



Preliminary Contaminated Site Investigation
Frenchs Forest Planned Precinct
Frenchs Forest, NSW

Department of Planning, Industry and Environment

12 November 2020



Preliminary Contaminated Site Investigation – Frenchs Forest Planned Precinct

Project no: IA170900
Document title: Preliminary Contaminated Site Investigation – Frenchs Forest Planned Precinct
Document No.: 1
Revision: 3
Date: 12 November 2020
Client name: Department of Planning, Industry and Environment
Client no:
Project manager: Michael Stacey
Author: Michael Stacey
File name: J:\IE\Projects\04_Eastern\IA170900\21 Deliverables\IA170900_Contamination Investigation 12 November 2020.docx

Jacobs Group (Australia) Pty Limited
ABN 37 001 024 095
177 Pacific Highway
North Sydney NSW 2060 Australia
PO Box 632 North Sydney NSW 2059 Australia
T +61 2 9928 2100
F +61 2 9928 2444
www.jacobs.com

© Copyright 2015 Jacobs Group (Australia) Pty Limited. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This report has been prepared on behalf of, and for the exclusive use of Jacobs' Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

Document history and status

Revision	Date	Description	By	Review	Approved
1	15/03/2018	Technical Review	MS	DL	MS
2	28/08/2018	Client Review	DPIE	MS	MS
3	12/11/2020	Client request to change report date	MS		

Contents

1	Introduction.....	1
2	Objectives and Scope of Works	2
2.1	Objectives.....	2
2.2	Scope of Works.....	2
3	Site Setting.....	3
3.1	Site Identification.....	3
3.2	Site Zoning and Land Use	3
3.3	Topography and Drainage.....	3
3.4	Hydrogeology.....	3
3.5	Geology	4
3.6	Soils.....	4
3.7	Acid Sulfate Soils	5
4	Information Review	6
4.1	Aerial Photography.....	11
4.2	Parish Maps.....	13
4.3	Previous Investigations	13
4.4	Integrity Assessment.....	15
5	Site Information.....	16
5.1	Site Inspection	16
5.2	Surrounding Landuse	16
6	Discussion.....	17
7	Preliminary Conceptual Site Model	18
8	Conclusions and Recommendations	21
9	Limitations.....	22
	Figures	18
	Appendix A – Lotsearch (2017) Environmental Risk and Planning Report.....	24
	Appendix B – Parish Maps (1969)	25
	Appendix C – Site Photographs (9 March 2018).....	26

1 Introduction

Jacobs Group (Australia) Pty Ltd (Jacobs) was commissioned by the Department of Planning, Industry and Environment (DPIE) to undertake a Preliminary Contaminated Site Investigation (PCSI) of the Frenchs Forest Planned Precinct located at Frenchs Forest, NSW (referred to hereinafter as the site).

The location of the site is presented as **Figure 1**.

Jacobs understands that DPIE intends to prepare a draft Precinct Plan for the site and that this plan will contain a rezoning package including detailed development controls and an infrastructure plan. A Preliminary Site Contamination Investigation was undertaken in order to inform the draft Precinct Plan and assist in meeting DPEs obligations under State Environmental Planning Policy No. 55 Remediation of Land (SEPP 55).

This report details the works undertaken during the PCSI at the site including a review of available information and field observations.

This report has been prepared in general accordance with the requirements specified for a Preliminary Site Investigation as detailed in the NSW EPA (1997) *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*.

2 Objectives and Scope of Works

2.1 Objectives

The objectives of the PCSI were:

- To identify and document the potential for land contamination, based on a review of current and historical activities undertaken within and/or adjoining the site
- To comment on the suitability of the land for development including the potential for the land to be made suitable through remediation and any areas not suitable for development.

2.2 Scope of Works

The scope of works undertaken to address the objectives are detailed below.

A desktop contamination assessment was undertaken which included a review of information (where available) from the following sources:

- NSW EPA Contaminated Land Record of Notices
- NSW EPA List of NSW Contaminated sites notified to the NSW EPA
- NSW EPA Protection of the Environment Operations Act Public Register
- Historical aerial photographs
- Topographic and/or orthophoto maps
- Geology and soil maps
- Available hydrogeological information
- Other information pertaining to potential contamination as detailed in the *Environmental Risk and Planning Report* (Lotsearch, 4 December 2017).

A site inspection was undertaken to assess potential contaminating activities undertaken within and/or adjacent to the site.

This report was prepared detailing the results of the desktop assessment and the site inspection.

3 Site Setting

The site information presented below is based on a review of readily available government information sources and information provided by DPIE.

3.1 Site Identification

The site has been defined spatially as:

- Areas adjacent to and to the north of Frenchs Forest Road
- Areas to the west of Wakehurst Parkway
- Areas adjacent to and to the south of Warringah Road and extending south west to Fitzpatrick Avenue
- Areas including, adjacent to and to the east of Forest High.

The site is located within the local government area (LGA) of the Northern Beaches Council.

3.2 Site Zoning and Land Use

At the time of undertaking the PCSI, the site was occupied by a combination of land uses including:

- Roadways (operational and under construction)
- The Northern Beaches Hospital (under construction)
- Ancillary construction sites
- The Forest High School
- Residential premises.

The zonings of the site under the Warringah Local Environment Plan (LEP) 2011 were:

- RE1 – Public Recreation
- R2 – Low Density Residential
- SP2 – Infrastructure
- B1 – Neighbourhood Centre.

3.3 Topography and Drainage

The site topography can be characterised as a plateau landform with localised gentle undulations. Areas adjoining the site are characterised by steep topography. The site is covered by both unsealed (grassed areas, open space and areas of earthworks) and sealed areas (hospital and school associated buildings, footpaths and roadways). Water falling onto the unsealed areas of the site is likely to infiltrate directly into site soils. Rainfall falling onto sealed areas within the site are likely to be discharged directly into formal drainage structures (e.g. concrete kerb and guttering, formalised storm water pits) and discharge to the local storm water system.

3.4 Hydrogeology

In consideration of the topography of the site and surrounding areas, the site is likely to act as a watershed with the anticipated groundwater flowing in a northerly, southerly and westerly direction towards Trefoil Creek (to the north), Main Creek (to the south) and Carroll Creek (to the west). Shallow groundwater beneath the site is

expected to be perched above the residual weathered bedrock and to be recharged predominantly by the infiltration of surface water falling onto the unsealed surfaces of the site.

Based on information from the Lotsearch (4 December 2017), the aquifer beneath the site is described as porous, extensive aquifers of low to moderate productivity.

The Lotsearch (4 December 2017) search of the NSW Department of Primary Industries – Office of Water registered groundwater bore database indicated that a number of registered groundwater wells are located on and within 1km of the site. Details of the registered groundwater wells located on and adjacent to the site (i.e. within 1km) are provided in **Table 3.1**.

Table 3.1: Registered Groundwater Wells

Well ID	Location	Registered Use	Depth
GW073570	On-site	Groundwater Exploration	4.9m
GW073573	On-site	Groundwater Exploration	3.5m
GW073572	On-site	Groundwater Exploration	4.0m
GW073569	On-site	Groundwater Exploration	4.7m
GW073571	On-site	Groundwater Exploration	4.5m
GW072997	On-site	Groundwater Exploration	4.2m
GW106757	345m west of the site	Domestic	7.0m
GW020065	489m east of the site	Waste Disposal	114.9m
GW020067	494m east of the site	Waste Disposal	137.2m
GW031758	755m east of the site	Stock	58.5m
GW101513	999m south west of the site	Monitoring	4.3m

3.5 Geology

Reference to the Sydney 1:100,000 geological series sheet 9130 indicates the majority of the site is underlain by Wianamatta Group shale and laminate with small areas within the north western and south western portions of the site underlain by Wianamatta Group Hawkesbury Sandstone (Rh) comprising medium to coarse grained quartz sandstone with very minor shale and laminite lenses.

3.6 Soils

Review of the Sydney 1:100,000 soil landscape series sheet 9130 indicated that the site is underlain by the Lucas Heights soil landscape.

The Lucas Heights (lh) soil landscape is characterised by residual moderately deep, hardsetting, yellow podzolic and yellow soloth soils, yellow earths on outer edges of crests. The limitations of this soil landscape include stony soils, low soil fertility and low available water capacity.

The CSIRO (2011) Australian Atlas of Soils describes the soil landscape beneath the site as:

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.

3.7 Acid Sulfate Soils

Acid sulfate soils (ASS) are the common name given to naturally occurring sediments and soils containing iron sulfides (principally iron sulfide or iron disulfide or their precursors). The exposure of the sulfide in these soils to oxygen by drainage or excavation leads to the generation of sulfuric acid. Areas of ASS can typically be found in low lying and flat locations which are often swampy or prone to flooding.

A review of the ASS risk maps from the Warrigah LEP (2011) indicated that the site is not within an area classified as an ASS risk.

4 Information Review

The site history has been sourced from publically available information and the *Environmental Risk and Planning Report* (Lotsearch, 4 December 2017) commissioned by Jacobs. The Lotsearch (4 December 2017) report is provided in **Appendix A**.

The information reviewed and summary of the results in the context of contamination risk is provided in **Table 4.1**. Contamination risks have been assessed as high (if present on site), moderate (if present within 500m of the site), low risk (if greater than 500m and less than 1km from the site) and no risk where there were no relevant records or information was not relevant with respect to contamination.

Businesses with potential contaminating activities are based on those industries detailed in the Australian Standard *Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds* (AS 4482.1-2005).

- Agricultural / horticultural activities
- Airports
- Asbestos production and disposal
- Battery manufacture and recycling
- Breweries / distilleries
- Chemicals manufacture and use
- Defence works
- Drum reconditioning
- Dry cleaning
- Electrical
- Engine works
- Foundries
- Gas works
- Iron and steel works
- Landfill sites
- Marinas
- Metal treatments
- Mining and extractive industries
- Power stations
- Printing shops
- Railway yards
- Scrap yards
- Service stations and fuel storage facilities
- Sheep and cattle dips
- Smelting and refining
- Tanning and associated trades
- Water and sewerage treatment plant
- Wood preservation.

Table 4.1: Summary of Potential Contamination Risks

Source	Information	Potential for site contamination	Comment
NSW EPA	NSW contaminated sites notified to EPA under Contaminated Lands Management Act 1997 (CLM Act).	Low to Moderate	Shell Service Station (667 Warringah Road) – Contamination currently regulated by the NSW EPA (approximately 982 m to south west of the site) Former BP Service Station (Russell Avenue) – Regulation under CLM Act not required (approximately 303 m to west of the site)
NSW EPA	NSW contaminated sites regulated under the CLM Act.	Low	Shell Service Station (667 Warringah Road) – Contamination currently regulated by the NSW EPA (approximately 982 m to south west of the site)
NSW EPA	Known former gasworks sites.	No	No known former gasworks sites within 1km of the site
Geoscience Australia	National waste management site database which lists known landfills, waste transfer stations and waste reprocessing facilities	No	No known waste management sites within 1km of the site
NSW EPA	NSW EPA PFAS investigation program	No	No known PFAS investigation sites within 1km of the site
NSW EPA	Licensed activities under the Protection of the Environment Operations Act 1997 (POEO Act)	High	Ferroval Agroman (Australia) Pty Ltd – Road construction and land based extractive activity associated with the Northern Beaches Hospital Stage 1 and Stage 2 works (on-site)
NSW EPA	Delicensed POEO Act 1997 activities still regulated by the NSW EPA	No	No delicensed activities within 1km of the site
NSW EPA	Former POEO licensed activities now revoked or surrendered	Low to Moderate	Luhmann Environment Management - Other Activities / Non Scheduled Activity - Application of Herbicides (within 71m of the site) Robert Orchard - Other Activities / Non Scheduled Activity - Application of Herbicides (within 71m of the site) Sydney Weed and Pest Management - Other Activities / Non Scheduled Activity - Application of Herbicides (within 71m of the site) Alcon Laboratories(Australia) Pty Ltd – Hazardous, Industrial or Group A Waste Generation and Storage (approximately

Source	Information	Potential for site contamination	Comment
			614m to east of the site)
NSW Department of Environment, Climate Change and Water	Environmentally sensitive zones for the regulation of Underground Petroleum Storage Systems (UPSS)	Moderate	Site within 500m of UPSS sensitive zone
Hardie Grant	Universal Business Directory (UBD) 1991 – Business type and location search	Moderate to High	<p>Motor Garages and Service Stations – ESSO Frenchs Forest, Warringah Road Frenchs Forest (road match)</p> <p>Tyre Dealers &/or Retreaders &/or Vulcanisers – Owen Tyres, Warringah Road Frenchs Forest (road match)</p> <p>Rubber Moulders – A&B Printing, Forestway Frenchs Forest (road match - approximately 148m to the west of the site)</p> <p>Printers Lithographic – A&B Printing, Forestway Frenchs Forest (road match approximately 148m to the west of the site)</p>
Hardie Grant	UBD 1986 – Business type and location search	Moderate to High	<p>Printers Lithographic – A&B Printing, 500C Warringah Road Frenchs Forest (approximately 110m to the west of the site)</p> <p>Motor Garages and Service Stations – ESSO Frenchs Forest, Warringah Road Frenchs Forest (road match)</p> <p>Pharmaceutical and Chemical Manufacturers, Importers and Distributors – Smith, Kline and French Laboratories, Warringah Road Frenchs Forest (road match)</p>
Hardie Grant	UBD 1982 – Business type and location search	Moderate to High	<p>Printers Lithographic – A&B Printing, 500C Warringah Road Frenchs Forest (approximately 110m to the west of the site)</p> <p>Motor Garages and Service Stations – ESSO Frenchs Forest, Warringah Road Frenchs Forest (road match)</p> <p>Chemical Manufacturers, Importers and Distributors – Smith, Kline and French Laboratories, Warringah Road Frenchs Forest (road match)</p>
Hardie Grant	UBD 1978 – Business type and location	Moderate to	Printers Lithographic – A&B Printing, 500C Warringah Road Frenchs Forest

Source	Information	Potential for site contamination	Comment
	search	High	(approximately 110m to the west of the site) Motor Garages and Service Stations – ESSO Frenchs Forest, Warringah Road Frenchs Forest (road match) Chemical Manufacturers, Importers and Distributors – Smith, Kline and French Laboratories, Warringah Road Frenchs Forest (road match)
Hardie Grant	UBD 1975 – Business type and location search	Moderate to High	Printers Lithographic – A&B Printing, 500C Warringah Road Frenchs Forest (approximately 115m to the west of the site) Oil Burner Manufacturers and Suppliers – Universal Oil Burner Co., Warringah Road Frenchs Forest (road match) Chemical Manufacturers, Importers and Distributors – Smith, Kline and French Laboratories, Warringah Road Frenchs Forest (road match)
Hardie Grant	UBD 1970 – Business type and location search	Moderate to High	Motor Garages and Service Stations – ESSO Service Centre, Cnr Warringah Road and Hilmer Street Frenchs Forest (on-site) Printers Lithographic – A&B Printing, 500C Warringah Road Frenchs Forest (approximately 115m to the west of the site) Motor Garages and Service Stations – ESSO Frenchs Forest, Warringah Road Frenchs Forest (road match) Hardware Dealers / Ironmongers – N.H.Dunn Pty Ltd, Frenchs Forest Road Frenchs Forest (road match)
Hardie Grant	UBD 1965 – Business type and location search	Moderate to High	Paint, Varnish, Oils/Colour Merchants – Forest Hardware, 42 Bantry Bay Road, Frenchs Forest (on-site) Motor Garages & Engineers – Forestville Auto Port, Warringah Road Forestville (road match)
Hardie Grant	UBD 1961 – Business type and location search	Moderate to High	Nurserymen – Forest Garden Centre, 40 Bantry Bay Road Frenchs Forest (on-site) Hardware Dealers / Ironmongers – Forest

Source	Information	Potential for site contamination	Comment
			<p>Hardware Supplies, 42 Bantry Bay Road Frenchs Forest (on-site)</p> <p>Hardware Dealers / Ironmongers – Upton's, Corner Warringah Road and Bantry Bay Road Frenchs Forest (approximately 10m to the south east of the site)</p> <p>Hardware Dealers / Ironmongers – E.Andrews, Bantry Bay Road Frenchs Forest (road match)</p> <p>Motor Garages & Engineers – Sheppards Service Station, Warringah Road Frenchs Forest (road match)</p> <p>Nurserymen – York Meredith, Fitzpatrick Avenue Frenchs Forest road match)</p> <p>Motor Garages & Engineers – Forestville Auto Port, Warringah Road Forestville (road match)</p> <p>Motor Garages & Engineers – Forestville Service Station, Warringah Road Forestville (road match)</p> <p>Motor Garages & Engineers – Safety Drive Service Centre, Warringah Road Forestville (road match)</p>
Hardie Grant	UBD 1950 – Business type and location search	High	Engineers – General and/or Manufacturing and/or Mechanical – Ashburn and Co, Bantry Bay Frenchs Forest (road match)
Hardie Grant	UBD – Business search for drycleaners & motor garages/service stations	Low to High	<p>Motor Garages/Service Stations:</p> <p>ESSO Service Centre, Cnr Warringah Road and Hilmer Street Frenchs Forest (on-site)</p> <p>BP Service Station, Russell Avenue Frenchs Forest (approximately 471m to the south west of the site)</p> <p>Forestville Self Service, 647 Warringah Road Forestville (approximately 745m to the south west of the site)</p> <p>Forestville Auto Port, 647 Warringah Road Forestville (approximately 745m to the south west of the site)</p> <p>Safety Service Centre, 1 Currie Road Forestville (approximately 917m to the south west of the site)</p>

Source	Information	Potential for site contamination	Comment
			<p>Golden Fleece Service Station, 663 Warringah Road Forestville (approximately 918m to the south west of the site)</p> <p>Safety Drive Service Station, 663 Warringah Road Forestville (approximately 918m to the south west of the site)</p> <p>Frenchs Forest Motors, 7 Cook Street Forestville (approximately 973m to the south west of the site)</p> <p>Sheppards Service Station, Warringah Road Frenchs Forest (road match)</p> <p>Forestville Service Station, Warringah Road Forestville (road match)</p> <p>Allambie Heights BP Service Station, Allambie Road Allambie Heights (road match)</p> <p>Dry Cleaners:</p> <p>Jolly Frog, 21 Arndale Shopping Centre Frenchs Forest (approximately 265m to the west of the site)</p> <p>Forestway Dry Cleaners, 21 Arndale Shopping Centre Frenchs Forest (approximately 265m to the west of the site)</p>
NSW Department of Industry, Resources & Energy	Location of known Naturally Occurring Asbestos (NOA) potential	No	No records of NOA within 1km of the site
NSW Planning and Environment	Acid Sulfate Soils (Local Environment Plans)	No	No records of acid sulfate soils within 1km of the site

4.1 Aerial Photography

Aerial imagery was reviewed for the years 1943, 1956, 1961, 1965, 1970, 1982, 1991, 2005, 2009 and 2016 to assess land use and changes in general conditions within and adjacent to the site. The findings of the aerial imagery review are summarised in **Table 4.2**. Historical aerial imagery is presented in the Lotsearch (2017) report provided in **Appendix A**.

Table 4.2: Aerial Imagery Review

Date	Site	Surrounding Areas
1943	The site appears to be bushland (northern, eastern, southern and south western portions of the site). Agricultural land use (orchard) is present within the central portion of the site. Some scattered buildings (possible low density residential dwellings) present with the south eastern portion of the site. Warringah Road, Wakehurst Parkway and Bantry Bay Road are evident.	The areas surrounding the site appear to be predominantly bushland. Isolated areas of cleared land and buildings (possible low density residential dwellings) to the south east of the site and agricultural land use (orchard) to the west.
1956	Development of areas of low density residential dwellings is evident within the north eastern and south eastern portions of the site. Bushland within the northern and eastern portions of the site has been cleared. Agricultural activities within the central portion of the site appear to have ceased.	The areas surrounding the site appear largely the same as per the 1943 imagery with the exception of low density residential development occurring to the south east and west of the site.
1961	Residential development has continued within the northern, eastern and southern portions of the site. Construction of buildings within the Forest High School site has occurred with disturbed ground evident across the site indicating potential ongoing development. Commercial premises (including possible service station) have been constructed along Warringah Road between Bantry Bay Road and Hilmer Street. Frenchs Forest Road is evident.	The areas surrounding the site (north, south and west) has been primarily developed or is in the process of being developed for residential land use. Areas to the east of the site remain primarily as bushland. Quarrying activities are potentially being undertaken at the corner of Warringah Road and Wakehurst Parkway (south western corner). Forest primary school is evident to the west of the site. A larger industrial premises has been constructed to the south west of the site.
1965	The site appears largely unchanged from the 1965 imagery with the exception of further development of the Forest High School site (additional buildings and playing fields).	Increased residential development has occurred to the north, north east, south and west of the site. Areas to the east of the site remain primarily as bushland. Quarrying activities are continuing on the south western and the south eastern corners of Warringah Road and Wakehurst Parkway. Forestway shopping centre is visible to the west of the site.
1970	The site appears largely unchanged from the 1965 imagery with the exception of additional buildings constructed on the Forest High School site.	The areas surrounding the site appear largely the same as per the 1965 imagery with the exception of quarrying activities no longer evident on the south western and the south eastern corners of Warringah Road and Wakehurst Parkway.
1982	The site appears largely unchanged from the 1970 imagery.	The areas surrounding the site appear largely the same as per the 1970 imagery with the exception of construction of a facility (possibly current Warringah Aquatic Centre and playing fields) to the south east of the site and additional buildings constructed at the Forestway shopping centre.
1991	The site appears largely unchanged from the 1982 imagery with the exception of three buildings constructed close to the north west corner of Warringah Road and Bantry Bay Road.	The areas surrounding the site appear largely the same as per the 1982 imagery, with the exception of a facility constructed to the east of the site off Frenchs Forest Road (possibly current Sky Studios building).

Date	Site	Surrounding Areas
2005	The site appears largely unchanged from the 1991 imagery.	The areas surrounding the site appear largely the same as per the 1991 imagery, with the exception of the demolition of the industrial premises to the south east of the site.
2009	The site appears largely unchanged from the 2005 imagery.	The areas surrounding the site appear largely the same as per the 2005 imagery, with the exception of industrial units constructed to the south east of the site.
2016	The site appears largely unchanged from the 2009 imagery, with the exception of the construction of the Northern Beaches Hospital within the central portion of the site.	The areas surrounding the site appear largely the same as per the 2009 imagery with the exception of the construction of a works compound on the north eastern corner of Warringah Road and Wakehurst Parkway.

4.2 Parish Maps

Parish maps for Manly Cove (dated 1969) were reviewed. The information provided (with respect to the site) indicated the following:

- The Northern Beaches Hospital site was resumed for a hospital site (gazetted 13 November 1959)
- The Forest High site was resumed for a public school site (gazetted 5 June 1959).

Parish maps are provided in **Appendix B**.

4.3 Previous Investigations

The following information was provided by DPIE and Roads and Maritime Services for review:

- SMEC (October 2014) *Phase 1 Contamination Assessment: Northern Beaches Hospital Connectivity and Network Enhancement Project, Frenchs Forest NSW* (SMEC 2014)
- ADE Consulting Group (June 2016) *Remediation Action Plan – 461 Warringah Road, Frenchs Forest NSW* (ADE 2016)

The results and conclusions of the previous investigations have been assessed in context of the contamination risk to the site.

1.1.1 SMEC 2014

The SMEC (2014) assessment was undertaken to assess potential contamination risks associated with the road upgrades for the development of the Northern Beaches Hospital and the broader network capacity (i.e. network enhancement works). The SMEC (2014) assessment addressed potential contamination risks associated with the construction of the road upgrades across an area which included the Frenchs Forest Planning Precinct and adjoining areas. The SMEC (2014) assessment was undertaken prior to the commencement of construction works for the Northern Beaches Hospital and associated road upgrades.

The findings of the SMEC (2014) in context of the Frenchs Forest Planned Precinct were:

- The potential presence of fill material on the southern side of Warringah Road between Hilmer Street and Fitzpatrick Avenue.
- The potential for the storage of chemicals (including fuels) in workshops and refuelling infrastructure at the Frenchs Forest Police Station
- The historical use of the Forest High School site as an orchard.
- Storage of fuels within underground storage tanks and associated infrastructure at the 7-11 service station located at the corner of Warringah Road and Hilmer Street. Information from reports predating the SMEC (2014) assessment indicated that soils and groundwater beneath the site were impacted by heavy metals and hydrocarbons.
- Historical brickwork activities undertaken on the corner (south western) of Warringah Road and Wakehurst Parkway.
- Roads and pavements across the project area could contain coal tar materials.

Other information contained within the SMEC (2014) assessment included an overview of contamination testing undertaken on the Northern Beaches Hospital site by SMEC in 2013 and Douglas Partners in 2012. No contamination was reported in the soil and groundwater samples collected as part of these investigations.

1.1.2 ADE 2016

The ADE (2016) remediation action plan (RAP) was prepared to outline guidance for the future remediation of the site (i.e. 461 Warringah Road, Frenchs Forest). The RAP was prepared based on the results from previous contamination investigations undertaken at the site as detailed below. With the exception of the SMEC (2014) report, these reports were not provided for review.

- Parsons Brinckerhoff, UPSS Validation, 7-Eleven Service Station 461 Warringah Road, Frenchs Forest, NSW (Store ID: 2220), Document No: 2201503A-CLM-RPT-1557 RevB, dated 1st of August 2014
- SMEC, Phase 1 Contamination Assessment: Northern Beaches Hospital Connectivity and Network Enhancement Project, Frenchs Forest NSW, Document No: 30011560 FINAL, dated October 2014
- Ventia, 2220-Frenchs Forest-GME Report, dated October 2015
- ADE Report No. FYJV-01-10217 / DSI / v1 final, Phase II – Detailed Site Investigation for 461 Warringah Road, Frenchs Forest NSW, dated 15th April 2016.

The results of these investigations (as summarised by ADE) are provided below.

Note that at the time of preparing this report, Jacobs had not been provided with reports detailing the validation of the site in accordance with the ADE (2016) RAP. No relevant contamination information was provided for the Ventia (2015) report.

The PB (2014) investigation involved the sampling of soil from around the underground petroleum storage systems (UPSS), sampling of groundwater and evaluation of residual contamination in soil/groundwater that would preclude the site's suitability for on-going use as a service station.

The validation report concluded that residual hydrocarbon contamination existed both within the soil and groundwater after the removal of the UPSS. PB concluded that "The residual impacts, however, were not considered to pose unacceptable risks to the commercial users of the site under the site's current configuration. The validation soil results also showed no unacceptable risks to the shallow trench worker undertaking intrusive works in the vicinity of the site. Therefore, the site was considered suitable for continued use as a service

station. If the site's layout was to be changed in the future, assessment of potential vapour intrusion risks would be necessary to confirm the site's suitability under the layout of the new development."

PB (2014) noted that three underground storage tanks (USTs) remained in-situ, a liquefied petroleum gas UST (located central portion) and two USTs (located in the eastern portion).

The ADE (2016) investigation indicated three areas on-site which posed contamination risks, as detailed below.

Area of Concern 1 - TRH Contamination in Soil

The elevated total recoverable hydrocarbon (TRH) concentrations were identified above the site assessment criteria (SAC) in BH05, located in the central portion of the site.

Area of Concern 2 – Underground Storage Tanks (USTs), Fuel Transfer Lines (FTLs) and Associated Soils

The desktop study identified six (6) abandoned USTs remaining within the site.

Area of Concern 3 - Groundwater

The direction of groundwater within the site was considered to flow in a south easterly direction based on previous investigations. Exceedances of the groundwater SAC (Chromium, Naphthalene and Ethylbenzene) were observed within the most hydraulically up-gradient groundwater well (GWMW-3) at the site. It should be noted that the aforementioned contaminants of concern were not detected above the SAC at GWMW-1 and GWMW-2 which were located down gradient. ADE believed that the removal of areas of concern 1 and 2 would achieve the remediation of the groundwater.

Based on the findings, implementation of the RAP was recommended for the site, detailing the actions required to render the site suitable for its future land use as the extended Warringah Road.

4.4 Integrity Assessment

Historical and site information was sourced from NSW Government departments and reports provided by the client. Jacobs has relied on the accuracy of the documentation provided and our experience in historical document interpretation. Whilst there is a margin for error in interpretation, Jacobs consider the information presented in this assessment to be of acceptable reliability for the purposes of this investigation.

5 Site Information

5.1 Site Inspection

A site inspection was undertaken by a Jacobs Environmental Scientist on 9 March 2018. The site inspection was undertaken from publically accessible areas. Photographs taken during the inspection are provided in **Appendix C**.

At the time of undertaking the site inspection, a significant portion of the site was subject to construction activities associated with the Northern Beaches Hospital and associated road upgrades. Construction activities observed (partially constructed or constructed) included:

- The Northern Beaches Hospital and associated multi-level carpark
- Road and footpath construction adjacent to Warringah Road, Wakehurst Parkway and Frenchs Forest Road
- Pedestrian foot bridges spanning Warringah Road adjacent to the Northern Beaches Hospital and Forest Way.

Remaining areas of the site comprised areas of low density residential development, Forest High School and Frenchs Forest Police Station.

Potential areas of contamination identified during previous investigations including the former brickpit, 7-11 service station and areas of fill on the southern side of Warringah Road between Hilmer Street and Fitzpatrick Avenue were located beneath areas of earthworks associated with the road upgrades or had been removed (i.e. fill on the southern side of Warringah Road) to facilitate road construction.

Existing buildings (e.g. high school, police station and residential houses) located across the site are likely to have been constructed pre-1980. The age of these buildings could indicate that they contain hazardous building materials including, but not limited to asbestos and heavy metals. Whilst these building materials remain in a good, non-degraded condition within buildings, they do not represent a contamination issue. These materials (if present) could represent a potential contamination source if they are not adequately managed through ongoing occupation and/or demolition.

5.2 Surrounding Landuse

At the time of undertaking the site inspection, the following land uses were observed surrounding the site:

- North: Low density residential areas
- East: Wakehurst Parkway, bushland, commercial/industrial premises and low density residential areas.
- South: Low density residential areas
- West: Warringah Road, low density residential areas, Frenchs Forest Public School.

6 Discussion

The results of the site history review and the site inspection have indicated that there are a number of potential contamination risk areas on and/or adjacent to the site associated with current and historical activities. These potential contamination risk areas include:

- Former service station site (Esso, 7-11) located at the corner of Warringah Road and Hilmer Street
- Road construction activities (licensed under the POEO Act)
- Other on-site historical commercial land use including paint merchants, nursery, iron mongers, hardware dealers and general engineering (manufacturing and/or mechanical)
- Adjacent (within 500m of the site) historical commercial land use including service stations, rubber moulders, printers, iron mongers, hardware dealers and dry cleaners
- Herbicide application (former POEO licensed activities now revoked or surrendered) within and adjacent to waterways located within 500m of the site
- Former brickworks and infill of the quarry located at the south western corner of Warringah Road and Wakehurst Parkway
- Former orchard on the Forest High School site
- Filling on the southern side of Warringah Road between Hilmer Street and Fitzpatrick Avenue
- Hazardous buildings materials may be present within buildings/structures present across the site. Whilst these materials remain in a good, non-degraded condition within buildings, they do not represent a contamination issue. These materials (if present) could represent a potential contamination source if they are not adequately managed through ongoing occupation and/or demolition of these buildings/structures.

7 Preliminary Conceptual Site Model

To assist in assessing potential contamination risks which could impact upon the development of the Frenchs Forest Planned Precinct, Jacobs has developed the following preliminary conceptual site model (CSM) for the site based on the site history review and observations made during the site inspection. The CSM has assessed contamination risks as those risks which could preclude rezoning (e.g. presence of gross and widespread contamination, considerable material investment required to remove, reduce or manage the risk).

Table 7.1: Preliminary Conceptual Site Model

Source	Contaminants of Concern	Contamination Mechanism	Contamination Depth	Receptor	Risk Assessment
Shell Service Station - 667 Warringah Road Former BP Service Station – Russell Avenue (NSW contaminated sites notified to EPA under CLM Act).	Heavy metals, TRH, BTEX, PAH	Leaking of underground storages and associated infrastructure	Depth	Site users, environmental receptors, beneficial groundwater users	Negligible – Sites are located over 300m from the FFPP site.
Shell Service Station - 667 Warringah Road (NSW contaminated sites regulated under the CLM Act).	Heavy metals, TRH, BTEX, PAH	Leaking of underground storages and associated infrastructure	Depth	Site users, environmental receptors, beneficial groundwater users	Negligible – Site is located over 800m from the FFPP site.
Road construction and land based extractive activity associated with the Northern Beaches Hospital Stage 1 and Stage 2 works (Licensed activities under the POEO Act)	Heavy metals, TRH, BTEX, PAH	Spills and leaks from plant	Surface	Site users	Negligible – Spills and leaks from plant are likely to be managed under a construction environmental management plan.
Application of Herbicides Former POEO licensed activities now revoked or surrendered	Heavy metals, TRH, herbicides	Application of herbicides within and adjacent to waterways	Surface	Site users, environmental receptors	Negligible – Localised use of herbicides within and adjacent to waterways located over 70m from the site.
Environmentally sensitive zones for the regulation of Underground Petroleum Storage Systems (UPSS)	NA	NA	NA	NA	Not a current site contamination risk. If UPSS are required as development of the FFPP, these will need to be managed in accordance with the UPSS regulations.
Service Station (Esso, 7-11) – Corner of Warringah Road and Hilmer Street	Heavy metals, TRH, BTEX, PAH	Leaking of underground storages and associated infrastructure	Depth	Site users, environmental receptors, beneficial groundwater users	Moderate – Contamination present on-site (based on the information provided). On-site exposure risk is low considering that the site will become Warringah Road. There is the potential for contamination to migrate

Source	Contaminants of Concern	Contamination Mechanism	Contamination Depth	Receptor	Risk Assessment
					beyond the site boundary and the road corridor. The exposure risk for potential contamination beyond the site boundaries is dependent on the use of the adjoining areas.
Rubber Moulders – 500 Warringah Road	Nutrients, heavy metals, TRH, VOC	Manufacturing or rubber products, chemical use and storage	Surface	Site users	Negligible – Site was located over 100m from the FFPP site.
Printers – 500 Warringah Road	Heavy metals, VOC	Spills and leaks from chemical use and storage	Surface	Site users	Negligible – Site was located over 100m from the FFPP site.
Chemical Manufacturers, Importers and Distributors – Warringah Road	Various	Spills and leaks from manufacturing, chemical use and storage	Surface and depth	Site users, environmental receptors, beneficial groundwater users	Negligible - Chemical manufacturing unlikely to have been undertaken on site. Likely to have been located in industrial area to the south of the site
Hardware Dealers / Ironmongers – Bantry Bay Road	Metals, TRH, VOC	Spills and leaks from chemical storage	Surface	Site users	Negligible – Contamination (if present) likely to have been removed or buried as part of road construction.
Paint, Varnish, Oils/Colour Merchants – Bantry Bay Road	Metals, VOC	Spills and leaks from chemical storage	Surface	Site users	Negligible – Contamination (if present) likely to have been removed or buried as part of road construction.
Nursery – Bantry Bay Road	Pesticides, nutrients	Pesticide / fertiliser use and storage	Surface	Site users	Negligible – Contamination (if present) likely to have been removed or buried as part of road construction.
Engineers – General and/or Manufacturing and/or Mechanical – Bantry Bay Road	Metals, VOC	Spills and leaks from manufacturing and chemical storage	Surface	Site users	Negligible – Contamination (if present) likely to have been removed or buried as part of road construction.
Service Stations Forestville Service Station – 647 Warringah Road, Forestville Golden Fleece – 663 Warringah Road, Forestville BP Allambie – Allambie Road, Allambie Heights	Heavy metals, TRH, BTEX, PAH	Leaking of underground storages and associated infrastructure	Depth	Site users, environmental receptors, beneficial groundwater users	Negligible – Sites located over 700m from the FFPP site.
Motor Garages Forestville Auto Port - 647 Warringah Road Forestville	Metals, TRH, VOC, asbestos	General mechanical activities, spills and leaks, chemical	Surface	Site users	Negligible – Sites located over 700m from the FFPP site.

Source	Contaminants of Concern	Contamination Mechanism	Contamination Depth	Receptor	Risk Assessment
Safety Service Centre - 1 Currie Road Forestville Safety Drive Service Station - 663 Warringah Road Forestville		storage			
Dry Cleaners Jolly Frog - 21 Arndale Shopping Centre Frenchs Forest Forestway Dry Cleaners - 21 Arndale Shopping Centre Frenchs Forest	VOC	Spills and leaks from chemical storage	Surface and depth	Site users, environmental receptors, beneficial groundwater users	Negligible – Site located over 250m from the FFPP site.
On-site buildings/structures constructed pre 1980.	Heavy metals, asbestos	Degradation and inappropriate demolition practices	Surface	Site users	Low - Based on current requirements for managing hazardous building materials during occupation and demolition, unlikely to be represent a significant contamination risk.

8 Conclusions and Recommendations

Jacobs has undertaken the PCSI of the Frenchs Forest Planned Precinct located at Frenchs Forest, NSW.

Based on the desktop information review and site observations, significant contamination that would preclude rezoning is unlikely to be present on the site. The PCSI did identify that the former 7-11 service station may pose a localised source of contamination. Contamination from this site (if present), could be managed through development application (DA) approval mechanisms.

Whilst the PCSI identified the potential for contamination to be present in some areas of the site (namely the former 7-11 service station located on the Corner of Hilmer Street and Warringah Road), the investigation did not identify the potential for gross or widespread contamination which may preclude rezoning of properties within the site. Identified potential impacts are considered representative of common contaminants and potentially contaminating land use activities which can be readily dealt with during the development application stage (i.e. including completion of specific preliminary and detailed site investigations to assess land use suitability consistent with relevant planning instruments) for redevelopment of areas within the site, once later detailed development proposals are made. In the absence of gross or widespread contamination, the requirements of the DUAP/EPA (1998) Managing Land Contamination: Planning Guidelines for rezoning are considered to have been satisfied, namely that the rezoning can proceed, "provided that measures are in place to ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made" (s.4.1.2 DUAP 1998). It is recommended that individual properties within the site proposed to be developed be suitably investigated in accordance with relevant NSW EPA endorsed guidelines to assess site suitability, when detailed development proposals are made. It is also recommended that Hazardous Building Material Surveys (HBMS) be undertaken on sites containing buildings/structures pre dating 1980 prior to any demolition and redevelopment works on these individual land parcels where redevelopment is proposed.

9 Limitations

The sole purpose of this report and the associated services performed by Jacobs was to provide a preliminary assessment of site contamination conditions in accordance with the scope of services set out in the contract between Jacobs and DPIE (the Client). That scope of services, as described in this report, was developed with the Client.

In preparing this report, Jacobs has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

Jacobs derived the data in this report from information sourced from the public domain, the Client (if any) and from observations made during the site inspection. The passage of time, manifestation of latent conditions or impacts of future events may require further examination of the project and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed in this report. Jacobs has prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by Jacobs for use of any part of this report in any other context.

This report has been prepared on behalf of, and for the exclusive use of, Jacobs' Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

Figures



Legend

Site location

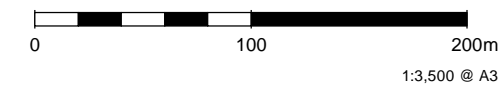


Figure 1 | Site location

Appendix A – Lotsearch (2017) Environmental Risk and Planning Report

Lotsearch



Environmental Risk and Planning Report

Warringah Road, Frenchs Forest, NSW 2086

Report Date: 04 Dec 2017 19:24:52

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.

Table of Contents

Location Confidences.....	2
Dataset Listings.....	3
Site Location Aerial	5
Contaminated Land & Waste Management Facilities.....	6
EPA PFAS Investigation Program	9
EPA Other Sites with Contamination Issues	10
EPA Current Licensed Activities.....	11
EPA Delicensed & Former Licensed Activities.....	13
UPSS Sensitive Zones.....	15
Historical Business Activities.....	16
Historical Aerial Imagery & Maps	43
Topographic Features	56
Elevation Contours.....	62
Hydrogeology & Groundwater.....	63
Geology.....	72
Naturally Occurring Asbestos Potential.....	74
Soils	75
Acid Sulfate Soils	79
Dryland Salinity	82
Mining Subsidence Districts	83
State Environmental Planning.....	84
Local Environmental Planning.....	85
Heritage	90
Natural Hazards	92
Ecological Constraints.....	94
Terms & Conditions.....	103

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
1	Georeferenced to the site location / premise or part of site
2	Georeferenced with the confidence of the general/approximate area
3	Georeferenced to the road or rail
4	Georeferenced to the road intersection
5	Feature is a buffered point
6	Land adjacent to Georeferenced Site
7	Georeferenced to a network of features

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 Onsite	No. Features within 100m	No. Features within Buffer
Cadastral Boundaries	Dept. Finance, Services & Innovation	04/12/2017	04/12/2017	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	10/04/2015	01/04/2015	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	20/11/2017	10/11/2017	Monthly	1000	0	0	2
Contaminated Land: Records of Notice	Environment Protection Authority	13/11/2017	13/11/2017	Monthly	1000	0	0	1
Former Gasworks	Environment Protection Authority	13/11/2017	12/09/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	13/11/2017	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	21/11/2017	21/11/2017	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/11/2017	13/11/2017	Quarterly	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	09/11/2017	09/11/2017	Monthly	1000	1	1	1
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	09/11/2017	09/11/2017	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	09/11/2017	09/11/2017	Monthly	1000	0	3	4
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	0	0	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	1	1	2
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	3	5
UBD Business to Business Directory 1986 (Premise & Intersection Matches)	Hardie Grant			Not required	150	6	6	15
UBD Business to Business Directory 1986 (Road & Area Matches)	Hardie Grant			Not required	150	-	9	11
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	8	10	16
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	12	12
UBD Business Directory 1978 (Premise & Intersection Matches)	Hardie Grant			Not required	150	6	9	15
UBD Business Directory 1978 (Road & Area Matches)	Hardie Grant			Not required	150	-	8	8
UBD Business Directory 1975 (Premise & Intersection Matches)	Hardie Grant			Not required	150	7	8	14
UBD Business Directory 1975 (Road & Area Matches)	Hardie Grant			Not required	150	-	18	18
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	11	11	14
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	19	20
UBD Business Directory 1965 (Premise & Intersection Matches)	Hardie Grant			Not required	150	9	15	16
UBD Business Directory 1965 (Road & Area Matches)	Hardie Grant			Not required	150	-	7	7
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	9	13	13
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	20	21
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	4	4
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	1000	2	2	20
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	1000	-	12	20

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Points of Interest	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	Annually	1000	4	7	56
Tanks (Areas)	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	Annually	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	Annually	1000	0	1	2
Major Easements	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	As required	1000	1	6	38
State Forest	Dept. Finance, Services & Innovation	01/02/2017	29/06/2016	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	01/02/2017	31/12/2016	Annually	1000	0	0	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Groundwater Boreholes	NSW Dept. of Primary Industries - Office of Water / Water Administration Ministerial Corporation; Commonwealth of Australia (Bureau of Meteorology)	21/03/2016	01/12/2015	Annually	2000	6	6	70
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	2	-	2
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	3
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	1	-	7
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	1
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	0
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	0
LEP - Land Zoning	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	1000	4	12	60
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	0	2	-	-
LEP - Height of Building	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	0	2	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	0	0	-	-
LEP - Land Application	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	0	1	-	-
State Heritage Items	NSW Office of Environment & Heritage	13/11/2017	30/09/2016	Quarterly	1000	0	0	0
Local Heritage Items	NSW Planning and Environment	13/11/2017	13/11/2017	Quarterly	1000	2	2	10
Bush Fire Prone Land	NSW Rural Fire Service	13/11/2017	06/09/2017	Quarterly	1000	2	2	3
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment & Heritage	01/03/2017	16/12/2016	As required	1000	11	12	18
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	The Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	0
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	04/12/2017	04/12/2017	Daily	10000	-	-	-

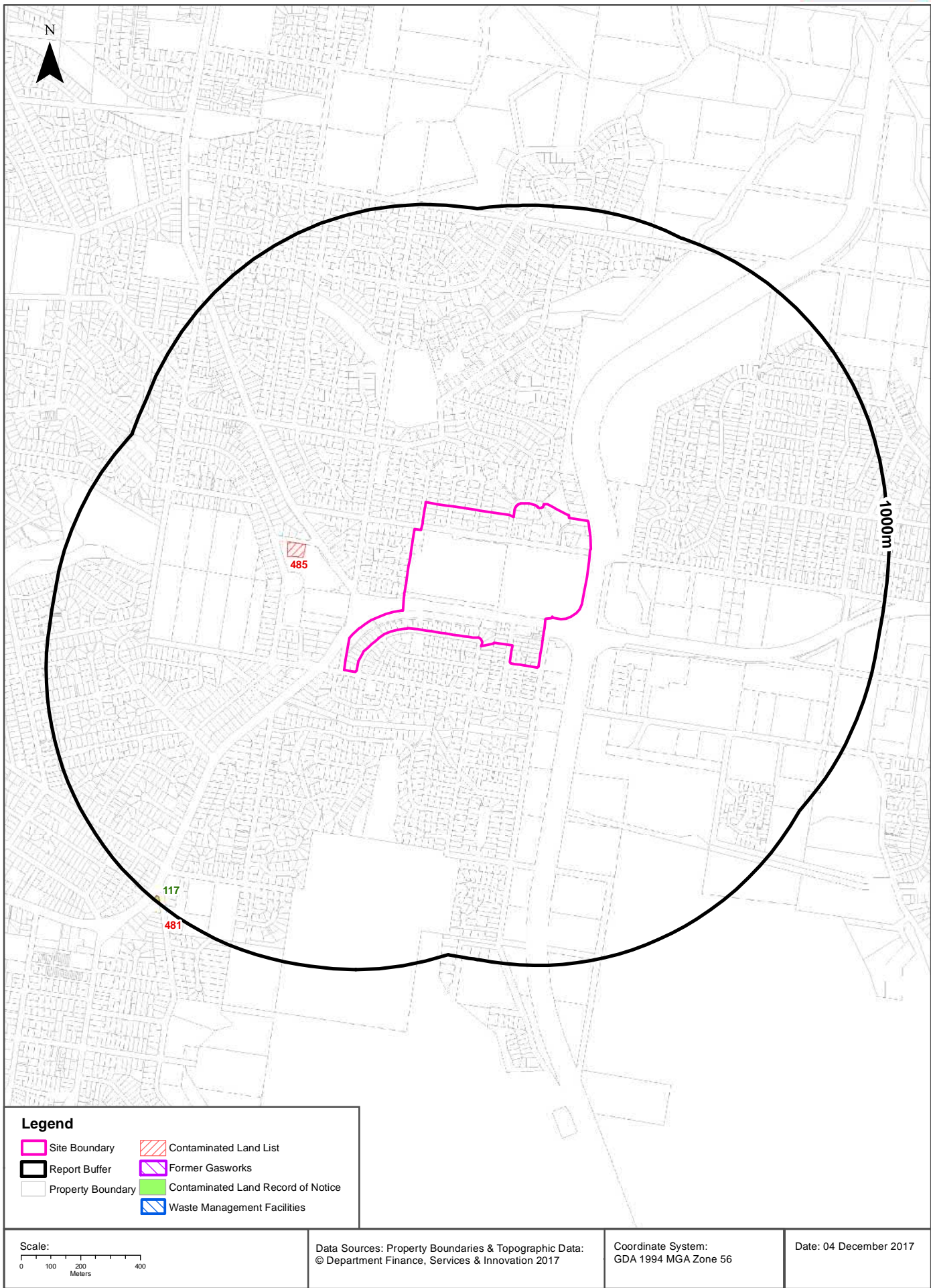
Aerial Imagery 2016

Warringah Road, Frenchs Forest, NSW 2086



Contaminated Land & Waste Management Facilities

Warringah Road, Frenchs Forest, NSW 2086



Contaminated Land & Waste Management Facilities

Warringah Road, Frenchs Forest, NSW 2086

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 (m)	Direction
485	Former BP Service Station	Russell Avenue	Frenchs Forest	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	303m	West
481	Shell Service Station	667 Warringah Road	Forestville	Service Station	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	982m	South West

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).
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 & Waste Management Facilities

Warringah Road, Frenchs Forest, NSW 2086

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
117	Shell Service Station	667 Warringah Road	Forestville	2 current	3186	Premise Match	982m	South West

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

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 (m)	Direction
N/A	No records in buffer											

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

EPA PFAS Investigation Program

Warringah Road, Frenchs Forest, NSW 2086

EPA PFAS Investigation Program

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

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

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

EPA Other Sites with Contamination Issues

Warringah Road, Frenchs Forest, NSW 2086

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

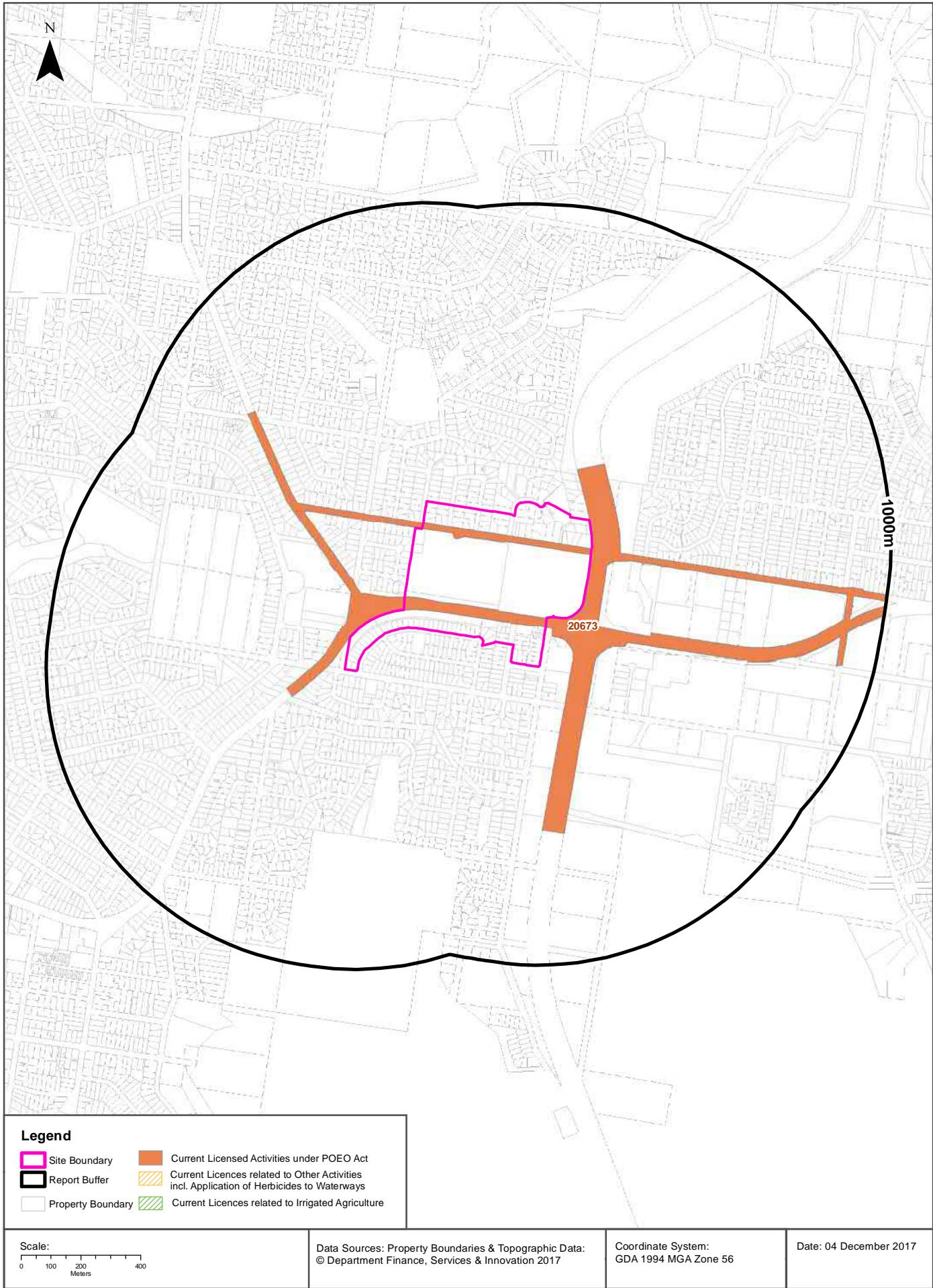
Sites within the dataset buffer:

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

Current EPA Licensed Activities

Warringah Road, Frenchs Forest, NSW 2086



EPA Activities

Warringah Road, Frenchs Forest, NSW 2086

Licensed Activities under the POEO Act 1997

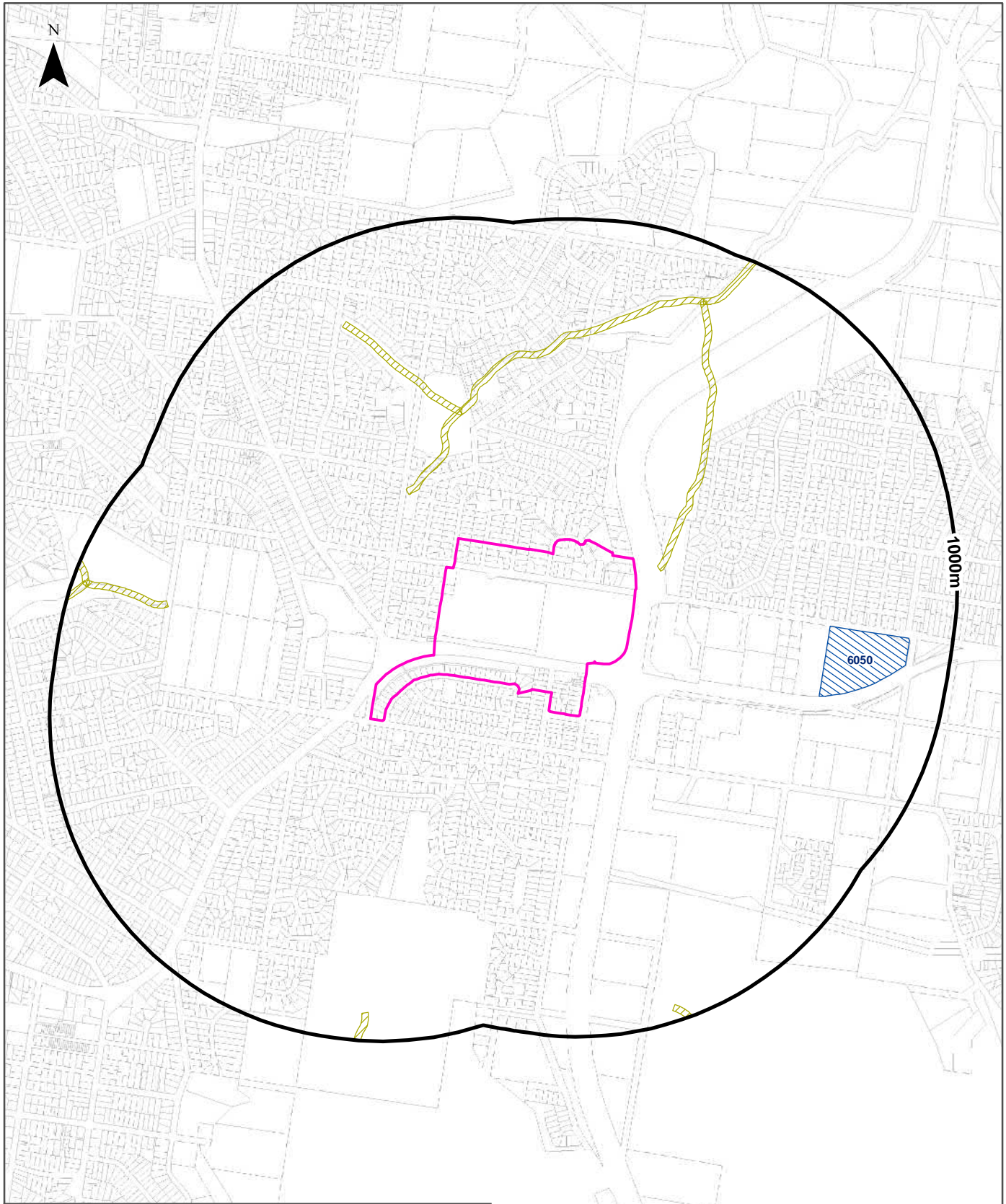
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
20673	FERROVIAL AGROMAN (AUSTRALIA) PTY. LTD.	Northern Beaches Hospital Stage 1 and Stage 2	Connectivity and Network Enhancements Project, FRENCHS FOREST, NSW 2086		Road construction; Land-based extractive activity	3	0m	Onsite

POEO Licence Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Warringah Road, Frenchs Forest, NSW 2086



Legend <div><div><div><div></div><div>Site Boundary</div></div><div><div></div><div>Report Buffer</div></div><div><div></div><div>Property Boundary</div></div><div><div></div><div>Delicensed Activities still Regulated by EPA</div></div><div><div></div><div>Former Licensed/Regulated Activities (revoked or surrendered)</div></div><div><div></div><div>Surrendered Licences related to Other Activities on Waterways incl. Application of Herbicides</div></div></div></div>		Property Boundary Data Source: © Department Finance, Services & Innovation 2017	Coordinate System: GDA 1994 MGA Zone 56	Date: 04 December 2017
Scale: 0 100 200 400 Meters				

EPA Activities

Warringah Road, Frenchs Forest, NSW 2086

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
N/A	No records in buffer							

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

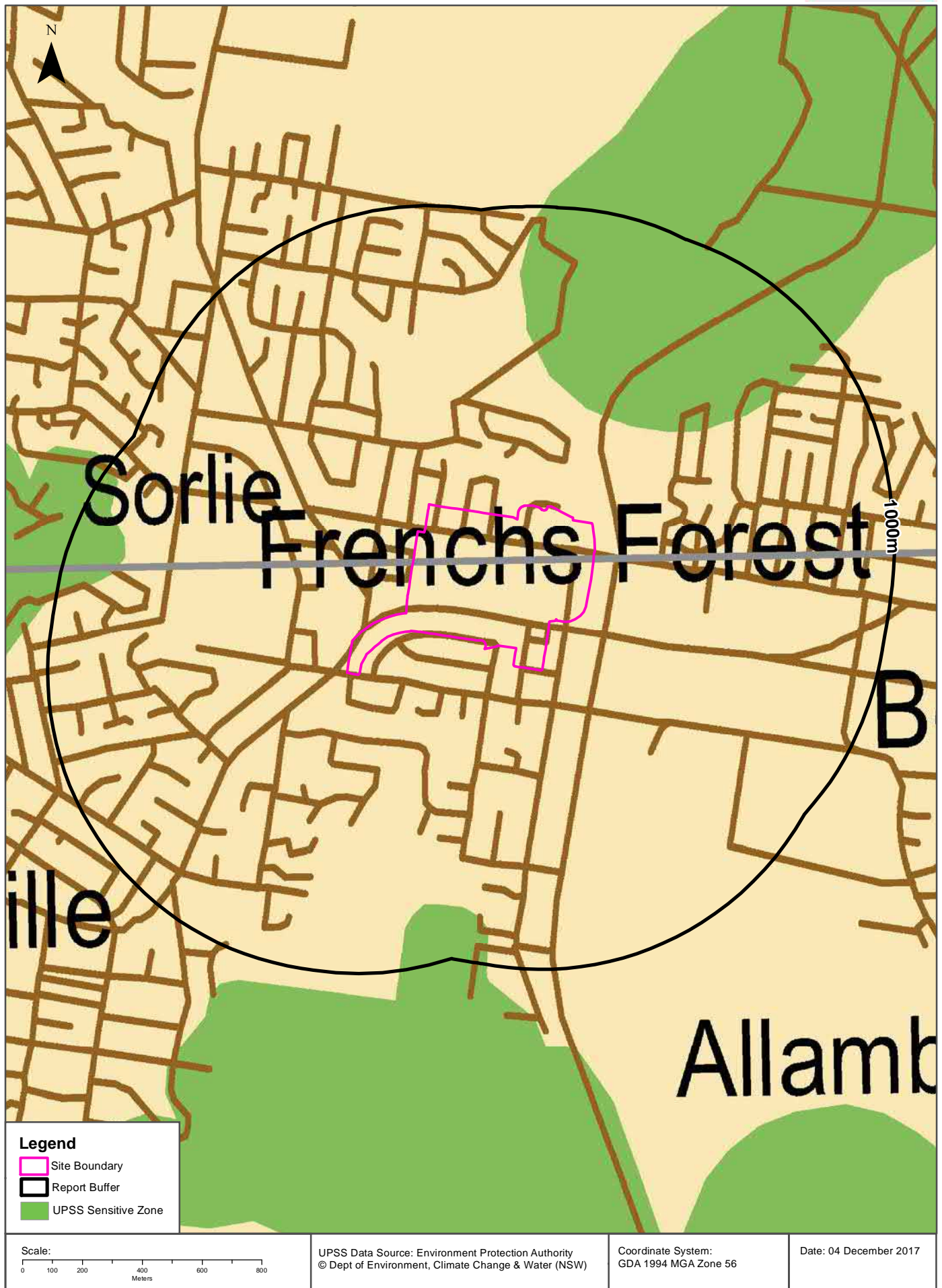
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	71m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	71m	-
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	71m	-
6050	ALCON LABORATORIES (AUSTRALIA) PTY LTD	10 & 11/25 FRENCHS FOREST ROAD EAST, FRENCHS FOREST, NSW 2086	Surrendered	03/04/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	614m	East

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

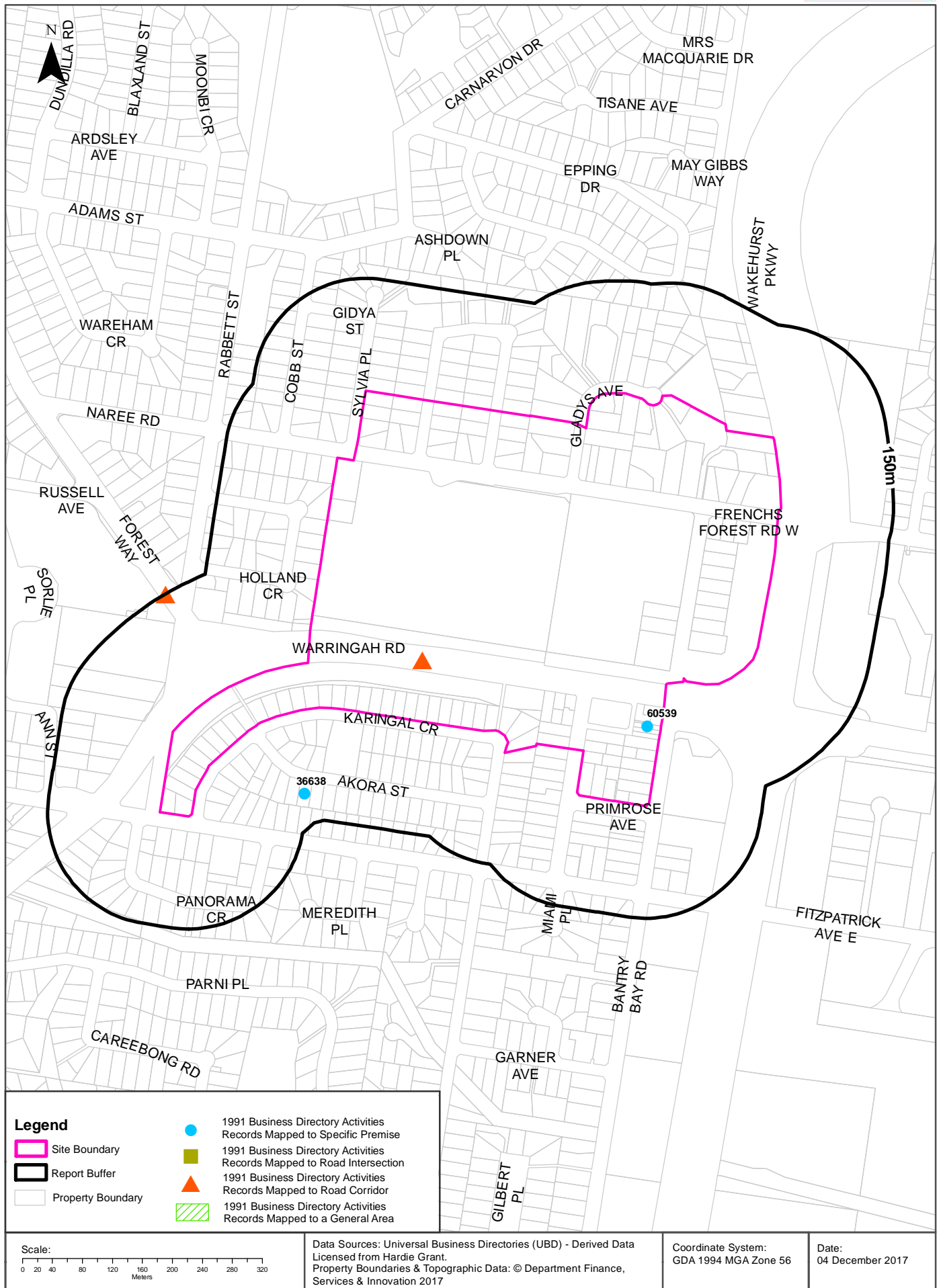
UPSS Sensitive Zones

Warringah Road, Frenchs Forest, NSW 2086



1991 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1991 Business to Business Directory Records Premise or Road Intersection Matches

Records from the 1991 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance to Feature Point	Direction
Real Estate Agents	Parnell, Gilmour & Jones Realty	38 Bantry Bay Rd., Frenchs Forest 2086	60539	Premise Match	0m	Onsite
Bricklayers	Fox, J.R.	9 Akora St, French Forest 2086	36638	Premise Match	110m	South West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1991 Business to Business Directory Records Road or Area Matches

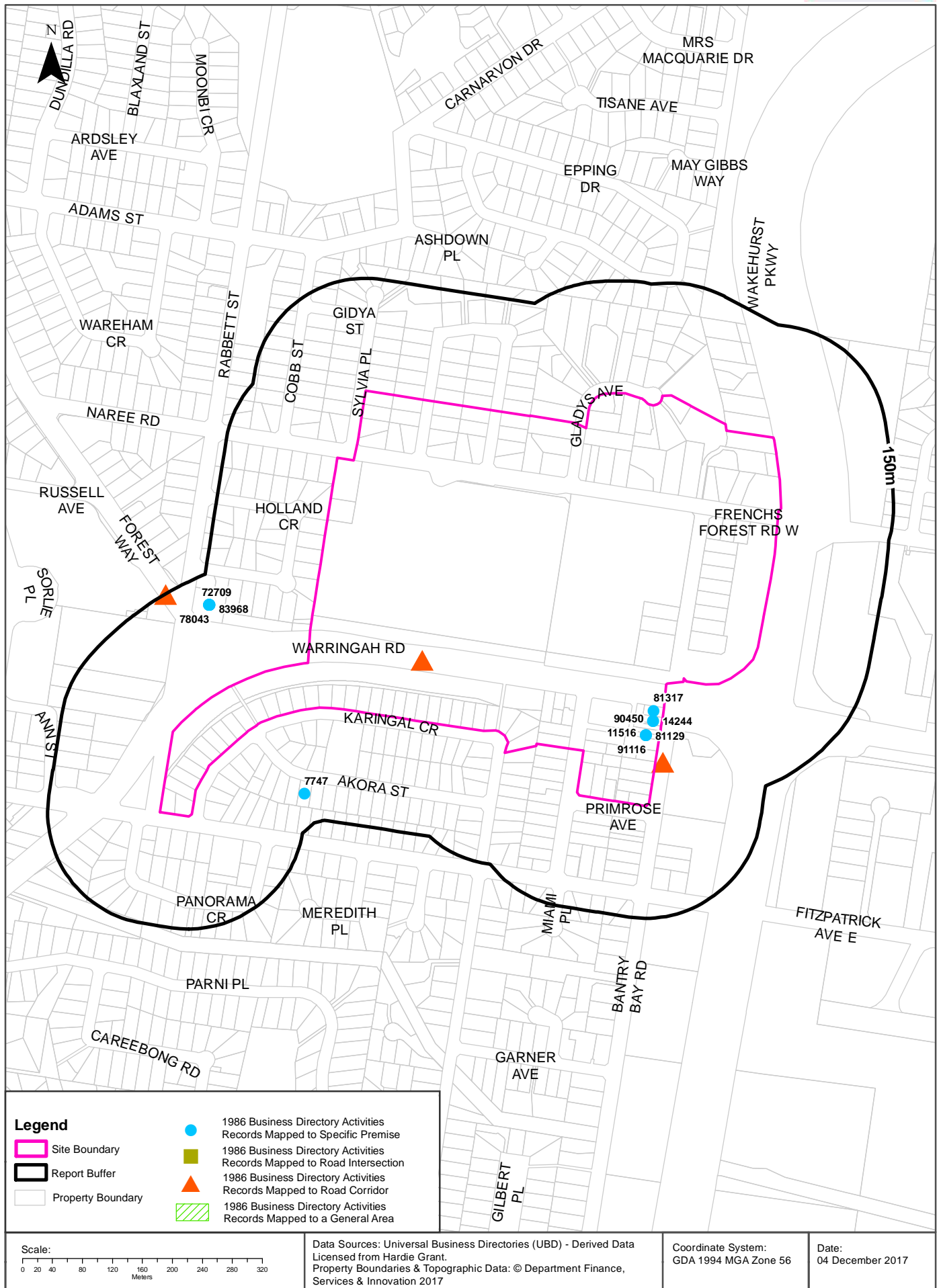
Records from the 1991 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance to Road Corridor or Area
Motor Garages & Service Stations	Eso Frenchs Forest Service Station	Warringah Rd., Frenchs Forest	53720	Road Match	0m
Tyre Dealers &/or Retreaders &/or Vulcanisers	Owen Tyres	Warringbah Rd Frenchs Forest 2086	65324	Road Match	0m
Property Management	Stewart Upton Frenchs Forest Forestworld	Warringah Rd Frenchs Frenchs Forest	59716	Road Match	0m
Rubber Moulders	A & B Printing	Forestway Frenchs Forest 2086	61324	Road Match	148m
Printers Lithographic (Offset)	A.& B Printing	Forestway Frenchs Forest 2086	58998	Road Match	148m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1986 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1986 Business to Business Directory Records Premise or Road Intersection Matches

Records from the 1986 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
CAKE SHOPS &/OR PASTRYCOOKS.	Babarum, 42 Bantry Bay Rd., Frenchs Forest.	11516	Premise Match	0m	Onsite
TAKE-AWAY FOODS.	Bantry Burger, The, 36 Bantry Bay Rd., Frenchs Forest.	90450	Premise Match	0m	Onsite
RESTAURANTS.	Black Stump Steak & Ale Restaurant, The, 42 Bantry Bay Rd., Frenchs Forest.	81129	Premise Match	0m	Onsite
RESTAURANTS.	China Gates, 32 Bantry Bay Rd., Frenchs Forest.	81317	Premise Match	0m	Onsite
CHEMISTS-PHARMACEUTICAL.	Frenchs Forest Night Pharmacy, 34 Bantry Bay Rd., Frenchs Forest.	14244	Premise Match	0m	Onsite
TAKE-AWAY FOODS.	Kentucky Fried Chicken Pty. Ltd., 40 Bantry Bay Rd., Frenchs Forest.	91116	Premise Match	0m	Onsite
BRICKLAYERS.	Fox, J. R., 9 Akora St., Frenchs Forest,	7747	Premise Match	110m	South West
RUBBER STAMP MFRS. &/OR DIST.	A. & B. Printing, 500C Warringah Rd., Frenchs Forest.	83968	Premise Match	110m	West
PHOTO COPYING SERVICES.	A. & B. Printing, 500C Warringah Rd., Frenchs Forest.	72709	Premise Match	110m	West
PLAN PRINTERS.	A. & B. Printing, 500C Warringah Rd., Frenchs Forest.	74016	Premise Match	110m	West
PRINTERS - LITHOGRAPHIC.	A. & B. Printing, 500C Warringah Rd., Frenchs Forest.	76460	Premise Match	110m	West
PROPERTY MANAGEMENT.	Weight & Co. Nationwide Realty Pty. Ltd., 500 Warringah Rd. Frenchs Forest.	78043	Premise Match	110m	West
AUCTIONEERS REAL ESTATE	Weight & Co. Nationwide Realty Pty. Ltd., 500 Warringah Rd., Frenchs Forest.	4649	Premise Match	110m	West
VALUERS - REAL ESTATE.	Weight & Co. Nationwide Realty Pty. Ltd., 500 Warringah Rd., Frenchs Forest.	96924	Premise Match	110m	West
REAL ESTATE AGENTS	Weight & Co. Nationwide Realty Pty. Ltd., 500 Warringah, Frenchs Forest.	80339	Premise Match	110m	West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1986 Business to Business Directory Records Road or Area Matches

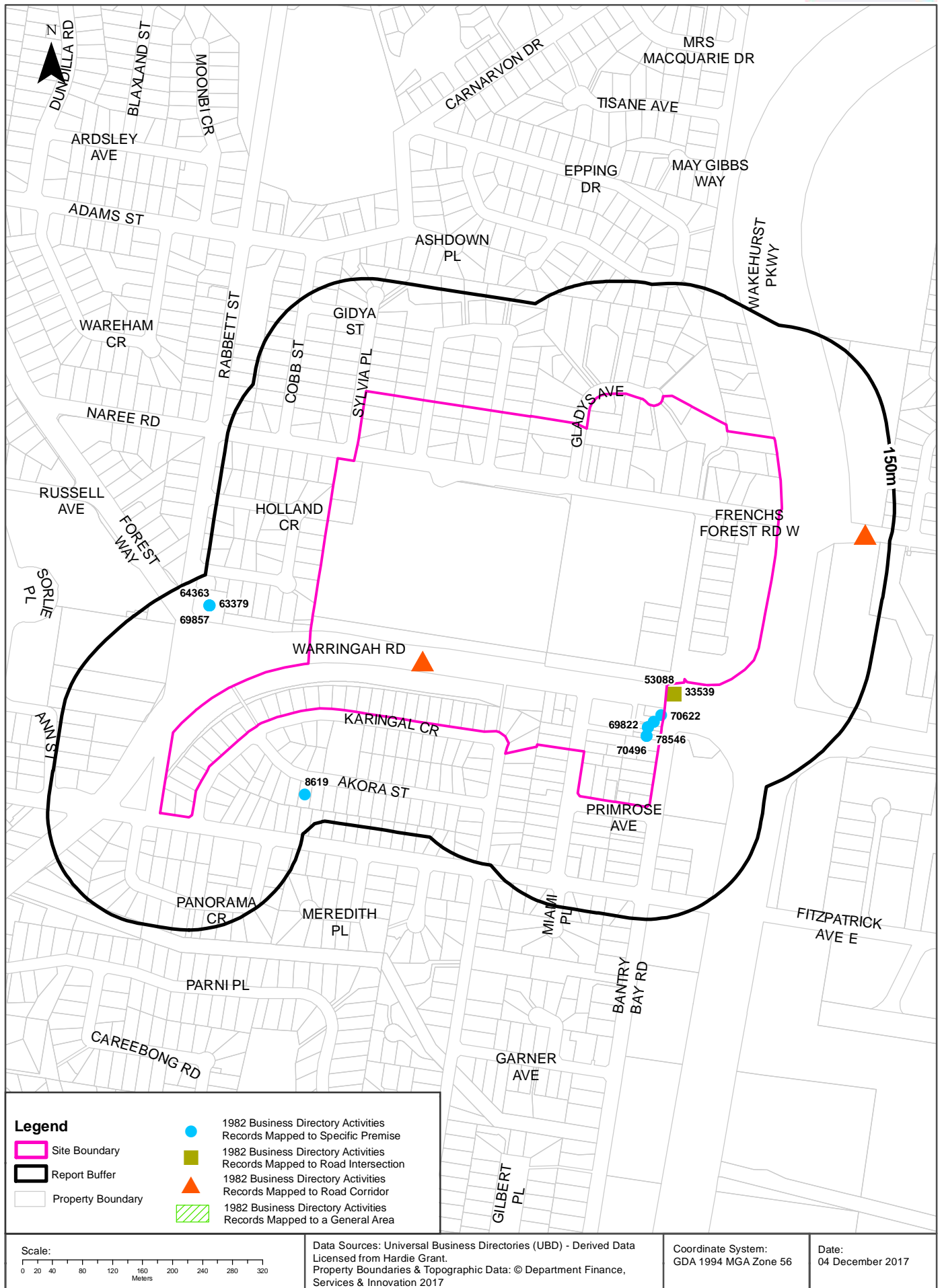
Records from the 1986 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES & SERVICE STATIONS.	Esso Frenchs Forest Service Station, Warringah Rd., Frenchs Forest.	64627	Road Match	0m
PROPERTY MANAGEMENT.	Sky Line Real Estate, Bantry Bay Rd., Frenchs Forest.	77962	Road Match	0m
REAL ESTATE AGENTS.	Sky Line Real Estate, Bantry Bay Rd., Frenchs Forest.	80184	Road Match	0m
PICTURE THEATRES.	Skyline Drive-In Theatre, Warringah Rd., Frenchs Forest.	73795	Road Match	0m
CHEMISTS-PHARMACEUTICAL - MFRS. &/OR IMPS. &/OR	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd., Frenchs Forest.	13854	Road Match	0m
CHEMICAL MFRS. &/OR IMPS. &/OR DIST.	Smith, Kline & French Laboratories (Aust.) Ltd, Warringah Rd., Frenchs Forest.	13734	Road Match	0m
REAL ESTATE AGENTS.	Stewart Upton Pty, Ltd., Warringah Rd., Frenchs Forest.	80226	Road Match	0m
AUCTIONEERS REAL ESTATE	Stewart Upton Pty. Ltd., Warringah Rd., Frenchs Forest.	4619	Road Match	0m
PROPERTY MANAGEMENT.	Stewart Upton Pty. Ltd., Warringah Rd., Frenchs Forest.	77983	Road Match	0m
PROPERTY MANAGEMENT.	Centre, Forest Way, Frenchs Forest.	77965	Road Match	148m
REAL ESTATE AGENTS.	Centre, Forest Way, Frenchs Forest.	80187	Road Match	148m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1982 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1982 Business Directory Records Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
TAKE-AWAY FOODS. (T0235)	Bantry Burger. The, 36 Bantry Bay Rd., Frenchs Forest. 2086.	78132	Premise Match	0m	Onsite
RESTAURANTS. (R5180)	Black Stump Steak & Ale Restaurant, The, 42 Bantry Bay Rd., Frenchs Forest. 2086.	70496	Premise Match	0m	Onsite
RESTAURANTS. (R5180)	China Gates, 32 Bantry Bay Rd., Frenchs Forest. 2086.	70622	Premise Match	0m	Onsite
CHEMISTS - PHARMACEUTICAL. (C4110)	Frenchs Forest Night Pharmacy, 34 Bantry Bay Rd., Frenchs Forest. 2086.	15045	Premise Match	0m	Onsite
TAKE-AWAY FOODS. (T0235)	Kentucky Fried Chicken Pty, Ltd., 40 Bantry Bay Rd., Frenchs Forest. 2096.	78546	Premise Match	0m	Onsite
PROPERTY MANAGEMENT. (P9060)	Urquhart, Colin, Real Estate Pty, Ltd., 38 Bantry Bay Rd., Frenchs Forest. 2086.	67638	Premise Match	0m	Onsite
REAL ESTATE AGENTS. (R2555)	Urquhart, Colin, Real Estate Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest. 2086	69822	Premise Match	0m	Onsite
AUCTIONEERS - REAL ESTATE. (A8430)	Urquhart, Colin, Real Estate Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest. 2086.	4079	Premise Match	0m	Onsite
MIXED BUSINESSES. (M4060)	Frenchs Forest Fruit Market, Warringah & Bantry Bay Rds , Frenchs Forest. 2086.	53088	Road Intersection	11m	South East
FRUITERERS &/OR GREENGROCERS. (F6775)	Frenchs Forest Fruit Market, Warringah & Bantry Bay Rds., Frenchs Forest. 2086.	33539	Road Intersection	11m	South East
BRICKLAYERS. (B6260)	Fox, J. R., 9 Akora St., Frenchs Forest. 2006.	8619	Premise Match	110m	South West
DUPLICATING &/OR TYPING SPECIALISTS. (D9250)	A. & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest. 2066.	24129	Premise Match	110m	West
PRINTERS - LITHOGRAPHIC (OFFSET). (P8440)	A. & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest. 2086.	66349	Premise Match	110m	West
PHOTO COPYING SERVICES. (P3280)	A. & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest. 2086.	63379	Premise Match	110m	West
PLAN PRINTERS. (P5200)	A.&B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest. 2086.	64363	Premise Match	110m	West
REAL ESTATE AGENTS. (R2555)	Weight & Co. Pty. Ltd., 500 Warringah Rd., Frenchs Forest. 2086.	69857	Premise Match	110m	West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1982 Business Directory Records Road or Area Matches

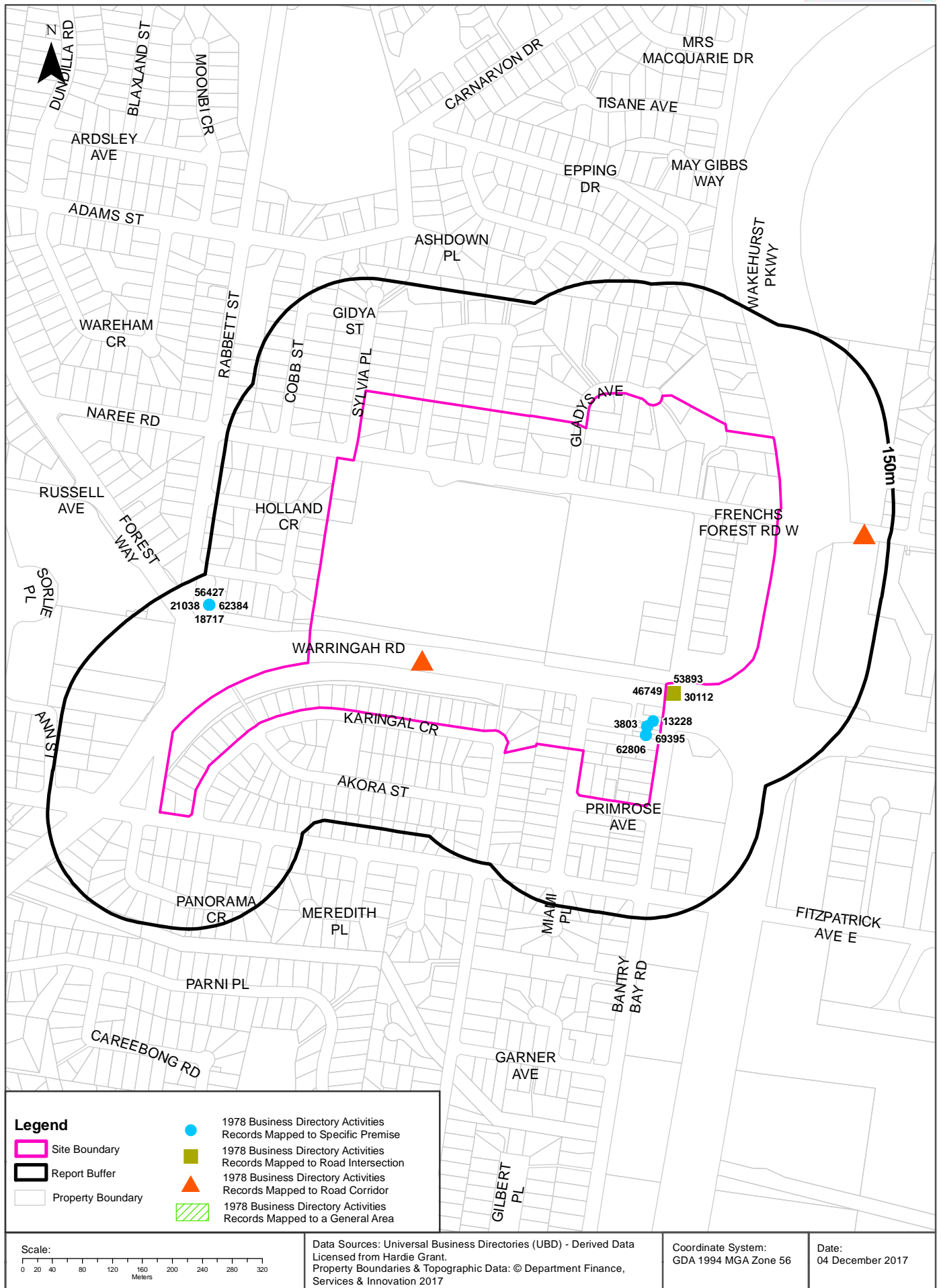
Records from the 1982 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Esso Frenchs Forest Service Station, Warringah Rd., Frenchs Forest. 2066.	56695	Road Match	0m
RESTAURANTS. (R5180)	Forest Fire Kettle, 3 Warringah Rd Frenchs Forest. 2086.	70849	Road Match	0m
THEATRES - DRIVE-IN. (T3600)	Frenchs Forest Skyline Drive-In (Hoyts), Frenchs Forest Rd Frenchs Forest. 2086.	79953	Road Match	0m
CHEMISTS MFRG.&/OR W/SALERS. (C4095)	Menley & James Laboratories, Warringah Rd., Frenchs Forest.2086.	14631	Road Match	0m
PICTURE THEATRES. (P4420)	Skyline Drive-In Theatre, Warringah Rd., Frenchs Forest. 2086.	64195	Road Match	0m
CHEMISTS MFRG.&/OR W/SALERS. (C4095)	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd., Frenchs Forest. 2086.	14661	Road Match	0m
CHEMICAL MFRS. &/OR IMPS.&/OR DIST. (C3855)	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd, Frenchs Forest. 2086.	14515	Road Match	0m
REAL ESTATE AGENTS. (R2555)	Stewart Upton Pty. Ltd., Warringah Rd., Frenchs Forest 2086.	69754	Road Match	0m
BUILDERS HARDWARE MFRS.&/OR IMPS. &/OR DIST. (B6990)	Dunn, N. H. Pty. Ltd, Frenchs Forest Rd., Frenchs Forest. 2086.	9554	Road Match	77m
GIFT SHOPS. (G3350)	Dunn, N. H. Pty. Ltd., Frenchs Forest Rd., Frenchs Forest. 2086.	36208	Road Match	77m
MEDICAL PRACTITIONERS. (M2020)	Patel, V. I., 23 Frenchs Forest Rd., Frenchs Forest. 2086.	49738	Road Match	77m
TAKE-AWAY FOODS. (T0235)	Pizza Hut, 1 Frenchs Forest Rd., Frenchs Forest. 2086.	78821	Road Match	77m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1978 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1978 Business Directory Records Premise or Road Intersection Matches

Records from the 1978 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
RESTAURANTS.	Black Stump Steak & Ale Restaurant, The, 42 Bantry Bay Rd., Frenchs Forest.	62806	Premise Match	0m	Onsite
CHEMISTS-PHARMACEUTICAL.	Frenchs Forest Night Pharmacy. 34 Bantry Bay Rd., Frenchs Forest.	13228	Premise Match	0m	Onsite
TAKE-AWAY FOODS.	Kentucky Fried Chicken, 40 Bantry Bay Rd., Frenchs Forest.	69395	Premise Match	0m	Onsite
PROPERTY MANAGEMENT.	Urquhart, Colin, Real Estate Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest.	60399	Premise Match	0m	Onsite
REAL ESTATE AGENTS &/OR VALUERS.	Urquhart, Colin, Real Estate Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest.	62342	Premise Match	0m	Onsite
AUCTIONEERS-REAL ESTATE.	Urquhart, Colin, Real Estate Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest.	3803	Premise Match	0m	Onsite
NEWSAGENTS-GENERAL.	French Forest Fruit Market, Warringah & Bantry Bay Rds., Frenchs Forest.	53893	Road Intersection	11m	South East
FRUIT VEGETABLE, POTATO &/OR PRODUCE AGENTS &/OR WSALERS.	Frenchs Forest Fruit Market, Warringah & Bantry Bay Rds., Frenchs Forest.	30112	Road Intersection	11m	South East
MIXED BUSINESSES.	Frenchs Forest Fruit Market, Warringah & Bantry Bay Rds., Frenchs Forest.	46749	Road Intersection	11m	South East
PLAN PRINTERS.	A & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest	57317	Premise Match	110m	West
DESIGN CONSULTANTS.	A. & B. Copying & Duplicating Service, 500c Warringah Rd., French Forest	18717	Premise Match	110m	West
PRINTERS-LITHOGRAPHIC	A. & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest	59300	Premise Match	110m	West
PHOTO COPYING SERVICES.	A. & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest	56427	Premise Match	110m	West
DUPLICATING &/OR TYPING SPECIALISTS.	A.A B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest	21038	Premise Match	110m	West
REAL ESTATE AGENTS &/OR VALUERS.	Weight & Co. Pty. Ltd., 500 Waringah Rd., Frenchs Forest	62384	Premise Match	110m	West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1978 Business Directory Records Road or Area Matches

Records from the 1978 UBD Business Directory, 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:

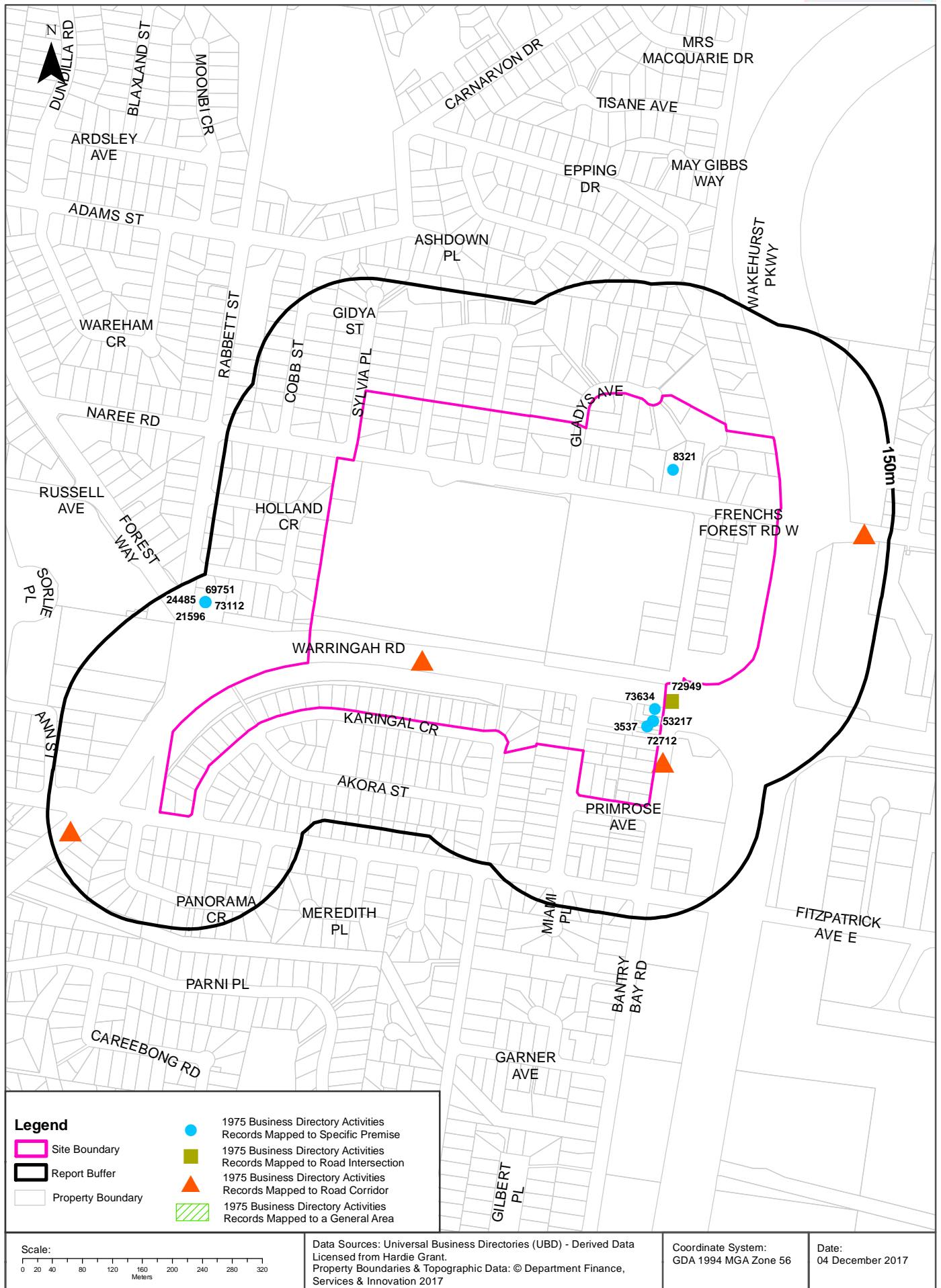
Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Servicenter, Warringah Rd., Frenchs Forest	49989	Road Match	0m
CHEMISTS MFRG.&/OR W/SALERS.	Menley & James Laboratories. Warringah Rd., Frenchs Forest.	12823	Road Match	0m
PICTURE THEATRES.	Skyline Drive-In, Warringah Rd., Frenchs Forest.	57122	Road Match	0m
CHEMICAL MFRS. &/OR DIST. &/OR IMPS.	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd., Frenchs Forest.	12654	Road Match	0m
CHEMISTS MFRG.&/OR W/SALERS.	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd., Frenchs Forest.	12857	Road Match	0m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
REAL ESTATE AGENTS &/OR VALUERS.	Stewart, Upton Pty. Ltd., Warringah Rd., Frenchs Forest	62277	Road Match	0m
BUILDERS HARDWARE MFRS. &/OR IMPS. &/OR DIST.	Dunn, N. H. Pty. Ltd., Frenchs Forest Rd., Frenchs Forest	8046	Road Match	77m
GIFT SHOPS.	Dunn, N. H. Pty. Ltd., Frenchs Forest Rd., Frenchs Forest.	32812	Road Match	77m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1975 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1975 Business Directory Records Premise or Road Intersection Matches

Records from the 1975 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
BUILDERS &/OR BUILDING CONTRACTORS.	Adema, J. Pty. Ltd., 116 Frenchs Forest Rd., Frenchs Forest.	8321	Premise Match	0m	Onsite
TAKE., AWAY FOODS.	Bantry Bay Hamburger Shop, 36 Bantry Bay Rd., Frenchs Forest	81824	Premise Match	0m	Onsite
MILK, FRUIT JUICE BARS &/OR CONFECTIONERS.	Bantry Bay Hamburger Shop, 36 Bantry Bay Rd., Frenchs Forest.	53217	Premise Match	0m	Onsite
RESTAURANTS.	China Gates, 32 Bantry Bay Rd., Frenchs Forest.	73634	Premise Match	0m	Onsite
CHEMISTS-PHARMACEUTICAL	Frenchs Forest Night Chemist, 34 Bantry Bay Rd., Frenchs Forest.	15298	Premise Match	0m	Onsite
AUCTIONEERS-REAL ESTATE	Morison, J. G. Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest.	3537	Premise Match	0m	Onsite
REAL ESTATE AGENTS &/OR VALUERS.	Morison, J. G. Pty. Ltd., 38 Bantry Bay Rd., Frenchs Forest.	72712	Premise Match	0m	Onsite
REAL ESTATE AGENTS &/OR VALUERS.	Stewart Upton Pty. Ltd, Cnr. Warringah & Bantry Bay Rds., French's Forest,	72949	Road Intersection	10m	South East
DUPLICATING &/OR TYPING SPECIALISTS.	A & B. Copying Duplicate Service, 500c Warringah Rd Frenchs Forest	24485	Premise Match	115m	West
DESIGN CONSULTANTS.	A. & B Copying & Duplicating Service, 500c Warringah & Frenchs Forest.	21596	Premise Match	115m	West
PHOTO COPYING SERVICES.	A. & B. Copying & Duplicating Service, 500c Warringah Rd., Frenchs Forest	66465	Premise Match	115m	West
PRINTERS-LITHOGRAPHIC (OFFSET).	A.& B. Copying & Duplicating Service, 500c Warringah Rd, Frenchs Forest	69751	Premise Match	115m	West
PLAN PRINTERS.	L & B. Copying & Duplicating Service, 500c Warringah Rd, Frenchs Forest	67491	Premise Match	115m	West
REAL ESTATE AGENTS &/OR VALUERS.	Weight & Co. Pty. Ltd., 500 Waringah Rd., Frenchs Forest.	73112	Premise Match	115m	West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1975 Business Directory Records Road or Area Matches

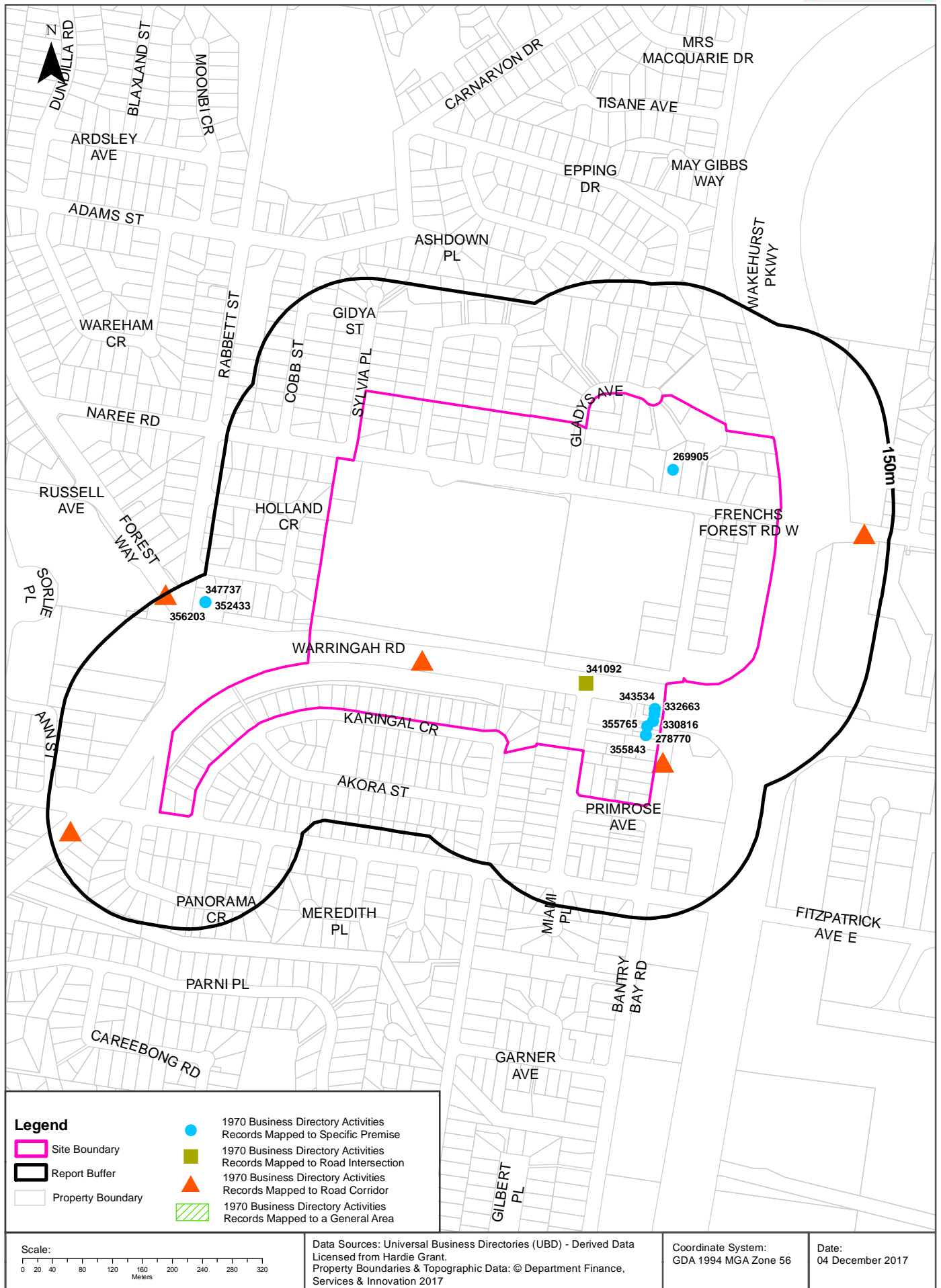
Records from the 1975 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
RESTAURANTS.	Black Stump, The, Bantry Bay Rd., Frenchs Forest.	73577	Road Match	0m
BUTCHERS-RETAIL	Elvy's Pty. Ltd., Warringah Rd., Frenchs Forest.	10325	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS.	Esso Servicenter, Warringah Rd., French Forest	58827	Road Match	0m
FRUITERS &/OR GREENGROCERS.	Frenchs Forest Fruit Market, Warringah Rd., French Forest.	35232	Road Match	0m
NEWSAGENTS-GENERAL	Frenchs Forest Fruit Market, Warringah Rd., Frenchs Forest	63559	Road Match	0m
FRUIT VEGETABLE, POTATO &/OR PRODUCE AGENTS &/OR WSALERS.	Frenchs Forest Fruit Market, Warringah Rd., Frenchs Forest.	34702	Road Match	0m
MIXED BUSINESSES.	Frenchs Forest Fruit Market, Warringah Rd., Frenchs Forest.	54869	Road Match	0m
TAKE., AWAY FOODS.	Kentucky Fried Chicken, Bantry Bay Rd., Frenchs Forest.	81935	Road Match	0m
RESTAURANTS.	Maxs Haystack, Warringah Rd., Frenchs Forest.	73959	Road Match	0m
CHEMISTS MFRG. &/OR W/SALERS.	Menley & James Laboratories, Warringah Rd., Frenchs Forest.	14837	Road Match	0m
PICTURE THEATRES.	Skyline Drive-In. Warringah Rd., Frenchs Forest.	67276	Road Match	0m
CHEMICAL MFRS. &/OR DIST. &/OR IMPS	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd., Frenchs Forest	14633	Road Match	0m
CHEMISTS MFRG. &/OR W/SALERS.	Smith, Kline & French Laboratories (Aust.) Ltd., Warringah Rd., Frenchs Forest.	14878	Road Match	0m
REAL ESTATE AGENTS &/OR VALUERS.	Stewart, Upton Pty. Ltd, Warringah Rd, Frenchs Forest	72998	Road Match	0m
OIL BURNER MFRS. &/OR SUPPLIERS.	Universal Oil Burner Co., Warringah Rd., Forestville	64621	Road Match	76m
GIFT SHOPS.	Dunn, N. H. Pty. Ltd. Frenchs Forest Rd, Frenchs Forest	38078	Road Match	77m
BUILDERS HARDWARE MFRS. &/OR IMPS. &/OR DIST.	Dunn, N. H. Pty. Ltd., Frenchs Forest Rd., Frenchs Forest.	9063	Road Match	77m
HEALTH FOODS-RETAIL	Little John's Bulk & Health Foods, Frenchs Forest Rd., Frenchs Forest.	41836	Road Match	77m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1970 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1970 Business Directory Records Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
BUILDERS & CONTRACTORS (B800)	Adema, J Pty. Ltd., 116 Frenchs Forest Rd., Frenchs Forest	269905	Premise Match	0m	Onsite
RESTAURANTS (R320)	China Gates,32 Bantry Bay Rd.,Frenchs Forest	356915	Premise Match	0m	Onsite
MIXED BUSINESSES (M408)	Frenchs Forest Newagency,30 Bantry Bay Rd.,FrenchsForest	332663	Premise Match	0m	Onsite
NEWSAGENTS (N100)	Frenchs Forest Newsagency,30 Bantry Bay Rd.,FrenchsForest	343534	Premise Match	0m	Onsite
CHEMISTS-PHARMACEUTICAL (C286)	Frenchs Forest Night Chemist, 34 Bantry Bay Rd., FrenchsForest	280400	Premise Match	0m	Onsite
CATERERS (C183)	Larsen's Poul Catering, 42 Bantry Bay Rd., Frenchs Forest	278770	Premise Match	0m	Onsite
MILK,FRUIT JUICE BARS/CONFECTIONERS (M336)	Lerons,36 Bantry Bay Rd.,Frenchs Forest	330816	Premise Match	0m	Onsite
AUCTIONEERS-GENERAL (A620)	Morison, JGPty. Ltd., 38 Bantry Bay Rd., FrenchsForest, 2086	263680	Premise Match	0m	Onsite
REAL ESTATE AGENTS/VALUERS(R205)	Morison,J. G. Pty. Ltd.,38 Bantry Bay Rd.FRENCH'S FOREST	355765	Premise Match	0m	Onsite
REAL ESTATE AGENTS/VALUERS(R205)	Partridge & Earle,40 Bantry Bay Rd.FRENCH'S FOREST	355843	Premise Match	0m	Onsite
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Esso Servicenter,Cnr. Warringah Rd. & Hilner St.FRENCH'S FOREST	341092	Road Intersection	0m	Onsite
PHOTO-COPYING SERVICES (P254)	A. & B.,500c Warringah Rd.,Frenchs Forest,2086	347737	Premise Match	115m	West
PRINTERS-LITHOGRAPHIC (OFFSET)(P810)	A. & B.,500c Warringah Rd.,Frenchs Forest,2086	352433	Premise Match	115m	West
REAL ESTATE AGENTS/VALUERS(R205)	Weight & Co. Pty. Ltd.;500 Warringah Rd. & BranchFRENCH'S FOREST	356203	Premise Match	115m	West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1970 Business Directory Records Road or Area Matches

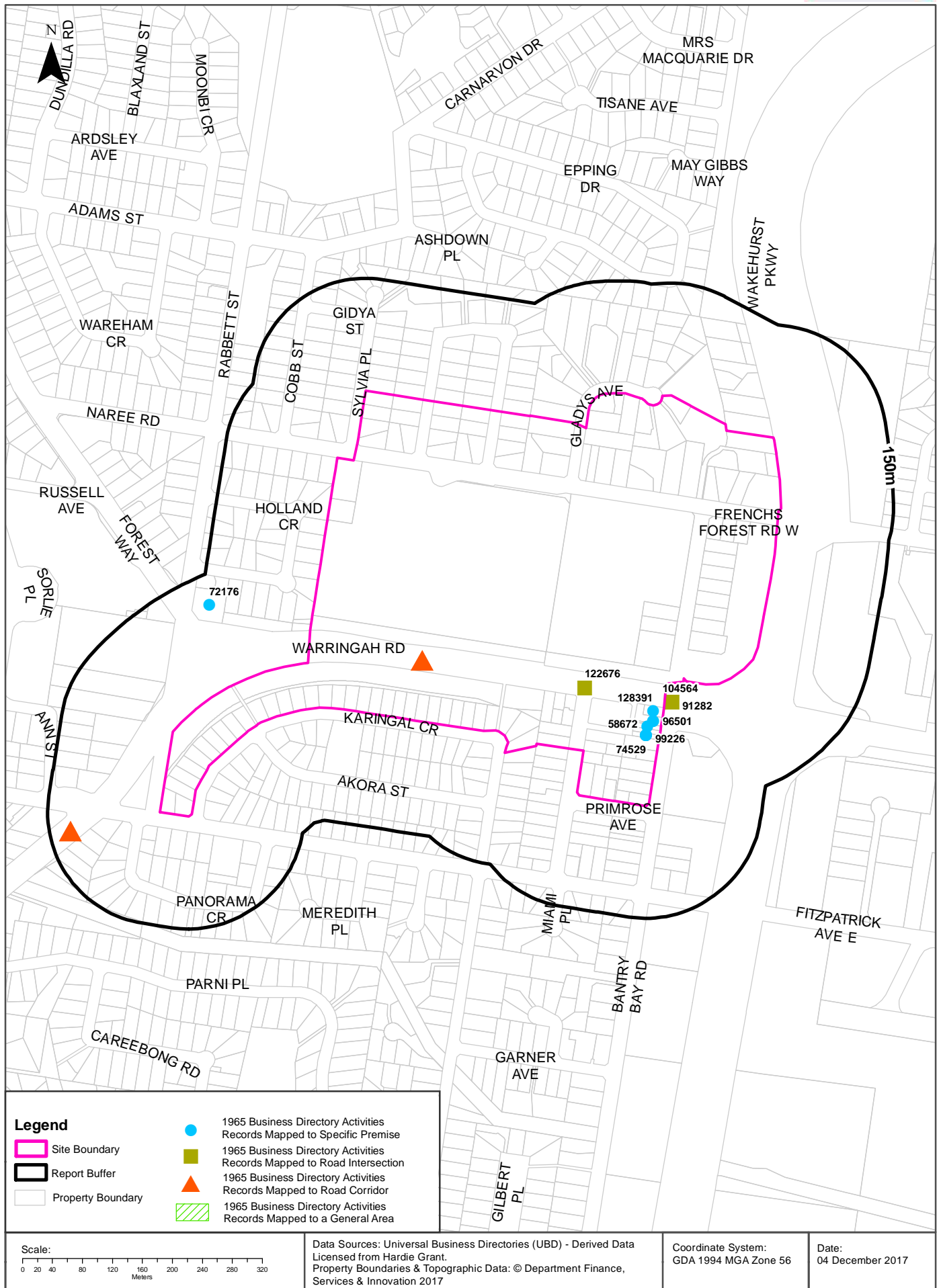
Records from the 1970 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
TELEVISION PROGRAMME PRODUCERS (T154)	Artransa Park Television Pty.Ltd.,Warringah Rd.,Frenchs Forest	367670	Road Match	0m
FILM PRODUCERS (F155)	Artransa Park Television Pty.Ltd.,Warringah Rd.,French'sForest	302664	Road Match	0m
MOTOR GARAGES & ENGINEERS(M6S6)	Esso Servicenter,Warringah Rd.FRENCH'S FOREST	337772	Road Match	0m
FRUIT, VEGETABLE, POTATO & PRODUCE AGENTS &/OR W'SALERS(F637)	Frenchs Forest Fruit Market,Warringah Rd.,Frenchs Forest	306388	Road Match	0m
FRUITERS/GREENGROCERS (F640)	Frenchs Forest Fruit Market,Warringah Rd.,Frenchs Forest	307086	Road Match	0m
CAFES, COFFEE LOUNGES, Etc. (C030)	Haystack (The), No5 Shopping Centre, Warringah Rd.,Frenchs Forest	275683	Road Match	0m
RESTAURANTS (R320)	Max's Haystack,Bantry Bay Rd.,Frenchs Forest	357130	Road Match	0m
CHEMISTS-MANUFACTURING &/OR WHOLESALE (C284)	Menley & James Laboratories, Warringah Rd., French's Forest1	279900	Road Match	0m
SOLICITORS (S413)	Wade,F. J.,Warringah Rd.,Frenchs Forest	363125	Road Match	0m
SOLICITORS (S413)	Ward,F,J.,Bantry Rd.,Frenchs Forest	363133	Road Match	0m
GROCERS-RETAIL (G655)	Baxter,W. & M. E.,Warringah Rd.,Forestville	312194	Road Match	76m
GROCERS-RETAIL (G655)	Vine,E.E.,Warringah Rd.,Forestville	313129	Road Match	76m
WINE/SPIRIT MERCHANTS-RETAIL(W260)	Vine,E.E.,Warringah Rd.,Forestville	374617	Road Match	76m
WINE/SPIRIT MERCHANTS-WHOLESALE (W265)	Vine,E.E.,Warringah Rd.,Forestville	374731	Road Match	76m
HARDWARE DEALERS/IRONMONGERS (H230)	Dunn,N. H. Pty. Ltd.,Frenchs Forest Rd.FRENCH'S FOREST	315018	Road Match	77m
GIFT SHOPS (G180)	Dunn,N.H.Pty.Ltd.,Frenchs Forest Rd.,Frenchs Forest	310767	Road Match	77m
HABERDASHERY-RETAIL (H010)	Gails Boutique,Frenchs Forest Rd.,Frenchs Forest	313409	Road Match	77m
DRESS SHOPS (D595)	Gails Boutique,Frenchs Forest Rd.; Frenchs Forest	291272	Road Match	77m
HEALTH FOOD RETAILERS (H350)	Little Johns Bulk & Health Foods,Frenchs Forest Rd.,Frenchs Forest	315997	Road Match	77m
BUILDERS & CONTRACTORS (B800)	Stewart Upton Constructions Pty. Ltd., Forest Wy., Frenchs Forest	270395	Road Match	148m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1965 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1965 Business Directory Records Premise or Road Intersection Matches

Records from the 1965 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Disposal Stores	Forest Bargain Centre, 40 Bantry Bay Rd., Frenchs Forest	74529	Premise Match	0m	Onsite
Paint, Varnish, Oils/Colour Merchants	Forest Hardware (The), 42 Bantry Bay Rd., Frenchs Forest	130832	Premise Match	0m	Onsite
Grocers - Retail	Forest Thriftway (The) , 34 Bantry Bay Rd., Frenchs Forest	96501	Premise Match	0m	Onsite
Chemists - Pharmaceutical	Hollis, P. R. D., 36 Bantry Bay Rd., Frenchs Forest	65138	Premise Match	0m	Onsite
Butchers - Retail	L.V. Superior Meats, , 38 Bantry Bay Rd., Frenchs Forest	58672	Premise Match	0m	Onsite
Hardware Dealers &/or Iron Mongers - French's Forest	Leigh-Potter's Hardware, 42 Bantry Bay Rd.	99226	Premise Match	0m	Onsite
Paint, Varnish, Oils/Colour Merchants	Leigh-Potter's Hardware, 42 Bantry Bay Rd., Frenchs Forest	130926	Premise Match	0m	Onsite
Newsagents	Peters, J., 30 Bantry Bay Rd., Frenchs Forest	128391	Premise Match	0m	Onsite
Motor Garages & Engineers - French's Forest	Esso Servicentre, Cnr. Warringah Rd. & Hilmer St.	122676	Road Intersection	0m	Onsite
Newsagents	Evans, P. & A., Cnr. 32 Bantry Bay & Warringah Rds., Frenchs Forest	128145	Road Intersection	9m	South East
Mixed Businesses	Evans, P. & A., Cnr. 32 Bantry Bay & Warringah Rds., French's Forest	117221	Road Intersection	9m	South East
Fruiterers & Greengrocers	French's Forest Retail Market, Cnr. Warringah & Bantry Bay Rds., French's Forest	91282	Road Intersection	9m	South East
Restaurants	Haystack Restaurant (The)Cnr. Warringah & Bantry , Bay Rds., Frenchs Forest	140454	Road Intersection	9m	South East
Real Estate Agents/Valuers - French's Forest	Stewart Lipton Pty. Ltd. , Cnr. Warringah & Bantry Bay Rds.	139246	Road Intersection	9m	South East
Insurance Agents	Stewart Upton Pty. Ltd., Cnr. Warringah & Bantry Bay Rds., Frenchs Forest	104564	Road Intersection	9m	South East
DELICATESSENS	French's Forest Post Office Store, Cnr. 500 Warringah Rd. & Rabbet St., Frenchs Forest	72176	Premise Match	110m	West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1965 Business Directory Records Road or Area Matches

Records from the 1965 UBD Business Directory, 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:

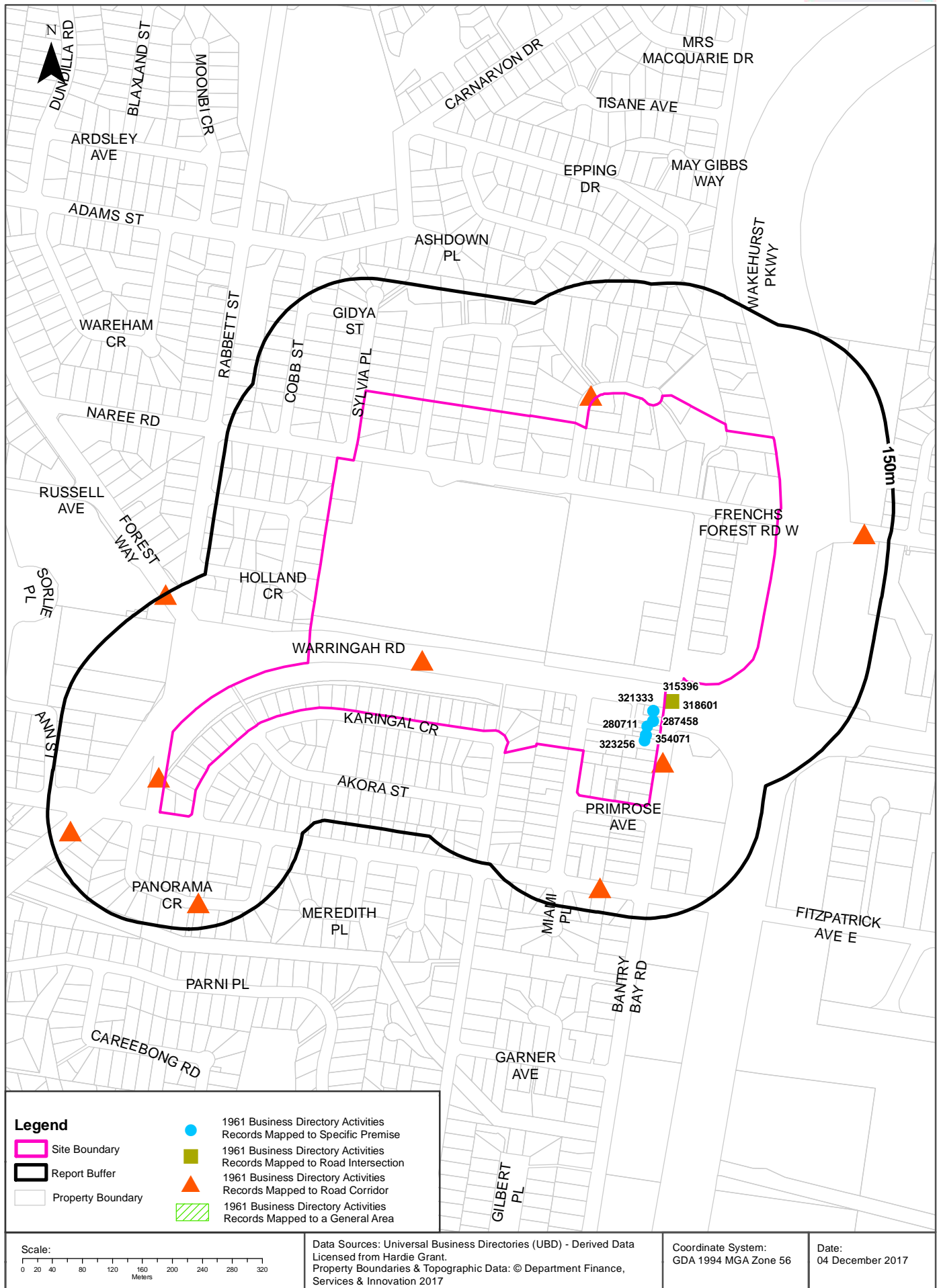
Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
Cafes, Tea Rooms, Coffee Lounges, Etc.	Haystack (The), No. 5 Shopping Centre, Warringah Rd., Frenchs Forest	60427	Road Match	0m
Grocers - Retail	Baxter, W. & M. E. , Warringah Rd., Forestville	96186	Road Match	76m
Motor Garages & Engineers - Forestville	Forestville Auto Port, Warringah Rd.	122670	Road Match	76m
Medical Practitioners	Morris, John, 8 Warringah Rd., Forestville	112242	Road Match	76m
Grocers - Retail	Vine, E. E. , Warringah Rd., Forestville	97258	Road Match	76m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
Wine/Spirit Merchants - Retail	vine, E. E. , Warringah Rd., Forestville	157377	Road Match	76m
Wine/Spirit Merchants - Wholesale	Vine, E. E. , Warringah Rd., Forestville	157475	Road Match	76m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1961 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1961 Business Directory Records Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
CHEMISTS-PHARMACEUTICAL	Carter, P. V., 36 Bantry Bay Rd., Frenchs Forest	287416	Premise Match	0m	Onsite
CHEMISTS-PHARMACEUTICAL	Coster, P. V., 34 Bantry Bay Rd., Frenchs Forest	287458	Premise Match	0m	Onsite
GARDEN SUPPLIES-RETAIL	Forest Garden Centre, 40 Bantry Bay Rd., Frenchs Forest	318504	Premise Match	0m	Onsite
NURSERYMEN	Forest Garden Centre, 40 Bantry Bay Rd., Frenchs Forest	354071	Premise Match	0m	Onsite
HARDWARE DEALERS/IRONMONGERS	Forest Hardware Supplies, 42 Bantry Bay Rd., FRENCH'S FOREST	323256	Premise Match	0m	Onsite
NEWSAGENTS	French's Forest Newsagency, 32 Bantry Bay Rd., French's Forest	353174	Premise Match	0m	Onsite
BUTCHERS-RETAIL	Maloney, Jack W., 38 Bantry Bay Rd., Frenchs Forest	280711	Premise Match	0m	Onsite
NEWSAGENTS	Peters, J., 30 Bantry Bay RO., Frenchs Forest	353367	Premise Match	0m	Onsite
GROCERS-RETAIL	Thriftway Food Stores, 32 Bantry Bay Rd., Frenchs Forest	321333	Premise Match	0m	Onsite
GAS APPLIANCES SHOWROOMS	French's Forest Estate Agency, Cnr. Bantry Bay & Warringah Rds., French's Forest	318601	Road Intersection	10m	South East
FRUITERERS/GREENGROCERS	French's Forest Retail Market, Cnr. Warringah & Bantry Bay Rds., French's Forest	315396	Road Intersection	10m	South East
RESTAURANTS	Haystack Restaurant (The), Cnr. Warringah & Bantry Bay Rds., Frenchs Forest	245992	Road Intersection	10m	South East
HARDWARE DEALERS/IRONMONGERS	Upton's, Cnr. Warringah & Bantry Bay Rds. FRENCH'S FOREST	323257	Road Intersection	10m	South East

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1961 Business Directory Records Road or Area Matches

Records from the 1961 UBD Business Directory, 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:

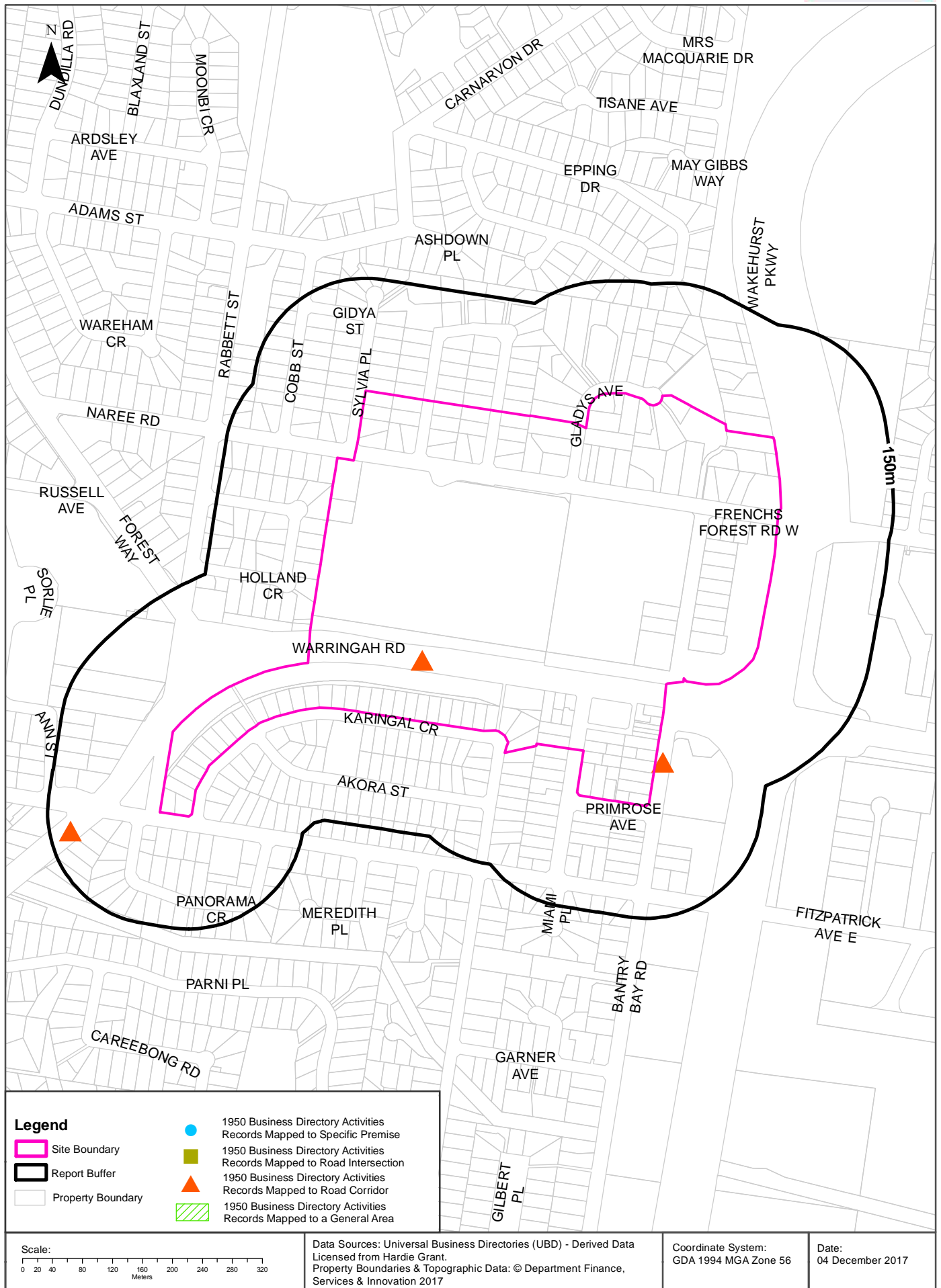
Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
HARDWARE DEALERS/IRONMONGERS	Andrews, E., Bantry Bay Rd. FRENCH'S FOREST	323255	Road Match	0m
DELICATESSENS	Boomgaard's Delicatessen, Rabbett St., Frenchs Forest	294607	Road Match	0m
VALUATORS-FURNITURE &/OR GENERAL	Farmer, D. F., Gladys Ave., Frenchs Forest	260713	Road Match	0m
PICTURE THEATRES	French's Forest Skyline Drive-In, Warringah Rd., Frenchs Forest	358440	Road Match	0m
FRUITERERS/GREENGROCERS	Frenchs Forest Market, 4 Shopping Centre, Warringah Rd., Frenchs Forest	315398	Road Match	0m
ARCHITECTS	Holmes, E. N., Bantry Bay Rd., Frenchs Forest	268290	Road Match	0m
MOTOR GARAGES & ENGINEERS	Sheppard's Service Station, Warringah Rd. FRENCH'S FOREST	348125	Road Match	0m
PICTURE THEATRES	Skyline Drive In, Warringah Rd., Frenchs Forest	358546	Road Match	0m
NURSERYMEN	York, Meredith, Fitzpatrick Ave., Frenchs Forest	354246	Road Match	0m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
ACCOUNTANTS & AUDITORS	Garvan, N. V., Panorama Cres., Frenchs Forest	265010	Road Match	30m
GROCERS-RETAIL	Baxter, W. and M. E., Warringah Rd., Forestville	320111	Road Match	76m
FRUITERERS/GREENGROCERS	Cummings Store, Warringah Rd., Forestville	315234	Road Match	76m
MOTOR GARAGES & ENGINEERS	Forestville Auto Port, Warringah Rd., FORESTVILLE	347154	Road Match	76m
MOTOR GARAGES & ENGINEERS	Forestville Service Station, Warringah Rd. FORESTVILLE	347155	Road Match	76m
MEDICAL PRACTITIONERS	Morris, John, 8 Warringah Rd., Forestville	335932	Road Match	76m
MOTOR GARAGES & ENGINEERS	Safety Drive Service Station Warringah Rd. FORESTVILLE	348088	Road Match	76m
MOTOR GARAGES & ENGINEERS	Safety Drive Service Station, Warringah Rd. FORESTVILLE	348089	Road Match	76m
MOTOR SPARE PARTS DEALERS—RETAIL	Sheppard's Service Station, Warringah Rd., Forestville	351727	Road Match	76m
WINE/SPIRIT MERCHANTS-RETAIL	Vine, E. E., Warringah Rd., Forestville	263135	Road Match	76m
MEDICAL PRACTITIONERS	Longley, E. O., Frenchs Forest Rd., Frenchs Forest	335703	Road Match	77m
CARRIERS & CARTAGE CONTRACTORS	Robson, S. T., Forest Way, French's Forest	285269	Road Match	148m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1950 Historical Business Directory Records

Warringah Road, Frenchs Forest, NSW 2086



Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

1950 Business Directory Records Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1950 Business Directory Records Road or Area Matches

Records from the 1950 UBD Business Directory, 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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Ashburn and Co., Bantry Bay Rd., Frenchs Forest	40417	Road Match	0m
MIXED BUSINESSES & GENERAL STORES	McKay, J., Cnr. Warringah and Pymble Rds., Frenchs Forest	80531	Road Match	0m
GROCERS-RETAIL	McKay, John, Cnr Pymble and Warringah Rds., Frenchs Forest	58299	Road Match	0m
GROCERS-RETAIL	Baxter, W. and M. E., Warringah Rd., Forestville	56403	Road Match	76m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

Dry Cleaners, Motor Garages & Service Stations 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:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Esso Servicenter,Cnr. Warringah Rd. & Hilner St.FRENCH'S FOREST	341092	1970	Road Intersection	0m	Onsite
Motor Garages & Engineers - French's Forest	Esso Servicentre, Cnr. Warringah Rd. & Hilmer St.	122676	1965	Road Intersection	0m	Onsite
DRY CLEANERS, PRESSERS &/OR DYERS	Jolly Frog, 21a Arndale Shopping Centre, Frenchs Forest.	20820	1978	Premise Match	265m	West
DRY CLEANERS, PRESSERS&/OR DYERS.	Jolly Frog, 21 Arndale Shopping Centre, Frenchs Forest.	24096	1975	Premise Match	265m	West
DRY CLEANERS,PRESSERS/DYERS (D710)	Forestway Dry Cleaners,21 Arndale Centre,French's Forest	292303	1970	Premise Match	265m	West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	BP SERVICE STATION RUSSELL AVE.,FRENCH'S FOREST,2086 451 3643FRENCH'S FOREST	340889	1970	Premise Match	471m	South West
MOTOR GARAGES & SERVICE STATIONS.	Forestville Self Service, 647 Warringah Rd., Forestville.	64712	1986	Road Intersection	745m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Forestville Self Service, 647 Warringah Rd., Forestville. 2087,	56776	1982	Road Intersection	745m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Forestville Self Service, 647 Warringah Rd., Forestville.	50069	1978	Road Intersection	745m	South West
MOTOR GARAGES &/OR ENGINEERS.	Forestville Auto Port, 647 Warringah Rd. Forestville.	58893	1975	Road Intersection	745m	South West
MOTOR GARAGES & SERVICE STATIONS.	Safety Service Centre, 1 Currie Rd., Forestville.	65386	1986	Premise Match	917m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Safety Service Centre, 1 Currie Rd., Forestville. 2087.	57518	1982	Premise Match	917m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Safety Service Centre, 1 Currie Rd., Forestville.	50793	1978	Premise Match	917m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station, 663 Warringah Rd.. Forestville.	50143	1978	Premise Match	918m	South West
MOTOR GARAGES &/OR ENGINEERS.	Safety Service Centre. 1 Currie Rd., Forestville.	59503	1975	Premise Match	918m	South West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Safety Drive Service Station,663 Warringah Rd.FORESTVILLE	341449	1970	Premise Match	918m	South West
Motor Service Stations - Petrol, Oil, Etc. - Forestville	Safety Drive Service Station, 663 Warringah Rd.	125712	1965	Premise Match	918m	South West
MOTOR SERVICE STATIONS - PETROL, OIL	Golden Fleece Service Station. 663 Warringah Rd., Forestville.	61780	1975	Premise Match	924m	South West
MOTOR GARAGES & SERVICE STATIONS.	Frenches Forest Motors, Rear 7 Cook St., Forestville.	64718	1986	Premise Match	973m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Frenches Forest Motors, Rear 7 Cook St., Forestville. 2087.	56782	1982	Premise Match	973m	South West

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

Warringah Road, Frenchs Forest, NSW 2086

Dry Cleaners, Motor Garages & Service Stations 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:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
Motor Garages & Service Stations	Esso Frenchs Forest Service Station Warringah Rd., Frenchs Forest	53720	1991	Road Match	0m
MOTOR GARAGES & SERVICE STATIONS.	Esso Frenchs Forest Service Station, Warringah Rd., Frenchs Forest.	64627	1986	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Esso Frenchs Forsst Service Station, Warringah Rd., Frenchs Forest. 2066.	56695	1982	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Servicenter, Warringah Rd., Frenchs Forest	49989	1978	Road Match	0m
MOTOR GARAGES & ENGINEERS(M6S6)	Esso Servicenter,Warringah Rd.FRENCH'S FOREST	337772	1970	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS.	Esso Servicenter, Warringah Rd., French Forest	58827	1975	Road Match	0m
MOTOR GARAGES & ENGINEERS	Sheppard's Service Station, Warringah Rd. FRENCH'S FOREST	348125	1961	Road Match	0m
Motor Garages & Engineers - Forestville	Forestville Auto Port, Warringah Rd.	122670	1965	Road Match	76m
MOTOR GARAGES & ENGINEERS	Forestville Auto Port, Warringah Rd., FORESTVILLE	347154	1961	Road Match	76m
MOTOR GARAGES & ENGINEERS	Forestville Service Station, Warringah Rd. FORESTVILLE	347155	1961	Road Match	76m
MOTOR GARAGES & ENGINEERS	Safety Drive Service Station Warringah Rd. FORESTVILLE	348088	1961	Road Match	76m
MOTOR GARAGES & ENGINEERS	Safety Drive Service Station, Warringah Rd. FORESTVILLE	348089	1961	Road Match	76m
MOTOR GARAGES & ENGINEERS(M6S6)	B.P. Service Station,Russell Ave.FRENCH'S FOREST	337252	1970	Road Match	313m
MOTOR GARAGES & SERVICE STATIONS.	BP Frenchs Forest Service Station, Russell Ave., Frenchs Forest.	64148	1986	Road Match	313m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	BP Frenchs Forest Service Station, Russell Ave., Frenchs Forest. 2066.	56219	1982	Road Match	313m
MOTOR SERVICE STATIONS - PETROL, OIL	BP Service Station, Russell Ave., French Forest	61418	1975	Road Match	313m
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	BP Service Station,Russell Ave.FRENCH'S FOREST	340895	1970	Road Match	313m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Ssrvcis Station, Russell Ave., French Forest	49355	1978	Road Match	313m
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	BP Allambie Heights ServiceStation,Allambie Rd.ALLAMBIE HEIGHTS	340867	1970	Road Match	871m
Motor Garages & Engineers - Forestville	McPhail, R. V. , Cook Rd.	122672	1965	Road Match	960m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Aerial Imagery 2009

Warringah Road, Frenchs Forest, NSW 2086



Aerial Imagery 2005

Warringah Road, Frenchs Forest, NSW 2086





Legend

Site Boundary

Buffer

Scale:

0 25 50 100 150 200 250 300 350

Meters

Data Sources: Aerial Imagery © Department Finance,
Services & Innovation

Coordinate System:
GDA 1994 MGA Zone 56


Date: 04 December 2017


Aerial Imagery 1982

Warringah Road, Frenchs Forest, NSW 2086



Legend

 Site Boundary

 Buffer

Scale:

0 25 50 100 150 200 250 300 350

Meters

Data Sources: Aerial Imagery © Department Finance,
Services & Innovation

Coordinate System:
GDA 1994 MGA Zone 56

Date: 04 December 2017

Aerial Imagery 1970

Warringah Road, Frenchs Forest, NSW 2086



Legend

- Site Boundary
- Buffer

Scale:

0 25 50 100 150 200 250 300 350
Meters

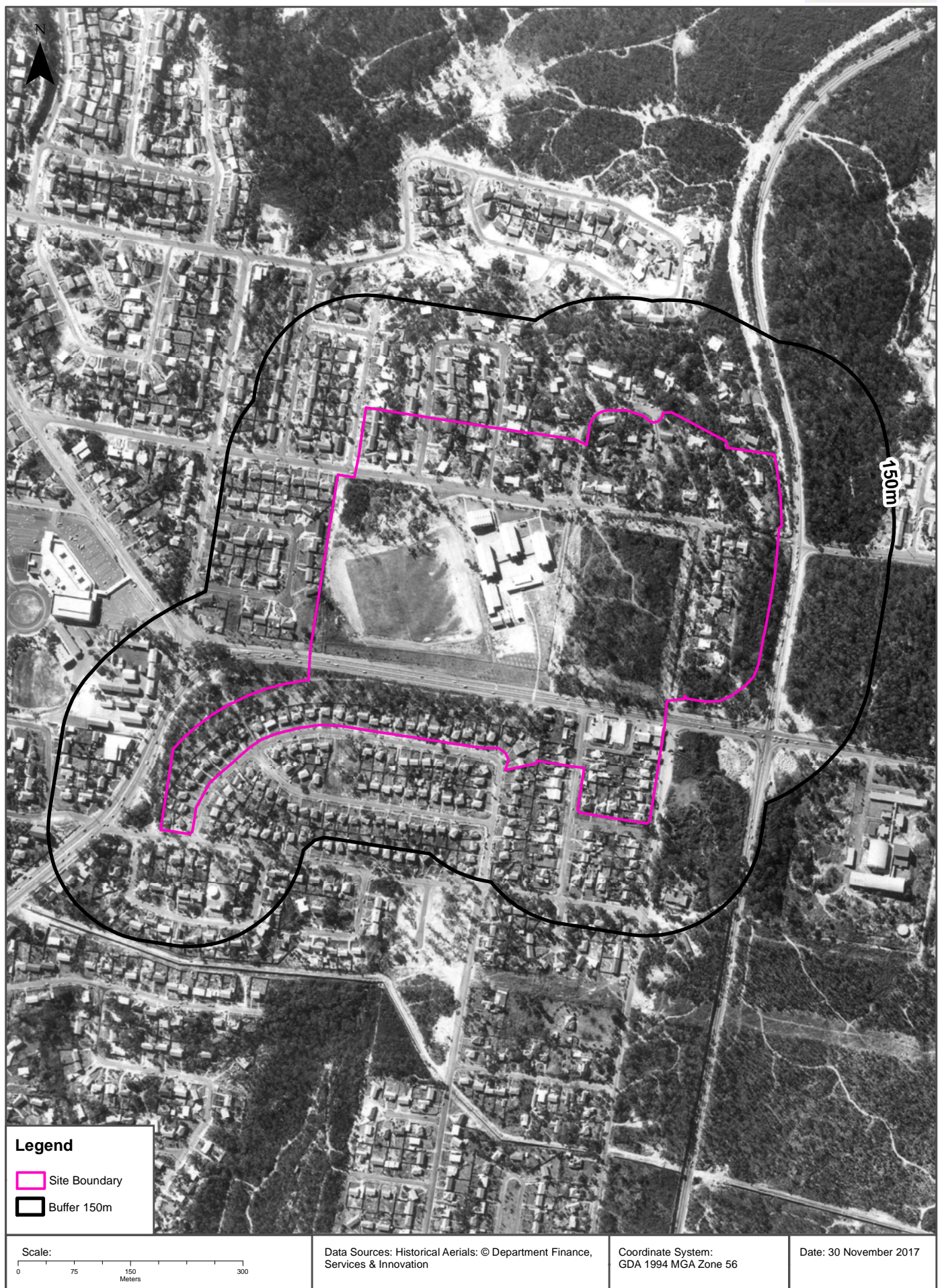
Data Sources: Aerial Imagery © Department Finance,
Services & Innovation

Coordinate System:
GDA 1994 MGA Zone 56

Date: 04 December 2017

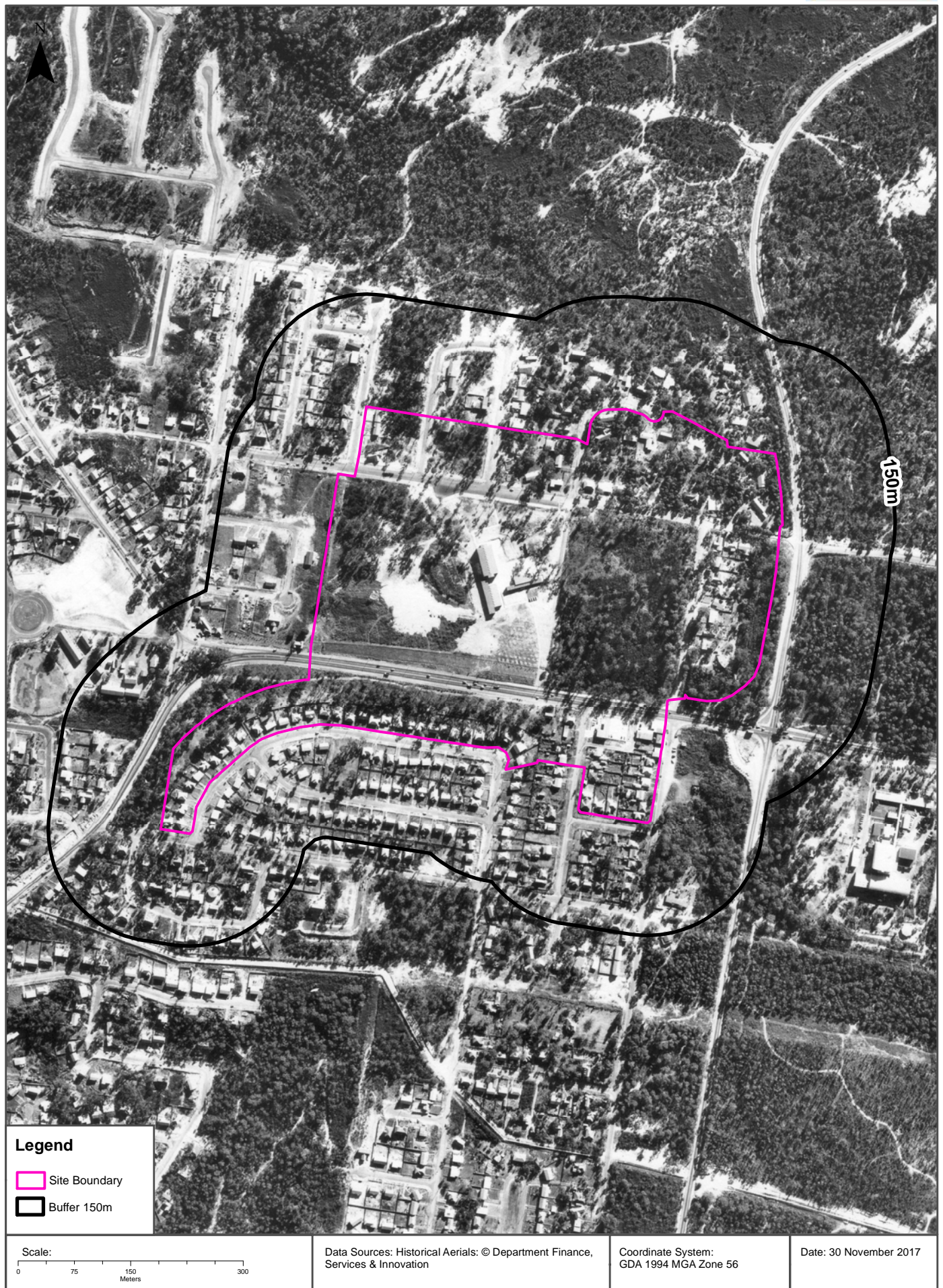
Aerial Imagery 1965

Warringah Road, Frenchs Forest, NSW 2086



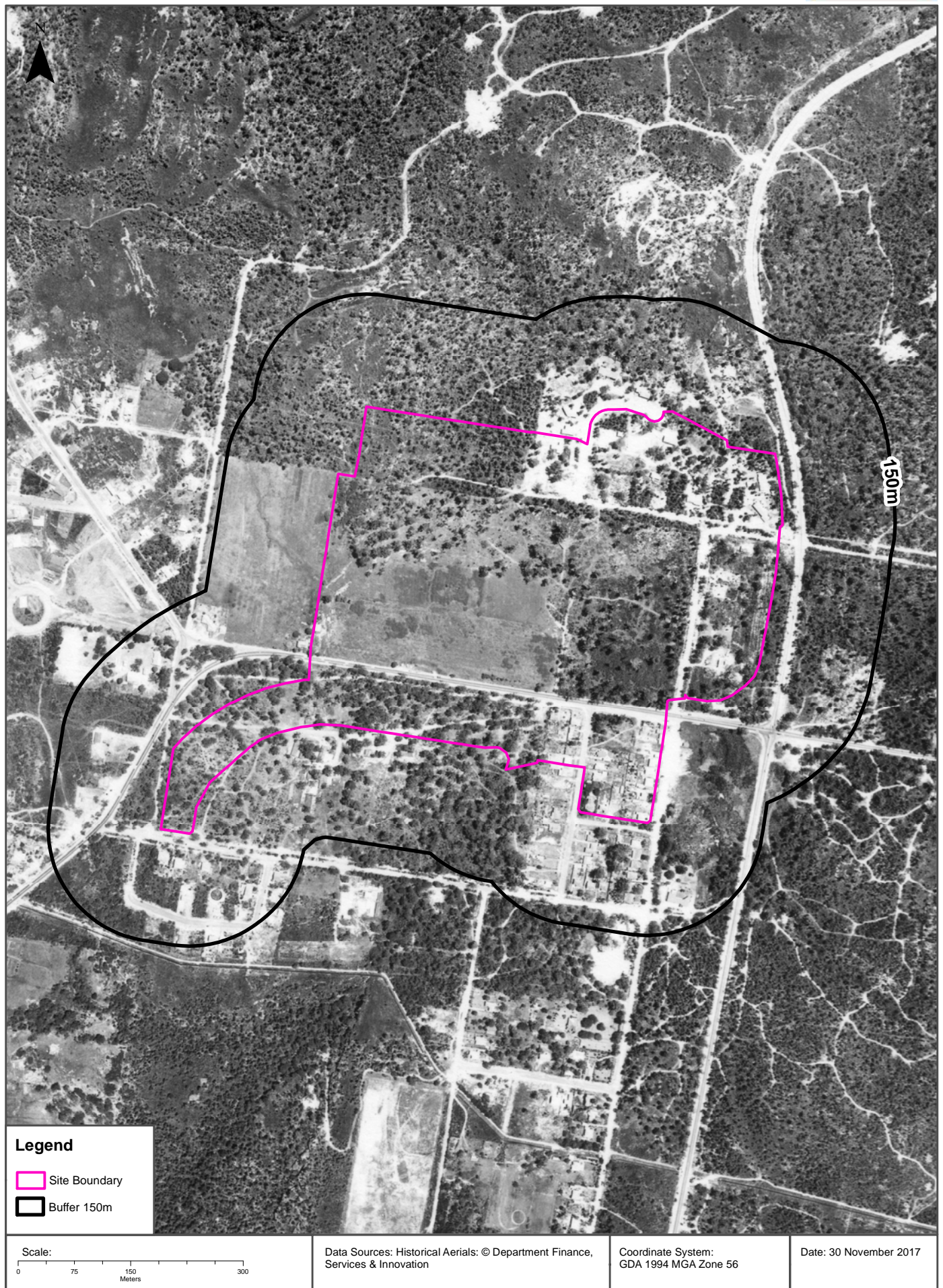
Aerial Imagery 1961

Warringah Road, Frenchs Forest, NSW 2086



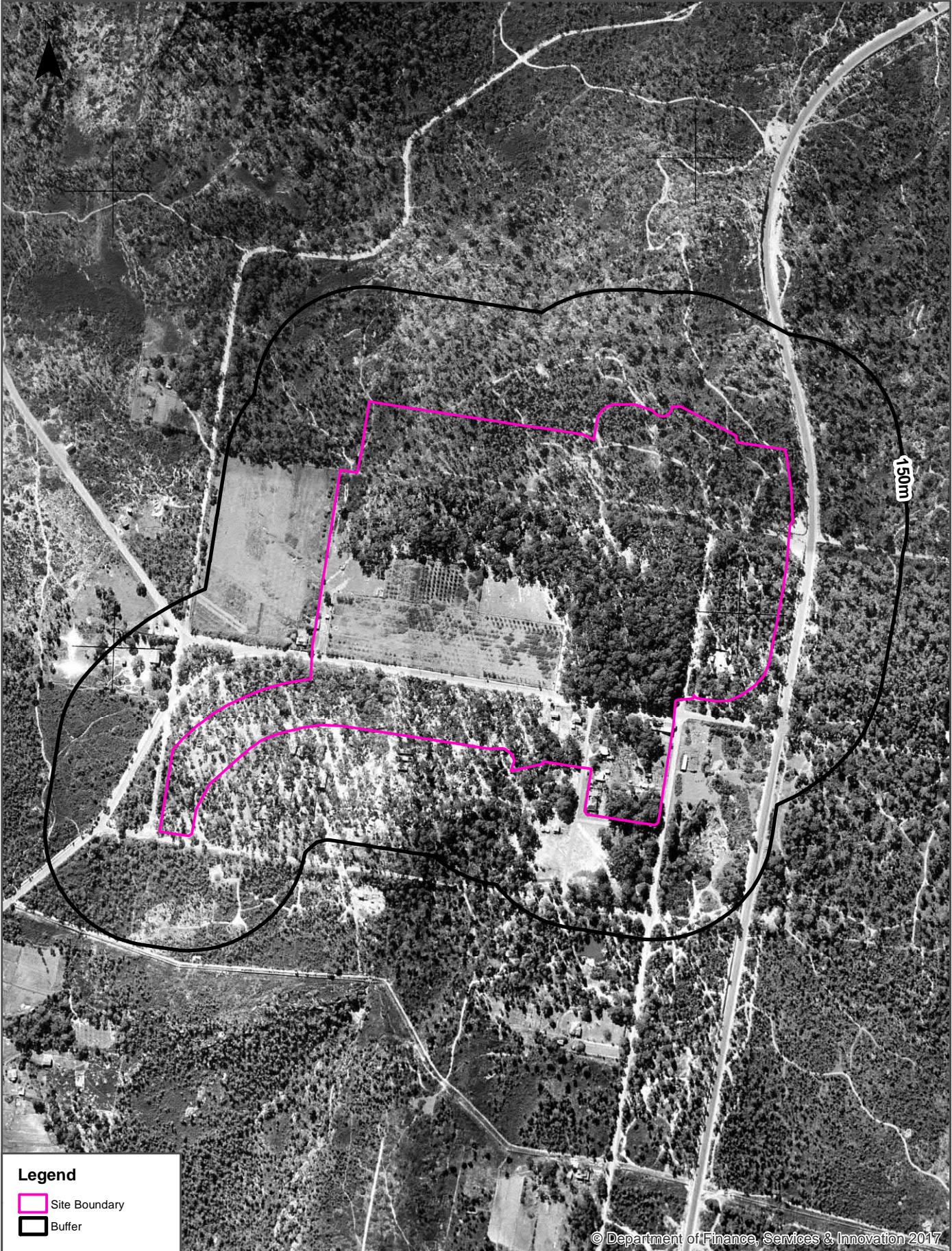
Aerial Imagery 1956

Warringah Road, Frenchs Forest, NSW 2086



Aerial Imagery 1943

Warringah Road, Frenchs Forest, NSW 2086



© Department of Finance, Services & Innovation 2017

Legend

Site Boundary

Buffer

Scale:

0 25 50 100 150 200 250 300 350

Meters

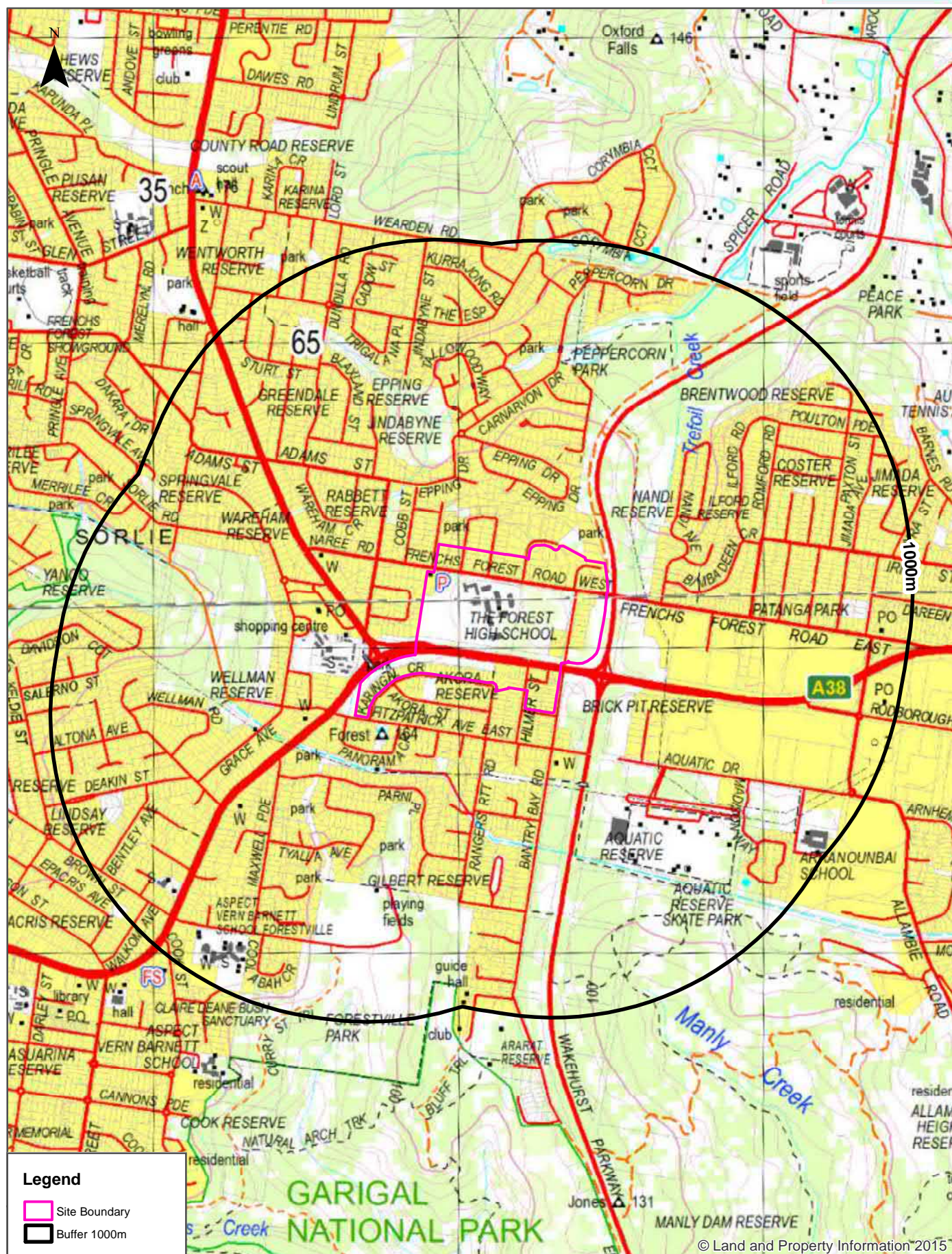
Data Sources: Aerial Imagery © Department Finance, Services & Innovation

Coordinate System:
GDA 1994 MGA Zone 56

Date: 04 December 2017

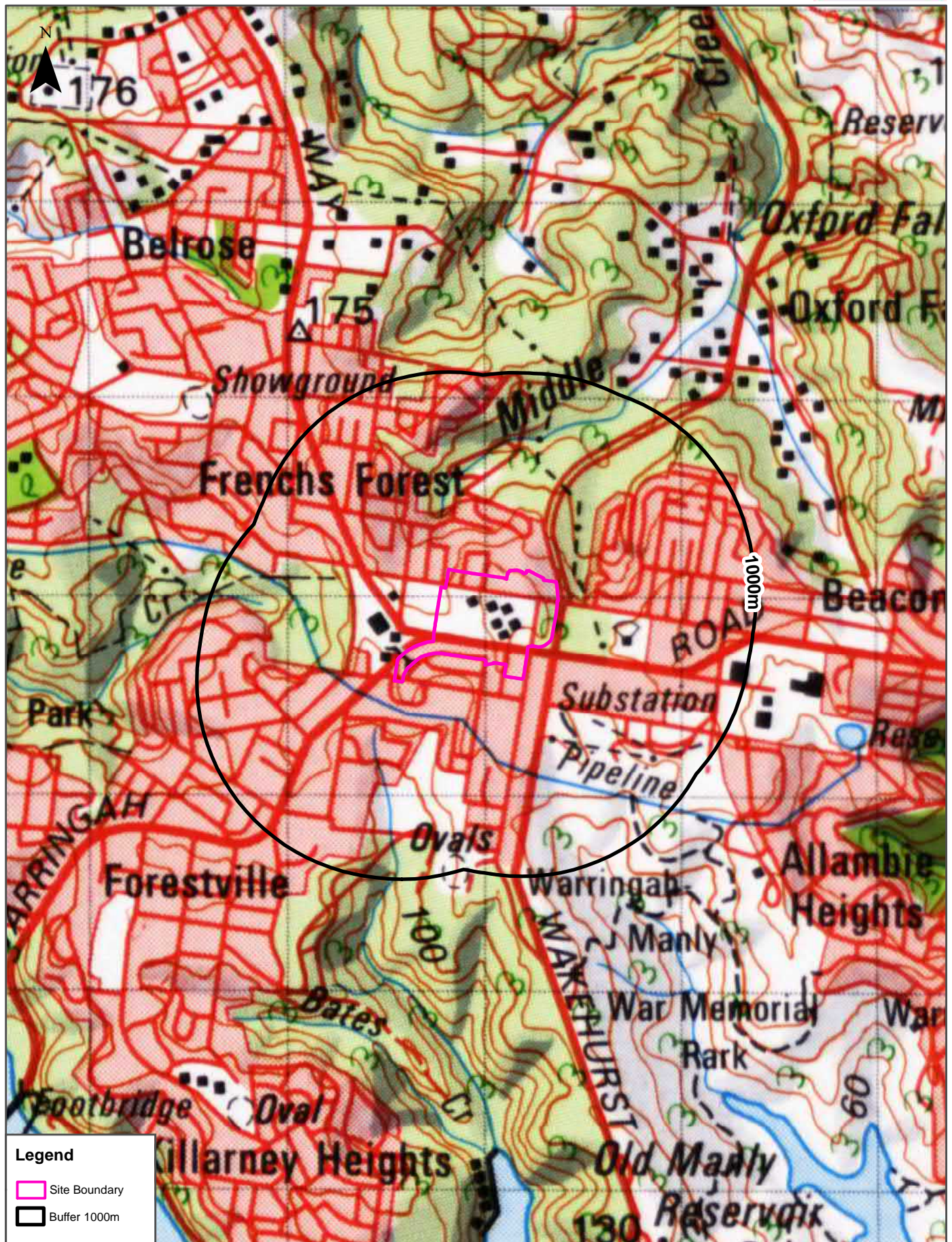
Topographic Map 2015

Warringah Road, Frenchs Forest, NSW 2086

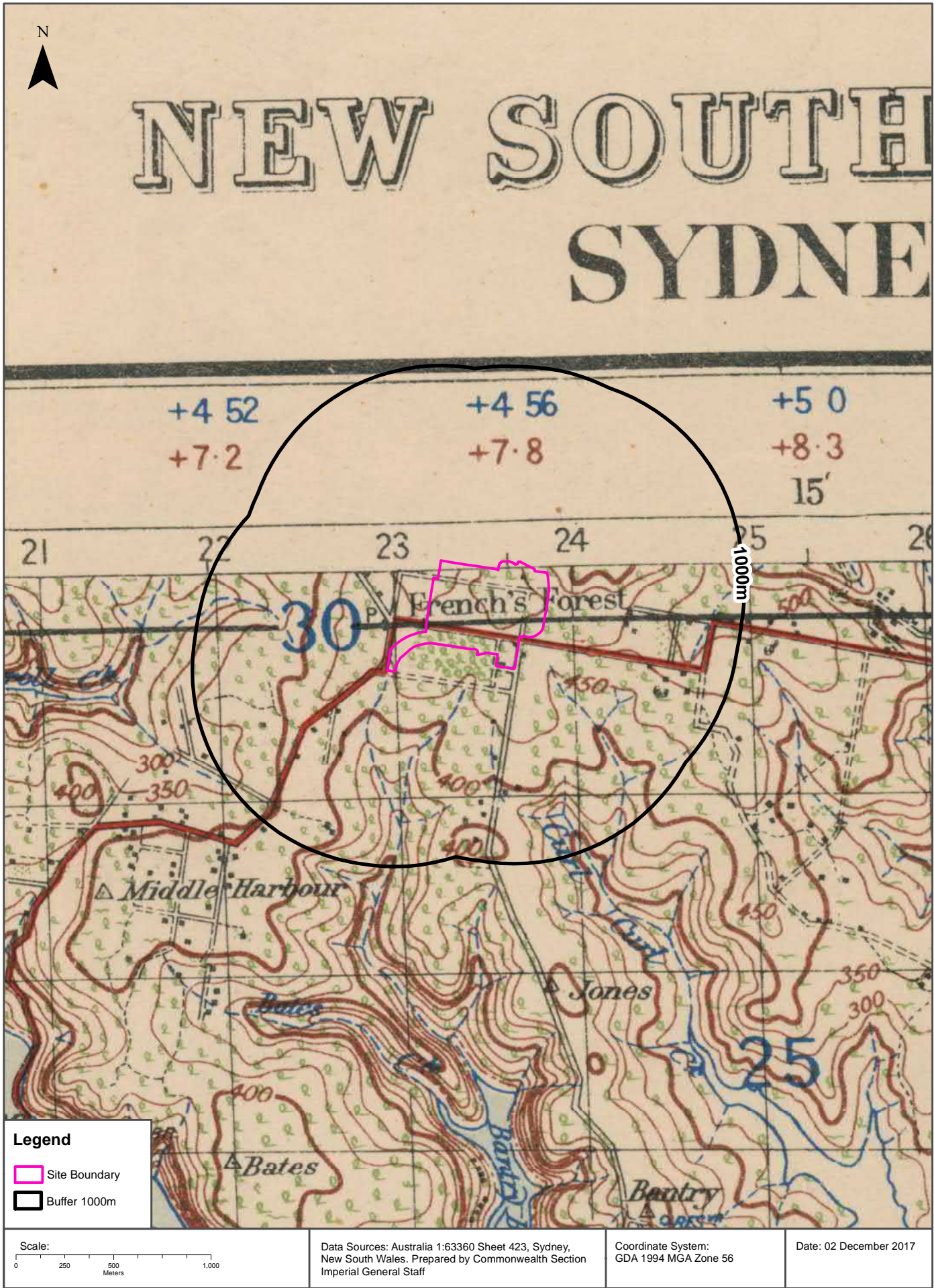


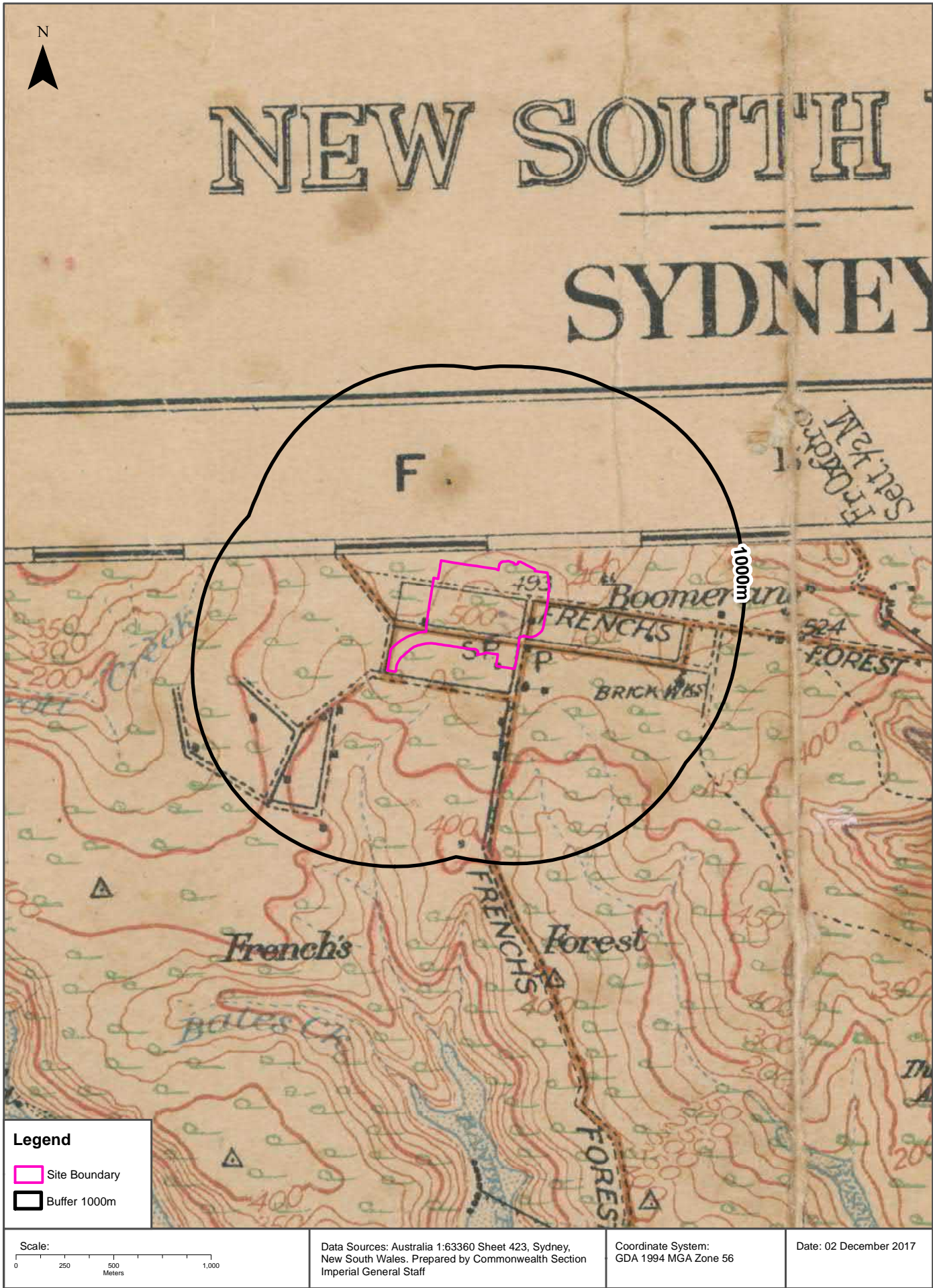
Historical Map 1975

Warringah Road, Frenchs Forest, NSW 2086



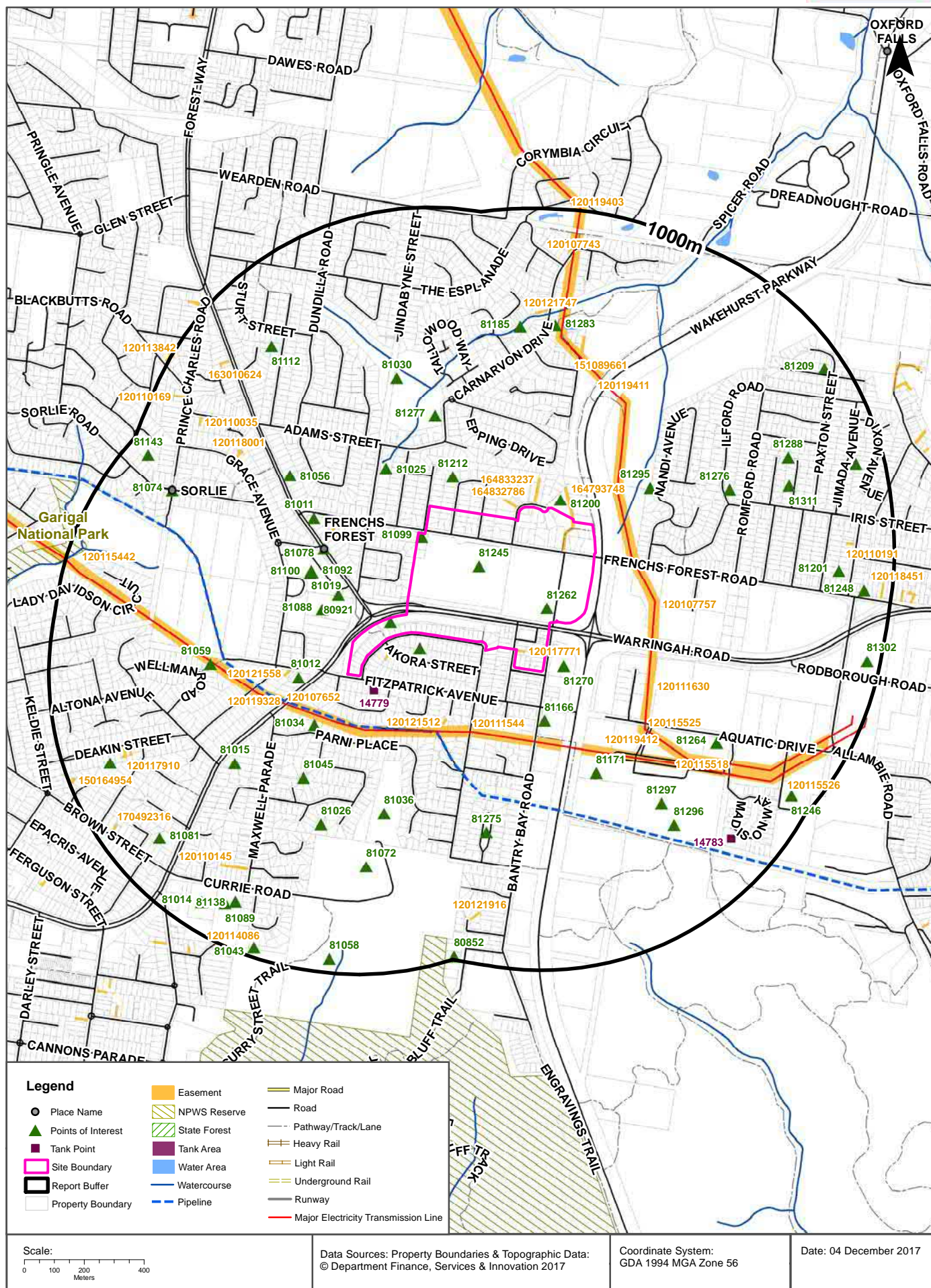
Scale: 0 500 1,000 Meters	Data Sources: Sheet 9130, Edition 1, Sydney, NSW, National Topographic Map Series Commonwealth of Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 02 December 2017
---------------------------------	---	--	------------------------





Topographic Features

Warringah Road, Frenchs Forest, NSW 2086



Topographic Features

Warringah Road, Frenchs Forest, NSW 2086

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
81028	Park	Park	0m	Onsite
81099	Police Station	FRENCHS FOREST POLICE STATION	0m	Onsite
81245	High School	THE FOREST HIGH SCHOOL	0m	Onsite
81262	Medical Centre	FRENCHS FOREST COMMUNITY HEALTH CENTRE	0m	Onsite
81200	Park	Park	37m	North East
81148	Park	AKORA RESERVE	50m	South West
81270	Park	BRICK PIT RESERVE	66m	South East
81212	Park	Park	108m	North
81088	Primary School	FRENCHS FOREST PUBLIC SCHOOL	148m	West
80921	Community Facility	YOYO'S FOREST YOUTH CENTRE	149m	West
81012	Place Of Worship	UNITING CHURCH	165m	South West
81166	Place Of Worship	ANGLICAN CHURCH	165m	South
81025	Park	RABBETT RESERVE	193m	North West
81034	Park	Park	204m	South West
81295	Park	NANDI RESERVE	228m	North East
81092	Post Office	FRENCHS FOREST POST OFFICE	262m	West
81100	Medical Centre	FRENCHS FOREST EARLY CHILDHOOD CENTRE	264m	West
81019	Shopping Centre	FOREST WAY SHOPPING CENTRE	269m	West
81078	Suburb	FRENCHS FOREST	303m	West
81277	Park	JINDABYNE RESERVE	303m	North
81011	Place Of Worship	Place Of Worship	353m	West
81045	Park	Park	377m	South West
81171	Swimming Pool	WARRINGAH AQUATIC CENTRE	386m	South East
81030	Park	EPPING RESERVE	442m	North West
81059	Park	WELLMAN RESERVE	460m	West
81036	Park	Park	469m	South West
81056	Park	WAREHAM RESERVE	470m	North West
81276	Park	ILFORD RESERVE	473m	East
81015	Place Of Worship	BAPTIST CHURCH	482m	South West
81026	Park	Park	511m	South West
81275	Park	GILBERT RESERVE	560m	South
81297	Sports Field	AQUATIC RESERVE	596m	South East

Map Id	Feature Type	Label	Distance	Direction
81185	Park	Park	604m	North
81283	Park	PEPPERCORN PARK	610m	North
81264	Retirement Village	EUROBODALLA HOMES FRENCHS FOREST	620m	South East
81072	Sports Field	PLAYING FIELDS	640m	South West
81311	Child Care Centre	FRENCHS FOREST KINDERGARTEN	669m	East
81296	Sports Court	AQUATIC RESERVE SKATE PARK	678m	South East
81288	Park	COSTER RESERVE	691m	North East
81112	Park	GREENDALE RESERVE	752m	North West
81074	Locality	SORLIE	789m	West
81201	Park	PATANGA PARK	815m	East
81081	Primary School	FORESTVILLE MONTESSORI SCHOOL	834m	South West
81064	Park	LINDSAY RESERVE	848m	South West
81138	Special School	ASPECT VERN BARNETT SCHOOL FORESTVILLE	850m	South West
81089	Primary School	OUR LADY OF GOOD COUNSEL CATHOLIC PRIMARY SCHOOL	871m	South West
81287	Park	JIMADA RESERVE	903m	East
81248	Post Office	FRENCHS FOREST EAST POST OFFICE	906m	East
81014	Place Of Worship	CATHOLIC CHURCH	907m	South West
81246	Special School	ARRANOUNBAI SCHOOL	923m	South East
81143	Park	SPRINGVALE RESERVE	927m	West
81209	Park	BRENTWOOD RESERVE	935m	North East
81058	Park	FORESTVILLE PARK	952m	South West
81302	Post Office	FRENCHS FOREST POST BUSINESS CENTRE	955m	East
81043	Park	CLAIRE DEANE BUSH SANCTUARY	967m	South West
80852	Community Facility	HOUSE WITH NO STEPS	988m	South

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Topographic Features

Warringah Road, Frenchs Forest, NSW 2086

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
	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
14779	Water	Operational		13/06/2001	70m	South West
14783	Water	Operational		01/01/2009	844m	South East

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

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
164793748	Primary	Right of way	6.096m	0m	Onsite
120117771	Primary	Undefined		0m	South
164832786	Primary	Right of way	variable	15m	North
164833237	Primary	Right of way	variable	15m	North East
120117865	Primary	Undefined		37m	South West
120119411	Primary	Undefined		92m	North East
120107757	Primary	Undefined		126m	East
120111544	Primary	Undefined		148m	South West
120121558	Primary	Undefined		192m	South West
120119412	Primary	Undefined		220m	South East
120107652	Primary	Undefined		228m	South West
120111630	Primary	Undefined		249m	South East
120121512	Primary	Undefined		265m	South
120117820	Primary	Undefined		267m	West

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120113839	Primary	Undefined		279m	West
120119328	Primary	Undefined		315m	West
120115525	Primary	Undefined		370m	South East
120107743	Primary	Undefined		451m	North
120115442	Primary	Undefined		493m	West
151089661	Primary	Right of way	5.65 & var	517m	North
120118001	Primary	Undefined		646m	North West
120121747	Primary	Undefined		647m	North
120115518	Primary	Undefined		703m	South East
120115526	Primary	Undefined		713m	South East
120110145	Primary	Undefined		732m	South West
166134734	Primary	Right of way	3.87m	767m	South West
120117910	Primary	Undefined		785m	South West
120110035	Primary	Undefined		813m	North West
163010624	Primary	Right of way	5m and Var.	827m	North West
120121916	Primary	Undefined		828m	South
120110191	Primary	Undefined		840m	East
120110169	Primary	Undefined		897m	North West
170492316	Primary	Right of way	3.8m	920m	South West
120119403	Primary	Undefined		939m	North
120118451	Primary	Undefined		965m	East
150164954	Primary	Right of way	variable	975m	South West
120113842	Primary	Undefined		992m	North West
120114086	Primary	Undefined		996m	South West

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Topographic Features

Warringah Road, Frenchs Forest, NSW 2086

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: © Land and Property Information (2015)

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

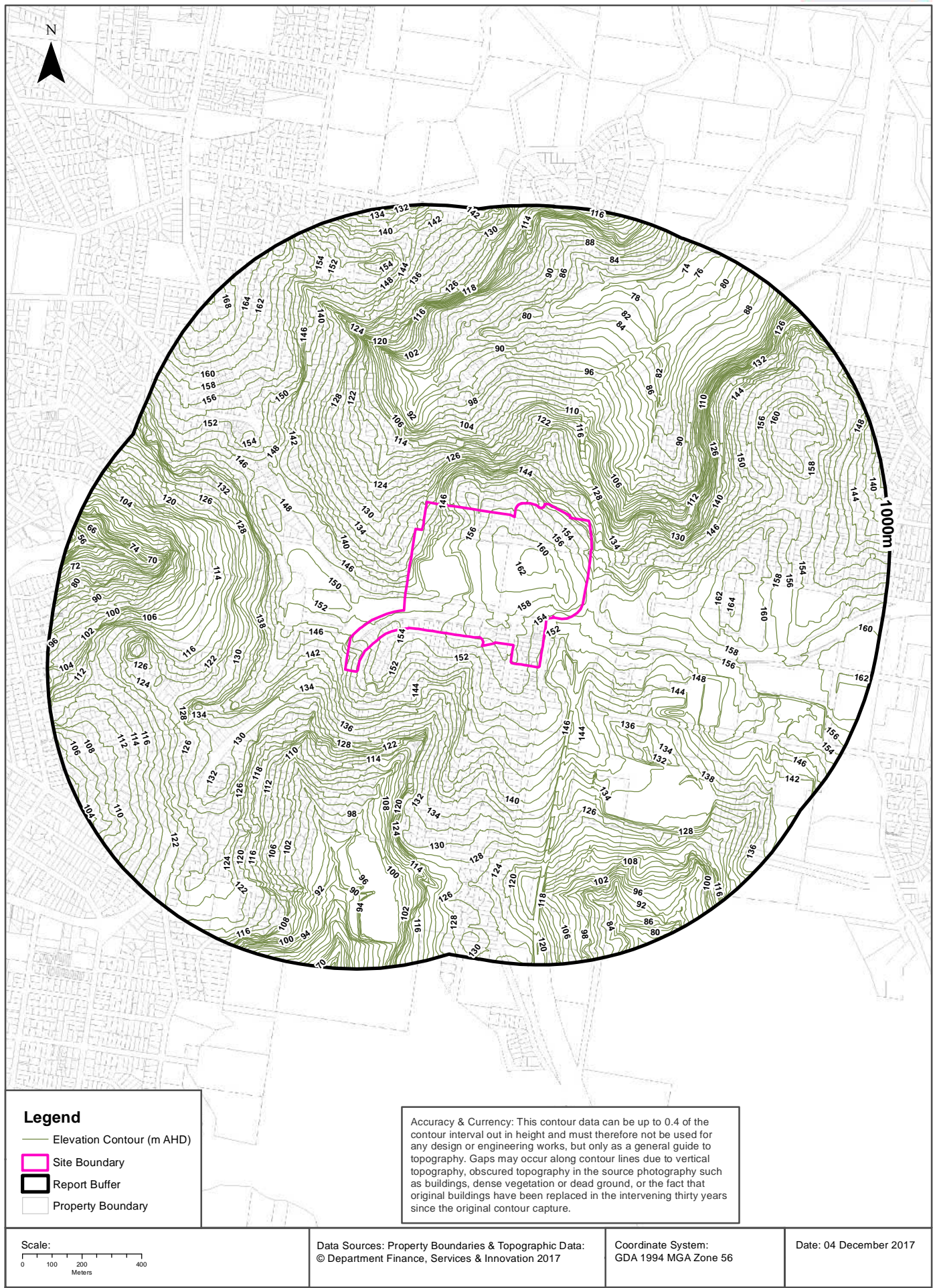
Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N0076	NATIONAL PARK	Garigal National Park	19/04/1991	895m	North West

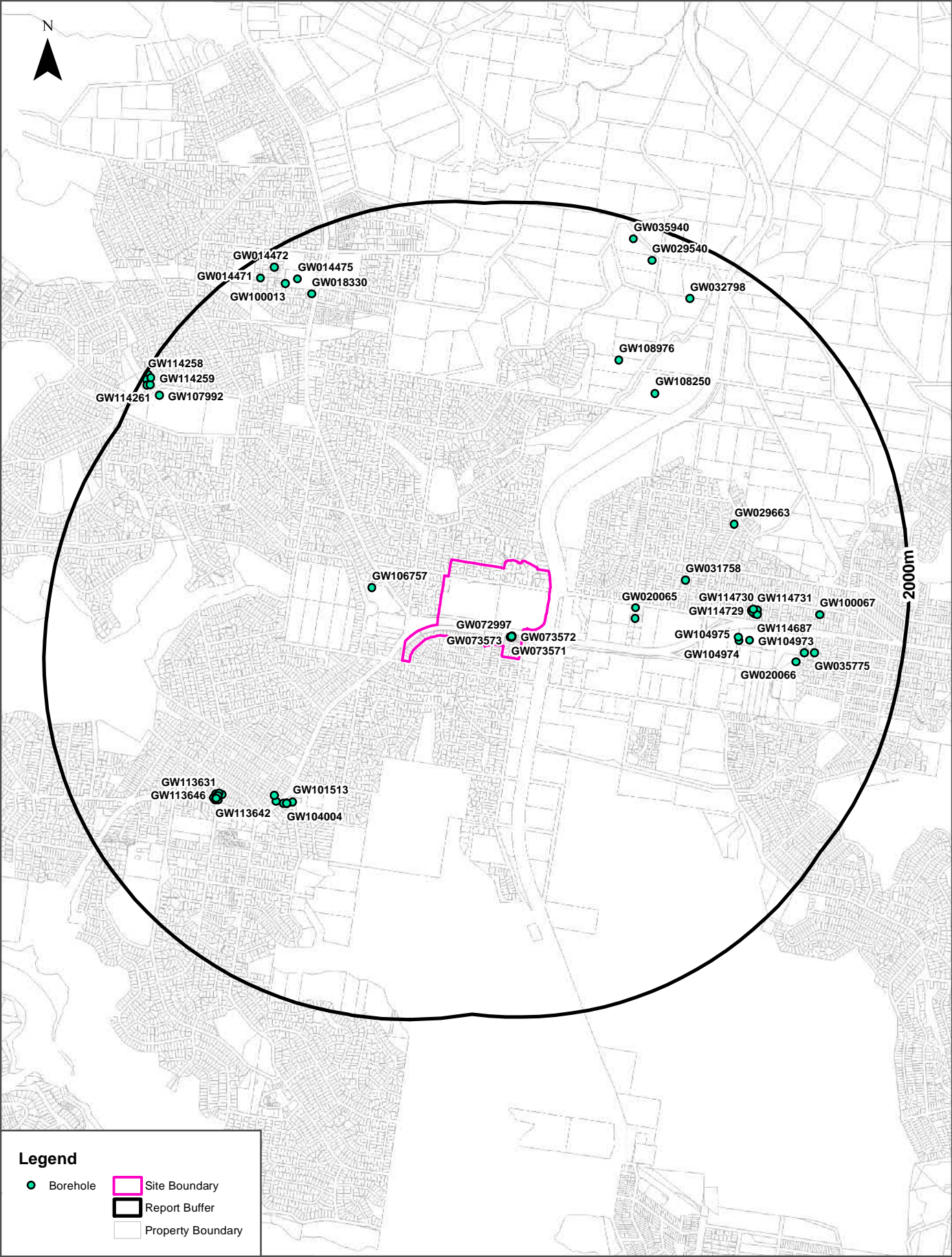
NPWS Data Source: © Land and Property Information (2015)

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Elevation Contours (m AHD)

Warringah Road, Frenchs Forest, NSW 2086





<p>Scale:</p> <p>0 100 200 400 600 800 1,000 1,200 1,400</p> <p>Meters</p>	<p>Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2017</p>	<p>Coordinate System: GDA 1994 MGA Zone 56</p>	<p>Date: 04 December 2017</p>
--	---	--	-------------------------------

Hydrogeology & Groundwater

Warringah Road, Frenchs Forest, NSW 2086

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Porous, extensive aquifers of low to moderate productivity

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW073570		Bore	Private	GW Exploration		04/06/1991	4.90	4.90					0m	Onsite
GW073573	10BL601836	Bore	Private	Monitoring		02/12/1991	3.50	3.50					0m	Onsite
GW073572	10BL156569	Bore	Private	Monitoring		02/12/1991	4.00	4.00					0m	Onsite
GW073569		Bore	Private	GW Exploration		04/06/1991	4.50	4.70					0m	Onsite
GW073571		Bore	Private	GW Exploration		04/06/1991	4.50	4.50					0m	Onsite
GW072997		Bore	Private	GW Exploration		04/06/1991	4.20	4.20					0m	Onsite
GW106757	10BL164320, 10WA108866	Bore		Domestic	B & B Drilling Inc	25/11/2004	7.00	7.00	Good	2.00	0.500		345m	West
GW020065	10BL012713	Bore open thru rock	Federal Govt	Waste disposal		01/05/1962	114.90	114.90					489m	East
GW020067	10BL012920	Bore open thru rock	Federal Govt	Waste disposal		01/10/1962	137.10	137.20					494m	East
GW031758	10BL024603, 10WA108155	Bore open thru rock	Private	Stock		01/05/1969	58.50	58.50					755m	East
GW101513	10BL158193	Bore	Private	Monitoring	Macquarie Drilling	24/10/1997	4.30	4.30					999m	South West
GW104005	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW104002	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW104006	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW104007	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW104004	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW104001	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW104000	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW104003	10BL158920	Bore		Monitoring	Engineering Explorations Pty Ltd	21/10/1998	2.50	2.50					1026 m	South West
GW106513	10BL163693	Bore		Monitoring	Environmental and Earth Sciences	20/07/2004	15.00	15.00					1037 m	South West
GW106512	10BL163693	Bore		Monitoring	Environmental and Earth Sciences	20/07/2004	15.00	15.00					1038 m	South West
GW106514	10BL163693	Bore		Monitoring	Environmental and Earth Sciences	16/06/2004	15.00	15.00					1056 m	South West
GW029663	10BL023529, 10WA108153	(Unknown)	Private	Stock		07/08/1974					0.400		1068 m	East
GW104975	10BL156923	Bore		Monitoring	Intertec Drilling Services	11/09/1995	6.00	6.00					1079 m	East
GW104974	10BL156923	Bore		Monitoring	Intertec Drilling Services	11/09/1995	5.00	5.00					1088 m	East
GW114729	10BL605659	Bore	Private	Monitoring bore	Numac Drilling Services Pty Ltd	01/12/2014	4.70	4.70					1130 m	East
GW114686	10BL604389	Bore	Private	Monitoring bore		01/01/2010	7.00	7.00					1137 m	East
GW114730	10BL605659	Bore	Private	Monitoring bore	Numac	01/12/2014	4.20	4.20					1138 m	East
GW104973	10BL156923	Bore		Monitoring	Intertec Drilling Services	11/09/1995	4.10	4.10					1145 m	East
GW114684	10BL604389	Bore	Private	Monitoring bore		03/12/2010	7.00	0.00					1150 m	East
GW108250	10BL601185, 10BL601714, 10WA109487	Bore		Recreation	Intertec Drilling Services	29/01/2007	90.00	90.00	370	21.00	4.450		1154 m	North East
GW114731	10BL605659	Bore	Private	Monitoring bore	Numac	01/12/2014	5.00	5.00					1163 m	East
GW114685	10BL604389	Bore	Private	Monitoring bore		06/12/2010	5.00	5.00					1164 m	East
GW114687	10BL604389	Bore	Private	Monitoring bore		01/01/2010	5.00	5.00					1164 m	East
GW108976	10BL602109, 10WA109224	Bore	Private	Domestic, Stock	Intertec Drilling Services	27/06/2008	150.00		315	30.00	0.350		1239 m	North East
GW113639	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	14/01/2011	5.00	5.00					1255 m	South West
GW113638	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	14/01/2011	5.00	5.00					1262 m	South West
GW113640	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	14/01/2011	5.00	5.00					1264 m	South West
GW113641	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	14/01/2011	5.00	5.00					1276 m	South West
GW113644	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	07/04/2011	6.00	6.00					1276 m	South West
GW113636	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	13/01/2011	5.00	5.00					1280 m	South West
GW113631	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	17/08/2010	5.50	5.50					1281 m	South West
GW113637	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	13/01/2011	5.00	5.00					1281 m	South West
GW113645	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	07/04/2011	6.00	6.00					1281 m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW113633	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	16/08/2010	3.00	3.00					1284 m	South West
GW113632	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	16/08/2010	4.17	4.17					1288 m	South West
GW113643	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	06/04/2011	6.00	6.00					1291 m	South West
GW113630	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	16/08/2010	3.50	3.50					1292 m	South West
GW113634	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	16/08/2010	6.00	6.00					1296 m	South West
GW113635	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	13/01/2011	3.00	3.00					1302 m	South West
GW113642	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	06/04/2011	6.00	6.00					1303 m	South West
GW113646	10BL604551	Bore	Private	Monitoring	SOILCHECK PTY LTD	07/04/2011	6.00	6.00					1303 m	South West
GW020066	10BL012712	Bore open thru rock	Federal Govt	Waste disposal		01/05/1962	106.60	106.70					1421 m	East
GW020108		Bore open thru rock	Private	Waste disposal		01/03/1963	134.10	134.10					1458 m	East
GW100067	10BL156730	Bore		Monitoring	Peter J Ramsay & Associates	22/06/1995	5.10						1511 m	East
GW035775	10BL013059	Bore open thru rock	Private	Waste disposal		01/03/1963	146.30	146.30					1512 m	East
GW018330	10BL009434	Bore open thru rock	Private	Irrigation		01/07/1959	3.66	3.66	Good				1675 m	North West
GW032798	10BL025754, 10WA108157	Bore open thru rock	Private	Domestic		01/09/1970	32.00	32.00					1712 m	North East
GW014475	10BL009433	Bore	Private	Irrigation		01/01/1954	23.70						1786 m	North West
GW100013	10BL156437, 10WA109379	Bore	Private	Recreation	B & B Drilling Inc	07/09/1995	51.00	51.00	80	30.00	0.170		1798 m	North West
GW029540	10BL023120, 10WA108150	Bore open thru rock	Private	Domestic, Stock			31.60	31.70					1822 m	North East
GW107992	10BL600216, 10BL601490, 10WA109493	Bore		Recreation	Intertec Drilling Services	22/11/2006	185.00	185.00	137	80.00	0.150		1868 m	North West
GW014471	10BL008894, 10WA108089	Bore open thru rock	Private	General Use		01/09/1958	45.70	45.70					1896 m	North West
GW035940	10BL030095, 10BL142114, 10WA108241	Bore open thru rock	Private	Irrigation		01/12/1970	54.80	54.90					1898 m	North
GW014472	10BL006865	Bore open thru rock	Private	Irrigation		01/11/1956	25.20	25.30	Good				1908 m	North West
GW114261	10BL605299	Bore	Private	Monitoring	Groundtest	16/01/2013	6.00	6.00					1944 m	North West
GW114259	10BL605299	Bore	Private	Monitoring	Groundtest	14/01/2013	6.00	6.00					1957 m	North West
GW114260	10BL605299	Bore	Private	Monitoring	Groundtest	18/01/2013	25.00	25.00					1957 m	North West
GW114255	10BL605299	Bore	Private	Monitoring	Groundtest	25/01/2013	25.00	25.00					1974 m	North West
GW114258	10BL605299	Bore	Private	Monitoring	Groundtest	18/01/2013	6.00	6.00					1982 m	North West

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores © Commonwealth of Australia (Bureau of Meteorology) 2015. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Hydrogeology & Groundwater

Warringah Road, Frenchs Forest, NSW 2086

Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW072997	0.00m-0.10m Sandy Clays & Gravels 0.10m-1.00m Residual Soil- Sandy Clay-grey, Mottled W/ Red >10%, Moist. Med. Plasticity 1.00m-2.50m Weathered Bedrock- Sandy Clay, Grey Brown, Dry 2.50m-4.20m Bedrock- Hole Terminated @ 4.2	0m	Onsite
GW073569	0.00m-0.10m Fill Mat'l. & Residual Soil-sandy Clay, Grey W/ Mottles/streaks Of Red Moist, Ironstone Fragments 0.10m-1.00m Residual Soil- Sandy/silty Clay,yb Staining On Surface Giving Black Colour, Moist Med. Plasticity, Hydrocarbon Odour Prs 1.00m-1.50m Weathered Bedrock & Residual Soil-dry Red Brown Silty Clay)silty Clay Yb Moist, Shle Fragments Present In Sample. 1.50m-3.00m Weathered Bedrock-silty Clay, Red Brown, Dry Med To Strong Plasticity. Fragments Of Shle Present. 3.00m-4.50m Hole Terminated @ 4.7m	0m	Onsite
GW073570	0.00m-0.05m Fill Material 0.05m-0.10m Residual Soil & Clay- Grey Mottled W/ Red, Moist, Med Plasticity, Irsn Fragments Presents W/ Diam. Approx. 1cm 0.10m-1.00m Texture Change Silty Clay- Yellow Brown, Some Hydrocarbon Staining, Moist, Shle Fragments Approx. 5mm Present 1.00m-2.00m Colour Change- Yellow Brown & Grey-red Clay 50/50. 2.00m-3.00m Weathered Bedrock & Residual Soil- Silty Clay, Grey Streaks Of Red, Dry. 3.00m-4.00m Weathered Bedrock- Silty Clay, Brown, Dry 4.00m-4.90m Hole Terminated @ 4.9m.	0m	Onsite
GW073571	0.00m-0.10m Fill & Residual Soil- Silty Clay, Grey And Red 0.10m-1.00m Residual Soil- Silty Clay,brown-black, Moist, Med-high Plasticity; Colour Change Yellow-brown. 1.00m-2.00m Weathered Bedrock- Silty Clay:grey, Mottles Of Red,dry,yellow. 2.00m-4.50m Hole Terminated @ 4.5m	0m	Onsite
GW073572	0.00m-0.10m Sand Fill- Grey, Medium Grind, Saturated With Hydrocarbon 0.10m-0.40m Silty Clay- Grey-mottled With Red. 0.40m-4.00m Hole Terminated @ 4m.	0m	Onsite
GW073573	0.00m-0.10m Silt-clay, Grey-mottled 10% With Red, Moist - Wet. 0.10m-1.00m Silt-clay, Grey-mottled 10% With Red, Moist- Wet. 1.00m-3.50m Hole Terminated @ 3.5m.	0m	Onsite
GW106757	0.00m-0.30m TOPSOIL 0.30m-2.50m BROWN SAND 2.50m-3.00m BLACK SAND 3.00m-5.00m DARK BROWN SILTY SAND 5.00m-7.00m BROWN SAND	345m	West
GW020065	0.00m-0.30m Topsoil 0.30m-4.87m Clay 4.87m-8.22m Pipe Clay White 8.22m-10.66m Driller 10.66m-33.22m Sandstone 33.22m-34.13m Sandstone 34.13m-35.96m Shale Clay 35.96m-56.38m Sandstone 56.38m-56.99m Mudstone Clay 56.99m-61.87m Shale 61.87m-110.94m Sandstone Water Supply 110.94m-114.90m Shale	489m	East

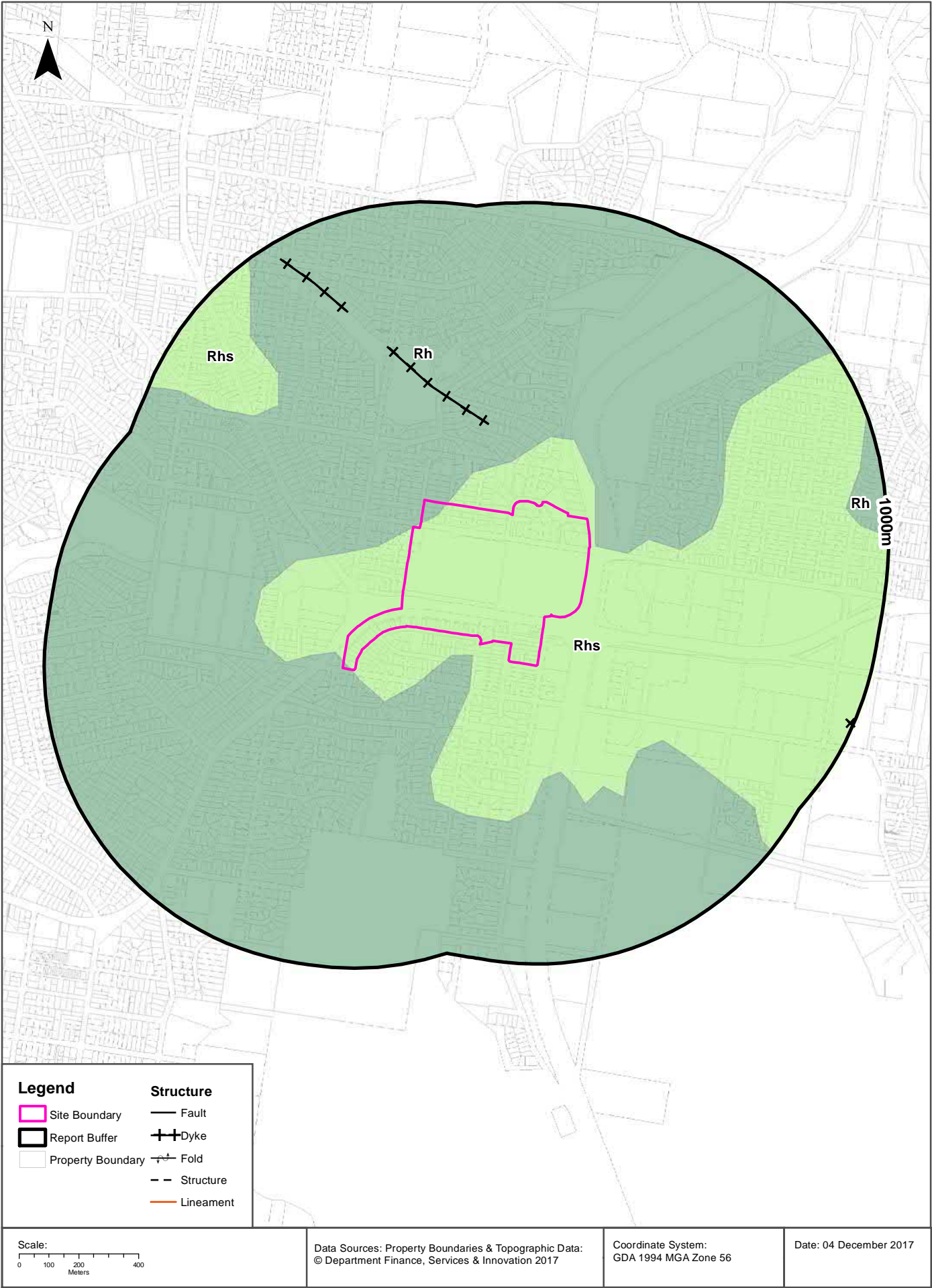
Groundwater No	Drillers Log	Distance	Direction
GW020067	0.00m-0.30m Topsoil 0.30m-1.52m Clay Red Sandstone 1.52m-5.48m Pipe Clay White 5.48m-6.40m Clay Grey 6.40m-7.62m Clay Yellow 7.62m-7.92m Driller 7.92m-8.22m Clay Grey 8.22m-9.14m Driller 9.14m-20.11m Sandstone 20.11m-21.64m Driller 21.64m-33.22m Sandstone 33.22m-34.44m Clay White 34.44m-38.70m Sandstone 38.70m-39.31m Clay White 39.31m-59.74m Sandstone 59.74m-60.96m Shale 60.96m-62.48m Sandstone Clay Seams 62.48m-73.15m Clay White Grey Seams Sandstone 73.15m-88.39m Sandstone 88.39m-89.61m Shale 89.61m-93.26m Sandstone 93.26m-93.57m Clay White 93.57m-101.80m Sandstone Water Supply 101.80m-102.71m Shale Clay 102.71m-137.16m Sandstone	494m	East
GW031758	0.00m-0.30m Topsoil 0.30m-12.19m Sandstone Yellow 12.19m-13.71m Sandstone Shale Water Supply 13.71m-15.24m Sandstone Yellow 15.24m-27.43m Sandstone White 27.43m-28.95m Sandstone Grey 28.95m-56.38m Sandstone White Water Supply 56.38m-58.52m Shale Some Sandstone	755m	East
GW101513	0.00m-1.50m CLAYEY SAND 1.50m-2.50m IRON INDURATED CLAYEY SANDS AND SANDSTONE 2.50m-4.30m SANDSTONE	999m	South West
GW104000	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.50m SANDY CLAY,LOW PLASTICITY,IRONSTONE	1026m	South West
GW104001	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY,MOIST 2.40m-2.50m IRONSTONE	1026m	South West
GW104002	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY,SL.WET 2.40m-2.50m IRONSTONE	1026m	South West
GW104003	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY 2.40m-2.50m IRONSTONE	1026m	South West
GW104004	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY,MOIST 2.40m-2.50m IRONSTONE	1026m	South West
GW104005	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY 2.40m-2.50m IRONSTONE	1026m	South West
GW104006	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY 2.40m-2.50m IRONSTONE	1026m	South West
GW104007	0.00m-0.10m FILL:SANDY CLAY 0.10m-2.40m SANDY CLAY:LOW PLASTICITY 2.40m-2.50m IRONSTONE	1026m	South West
GW106513	0.00m-0.40m BROWN,MEDIUM GR. SAND/STONES 0.40m-1.20m BROWN SANDY CLAY 1.20m-2.30m RED/BROWN MOTTLED M/CLAY 2.30m-5.80m GREY/ORANGE/BROWN M/GR.CLAY 5.80m-6.00m WHITE WEATHERED SANDSTONE 6.00m-6.50m HARD, MEDIUM SANDSTONE 6.50m-7.10m RED,PINK, M/SANDSTONE 7.10m-7.20m HAEMATITE 7.20m-8.20m HARD,RED SANDSTONE,SOME HAEMATITE 8.20m-8.30m COARSE, RED CLAYEY SAND BANDS 8.30m-9.50m MEDIUM RED BROWN SANDSTONE 9.50m-9.80m CLAY LAYER 9.60m-11.50m CLAY LAYER,,RED, PINK,GR. SANDSTONES 11.50m-15.00m INFILLED WITH HAEMATITE,PINK TO YELLOW	1037m	South West

Groundwater No	Drillers Log	Distance	Direction
GW106512	0.00m-5.20m PURPLE BANDED SANDSTONE 5.20m-5.40m WHITE FRACTURED SANDSTONE 5.40m-5.90m PURPLE,WHITE SANDSTONE 5.90m-6.30m WHITE,YELLOW PURPLE SANDSTONE 6.30m-6.50m FRACTURED ZONE 6.50m-8.90m WHITE,YELLOW PURPLE SANDSTONE 8.90m-9.60m PURPLE,WHITE SANDSTONE 9.60m-9.90m PURPLE SANDSTONE 9.90m-10.90m PURPLE SANDSTONE/WHITE INCLUSIONS 10.90m-12.00m PURPLE SANDSTONE/YELLOW/WHITE 12.00m-13.80m WHITE,PURPLE BANDED SANDSTONE 13.80m-14.20m PURPLE,WHITE SANDSTONE 14.20m-15.00m WHITE,PURPLE BANDED SANDSTONE	1038m	South West
GW106514	0.00m-0.40m LIGHT BROWN SANDY LOAM 0.40m-1.00m DARK BROWN SANDY LOAM WITH SHELLS 1.00m-1.60m CREAM YELLOW,SANDY CLAY 1.60m-2.70m BLUE/GREY,FINE SANDY CLAY 2.70m-4.00m SANDY CLAY/RED STONES 4.00m-4.70m YELLOW SANDSTONES/SOME STONES 4.70m-5.20m PURPLE SANDSTONE 5.20m-5.30m WHITE SANDSTONE 5.30m-8.00m YELLOW WHITE/PURPLE SANDSTONE 8.00m-9.00m PURPLE/YELLOW/ SANDSTONE 9.00m-9.90m PURPLE WHITE SANDSTONE 9.90m-10.20m YELLOW /PURPLE WHITE SANDSTONE 10.20m-11.10m PURPLE WHITE SANDSTONE 11.10m-12.00m PURPLE WHITE BANDED SANDSTONE 12.00m-13.10m WHITE WEATHERED SANDSTONE 13.10m-15.00m WHITE SANDSTONE/PURPLE BANDED	1056m	South West
GW104975	0.00m-1.80m SANDY CLAY 1.80m-6.00m SANDSTONE	1079m	East
GW104974	0.00m-2.00m SANDY CLAY 2.00m-3.00m SAND/SILTY CLAY 3.00m-5.00m SANDSTONE	1088m	East
GW114729	0.00m-1.90m CLAY GREY 1.90m-4.70m SANDSTONE RED GREY	1130m	East
GW114730	0.00m-1.60m CLAY GREY WHITE M/GRAINED SOFT 1.60m-4.20m SANDSTONE GREY WHITE M/GRAINED WEATHERED	1138m	East
GW104973	0.00m-2.20m SANDY CLAY/D/BROWN/BLACK 2.20m-4.10m SILTY CLAY/SANDSTONE	1145m	East
GW114684	0.00m-0.20m CONCRETE 0.20m-0.30m SAND MINOR GRAVEL,M/GRAINED SAND 0.30m-0.60m CLAY, MINOR SAND M/GRAINED,SOFT,MOIST 0.60m-1.30m CLAYEY SAND M/GRAINED 1.30m-1.50m SAND MED. GRAINED 1.50m-2.50m SILTY CLAY VERY SOFT,MOIST, DARK BROWN 2.50m-3.20m SILY CLAY,FIRM, MOIST 3.20m-3.80m SANDY CLAY FINE GRAINED,SOFT,MOIST 3.80m-4.50m SANDSTONE WEATHERED,MOIST,GREY 4.50m-7.00m SANDY CLAY,FINE GRAINED	1150m	East
GW108250	0.00m-0.50m CLAY 0.50m-2.50m SANDSTONE WEATHERED 2.50m-4.00m SANDY CLAY 4.00m-8.00m SANDSTONE WEATHERED 8.00m-9.00m SHALE 9.00m-28.00m SANDSTONE GREY 28.00m-31.00m SANDSTONE BROWN QUARTZ 31.00m-34.00m SANDSTONE GREY 34.00m-34.20m SANDSTONE FRACTURED 34.20m-42.00m SANDSTONE GREY 42.00m-44.00m SANDSTONE QUARTZ 44.00m-44.50m SANDSTONE FRACTURED 44.50m-53.00m SILTSTONE 53.00m-57.00m SANDSTONE GREY 57.00m-59.00m SANDSTONE QUARTZ 59.00m-63.00m SANDSTONE GREY 63.00m-65.50m SANDSTONE QUARTZ 65.50m-81.00m SANDSTONE GREY 81.00m-83.00m SANDSTONE QUARTZ 83.00m-90.00m SANDSTONE GREY	1154m	North East
GW114731	0.00m-1.50m CLAY WHITE/RED MG.SOFT 1.50m-5.00m SANDSTONE RED/GREY MG WEATHERED	1163m	East
GW114685	0.00m-0.20m SILTY CLAY SOFT,MOIST,DARK BROWN 0.20m-1.00m SILTY CLAY WITH MINOR GRAVEL AND SAND 1.00m-1.60m SILTY CLAY, SOFT,FIRM, MOIST YELLOW BROWN 1.60m-2.00m SILTSTONE HARD DRY,RED BROWN 2.00m-5.00m SILTY CLAY,SOFT,MOIST,LOW PLASYICITY	1164m	East

Groundwater No	Drillers Log	Distance	Direction
GW020066	0.00m-0.30m Topsoil 0.30m-5.18m Clay 5.18m-9.44m Clay Shale 9.44m-11.27m Pipe Clay White 11.27m-11.88m Driller 11.88m-14.02m Pipe Clay White 14.02m-14.63m Sandstone Clay 14.63m-33.83m Sandstone 33.83m-34.44m Clay White Sandstone Decomposed 34.44m-54.86m Sandstone Grey 54.86m-60.96m Sandstone White 60.96m-62.17m Sandstone Shale 62.17m-64.00m Sandstone 64.00m-67.05m Shale 67.05m-104.54m Sandstone 104.54m-106.68m Shale Grey Water Supply	1421m	East
GW020108	0.00m-0.30m Topsoil 0.30m-2.74m Clay Red 2.74m-3.35m Pipe Clay White 3.35m-4.26m Driller 4.26m-6.09m Sandstone 6.09m-7.62m Clay 7.62m-12.80m Sandstone Clay 12.80m-33.52m Sandstone 33.52m-37.79m Clay Grey Shale 37.79m-51.51m Sandstone 51.51m-53.64m Clay White 53.64m-57.91m Clay Grey Shale 57.91m-61.56m Sandstone Hard 61.56m-67.97m Sandstone Clay Seams 67.97m-102.10m Sandstone 102.10m-103.63m Shale 103.63m-134.11m Sandstone	1458m	East
GW035775	0.00m-0.30m Topsoil 0.30m-4.26m Clay Red 4.26m-5.18m Driller 5.18m-7.62m Clay White 7.62m-8.22m Clay Grey 8.22m-16.15m Sandstone Clay 16.15m-35.05m Sandstone 35.05m-39.92m Shale Clay 39.92m-55.77m Sandstone 55.77m-56.69m Clay 56.69m-57.60m Shale Clay 57.60m-62.78m Sandstone 62.78m-76.20m Sandstone Clay Seams 76.20m-113.38m Sandstone 113.38m-116.43m Shale 116.43m-129.84m Sandstone 129.84m-133.50m Sandstone Shale 133.50m-137.46m Sandstone 137.46m-137.76m Shale 137.76m-146.30m Sandstone Clay Seams	1512m	East
GW018330	0.00m-3.66m Sandstone Water Supply	1675m	North West
GW032798	0.00m-0.60m Topsoil Black 0.60m-1.82m Sand White 1.82m-6.40m Sandstone Red 6.40m-9.75m Sandstone White Water Supply 9.75m-16.45m Sandstone 16.45m-18.89m Sandstone Dark Brown 18.89m-19.81m Sandstone White 19.81m-20.42m Sandstone Grey 20.42m-32.00m Sandstone White Water Supply	1712m	North East
GW100013	0.00m-1.50m CLAY 1.50m-3.00m WEATHERED SANDSTONE 3.00m-51.00m HAWKESBURY SANDSTONE	1798m	North West
GW029540	0.00m-2.13m Sand Loose 2.13m-3.04m Clay Sandy 3.04m-6.09m Sandstone Light Brown Water Supply 6.09m-9.75m Sand Grey 9.75m-12.19m Sandstone 12.19m-14.02m Sandstone Hard 14.02m-15.24m Sandstone Soft Water Supply 15.24m-17.06m Sandstone White Hard 17.06m-18.28m Sandstone Soft 18.28m-19.81m Sandstone Dark 18.28m-19.81m Pipe Clay Fine Interlayere 19.81m-21.33m Sandstone Very Hard 21.33m-24.38m Sandstone White 21.33m-24.38m Clay Fine Interlayere 24.38m-25.90m Sandstone White Hard 25.90m-31.69m Sandstone Grey Water Supply	1822m	North East

Groundwater No	Drillers Log	Distance	Direction
GW107992	0.00m-24.50m SANDSTONE WEATHERED 24.50m-25.50m SANDY CLAY 25.50m-29.00m SANDSTONE, QUARTZ 29.00m-36.00m SANDSTONE GREY 36.00m-36.50m SANDSTONE GREY FRACTURED 36.50m-69.00m SANDSTONE GREY 69.00m-72.00m SANDSTONE SHALE BANDS 72.00m-76.00m SANDSTONE GREY 76.00m-85.00m SANDSTONE, SILTSTONE, QUARTZ 85.00m-88.00m SANDSTONE GREY, QUARTZ 88.00m-115.00m SANDSTONE GREY 115.00m-116.00m SANDSTONE GREY, SHALE 116.00m-127.00m SANDSTONE GREY 127.00m-128.00m SILTSTONE 128.00m-136.50m SANDSTONE GREY 136.50m-138.00m SANDSTONE GREY, QUARTZ SILT 138.00m-157.00m SANDSTONE GREY 157.00m-166.00m SANDSTONE GREY, QUARTZ 166.00m-174.00m SANDSTONE GREY 174.00m-175.00m SILTSTONE 175.00m-176.00m SANDSTONE GREY 176.00m-177.00m SANDSTONE GREY, QUARTZ 177.00m-179.50m SANDSTONE GREY 179.50m-183.00m SANDSTONE GREY, QUARTZ 183.00m-185.00m SANDSTONE GREY	1868m	North West
GW014471	0.00m-42.67m Sandstone Water Supply 42.67m-43.28m Clay Gravel Water Supply 43.28m-45.72m Sandstone	1896m	North West
GW035940	0.00m-0.30m Topsoil Sandy 0.30m-0.60m Gravel Clay 0.60m-3.96m Driller 3.96m-40.23m Sandstone White Water Supply 40.23m-54.86m Sandstone Grey Water Supply	1898m	North
GW014472	0.00m-0.30m Topsoil 0.30m-4.57m Driller 4.57m-25.29m Sandstone Water Supply	1908m	North West

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Geology

Warringah Road, Frenchs Forest, NSW 2086

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rh	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses				Triassic		Sydney	1:100,000
Rhs	Shale. Laminate				Triassic		Sydney	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rh	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses				Triassic		Sydney	1:100,000
Rhs	Shale. Laminate				Triassic		Sydney	1:100,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
Dyke			Sydney	1:100,000
Dyke			Sydney	1:100,000
Dyke			Sydney	1:100,000

Geological Data Source : NSW Department of Industry, Resources & Energy

© State of New South Wales through the NSW Department of Industry, Resources & Energy

Naturally Occurring Asbestos Potential

Warringah Road, Frenchs Forest, NSW 2086

Naturally Occurring Asbestos Potential

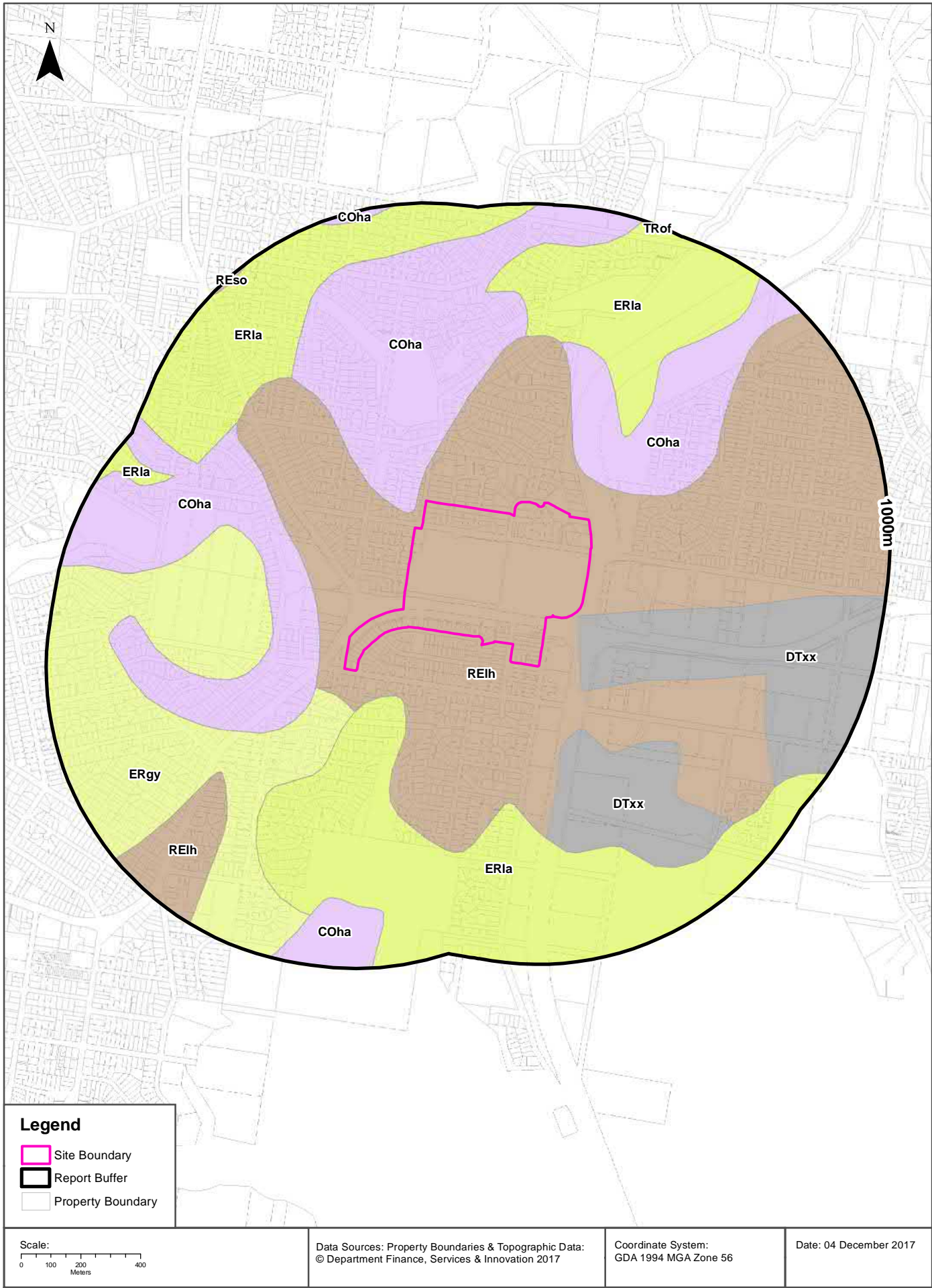
Naturally Occurring Asbestos Potential within the dataset buffer:

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

Mining Subsidence District Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Soil Landscapes

Warringah Road, Frenchs Forest, NSW 2086



Soils

Warringah Road, Frenchs Forest, NSW 2086

Soil Landscapes

What are the onsite Soil Landscapes?

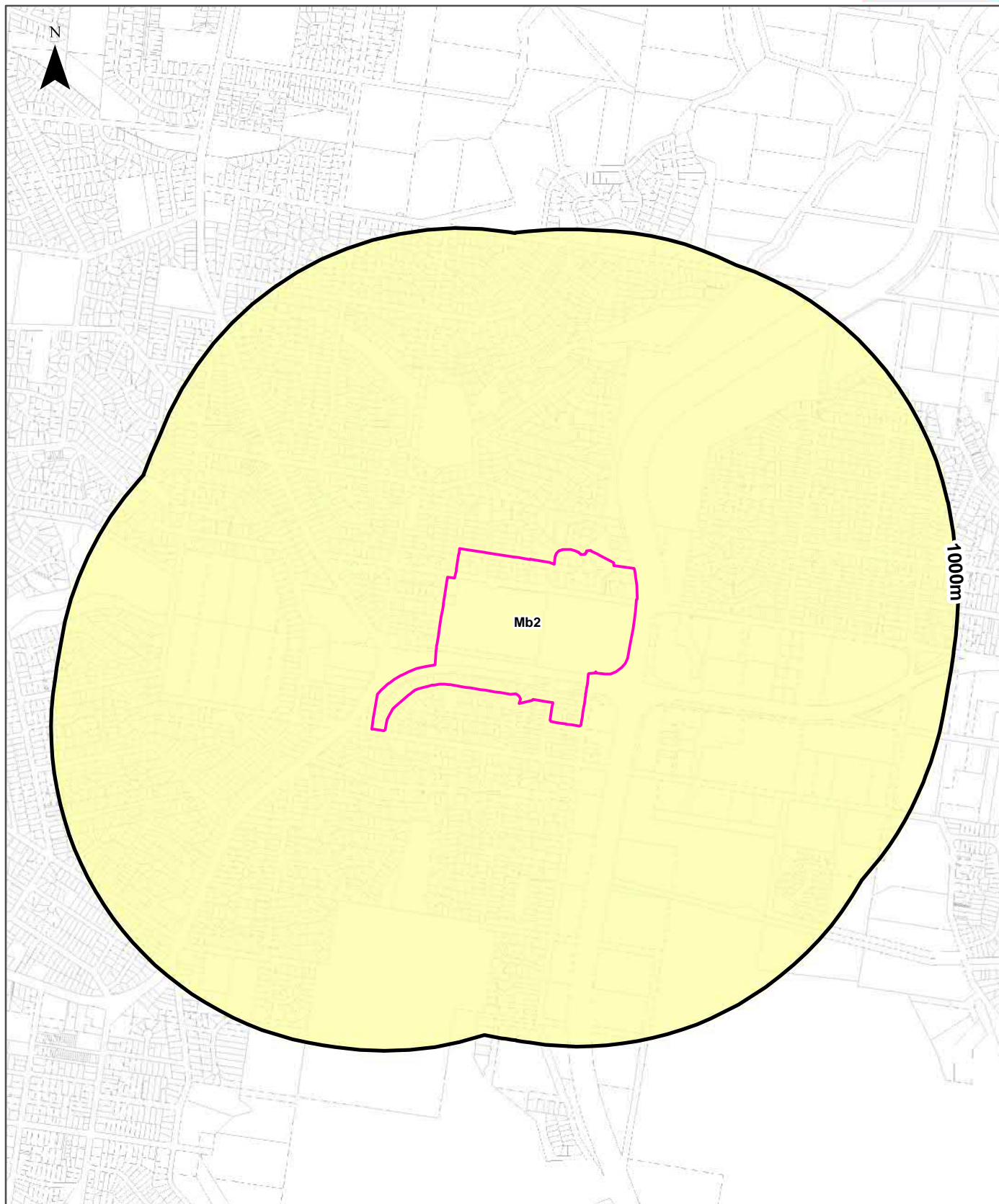
Soil Code	Name	Group	Process	Map Sheet	Scale
RElh	LUCAS HEIGHTS		RESIDUAL	Sydney	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
COha	HAWKESBURY		COLLUVIAL	Sydney	1:100,000
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Sydney	1:100,000
ERgy	GYMEA		EROSIONAL	Sydney	1:100,000
ERla	LAMBERT		EROSIONAL	Sydney	1:100,000
RElh	LUCAS HEIGHTS		RESIDUAL	Sydney	1:100,000
REso	SOMERSBY		RESIDUAL	Sydney	1:100,000
TRof	OXFORD FALLS		TRANSFERRAL	Sydney	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Legend		Australian Soil Classification Orders				
Site Boundary	Anthrosol	Dermosol	Kandosol	Podosol	Tenosol	No Data
Report Buffer	Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol	
Property Boundary	Chromosol	Hydrosol	Organosol	Sodosol	Lake	

Scale: 	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2017	Coordinate System: GDA 1994 MGA Zone 56	Date: 04 December 2017
-------------------	--	---	-------------------------------

Soils

Warringah Road, Frenchs Forest, NSW 2086

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
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.	0m

Atlas of Australian Soils Data Source: CSIRO

Creative Commons 4.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/4.0/au/deed.en>

Acid Sulfate Soils

Warringah Road, Frenchs Forest, NSW 2086

Standard Local Environmental Plan Acid Sulfate Soils

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

Soil Class	Description	LEP
N/A		

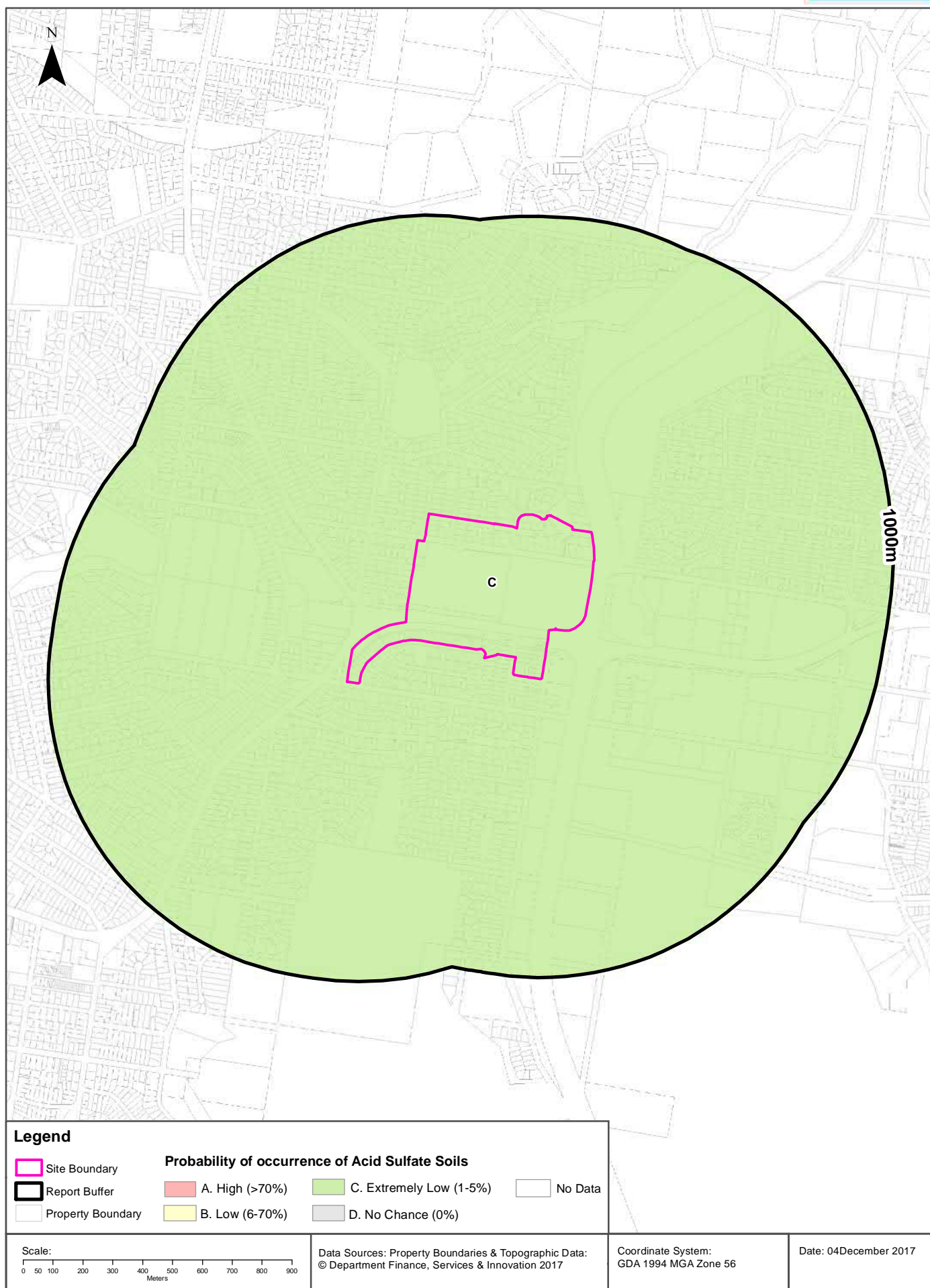
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	LEP	Distance	Direction
N/A				

Acid Sulfate Data Source Accessed 07/10/2016: NSW Crown Copyright - Planning and Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Atlas of Australian Acid Sulfate Soils

Warringah Road, Frenchs Forest, NSW 2086



Acid Sulfate Soils

Warringah Road, Frenchs Forest, NSW 2086

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Dryland Salinity

Warringah Road, Frenchs Forest, NSW 2086

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	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.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
N/A	Outside Data Coverage			

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Mining Subsidence Districts

Warringah Road, Frenchs Forest, NSW 2086

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)
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Environmental Zoning

Warringah Road, Frenchs Forest, NSW 2086

State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the dataset buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	No	N/A

SEPP Protected Areas Data Source: NSW Department of Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
N/A	No records within buffer			

SEPP Major Development Data Source: NSW Department of Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

State Environmental Planning Policy Strategic Land Use Areas

State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Local Environmental Plan

Warringah Road, Frenchs Forest, NSW 2086

Land Zoning

What Local Environmental Plan Land Zones exist within the dataset buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R2	Low Density Residential		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		0m	Onsite
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		0m	Onsite
SP2	Infrastructure	Classified Road	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		0m	Onsite
B1	Neighbourhood Centre		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		0m	Onsite
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		15m	South West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		20m	South East
R2	Low Density Residential		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		40m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		75m	East
B7	Business Park		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		77m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		84m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		91m	North
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		92m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		110m	West
R2	Low Density Residential		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		136m	East
B2	Local Centre		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		143m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		149m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		166m	South West
B7	Business Park		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		179m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		184m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		191m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		210m	South
E2	Environmental Conservation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		218m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		220m	South
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		224m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		236m	South West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		252m	North
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		262m	South West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		293m	South
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		302m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		322m	South East

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		443m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		458m	East
R2	Low Density Residential		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		576m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		610m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		648m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		659m	North East
E2	Environmental Conservation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		668m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		721m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		723m	East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		769m	East
R2	Low Density Residential		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		776m	South East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		803m	South West
SP1	Special Activities	Health Services Facilities	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		807m	South East
R2	Low Density Residential		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		818m	South East
E3	Environmental Management		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		823m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		854m	West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		857m	North West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		859m	East
B1	Neighbourhood Centre		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		866m	East
IN2	Light Industrial		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		885m	South West
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		886m	East
E1	National Parks and Nature Reserves		Warringah Local Environmental Plan 2011	27/06/2014	27/06/2014	30/06/2017	Amendment No 7	895m	South
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		912m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		938m	North
E1	National Parks and Nature Reserves		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		946m	North West
DM	Deferred Matter		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		959m	North
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		978m	South West
DM	Deferred Matter		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		984m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		994m	North East
RE1	Public Recreation		Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		995m	North West

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Local Environmental Plan

Warringah Road, Frenchs Forest, NSW 2086

Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
M	600 m ²	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	Amendment No 19	66.04
M	600 m ²	Warringah Local Environmental Plan 2011	09/10/2015	09/10/2015	30/06/2017		12.71

Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
9	8.50 m	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	Amendment No 19	66
9	8.50 m	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017		14.1

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Warringah Local Environmental Plan 2011	14/02/2014	14/02/2014	14/02/2014	Amendment No 2	100

Land Reservation Acquisition

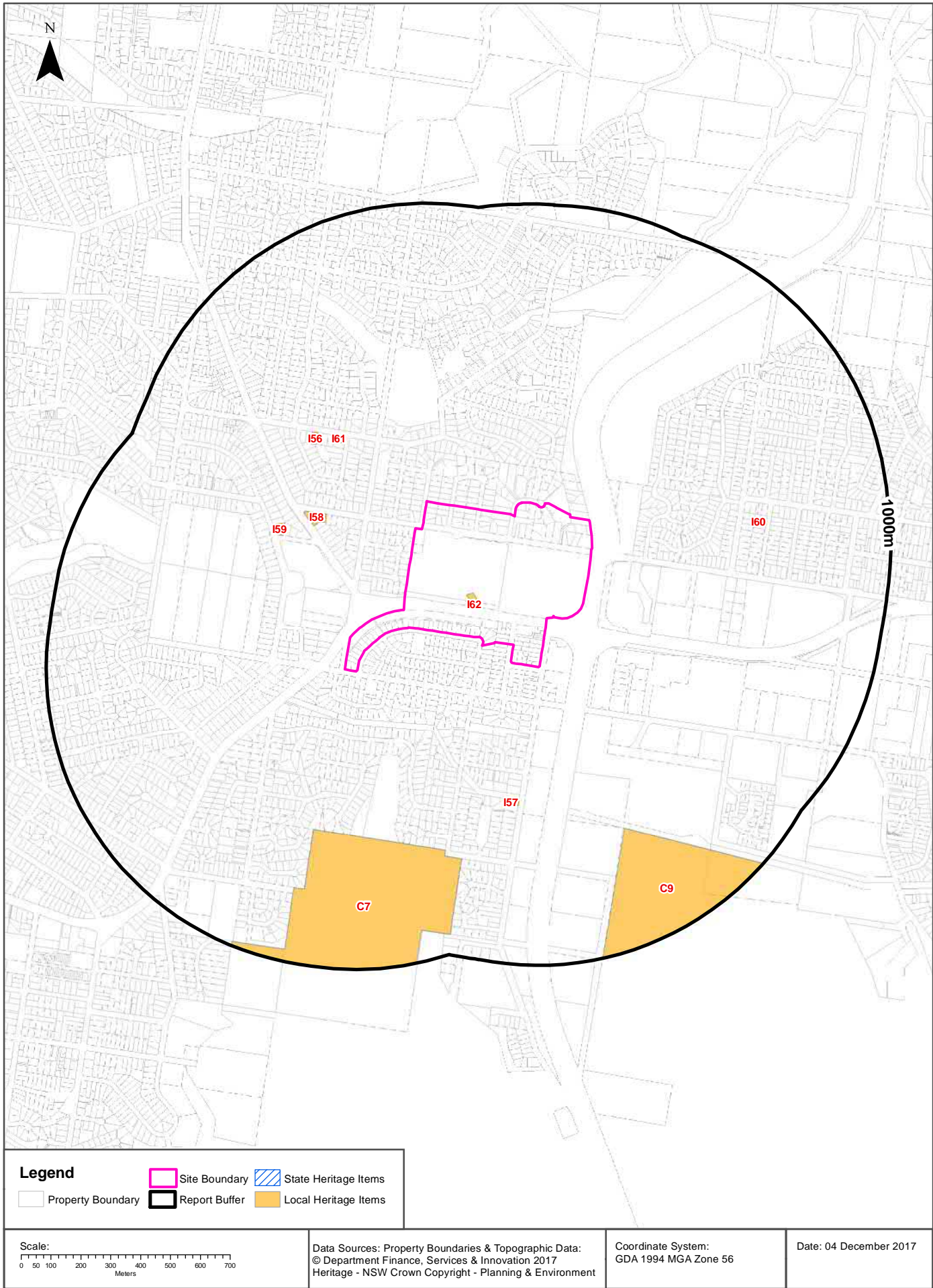
What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
Infrastructure	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	09/12/2011			0.3

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Heritage Items

Warringah Road, Frenchs Forest, NSW 2086



Heritage

Warringah Road, Frenchs Forest, NSW 2086

State Heritage Items

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Planning & Environment

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Local Heritage Items

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

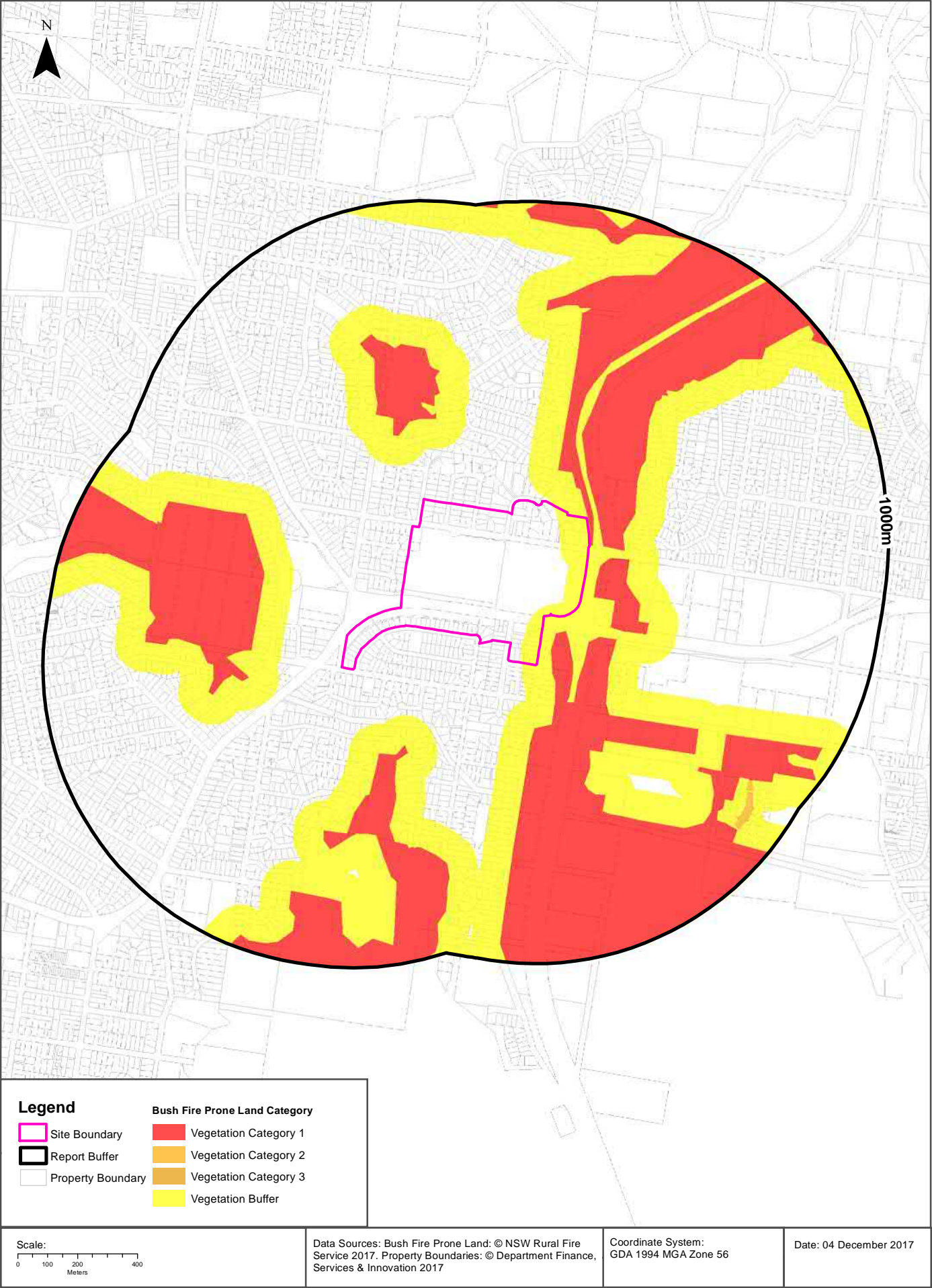
Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I62	Former Holland's Orchard Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	30/05/2014	30/05/2014	30/06/2017	0m	Onsite
I62	Former Holland's Orchard Trees	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	0m	Onsite
I58	Former Methodist Church	Item - General	Local	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	302m	West
I61	House	Item - General	Local	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	338m	North West
I59	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	402m	West
I56	House	Item - General	Local	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	417m	North West
I57	House	Item - General	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	454m	South
I60	Betty Moloney Garden	Item - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	543m	East
C7	Forestville Park	Conservation Area - Landscape	Local	Warringah Local Environmental Plan 2011	09/12/2011	09/12/2011	30/06/2017	546m	South
C9	Manly Dam and Surrounds	Conservation Area - Landscape	Local	Warringah Local Environmental Plan 2011	30/06/2017	30/06/2017	30/06/2017	612m	South East

Heritage Data Source: NSW Crown Copyright - Planning & Environment

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Natural Hazards - Bush Fire Prone Land

Warringah Road, Frenchs Forest, NSW 2086



Natural Hazards

Warringah Road, Frenchs Forest, NSW 2086

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	0m	Onsite
Vegetation Category 1	0m	Onsite
Vegetation Category 2	804m	South East

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

Ecological Constraints - Native Vegetation & RAMSAR Wetlands

Warringah Road, Frenchs Forest, NSW 2086



Ecological Constraints

Warringah Road, Frenchs Forest, NSW 2086

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Map Unit Name	Threatened Ecological Community NSW	Threatened Ecological Community EPBC Act	Understorey	Disturbance	Disturbance Index	Dominant Species	Dist	Direction
S_DSF09	S_DSF09: Coastal Sandstone Gully Forest			11: Semi sheltered dry/mesic	24: Urban mixed use	4: Very high	A.costata/E.sieberi/E.piperita/C.gummiferaE.resinifera/E.umbra	0m	Onsite
S_DSF14	S_DSF14: Sydney Ironstone Bloodwood-Silvertop Ash Forest	Duffys Forest Ecological Community		15: Grassy natives and exotics	13: Weeds	3: High	A.costata/E.sieberi/E.capitellata/C.gummiferaE.umbra/E.haemastoma	0m	Onsite
S_DSF14	S_DSF14: Sydney Ironstone Bloodwood-Silvertop Ash Forest	Duffys Forest Ecological Community		15: Grassy natives and exotics	24: Urban mixed use	4: Very high	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
S_DSF14	S_DSF14: Sydney Ironstone Bloodwood-Silvertop Ash Forest	Duffys Forest Ecological Community		23: Rocky	24: Urban mixed use	4: Very high	A.costata/E.sieberi/E.capitellata/C.gummiferaE.umbra/E.haemastoma	0m	Onsite
S_DSF14	S_DSF14: Sydney Ironstone Bloodwood-Silvertop Ash Forest	Duffys Forest Ecological Community		25: Bare soil	23: Plantings	4: Very high	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
S_WSF06	S_WSF06: Coastal Shale-Sandstone Forest			12: Dry xeric shrubs	13: Weeds	3: High	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
S_WSF06	S_WSF06: Coastal Shale-Sandstone Forest			12: Dry xeric shrubs	14: Canopy gaps	3: High	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
S_WSF06	S_WSF06: Coastal Shale-Sandstone Forest			12: Dry xeric shrubs	15: Regrowth	2: Moderate	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
S_WSF06	S_WSF06: Coastal Shale-Sandstone Forest			12: Dry xeric shrubs	25: Edge disturbances only	1: Low	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
S_WSF06	S_WSF06: Coastal Shale-Sandstone Forest			25: Bare soil	23: Plantings	4: Very high	E.sieberi/E.resinifera/A.costata/E.umbra/E.globoidea	0m	Onsite
Urban_E/N	Urban_E/N: Urban Exotic/Native			00: Not assessed	00: Not assessed	0: Not assessed	Urban Exotic/Native	0m	Onsite
Weed_Ex	Weed_Ex: Weeds and Exotics			00: Not assessed	00: Not assessed	0: Not assessed	Exotic Species >90% cover	69m	North East
S_DSF11	S_DSF11: Sydney North Exposed Sandstone Woodland			19: Dense heath	19: Clearing/Part clearing	4: Very high	E.haemastoma/B.serrata	265m	West
S_HL08	S_HL08: Coastal Sandstone Heath-Mallee			19: Dense heath	19: Clearing/Part clearing	4: Very high	A.distyla/B.ericifolia/Leptospermum spp/A.hispida	320m	West
S_FrW01	S_FrW01: Coastal Upland Damp Heath Swamp	Coastal Upland Swamp		19: Dense heath	13: Weeds	1: Low	B.ericifolia/Hakea spp/sedges	457m	North East
S_DSF04	S_DSF04: Coastal Enriched Sandstone Dry Forest			11: Semi sheltered dry/mesic	24: Urban mixed use	4: Very high	A.costata/E.botryoides/E.piperata	462m	South West
S_FrW02	S_FrW02: Coastal Upland Wet Heath Swamp	Coastal Upland Swamp		19: Dense heath	13: Weeds	3: High	B.robur/B.oblongifolia/Hakea spp/Gleichenia spp./L.tenaxG.sp haerocephalus	488m	West
S_DSF08	S_DSF08: Coastal Sandstone Riparian Forest			10: Mesic/rainforest	13: Weeds	1: Low	E.piperita/A.costata/T.laurina	754m	South

Native Vegetation of the Sydney Metropolitan Area : NSW Office of Environment and Heritage

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Ecological Constraints

Warringah Road, Frenchs Forest, NSW 2086

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 Environment

Groundwater Dependent Ecosystems Atlas

Map Id	Type	GDE Potential	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
N/A	No records within buffer						

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Ecological Constraints

Warringah Road, Frenchs Forest, NSW 2086

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	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	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	CAMBA;JAMBA
Animalia	Aves	Ardenna pacificus	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;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	Curler 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	Endangered Population, Vulnerable	Category 3	Not Listed	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	JAMBA
Animalia	Aves	Egretta sacra	Eastern Reef Egret	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Esacus magnirostris	Beach Stone-curlew	Critically Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Eudyptula minor	Little Penguin	Endangered Population	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Fregata ariel	Lesser Frigatebird	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gygis alba	White Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Nettapus coromandelianus	Cotton Pygmy-Goose	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
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	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

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Philomachus pugnax	Ruff	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Plegadis falcinellus	Glossy Ibis	Not Listed	Not Sensitive	Not Listed	CAMBA
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	Ptilinopus magnificus	Wompoo 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	Stercorarius longicaudus	Long-tailed Jaeger	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	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	Sula dactylatra	Masked Booby	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Thalassarche cauta	Shy Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Isodon obesulus obesulus	Southern Brown Bandicoot (eastern)	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Megaptera novaeangliae	Humpback Whale	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Mormopterus norfolkensis	Eastern Freetail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Perameles nasuta	Long-nosed Bandicoot	Endangered Population	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascogale cinereus	Koala	Endangered Population, Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Phascogale cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Physeter macrocephalus	Sperm Whale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pseudomys novaehollandiae	New Holland Mouse	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheath-tail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Dermochelys coriacea	Leatherback Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Myuchelys bellii	Bell's Turtle, Western Sawshelled Turtle	Endangered	Not Sensitive	Vulnerable	
Animalia	Reptilia	Varanus rosenbergi	Rosenberg's Goanna	Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Camarophyllopsis kearneyi		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe anomala var. ianthinomarginata		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe aurantipes		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe austropratensis		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe collucera		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe griseoramosa		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe lanecovensis		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe reesiaae		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe rubronivea		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. terminalis	Sunshine Wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Allocasuarina portuensis	Nielsen Park She-oak	Endangered	Category 3	Endangered	
Plantae	Flora	Baeckea kandos		Endangered	Category 3	Endangered	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Chamaesyce psammogeton	Sand Spurge	Endangered	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Cheilanthes sieberi subsp. pseudovellea		Endangered	Category 3	Not Listed	
Plantae	Flora	Cryptostylis hunteriana	Leafless Tongue Orchid	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Darwinia biflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Deyeuxia appressa		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Diuris bracteata		Endangered	Category 2	Extinct	
Plantae	Flora	Epacris purpurascens subsp. 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	Endangered	
Plantae	Flora	Grevillea hilliana	White Yiel Yiel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Haloragodendron lucasii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia spanantha	Julian's Hibbertia	Critically Endangered	Category 2	Critically Endangered	
Plantae	Flora	Hibbertia superans		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Kunzea rupestris		Vulnerable	Not Sensitive	Vulnerable	
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		Presumed Extinct	Not Sensitive	Extinct	
Plantae	Flora	Persoonia pauciflora	North Rothbury Persoonia	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Pimelea curviflora subsp. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Prostanthera densa	Villous Mint-bush	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Prostanthera junonis	Somersby Mintbush	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Sarcochilus hartmannii	Hartman's Sarcochilus	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	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

NSW BioNet: © State of NSW and Office of Environment and Heritage

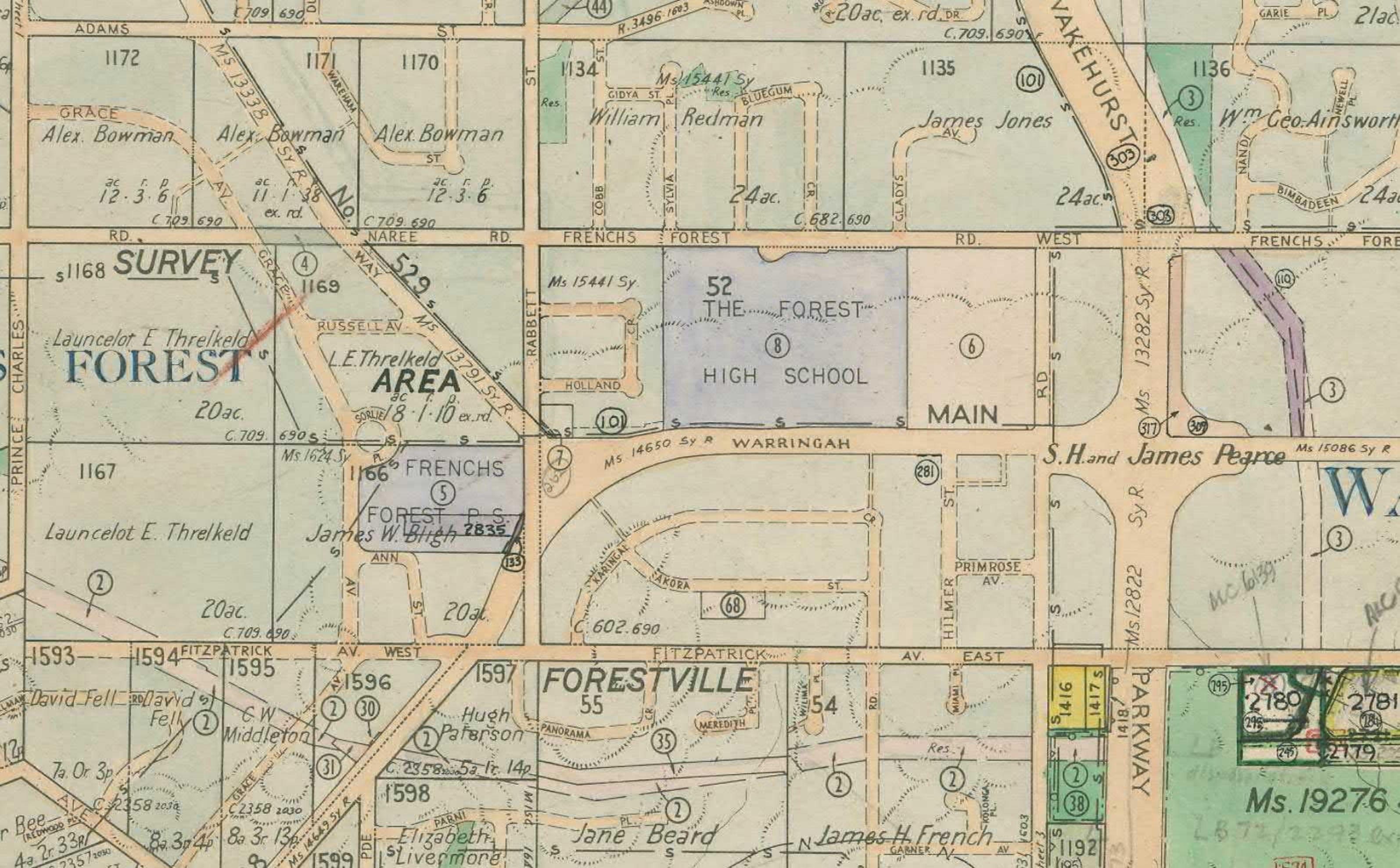
Data obtained 04/12/2017

USE OF REPORT – APPLICABLE TERMS

The following terms apply to any person (End User) who is given the Report by the person who purchased the Report from Lotsearch Pty Ltd (ABN: 89 600 168 018) (Lotsearch) or who otherwise has access to the Report. The contract terms that apply between Lotsearch and the purchaser of the Report are specified in the order form pursuant to which the Report was ordered and the terms set out below are of no effect as between Lotsearch and the purchaser of the Report.

1. End User acknowledges and agrees that:
 - (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
 - (i) content provided to Lotsearch by third party content suppliers with whom Lotsearch has contractual arrangements or content which is freely available (**Third Party Content Suppliers**);
 - (j) content which is derived from content described in paragraph (i);
 - (b) Lotsearch does not take any responsibility for or give any warranty in relation to the accuracy or completeness of any Third Party Content included in the Report;
 - (c) the Third Party Content Suppliers do not constitute an exhaustive set of all repositories or sources of information available in relation to the property which is the subject of the Report (**Property**);
 - (d) Lotsearch has not undertaken any physical inspection of the property;
 - (e) Lotsearch does not warrant that all land uses or features whether past or current are identified in the Report;
 - (f) the Report does not include any information relating to the actual state or condition of the Property;
 - (g) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of a Property for any particular purpose;
 - (h) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
 - (i) the End User should undertake its own inspection s of the Property to satisfy itself that there are no defects or failures.
2. The End User may not make the Report or any copies or extracts of the report or any part of it available to any other person. If End User wishes to provide the Report to any other person or make extracts or copies of the Report, it must contact the purchaser of the Report before doing so to ensure the proposed use is consistent with the contract terms between Lotsearch and the purchaser.
3. Neither Lotsearch (nor any of its officers, employees or agents) nor any of its Third Party Content Suppliers will have any liability to End User or any person to whom End User provides the Report and End User must not represent that Lotsearch or any of its Third Party Content Suppliers accepts liability to any such person or make any other representation to any such person on behalf of Lotsearch or any Third Party Content Supplier.
4. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
5. End User acknowledges and agrees that Lotsearch and Third Party Content Suppliers retain ownership of all copyright, patent, design right (registered or unregistered), trade marks (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right in any Report or any other item, information or data included in or provided as part of a Report.
6. To the extent permitted by law and subject to paragraph 7, all implied terms, representations and warranties whether statutory or otherwise relating to the subject matter of these terms other than as expressly set out in these terms are excluded.
7. Subject to paragraph 8, Lotsearch excludes liability to End User for loss or damage of any kind, however caused, due to Lotsearch's negligence, breach of contract, breach of any law, in equity, under indemnities or otherwise, arising out of all acts, omissions and events whenever occurring.
8. Lotsearch acknowledges that if, under applicable State, Territory or Commonwealth law, End User is a consumer certain rights may be conferred on End User which cannot be excluded, restricted or modified. If so, and if that law applies to Lotsearch, then, Lotsearch's liability is limited to the greater of an amount equal to the cost of resupplying the Report and the maximum extent permitted under applicable laws.
9. Subject to paragraph 7, neither Lotsearch nor the End User is liable to the other for any indirect, incidental, consequential, special or exemplary damages arising out of or in relation to these terms.
10. These terms are subject to New South Wales law.

Appendix B – Parish Maps (1969)



Appendix C – Site Photographs (9 March 2018)

Photograph 1: Looking east along Karingal Crescent



Photograph 2: Looking west along Karingal Crescent



Photograph 3: Looking east to Warringah Road from Forest Way overpass



Photograph 4: Looking west to Warringah Road from Forest Way overpass



Photograph 5: Looking east along Frenchs Forest Road from Rabbett Street



Photograph 6: Looking west along Frenchs Forest Road



Photograph 7: Frenchs Forest Police Station



Photograph 8: Northern Beaches Hospital (Frenchs Forest Road)



Photograph 9: Northern Beaches Hospital (Warringah Road)



Photograph 10: Forest High (Warringah Road)



Photograph 11: Looking east to Warringah Road from Forest High School overpass



Photograph 12: Looking west to Warringah Road from Forest High School overpass

