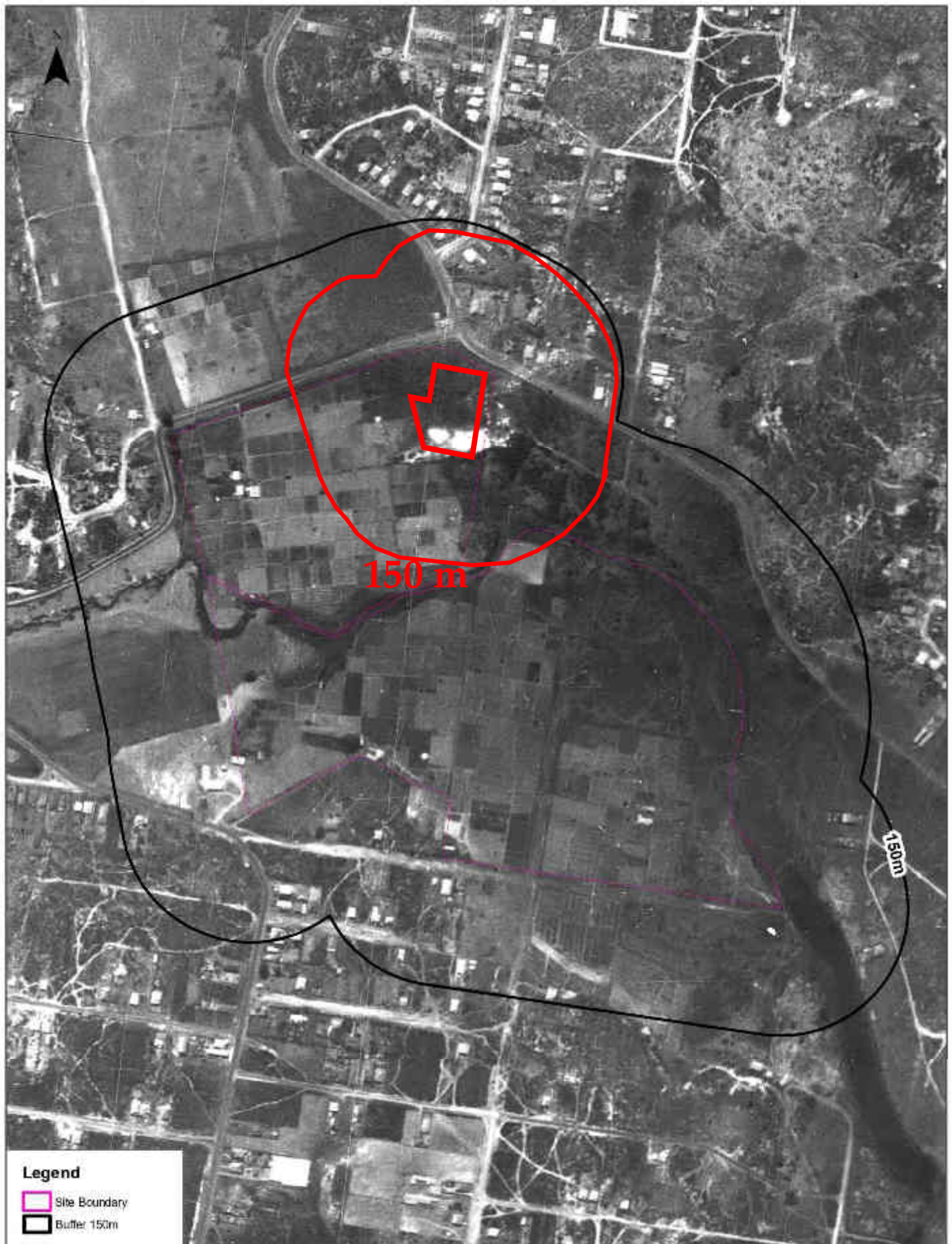


## **Appendix E**



# Historical Imagery

# Aerial Imagery 1930

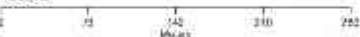
Campbell Parade, Manly Vale, NSW 2093



## Legend

-  Site Boundary
-  Buffer 150m

## Scale



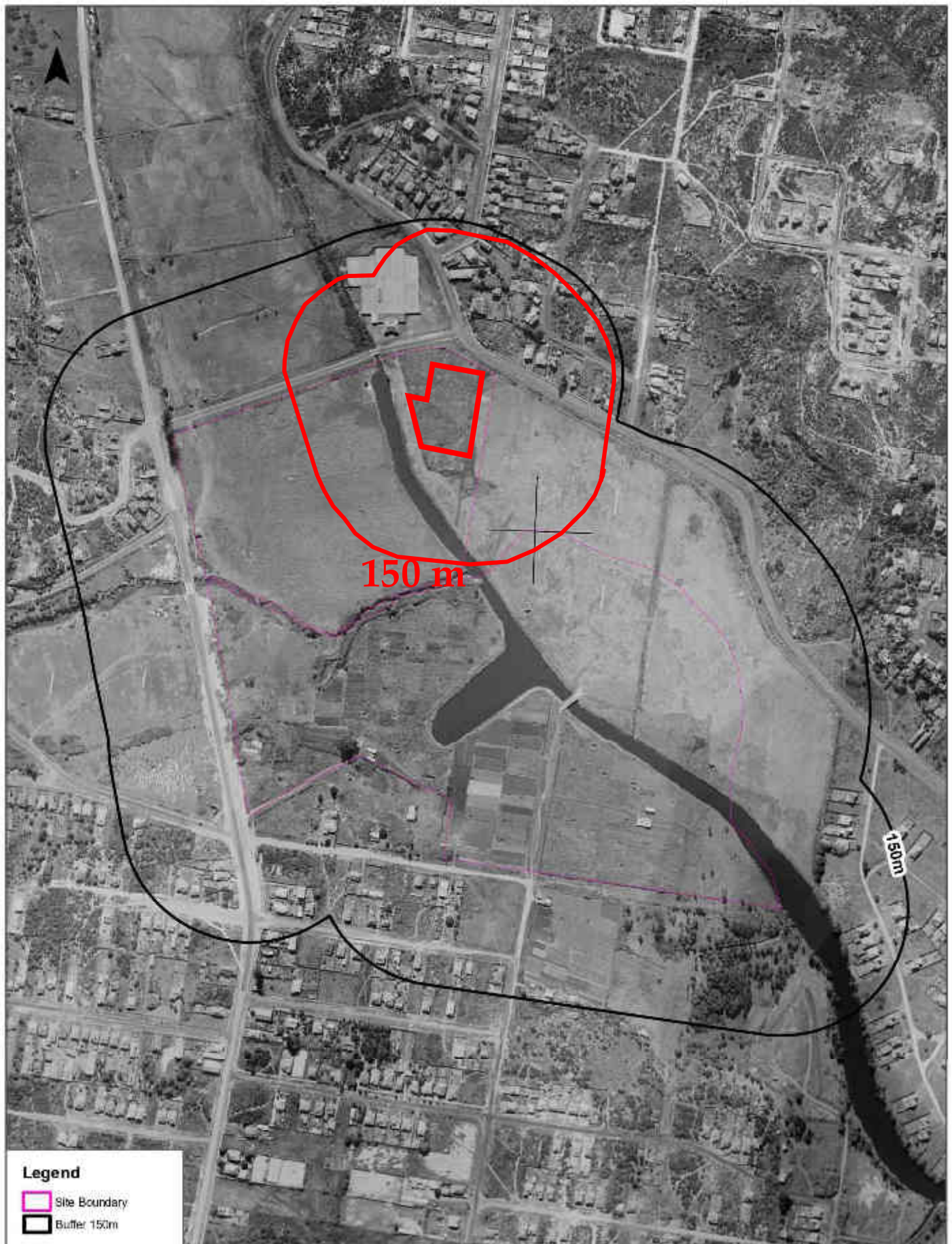
Data Sources: Aerial Imagery:  
© Geoscience Australia

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

# Aerial Imagery 1943

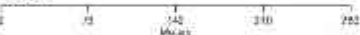
Campbell Parade, Manly Vale, NSW 2093



## Legend

- Site Boundary
- Buffer 150m

Scale



Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 18 September 2023

# Aerial Imagery 1951

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1955, 1956

Campbell Parade, Manly Vale, NSW 2093



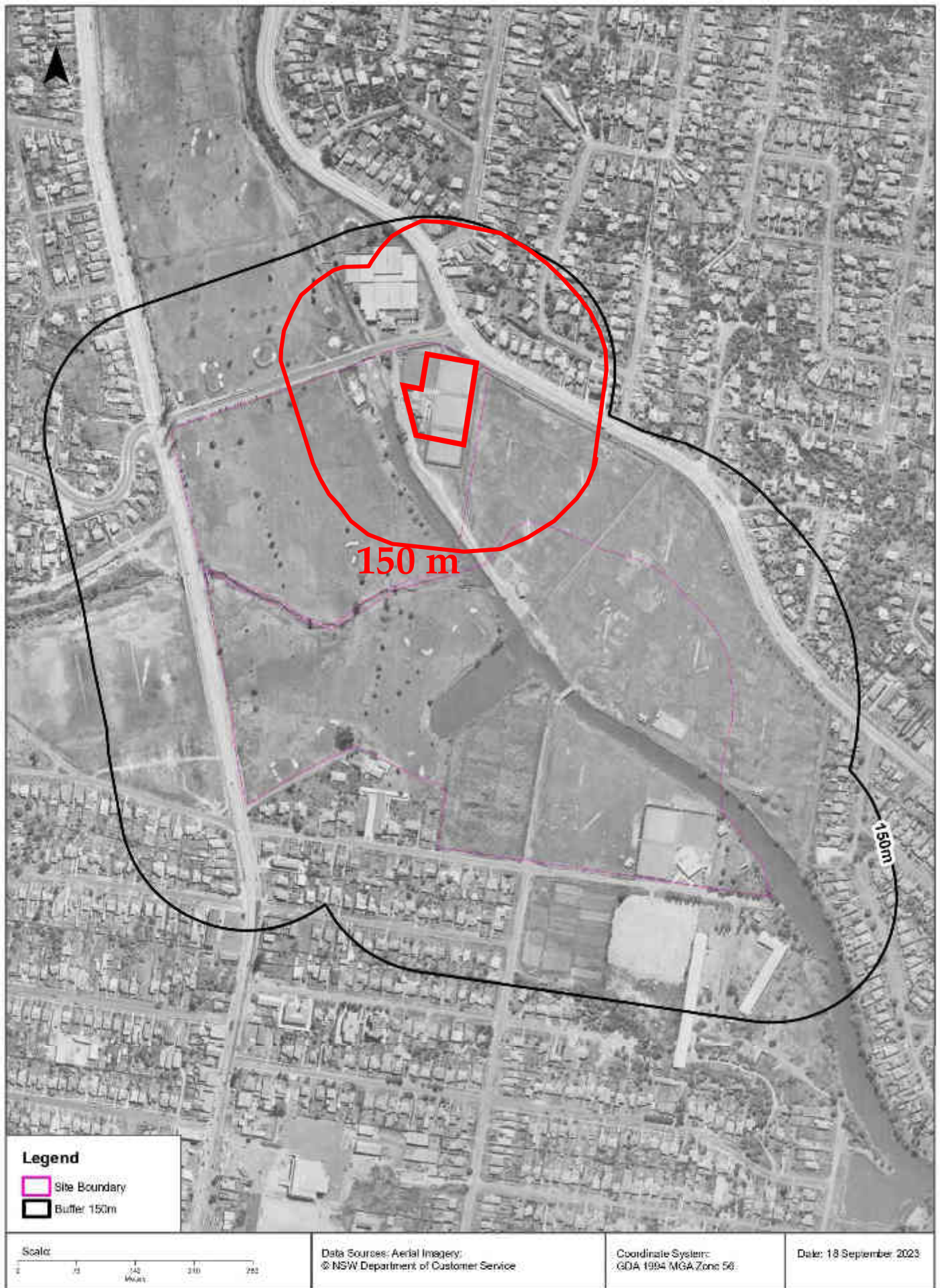
# Aerial Imagery 1961

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1965

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1970

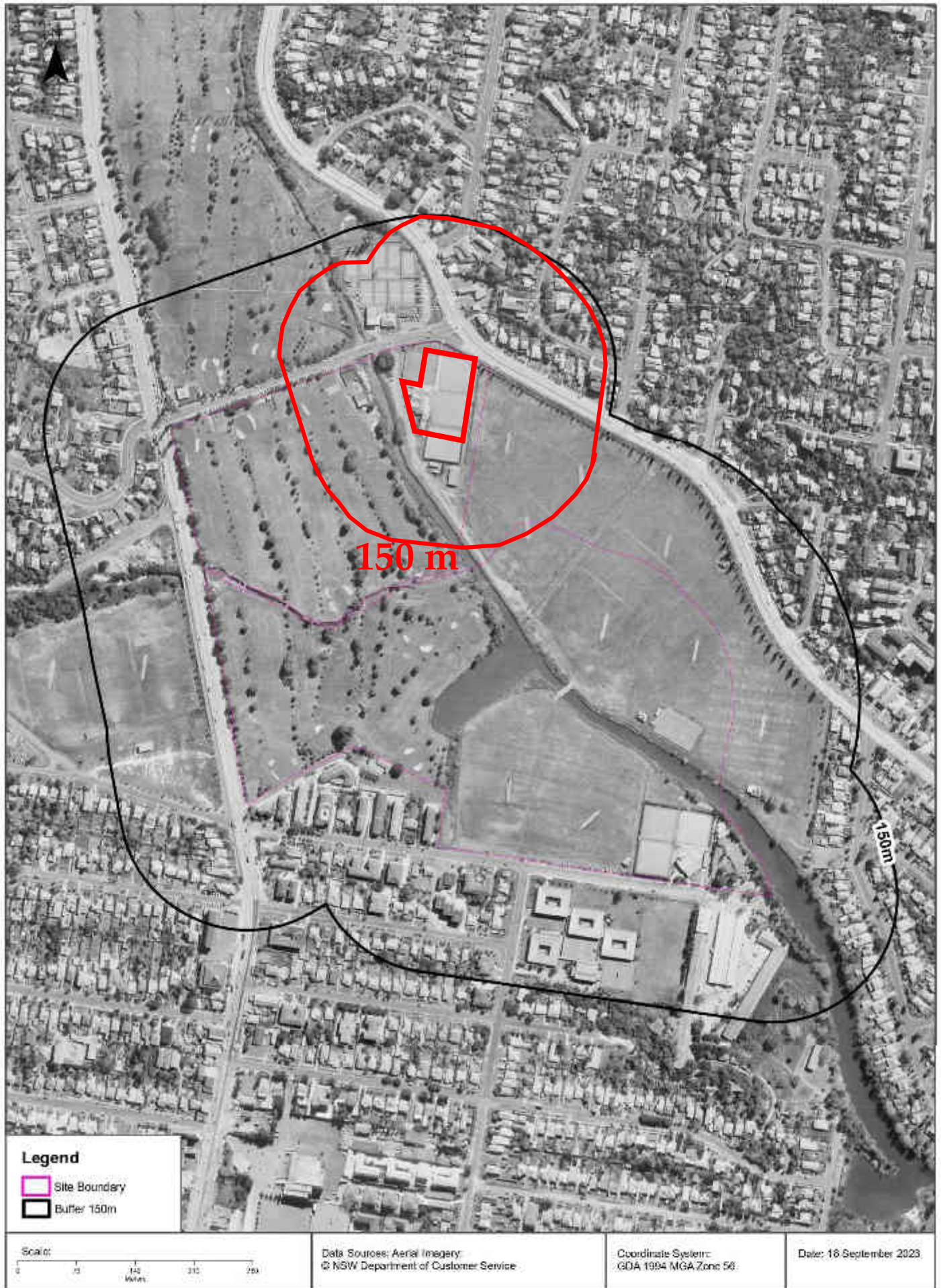
Campbell Parade, Manly Vale, NSW 2093





# Aerial Imagery 1978

Campbell Parade, Manly Vale, NSW 2093



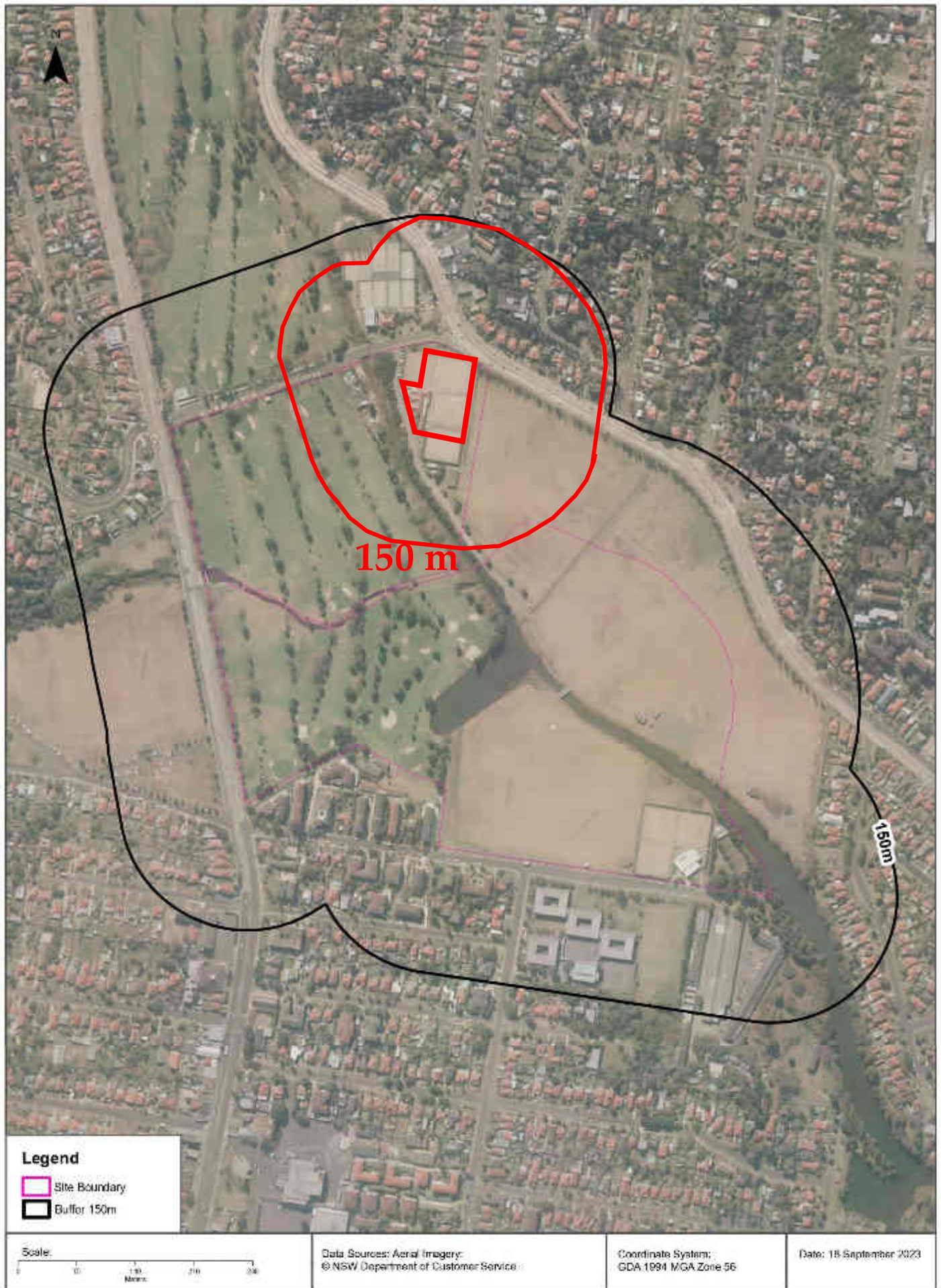
# Aerial Imagery 1982

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1986

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1991

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 1994

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 2000

Campbell Parade, Manly Vale, NSW 2093



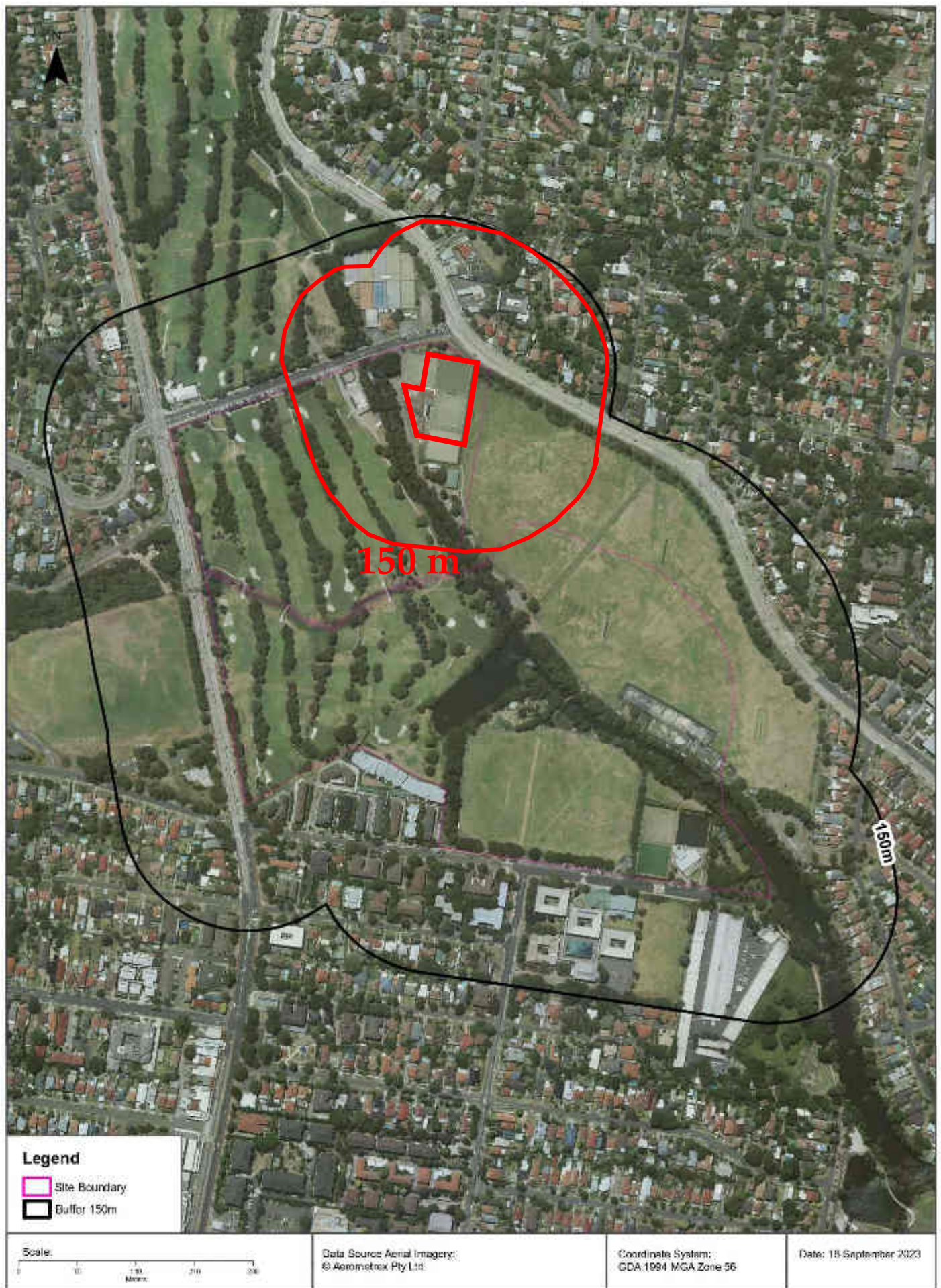
# Aerial Imagery 2007

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 2011

Campbell Parade, Manly Vale, NSW 2093





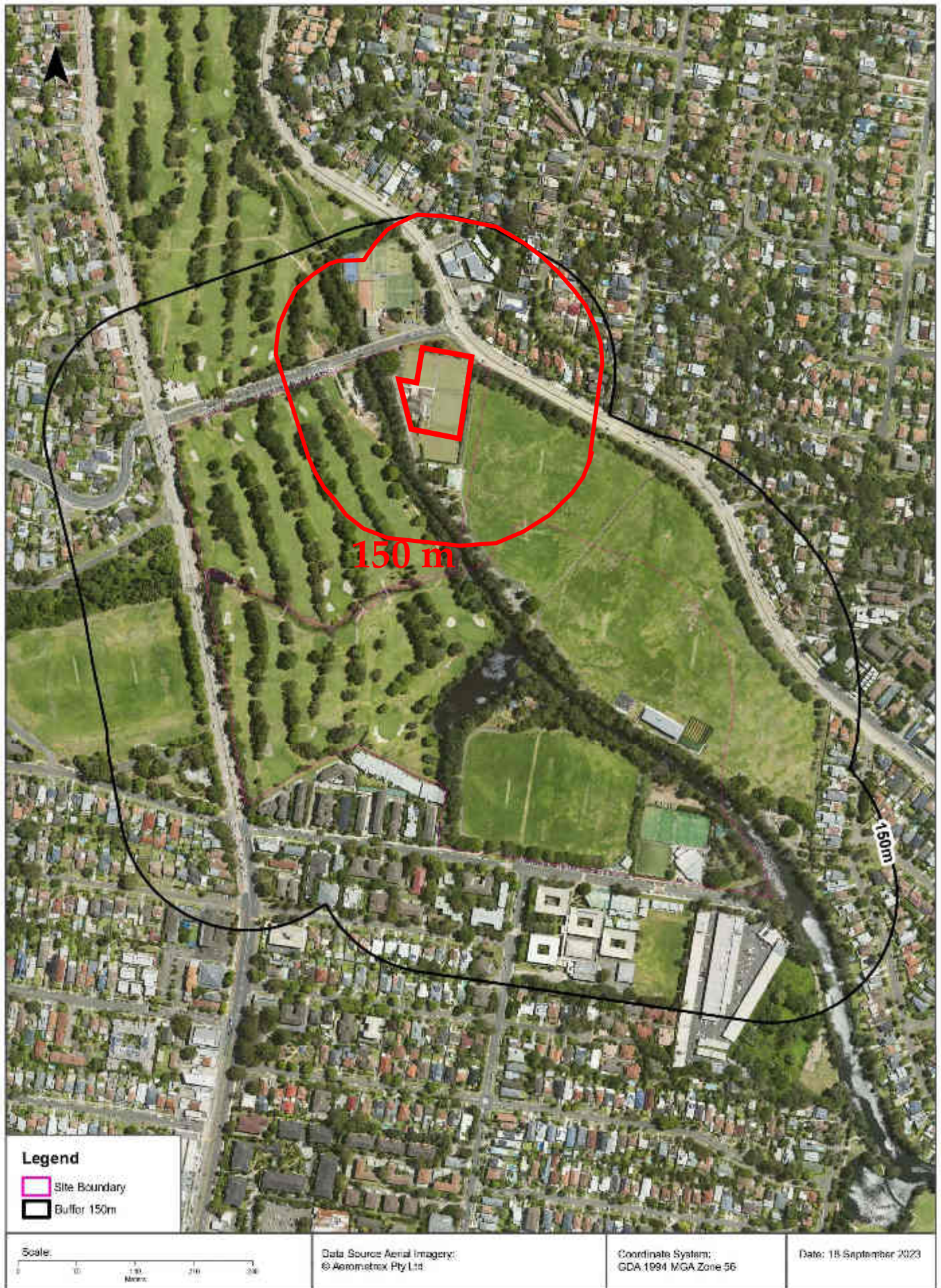
# Aerial Imagery 2016

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 2020

Campbell Parade, Manly Vale, NSW 2093



# Aerial Imagery 2023

Campbell Parade, Manly Vale, NSW 2093



**Appendix F**  
**Clean-Up Notice (S 91 POEO Act) on Warringah  
Golf Club Ltd**

## Notice of Clean Up Action



### Section 91 Protection of the Environment Operations Act 1997

WARRINGAH GOLF CLUB LTD,  
Trading as WARRINGAH GOLF CLUB,  
ACN/ARBN 15000-085-601,  
397 CONDAMINE STREET,  
NORTH MANLY NSW 2100  
FAX

Attention: MR DAVID AIREY

Notice Number: 1004528

Date: 23 February 2001

### **NOTICE OF CLEAN UP ACTION**

Section 91 Protection of the Environment Operations Act 1997

#### **BACKGROUND**

- (a) The EPA is investigating the circumstances leading to the death of a large number of fish in Manly Lagoon, Manly on Tuesday 13 February 2001.
- (b) As a result of the chemical analyses undertaken on water and fish samples collected in Brookvale Creek and Manly Lagoon, the EPA has concluded that the causative agent responsible for the death of the fish was the pesticide ethyl-azinphos.
- (c) The analysis of samples collected by an officer of Warringah Council in the stormwater system located immediately east of the covered concrete work area adjoining the main Warringah Golf Club Limited greenkeeper's shed on Kentwell Road, North Manly has shown very high concentrations of ethyl-azinphos.
- (d) The presence of ethyl-azinphos in the stormwater system described above, including the drains leading from the stormwater pits to Brookvale Creek and in the sediments of Brookvale Creek, has also been confirmed in samples collected by EPA officers on 17 February 2001.
- (e) To prevent the further release of ethyl-azinphos to Brookvale Creek, the EPA requires the following clean-up action to be completed.

#### **DIRECTION TO TAKE CLEAN-UP ACTION**

The Environment Protection Authority directs WARRINGAH GOLF CLUB LTD to take the following clean-up action:

## Notice of Clean Up Action

### Section 91 Protection of the Environment Operations Act 1997

1. By 5 PM on Friday 23 February 2001, effectively block the two drains and culverts leading from stormwater pits to Brookvale Creek located immediately east of the covered concrete work area adjoining the main Warringah Golf Club Limited greenkeeper's shed on Kentwell Road, North Manly;
2. By 5 PM Monday 26 February 2001, completely collect all water, sediment and sludges from the stormwater pits and drains referred to in 1 above;
3. By 5 PM Friday 23 February 2001, remove all soil, to a depth of 100 millimetres, from the area between the edge of the covered concrete work area and the stormwater pits referred to in 1 above;
4. By 5 PM Monday 26 February 2001, remove all sediment, to a depth of 50 millimetres, from the area up to 1 metre radius from the point of discharge to Brookvale Creek of both drains referred to in 1 above;
5. By 5 PM Friday 2 March 2001, undertake all necessary chemical analyses of the soil, sediment, sludge and water collected as a result of directions 2, 3 and 4 to determine the extent of any contamination by any organophosphate pesticide, including ethyl-azinphos;
6. By 5 PM Monday 5 March 2001, forward a written report setting out the results of the analyses undertaken pursuant to direction 5 to the EPA at PO Box 668, PARRAMATTA, New South Wales 2124 or by facsimile to (02) 9995 6900, to the attention of Mr Sean Hardiman;
7. By 5 PM Friday 2 March 2001, dispose of the soil, sediment, sludges and water collected pursuant to directions 2, 3 and 4.

This notice is issued under section 91 of the Protection of the Environment Operations Act 1997.

It is an offence against that Act not to comply with a clean-up notice unless you have a reasonable excuse.

#### **FEE TO BE PAID**

You are required by law to pay a fee of \$320 for the administrative costs of issuing this notice.

It is an offence not to pay this fee. However you can apply for an extension of time to pay the fee or for the fee to be waived. At the end of this notice there is information about how and when to pay the fee and how to apply for an extension or a waiver of the fee.

.....

Sean Hardiman

Senior Region Operations Officer (EPO 10)

(By Delegation)

## Notice of Clean Up Action

Section 91 Protection of the Environment Operations Act 1997



### INFORMATION ABOUT THIS NOTICE

#### Penalty for not complying with this notice

- The maximum penalty for a corporation is \$250,000 and a further \$120,000 for each day the offence continues. The maximum penalty for an individual is \$120,000 and a further \$60,000 for each day the offence continues.

#### What you can do if you are not the polluter

- If you comply with this clean-up notice but you are not the person who caused the pollution incident to which the notice relates, you have a right to go to court to recover your costs of complying with the notice from the person who caused the incident.

#### Deadline for paying fee

- The fee must be paid by **no later than 30 days after the date of this notice.**

#### How to pay fee

- An invoice/statement will follow outlining methods of payment.

#### How to apply for extension of time to pay/waiver of fee

- Any application should be made in writing to the Environment Protection Authority and sent to PO Box A290 Sydney South NSW 1232. The application should set out clearly why you think your application should be granted.

#### Other costs

- The Protection of the Environment Operations Act allows the Environment Protection Authority to recover from you reasonable costs and expenses it incurs in monitoring action taken under this notice, ensuring the notice is complied with and associated matters. (If you are going to be required to pay these costs and expenses you will later be sent a separate notice called a "Notice Requiring Payment of Reasonable Costs and Expenses")

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