

PRELIMINARY SITE INVESTIGATION

Kings Hill Urban Release Area

06 SEPTEMBER 2019



CONTACT

JAMES VAN DER HELM
Senior Environmental Scientist

M 0455 182 157
E james.vanderhelm@arcadis.com

Arcadis
Level 16, 580 George Street
Locked Bag 6503
SYDNEY NSW 2060
Tel No: +61 2 8907 9000
Fax No: +61 2 8907 9001
arcadis.com

KINGS HILL DEVELOPMENT (KHD) PTY LTD

10027844

Preliminary Site Investigation

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Author	Pragya Mathema, Environmental Engineer	
Checker	James Van Der Helm, Senior Environmental Scientist	
Approver	Graham Hawkes, Technical Director – Hydrogeology	
Report No	10027844_PSI01	
Date	4/09/2019	
Revision Text	V3	

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REVISIONS

Revision	Date	Description	Prepared by	Approved by
V0	11/07/2019	Draft	PM	GH
V1	7/08/19	Draft for internal review	PM	GH
V2	7/08/19	Draft for internal review	PM	JV
V3	5/09/19	Final report for issue to client.	PM	JV

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1 INTRODUCTION

Kings Hill Development Pty Ltd (KHD) engaged Arcadis Australia Pacific Pty Ltd (Arcadis) to complete a Preliminary Site Investigation (PSI) for Kings Hill Development (KHD) ('the client'). The Proposal site is defined as the water supply and wastewater pipeline corridor as shown on Figure 1, **Appendix A**.

1.1 Background

In 2010, the New South Wales Government rezoned land at Kings Hill Urban Release Area (Kings Hill URA), located north of Raymond Terrace within the Port Stephens Local Government Area (LGA). Previously zoned as rural land, the whole urban release area would support a mix of general residential and mixed use is expected to comprise in excess of 3,500 residential dwellings constructed over a twenty five-year period.

Kings Hill Development (KHD) is the majority landowner of this rezoned land known as the Kings Hill Urban Release Area (Kings Hill URA). Key development features of Kings Hill URA will also include the provision of utilities and supporting infrastructure, including a Pacific Highway grade separated interchange, stormwater channel and water and wastewater infrastructure. There is currently no water and wastewater infrastructure present with the capacity to service Kings Hill URA.

The Proposal includes water and wastewater supply pipeline approximately 6.7 kilometres (km) and 4.2 km in length, respectively, and a new wastewater pumping station (WWPS) to support the Kings Hill URA. The water pipeline will connect to existing Hunter Water infrastructure in the south and the Kings Hill URA in the north, while the wastewater pipeline would connect to the new WWPS in Kings Hill URA and existing Hunter Water infrastructure in the south. The southern portion of the Proposal site, terminating at the end of Rees James Road / south end of the wetland, generally follows existing easements and utilities alignment as noted by the numerous inspection points in the footpaths, driveways, roads, service roads and nature strips.

1.2 Objective

The objective of the PSI was to identify the potential for issues, concerns or environmental risks and liabilities associated with the current and historical uses of the Proposal site.

A summary of specific key environmental issues were identified, including a statement of the site's suitability for the Proposal and associated recommendations (if required) will be provided as an outcome of this PSI.

1.3 Scope of Work

To meet the objective Arcadis completed the following scope of works:

- Site visit and walkover to characterise the property setting, including inspection of the Proposal site's surface for obvious signs of potential contamination and / or contaminant sources;
- A visual evaluation of surrounding land uses to identify any neighbouring activities that may have impacted or present a potential risk to the environmental quality of the Proposal site;
- A review of available zoning plans and council documents to outline potentially contaminating activities that may have occurred on the Proposal site;
- A review of EPA Records (notified and regulated sites under Section 60 of the *Contaminated Land Management Act* (CLM Act));
- An evaluation of aerial photographs to assist in assessing historical land uses and conditions on and adjacent to the Proposal site;
- A review of the environmental setting with regards to geology, topography, hydrology and hydrogeology; and

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- Preparation of a PSI in general accordance with the requirements stated in the NSW OEH (2011) *Guidelines for Consultants Reporting on Contaminated Sites*, with reference to other relevant NSW EPA endorsed guidelines.

2 SITE CHARACTERISTICS

2.1 Proposal Site Location

The details of the Proposal site are provided in Table 1 below and described in detail in the following sections.

Table 1 - Site Summary Detail

Site Characteristic	Detail
Location	The Proposal site is located approximately 25 km north of Newcastle and 135 km north of Sydney.
Local Government Area	Port Stephens LGA
Land Use Information	'SP1 – Special Activities', 'SP2 – Infrastructure', 'R1 – General Residential', 'R2 – Low Density Residential', 'R3 – Medium Density Residential', 'E2 – Environmental Conservation' and 'RE1 – Public Recreation' as specified in the <i>Port Stephens Local Environmental Plan 2013</i> .
Proposal Site Coordinates to the approximate centre of the Proposal site (Geographic)	Latitude: -32.743022 Longitude: 151.773814
Proposal Site Lengths	The water and wastewater pipelines making up the Proposal site will be approximately 6.7 km and 4.2 km in length, respectively.

2.2 Proposal Site Description

The following description is based on the conditions of the Proposal site observed during a site visit, conducted on the 2nd of August 2019 by Arcadis Senior Environmental Scientist, James Van Der Helm. **Appendix B** presents photos taken during the site walkover.

The topography along the 6.7 km Proposal site is undulating, with many changes in surface water and inferred groundwater flow direction. The Proposal site generally follows existing utilities and infrastructure which is likely to include the presence of fill material. The surroundings to the southern end of the Proposal site were generally medium to low density residential properties which became sparser to the end of Rees James Road / wetland. North of the wetland, there is a single rural residence / business (Riding for the Disabled Australia), then no further residences.

The vegetated corridor containing an unsealed track between Adelaide Street and Irrawang Street at the south of the Proposal site contained drainage lines where wastes including a tyre and plastics were noted. This drainage line was also located immediately adjacent to some residential properties which may have resulted in potential sewage water being present.

No other obvious signs of contamination (i.e. surface staining, hummocky soil or odours) were noted. Vegetation did not appear to be stressed or dying.

2.3 Surrounding Land Uses

Along the 6.7 km Proposal site, notable observations in relation to the contamination assessment include:

- **North:** The volunteer organisation Riding for the Disabled Australia (RDA NSW) is located north of the Proposal site and is followed by dense vegetation;

- **South:** The suburb of Raymond Terrace comprising low to medium density residential homes and commercial properties. Some large recreational parks are also located at the southern end of the Proposal site;
- **East:** The east of the Proposal site is generally vacant, and vegetation covered and comprises Grahamstown Dam. The south east portion of the Proposal site falls within the suburb of Raymond Terrace which comprises low to medium density residential homes and Murree Golf Club.
- **West:** The majority of the west of the Proposal site contains a large coastal wetland that comprises a large vegetated area with several watercourses that allow the collection of water. SUEZ Raymond Terrace Resource Recovery Park, a recycling centre, is located further westward. Williams River and Hunter River are also located in this direction.

2.4 Sensitive Environments

The nearest sensitive environments are as follows:

- The nearest residential houses are located along the west and around the southern half of the Proposal site;
- Five schools are located nearby the southern portion of the Proposal site. These include Irrawang Public School, Irrawang Public Preschool, St Brigid's Primary School, Raymond Terrace Public School and Alesco Senior College Raymond Terrace Campus;
- Several parks and recreational fields are located within close proximity to the Proposal site. These include, but are not limited to, Kittyhawk Park, Feeney Park, Edstein Park, Roslyn Park, Ross Wallbridge Reserve and Boomerang Park; and
- Various watercourses and ponds are located around the Proposal site, however, as indicated by proximity and surface elevation, surface water will likely drain into the coastal wetland located to the west of the Proposal site.

Other points of interest can be found on page 36, 46, 50 and 54 of the Lotsearch reports Part 1, Part 2, Part 3 and Part 4, respectively. These reports are presented in **Appendix C**.

2.5 Proposed Land Use

Arcadis understands the Proposal includes construction of water and wastewater pipelines of about 6.7 km and 4.2 km in length, respectively, and a new WWPS within Kings Hill URA, which is north of Raymond Terrace, NSW. The Proposal site includes the footprints of the water pipeline and wastewater pipeline, in addition to buffer areas and temporary construction compounds.

The water pipeline will connect to existing Hunter Water infrastructure in the south and the Kings Hill URA in the north, while the wastewater pipeline would connect Kings Hill URA and existing Hunter Water infrastructure in the south.

The extent of the construction footprint is defined in Figure 1, **Appendix A**.

3 PROPOSAL SITE HISTORY

3.1 Review Council Records

The Environmental Planning instruments that apply to the carrying out of development on the land under the *Port Stephens Local Environmental Plan 2013* are provided within the four Lotsearch Environmental Risk and Planning Reports in **Appendix C**.

The following zoning and planning policies and instruments apply to the Proposal site:

- No Mining Subsidence Districts are located within the report buffer.
- No State Environmental Planning Policy Protected Areas are located onsite or within the report buffer.
- No State Environmental Planning Policy Major Developments within the report buffer.
- No State Environmental Planning Policy Strategic Land Use Area within the report buffer.
- *Port Stephens Local Environmental Plan 2013* applies to 100% of the Proposal site area.

Refer to the four Lotsearch Reports provided in **Appendix C** for more information regarding the Environmental Risk and Planning Reports.

3.2 Zoning

The Proposal is subject to multiple land zones in the *Port Stephens Local Environmental Plan 2013* as shown in Table 2 below.

Table 2 - Zoning and Objectives of the Proposal site

Zone	Objectives
SP1 – Special Activities	<ul style="list-style-type: none"> • To provide for special land uses that are not provided for in other zones. • To provide for sites with special natural characteristics that are not provided for in other zones. • To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land. • To ensure the protection of water catchment areas to safeguard the quality and quantity of groundwater and surface water. • To facilitate the provision of infrastructure provided by Hunter Water Corporation.
SP2 – Infrastructure	<ul style="list-style-type: none"> • To provide for infrastructure and related uses. • To prevent development that is not compatible with or that may detract from the provision of infrastructure.
R1 – General Residential	<ul style="list-style-type: none"> • To provide for the housing needs of the community. • To provide for a variety of housing types and densities. • To enable other land uses that provide facilities or services to meet the day to day needs of residents.
R2 – Low Density Residential	<ul style="list-style-type: none"> • To provide for the housing needs of the community within a low-density residential environment.

Zone	Objectives
	<ul style="list-style-type: none"> • To enable other land uses that provide facilities or services to meet the day to day needs of residents. • To protect and enhance the existing residential amenity and character of the area. • To ensure that development is carried out in a way that is compatible with the flood risk of the area.
R3 – Medium Density Residential	<ul style="list-style-type: none"> • To provide for the housing needs of the community within a medium density residential environment. • To provide a variety of housing types within a medium density residential environment. • To enable other land uses that provide facilities or services to meet the day to day needs of residents.
E2 – Environmental Conservation	<ul style="list-style-type: none"> • To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values. • To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
RE1 – Public Recreation	<ul style="list-style-type: none"> • To enable land to be used for public open space or recreational purposes. • To provide a range of recreational settings and activities and compatible land uses. • To protect and enhance the natural environment for recreational purposes.

3.3 Aerial Photograph Review

Due to the large area of the Proposal site, four Lotsearch Pty Ltd reports have been prepared along the alignment for different areas of the site. The aerial photographs reviewed in this section were sourced from reports from 1954, 1965, 1966, 1976, 1984, 1993, 2004, 2010, 2015 and 2018 to assess the historical land use and determine when/if changes to the use of Proposal site and surroundings may have occurred. The following reports were prepared representing different chainages along the Proposal site.

- Lotsearch 2019 (Part 1) CH 6650 – CH 4900
- Lotsearch 2019 (Part 2) CH 4900 – CH 3300
- Lotsearch 2019 (Part 3) CH 3300 – CH 1600
- Lotsearch 2019 (Part 4) CH 1600 – CH 0000

Copies of the aerial photographs are included in **Appendix C**. The relevant information from the aerial photograph review for each of the four sections of the Proposal site are summarised in tables 3,4,5 and 6.

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Table 3 - Summary of Aerial Photography - Northern-most Section of the Proposal site (Lotsearch Report Part 1) – Approximately CH 6650 to CH 4900

Date	Description of the Northern-most Section of the Proposal Site	Description of Surrounding Land
1954	The Proposal site appears to be undeveloped with sparse vegetation covering the northern section. The remainder of the Proposal site is grass covered.	<p>The majority of the surroundings to the Proposal site appears to be undeveloped, with vegetation and shrubbery located to the north. A small section of the vegetation running south west to north east, at the north of the Proposal site appears to be cleared.</p> <p>Some small unsealed tracks are also located to the west of the Proposal site.</p>
1965	<p>Vegetation clearing has occurred on the section of the Proposal site running south west to north east. A small pond/dam can also be seen here.</p> <p>A very thin, dark line can be seen on the section of the Proposal site running west to east. This may be a small watercourse.</p>	<p>An L-shaped building has been constructed directly adjacent to the west of the Proposal site at the end of an unsealed track running north west to south east across the the Proposal site. Some smaller shed-like structures have been erected nearby the L-shaped building.</p> <p>Vegetation clearing has occurred to the west of the Proposal site.</p>
1976	<p>All vegetation has been removed.</p> <p>A small road has been constructed running inside the Proposal site from the south up to the centre. This is Rees James Road. Slightly north of the end of this road lies the Irrawang Spillway structure.</p> <p>A small unnamed road has also been constructed running in the same direction as the section of the Proposal site running west to east. This road goes on to intersect with the Pacific Highway.</p>	<p>Minor clearing of vegetation has occurred to the north west of the Proposal site. The L-shaped building and nearby structures have all been removed. Structures belonging to the Irrawang Spillway have been erected approximately where these old buildings were located previously.</p> <p>Small buildings can be seen to the south of the Proposal site. These could potentially be rural residential properties.</p> <p>The Pacific Highway has been constructed and lies parallel to the west of the south-west-to-north-east running section of the Proposal site.</p> <p>A large waterbody connected to the Irrawang Spillway can be seen in the clearing that was made to the west of the Proposal site. This is likely a part of Grahamstown Dam.</p>
1984	The Proposal site has remained largely unchanged.	The waterbody located to the west of the Proposal site appears to be larger and now occupies more area to the south.
1993	The Proposal site has remained largely unchanged.	<p>Rural residential development appears to have occurred to the south of the Proposal site.</p> <p>The waterbody to the west of the Proposal site has decreased in size. Small unsealed roads and clearings have been created directly to the south of the waterbody.</p>
2004	Grahamstown Spillway can now be seen within the Proposal site and is positioned south of the Irrawang Spillway.	<p>The Pacific Highway appears to have been updated with additional lanes.</p> <p>A large building that can be accessed through the road running west to east on the Proposal site, has been erected. This building is currently occupied by</p>

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Date	Description of the Northern-most Section of the Proposal Site	Description of Surrounding Land
		<p>Riding for the Disabled Australia (RDA NSW), a volunteer organisation.</p> <p>Various developments of smaller ponds/dams appear to have occurred surrounding the large waterbody that was located to the west of the Proposal site. An unnamed road which intersects the Pacific Highway has also been constructed. These structures were likely made as a part of the construction of the Grahamstown Spillway.</p>
2010	The Proposal site has remained largely unchanged.	The shape of the waterbody located to the west of the Proposal site has been altered. Any water collecting in this area will now be directly towards Grahamstown Spillway.
2015	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.
2018	The Proposal site has remained largely unchanged.	<p>No major changes have been made to surrounding land use.</p> <p>Dense vegetation growth has occurred to the west, north, north east and south east of the Proposal site.</p>

Table 4 - Summary of Aerial Photography - North-Central Section of the Proposal Site (Lotsearch Report Part 2) – Approximately CH 4900 to CH 3300

Date	Description of the North-Central Section of the Proposal Site	Description of Surrounding Land
1954	<p>A small unsealed road can be seen running south west to north east along the southern section of the Proposal site. This road continues in a more easterly direction at the centre of the Proposal site area.</p> <p>The remainder of the site appears to be undeveloped with sparse vegetation covering the northern section of the Proposal site.</p>	The majority of the surroundings to the Proposal site are undeveloped, with the exception of some lots to the west, which appear to have been cleared. As small residential buildings can also be seen in here, these properties may have been cleared for agricultural/farming use.
1965	The Proposal site has remained largely unchanged.	<p>A large waterbody can be seen to the south east of the Proposal site. This is likely a part of Grahamstown Dam.</p> <p>A distinct line running south west-west to north east-east can be seen to the north west of the Proposal site. This is likely a watercourse pathway.</p> <p>Some small unsealed roads have also been constructed to the south and south west of the Proposal site, for access to the residential dwellings located there.</p>
1976	A small road has been constructed running inside the Proposal site area from the south up to the north. This is Rees James Road.	Rural residential development has occurred directly along the west and to the north east of the

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Date	Description of the North-Central Section of the Proposal Site	Description of Surrounding Land
		<p>Proposal site. Small ponds/dams nearby these properties are visible.</p> <p>The Pacific Highway has been constructed and lies roughly parallel to the Proposal site.</p> <p>Grahamstown Dam appears to be larger and now occupies more area to the north (is closer to the Proposal site).</p> <p>Water also appears to have collected in the areas adjacent to the watercourse pathway identified in the 1965 aerial photograph.</p>
1984	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.
1993	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use, with the exception of further residential development to the south west of the Proposal site.
2004	The Proposal site has remained largely unchanged.	<p>Some unsealed tracks have been defined in the undeveloped area to the south of the Proposal site, north of Grahamstown Dam.</p> <p>The Pacific Highway appears to have been updated with additional lanes.</p> <p>The developments located to the north east of the Proposal site appear to be undertaking agricultural/farming activities. A new development of medium density residential dwellings has been constructed directly to the south west of the Proposal site.</p>
2010	The Proposal site has remained largely unchanged.	There has been continued residential development along the western boundary and to the south west of the Proposal site.
2015	The Proposal site has remained largely unchanged. Some mature vegetation is visible along the eastern boundary of the Proposal site.	No major changes have been made to surrounding land use.
2018	Access to Rees James Road, which lies within the Proposal site boundary, appears to have been upgraded.	Some of the rural residential properties located to the west of the Proposal site have been completely removed for a new medium density residential area which is currently under construction.

Table 5 - Summary of Aerial Photography - South-Central Section of the Proposal Site (Lotsearch Report Part 3) – Approximately CH 3300 to CH 1600

Date	Description of the South-Central Section of the Proposal Site	Description of Surrounding Land
1954	The Proposal site appears to be mostly cleared with some sparse tree scattered along sections of Rees James Road, which	The majority of the surroundings to the Proposal site are undeveloped but cleared. Some small residential buildings can also be seen in here indicating agricultural/farming use.

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Date	Description of the South-Central Section of the Proposal Site	Description of Surrounding Land
	can be seen running along the Proposal site.	Two small patches of densely vegetated land remain to the north east and south east of the Proposal site. Richardson Road, which intersects a southern section of the Proposal site, has also been defined.
1966	Rees James Road is more clearly defined.	Low density residential properties have been established around the north west of the Proposal site, while medium density dwellings have been constructed along the south boundary and to the south and south east of the Proposal site. Two rectangular warehouse type structures are visible adjacent to the centre of the Proposal site. These buildings are likely used for agricultural purposes.
1976	Adelaide Street has been constructed directly alongside the eastern boundary of the northern portion of the Proposal site. Rees James Road intersects and merges into Adelaide Street at the southern portion of the Proposal site. The Proposal site therefore now is occupied by Rees James Road and Adelaide Street.	Vast residential development has occurred to the south and south east of the Proposal site. Additional rectangular warehouses have been erected adjacent to the two existing warehouses that were visible nearby the centre of the Proposal site. A part of Grahamstown Dam is visible to the east of the Proposal site. A small tributary also appears to be running from the dam towards the west.
1984	The Proposal site has remained largely unchanged.	Residential development has continued to occur to the south of the Proposal site. Earthworks for more residential development can be seen occurring to the north west of the Proposal site. The two densely vegetated patches of land have been mostly cleared. A small part of an unnamed dam located to the west of the site is also visible in the photograph.
1993	The Proposal site has remained largely unchanged.	Residential development has continued occurring to the north west, south west, south and south east of the Proposal site. Some dark parallel lines are visible further to the north west of the Proposal site, indicating agricultural land use.
2004	The Proposal site has remained largely unchanged with the exception to some upgrades to Adelaide Street.	The Pacific Highway is located to the south east of the Proposal site and can be seen running approximately southward. More residential development has occurred in all directions around the site, except for directly south east, where Grahamstown Dam and its tributary are located, and further north west, where other unnamed creeks are located.
2010	The Proposal site has remained largely unchanged.	The warehouses that were visible nearby the centre of the Proposal site have been completely removed and the lot is now vacant.

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Date	Description of the South-Central Section of the Proposal Site	Description of Surrounding Land
		Residential development appears to have slowed. Some residential properties to the south east of the Proposal site have been completely removed and replaced with large warehouse type structures. Currently, these warehouse structures are occupied by commercial businesses and a fuel station.
2015	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.
2018	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.

Table 6 - Summary of Aerial Photography - Southern-most Section of the Proposal Site (Lotsearch Report Part 4) – Approximately CH 1600 to CH 0.000

Date	Description of the Southern-most Section of the Proposal Site	Description of Surrounding Land
1954	<p>The area within the Proposal site boundary is mostly developed. Adelaide Street runs along the northern section while Irrawang Street runs along the southern section of the Proposal site.</p> <p>The central connecting portion of the Proposal site appears to run across a moderately vegetated lot.</p>	<p>The majority of the surroundings to the Proposal site have been cleared and developed for residential and agricultural use.</p> <p>Low to medium density residential developments can be seen to the west, south and east of the Proposal site. Agricultural plots can be seen to far east.</p> <p>A small pond can be visible immediately to the west of the centre of the Proposal site. Williams River and the merge between Williams River/Hunter River can also be seen past some vacant plots to the north west of the Proposal site.</p>
1966	The Proposal site has remained largely unchanged.	Further residential development has occurred to the north east, east, west and south of the Proposal site. Seaham Road, located to the west of the Proposal site, has been extended as a bridge over Williams River.
1976	Visible upgrades have been made to Adelaide Street at the northern portion of the Proposal site.	<p>Vast residential development has occurred to the north and north east of the Proposal site.</p> <p>The agricultural plots that were visible to the far east have mostly been removed and replaced with rows of mature trees. This area will be used as the Muree Golf Club in the future.</p>
1984	An unsealed track has been created in the central portion of the Proposal site, connecting Adelaide Street and Irrawang Street.	Earthworks appear to be ongoing in the vacant lots located to the north west of the Proposal site.
1993	The Proposal site has remained largely unchanged.	Several rectangular warehouse type buildings have been constructed to the west of the Proposal site. These are likely commercial but not industrial/manufacturing in nature.

Date	Description of the Southern-most Section of the Proposal Site	Description of Surrounding Land
2004	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.
2010	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.
2015	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.
2018	The Proposal site has remained largely unchanged.	No major changes have been made to surrounding land use.

Based on the review of historical aerial photographs, the Proposal site is accessed by minor roads that are aligned parallel to the Pacific Highway to the north and join the centre of Raymond Terrace to the south. The Proposal site access has changed from largely undeveloped and vegetated to its current configuration of access roads including Rees James Road, Adelaide Street, an unsealed road and Irrawang Street.

The surrounding land was also primarily undeveloped and vegetated or rural residential. More recently (over the past 20 years) there has been vast medium density residential and commercial developments along the west and to the south of the Proposal site area. During this time, Irrawang Spillway and Grahamstown Spillway have also been constructed.

It is noted that conclusions drawn from the aerial photographs must be treated with caution as the interpretation is subjective and is often limited by the quality of the photo.

3.4 NSW EPA Contaminated Land Search

A search of the NSW EPA Contaminated Land database for the property was conducted as part of this PSI. Details of this search can be found within the four Lotsearch Reports provided in **Appendix C**.

The NSW EPA does not hold records of notification of the Proposal site to NSW EPA as a contaminated site under Section 60 of the *CLM Act* (1997). There are records of four sites from the NSW EPA Contaminated Land list that fall within the dataset buffer. These include:

- Shell Coles Express Raymond Terrace (located 151 m west of the southern end of the Proposal site) does not require regulation under the *CLM Act* for conducting 'service station' activities;
- A former motor registry (located 287m west of the southern end of the Proposal site) does not require regulation under the *CLM Act* for conducting 'other petroleum' activities;
- Caltex Service Station Raymond Terrace (located 299 m south west of the western end of the Proposal site) does not require regulation under the *CLM Act* for conducting 'service station' activities; and
- Raymond Terrace Wastewater Treatment Works (located 747 m south of the southern end of the Proposal site) does not require regulation under the *CLM Act* for conducting 'other industry' activities.

No licenses or notices have been issued to the Proposal site under the *Protection of the Environment (Operations) (POEO) Act* 1997. Within the dataset buffer the following licenses have been recorded:

- Located approximately 722 m west of the Proposal site lies a waterbody that falls within the Maitland Local Government Area (EPL 10393) that has been flagged under the *POEO Act* for conducting "other activities"; and

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- Raymond Terrace Wastewater Treatment Works (located 747 m south of the Proposal site) has been flagged for conducting “sewage treatment processing by small plants”.

There are no delicensed activities regulated by the EPA onsite. There is one delicensed activity that is still regulated by the EPA within the dataset buffer, as follows:

- Hanson Construction Materials Pty Ltd (EPL 651) conducts “concrete works” approximately 531 m north west of the Proposal site.

The former licensed activities under the *Protection of the Environment Operations (POEO) Act 1997* that are now surrendered, and which fall within the dataset buffer are as follows:

- Luhrmann Environment Management Pty Ltd (EPL 4653), Robert Orchard (EPL 4838) and Sydney Weed & Pest Management Pty Ltd (EPL 6630) have undertaken ‘other activities/non-scheduled activities – application of herbicides’ at various waterways located 660m away from the Proposal site;
- Rocla Pty Ltd (EPL 7485) conducted ‘land-based extractive’ activities 710 m, south west of the Proposal site; and
- State of New South Wales (Department of Primary Industries) (EPL 11562) conducted ‘other activities – application of herbicides’, 718 m south of the Proposal site.
- No EPA PFAS Investigation programs are situated within the Proposal site boundary or within the dataset buffer.

3.5 Past Industrial and Manufacturing Processes

The historical data review showed there is no evidence of historical and current industrial and manufacturing processes on the Proposal site.

The historical business directory derived from the Universal Business Directories (UBD) shows that a motor garage/service station was located 380 m north west of the Proposal site. It is unclear whether this business is located up or down gradient of the Proposal site.

3.6 Hazardous Materials

It should be noted that hazardous materials survey was not included in the scope of works, and so the presence of hazardous materials cannot be confirmed.

3.7 Storage Tanks

The Proposal site is located within an underground petroleum storage system (UPSS) sensitive zone. UPSS sensitive zones represent a conservative assessment of areas that are likely to be vulnerable to contamination from leaking UPSS, or in close proximity to vulnerable environmental receptors. Refer to pages 11, 14, 15 and 17 of Part 1, Part 2, Part 3 and Part 4 of the Lotsearch Reports, respectively. These are provided in **Appendix C** for more information.

There was no evidence of tanks at the Proposal site during the site walkover. Additionally, based on the historical uses of the site, the presence of a UPSS to be within the Proposal site is considered to be low.

3.8 Discharges to Land, Water and Air

No information for the Proposal site regarding discharges to land, water and air was available for review at the time of writing this report.

4 SITE CONDITION AND ENVIRONMENTAL SETTING

4.1 Topography

According to the Elevation Contour Maps in each of the four Lotsearch reports, the extent of the Proposal site is generally undulating along the south of the wetland, flat across the wetland and gently undulating north of the riding school.

The Proposal site has its highest point at an elevation of approximately 30 m Australian Height Datum (AHD) at its centre (see the Elevation Contour Map on page 53 of Lotsearch Report Part 3, **Appendix C**), and has its lowest point at an elevation of 4 m AHD at its south (see the Elevation Contour Map on page 59 of Lotsearch Report Part 4, **Appendix C**).

4.2 Visible Signs of Contamination

There were no visible signs of staining or unhealthy vegetation on or around the Proposal site observed during the site inspection conducted on 2 August 2019.

4.3 Presence of Drums and Wastes

There was no presence of drums around the Proposal site. General waste bins were observed on most of the residential properties within and bordering the Proposal site.

Some wastes including a tyre and various plastics were observed in the water and along the drainage line located on the unsealed track connecting Adelaide Street and Irrawang Street towards the south of the Proposal site.

4.4 Fill Material

The Proposal site south of the wetland follows existing utilities alignment along footpaths, driveways, roads etc. There is potential for the utilities and surface finishes to be constructed within include unknown fill material from an unknown source.

It is possible that fill material was imported to parts of the Proposal site when vast residential development began occurring.

4.5 Odours

There were no olfactory indicators of possible contamination noted during the site walkover.

5 GEOLOGY AND HYDROGEOLOGY

5.1 Geology

The 1:250,000 Geological Survey of NSW map of Newcastle indicates that the Proposal site is underlain by the following geological units;

- Quaternary aged alluvium and lacustrine sediments;
- Palaeozoic aged Dalwood Group comprising sandstone, lithic sandstone, conglomerates, siltstone and basalt;
- Palaeozoic aged Greta Coal Measures comprising coal seams, siltstone, sandstone and conglomerates; and
- Palaeozoic aged Branxton Formation of the Maitland Group comprising conglomerates, sandstone and siltstone.

The Soil Conservation Service of NSW Sydney 1:100,000 Soil Landscapes Series Newcastle Sheet indicates that the landscape of the region of the Proposal site comprises of the following Soil Landscapes:

- Erosional Bolwarra Heights;
- Estuarine Millers Forest;
- Residual Wallalong;
- Aeolian Shoal Bay; and
- Disturbed Terrain.

5.2 Hydrogeology

Groundwater is expected to be present within the unconsolidated sediments associated with creeks dams and lakes.

A review of NSW Department of Primary Industries Office of Water records for groundwater bores within a 2 km radius of the Proposal site indicated the presence of twenty-two (22) water bores located offsite around the southern portion.

The majority of these boreholes were used for domestic purposes but were also used for monitoring, irrigation, stock and dewatering purposes. The Standing Water Level (SWL) measured from these boreholes ranged between 1.0 and 6.7m bgl as recorded in 2012 and 2004, respectively.

Due to the undulating natural topography along and around the Proposal site, the groundwater flow direction is expected to be variable and influenced by local conditions.

Further information on the boreholes surrounding the Proposal site are provided on page 61 and 62 of Lotsearch Report Part 4, which can be found in **Appendix C**.

5.3 Hydrology

Various watercourses and ponds are located around the Proposal site including Grahamstown Dam to the east (approximately 300m at its nearest point) and Williams River to the west (approximately 700m at its nearest point). The Proposal does not cross any natural waterways, with exception of the coastal wetland located to the west of the Proposal site.

As indicated by proximity and surface elevation, surface water will likely drain into the coastal wetland.

5.4 Acid Sulfate Soil Risk

As defined in the *NSW EPA (2014) Waste Classification Guidelines Part 4: Acid Sulfate Soils*, Acid sulfate soils (ASS) are those naturally occurring sediments and soils which contain sulfides, mainly iron sulfide and iron disulfide or their precursors. Exposure of these sulfides in the soil to oxygen – often as a result of drainage or excavation – can produce sulfuric acid, which may have a significant impact on the environment. Leaching of sulfuric acid into waterways can cause serious water quality problems, resulting in fish kills and damage to infrastructure, such as floodgates and bridges.

A review of the *Port Stephens Local Environmental Plan 2013* shows that the Proposal site is largely situated in a Class 5 category, however, does also marginally intersect a Class 3 category at its northern portion (see the Acid Sulfate Soils Map in Lotsearch Report Part 1, **Appendix C**, which poses a larger risk. A Class 3 category is described as “Works more than 1 metre below natural ground surface present an environmental risk; Works by which the water table is likely to be lowered more than 1 metre below natural ground surface, present an environmental risk.”

Due to the presence of a Class 3 category within the Proposal site, there is potential for acid sulfate soils to be encountered, disturbed, exposed and/or drained during excavation works. An Acid Sulfate Soils Management Plan (ASSMP) will therefore be required.

6 CONCEPTUAL SITE MODEL

Based on the information available for the Proposal site as summarised in Section 3 to Section 6, a preliminary conceptual site model (CSM) has been prepared. The CSM identifies complete and potential pathways between the known or potential source(s) and the receptor(s).

6.1 Source

Potential sources of contamination at the Proposal site (specifically related the proposed development area) and the associated contaminants of potential concern (CoPC) are listed in Table 4.

Table 4 - Potential Contaminant Sources

Source	Associated Chemicals	CoPC
Potential Onsite Sources		
Unknown fill materials and wastes: The undulating surface along the length of the Proposal site indicated the potential presence of fill material. The quality of this fill is unknown. Some general wastes such as tyres and plastics were also observed along some of the drainage lines present within the Proposal site boundary.	Asbestos, ash, slag, construction waste, demolition waste.	Heavy metals, TRH, BTEX, PAHs, organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs), phenols and asbestos.
Herbicides and Pesticides: Some of the surrounding land to the Proposal site was formerly used for farming and agricultural purposes which likely utilised herbicides and pesticides.	Herbicides and pesticides.	Organochlorine pesticides (OCPs) and organophosphate pesticides (OPPs).

6.2 Potentially Affected Media

Potentially affected media at the Proposal site include:

- Soil; and
- Groundwater.

6.3 Pathways

Pathways or transport mechanisms by which receptors may be exposed to contamination on and offsite include:

- Direct contact with contaminated soil/groundwater;
- Ingestion of soil/abstracted groundwater;
- Inhalation of dust; and
- Vertical migration of spills/leaks to groundwater.

6.4 Receptors

Potential receptors to contamination include:

- Surrounding residents;
- Construction workers; and
- Groundwater users (off-site).

6.5 Exposure Assessment

Based on the preliminary CSM discussed in Section 6.1 to Section 6.4, the potential for contamination to be present at the Proposal site is considered to be **Low**. This level of contamination risk can be minimised or removed if precautionary measures are taken. The potentially complete pathways are discussed in more detail in the Table below.

Table 5 – Exposure Assessment

Source	Pathway	Receptor	Exposure Assessment
Fill Materials	Direct contact	Construction workers	For the development of the water and wastewater supply pipeline, as well as the WWPS, earth works are required to be undertaken. As a result of this the potential exists for construction workers to come into contact with any underlying fill. The pathway is potentially complete.
	Ingestion	Construction workers	Construction workers may be at risk of ingesting fill material (dust) during earth works. The pathway is potentially complete.
	Inhalation	Surrounding residents and construction workers	Nearby residents and construction workers may be exposed to dust from the fill material during the earth works stage of the project. The pathway is potentially complete.
	Leaching	Groundwater and offsite groundwater users	Fill materials have the potential to leach into the underlying groundwater and reach offsite groundwater users. The pathway is potentially complete.
Herbicides and Pesticides	Direct contact	Construction workers	For the development of the water and wastewater supply pipeline, as well as the wastewater pumping station, earth works are required to be undertaken. As a result of this the potential exists for construction workers to come into contact with impacted soil and/or groundwater.

Preliminary Site Investigation

Source	Pathway	Receptor	Exposure Assessment
			The pathway is potentially complete.
	Ingestion	Construction workers	<p>Construction workers may be at risk of ingesting herbicides and pesticide impacted soil during earth works.</p> <p>The pathway is potentially complete.</p>
	Inhalation	Surrounding residents and construction workers	<p>Nearby residents and construction workers may be exposed to dust impacted by herbicides or pesticides during the earth works stage of the project.</p> <p>The pathway is potentially complete.</p>
	Leaching	Groundwater and offsite groundwater users	<p>Pesticides generally do not leach into the groundwater.</p> <p>The pathway is not complete.</p>

7 INTEGRITY ASSESSMENT

Information was collected from a wide range of sources to determine the risk of site contamination. The sources included a combination of government bodies and private organisations that have no knowledge of the current proposed development, nor are they project stakeholders.

The data obtained from other historical sources reviewed has been found to be in general agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

Whilst Arcadis uses professional judgement when evaluating information, Arcadis cannot guarantee all information is neither correct nor complete. Arcadis does not take responsibility for an errors nor incomplete data.

8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Summary of Conclusions

Based on the scope of work conducted at the Kings Hill Urban Release Area along the proposed pipeline routes, the following conclusions and recommendations are provided:

- The Proposal site and immediate surrounding area have primarily been vacant or used for residential / rural purposes and has no history of major industrial / manufacturing uses;
- Historically, some farming and agricultural land use has occurred in the surroundings to the Proposal site;
- No olfactory evidence of contamination or staining was noted during the site walkover;
- No staining or other visual indicators of contamination were observed at the Proposal site; and
- The undulating surface along the Proposal site and the rubbish noted within the drainage lines (tyres and plastics) is a potential indication of fill material. The nature and extent of this potential fill material is unknown.

Based on the observations made during the site walkover and following analysis of site history, Arcadis is of the opinion that there is a **Low risk** of contamination present onsite within the proposed development area.

8.2 Recommendations

Whilst there is a **Low risk** of contamination, given that some potential onsite sources of contamination have been identified (i.e. potential fill, acid sulfate soils and presence of herbicides and pesticides), Arcadis recommend that a protocol for managing contamination is detailed within the Construction Environmental Management Plan (CEMP), if contamination is uncovered.

In order to confirm that contamination will not pose a risk to human health or the environment, Arcadis recommend undertaking:

- A Detailed Site Investigation (DSI) of the site soils prior to any excavation works to confirm that risk to human health or the environment is removed or minimised within the Proposal site. The DSI should be completed in accordance with the *NSW OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites* and the *NEPC (2013) NEPM*; and / or
- Having an experienced contaminated land professional present on the Proposal site throughout the excavation works to screen the soils and manage the stockpiling of excavated materials.

All materials requiring removal from the site will need to be classified in accordance with the *NSW EPA (2014) Waste Classification Guidelines*. This material should only be transported from the Proposal site to an appropriately licensed landfill for disposal or to an appropriately licenced recycling facility which is licenced to receive this material, and waste disposal dockets kept for 'cradle to grave' waste tracking purposes.

8.3 Extent of Uncertainties in the Results

Arcadis is confident that the results of this investigation give an accurate representation of the historical status of the Proposal site but notes that no subsurface investigations were completed.

9 LIMITATIONS

The findings of this report are based on the scope of work outlined in **Section 1.3**. Arcadis performed its services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties expressed or implied are made.

Subject to the scope of work, Arcadis' assessment was limited strictly to identifying the environmental conditions associated with the subject property and does not include evaluation of any other issues. The absence of any identified hazardous or toxic materials should not be interpreted as a guarantee that such materials do not exist on the subject property.

Additionally, unless otherwise stated Arcadis did not conduct soil, air, wastewater or other matrix analyses including asbestos or perform contaminated sampling of any kind. Nor did Arcadis investigate any waste material from the property that may have been disposed of at the site or undertake an assessment or review of related site waste management practices.

The results of this assessment are based upon (if undertaken as part of the scope work) a site inspection conducted by Arcadis personnel and/or information from interviews with people who have knowledge of site conditions and/or information provided by regulatory agencies. All conclusions and recommendations regarding the property are the professional opinions of the Arcadis personnel involved with the project, subject to the qualifications made above.

While normal assessments of data reliability have been made, Arcadis assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements or sources outside of Arcadis, or developments resulting from situations outside the scope of this project.

Arcadis is not engaged in environmental assessment and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. The client acknowledges that this report is for the exclusive use of the client.

10 REFERENCES

- ANZECC/NHMRC (1992) Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites;
- Arcadis (2018) Kings Hill Development Water and Wastewater Infrastructure EIS Scoping Report
- Department of Environment and Climate Change (2009) Guidelines on the Duty to Report Contamination Under the Contaminated Land Management Act 1997;
- Lotsearch (2019) Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1) CH 6650 to CH 4900, dated July.
- Lotsearch (2019) Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2) CH 4900 to CH 3300, dated July.
- Lotsearch (2019) Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 3) CH 3300 to CH 1600, dated July.
- Lotsearch (2019) Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 4) CH 1600 to CH 0000, dated July.
- National Environment Protection Council (1999) 'National Environment Protection (Assessment of Site Contamination Measure 1999' as amended 2013.
- NSW Environment Protection Authority (2006) Guidelines for the Site Auditor Scheme Environment Protection Authority.
- NSW Environment Protection Authority (1995) Sampling Design Guidelines. Environment Protection Authority, Chatswood.
- NSW Environment Protection Authority (2014) Waste Classification Guidelines Part 4: Acid Sulfate Soils.
- NSW DECC (2009) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997.

APPENDIX A FIGURES



LEGEND

- | | |
|-----------------------|---|
| Proposed alignment | NSW Coastal Management SEPP (2018) |
| Kings Hill URA | Coastal Wetlands |
| Construction compound | Coastal Wetlands Proximity Area |

ARCADIS AUSTRALIA PACIFIC PTY LTD
 ABN 76 104 485 289
 Level 16, 580 George St | Sydney NSW 2000
 P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001
 Coordinate System: GDA 1994 MGA Zone 56

1:24,000 at A4
ARCADIS



APPENDIX B PHOTOS

Client Name:
Kings Hill
Development (KHD)

Site Location:
Kings Hill Urban Release Area

Project No:
10027844



Client Name:
Kings Hill
Development (KHD)

Site Location:
Kings Hill Urban Release Area

Project No:
10027844

Photo No.	Date	
3	2/08/2019	
<p>Location: CH 1015</p> <p>Description: The vegetated corridor containing an unsealed track between Adelaide Street and Irrawang Street at the south of the site was observed to shaped and filled. The extent and quality of fill is unknown.</p>		

Photo No.	Date	
4	2/08/2019	
<p>Location: CH 100</p> <p>Description: This photo was taken from a southern point of the site's alignment and shows the undulating topography along Irrawang Street.</p>		

Client Name:
Kings Hill
Development (KHD)

Site Location:
Kings Hill Urban Release Area

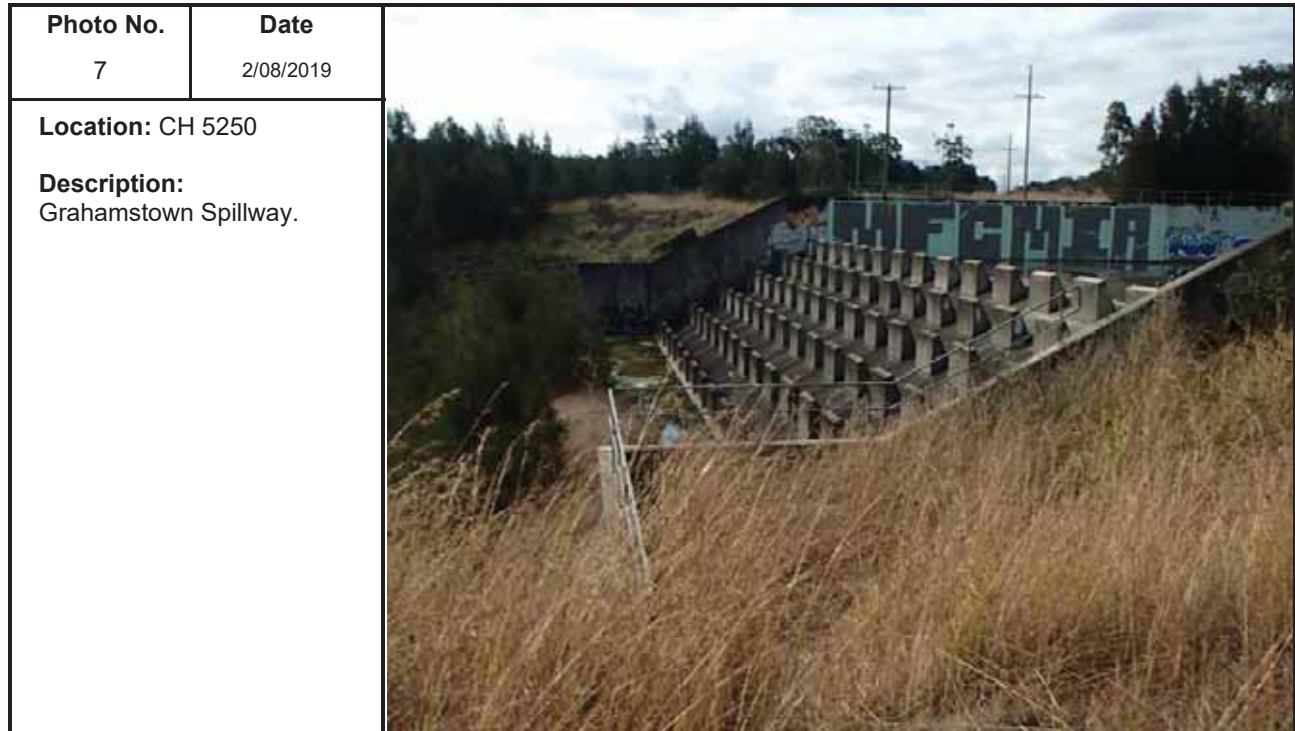
Project No:
10027844



Client Name:
Kings Hill
Development (KHD)

Site Location:
Kings Hill Urban Release Area

Project No:
10027844



APPENDIX C LOTSEARCH REPORTS



Date: 09 Jul 2019 16:23:30

Reference: LS007254 EP

Address: Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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.

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Location Confidences

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

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb match	Georeferenced with the confidence of the general/approximate area
Road match	Georeferenced to the road or rail
Road intersection	Georeferenced to the road intersection
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	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
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	09/07/2019	09/07/2019	Daily	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	21/06/2019	19/06/2019	Monthly	1000	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	11/06/2019	11/06/2019	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	01/07/2019	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	07/05/2019	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program	Department of Defence	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	01/07/2019	01/07/2019	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/12/2018	13/12/2018	Annually	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	27/06/2019	27/06/2019	Monthly	1000	0	0	0
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	27/06/2019	27/06/2019	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	27/06/2019	27/06/2019	Monthly	1000	4	4	4
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	0	1	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
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	-	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	0
Points of Interest	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	Quarterly	1000	0	1	2
Tanks (Areas)	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Tanks (Points)	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	Quarterly	1000	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	1	1	1
State Forest	NSW Department of Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	16/01/2019	14/11/2018	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	0
Geological Units 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	1	-	7
Geological Structures 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
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	3	-	10
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	2	3
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning and Environment	05/07/2019	28/06/2019	Weekly	500	2	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	2	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	1	1	1
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	0
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning and Environment	05/07/2019	07/12/2018	Weekly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning and Environment	05/07/2019	28/06/2019	Weekly	1000	4	8	15
Commonwealth Heritage List	Australian Government Department of the Environment and Energy - Heritage Branch	16/01/2019	31/07/2018	Unknown	1000	0	0	0
National Heritage List	Australian Government Department of the Environment and Energy - Heritage Branch	16/01/2019	28/09/2018	Unknown	1000	0	0	0
State Heritage Register - Curtilages	NSW Office of Environment & Heritage	15/04/2019	09/11/2018	Quarterly	1000	0	0	0
Environmental Planning Instrument Heritage	NSW Department of Planning and Environment	05/07/2019	28/06/2019	Weekly	1000	1	2	2
Bush Fire Prone Land	NSW Rural Fire Service	28/05/2019	05/04/2019	Quarterly	1000	3	3	3
Lower Hunter and Central Coast Regional Vegetation Survey	NSW Office of Environment & Heritage	28/02/2015	16/11/2009	As required	1000	6	13	28
Ramsar Wetlands of Australia	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	3	4	4
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	6	9	10
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	09/07/2019	09/07/2019	Weekly	10000	-	-	-

Aerial Imagery 2018

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Contaminated Land & Waste Management Facilities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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
N/A	No records in buffer								

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

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

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: Geoscience Australia

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PFAS Investigation Sites

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

EPA PFAS Investigation Program

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

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

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

Defence PFAS Investigation & Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Defence 3 Year Regional Contamination Investigation Program

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

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

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

EPA Other Sites with Contamination Issues

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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
- Pasminco Lead Abatement Strategy Area

Sites within the dataset buffer:

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

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

EPA Activities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Licensed Activities under the POEO Act 1997

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

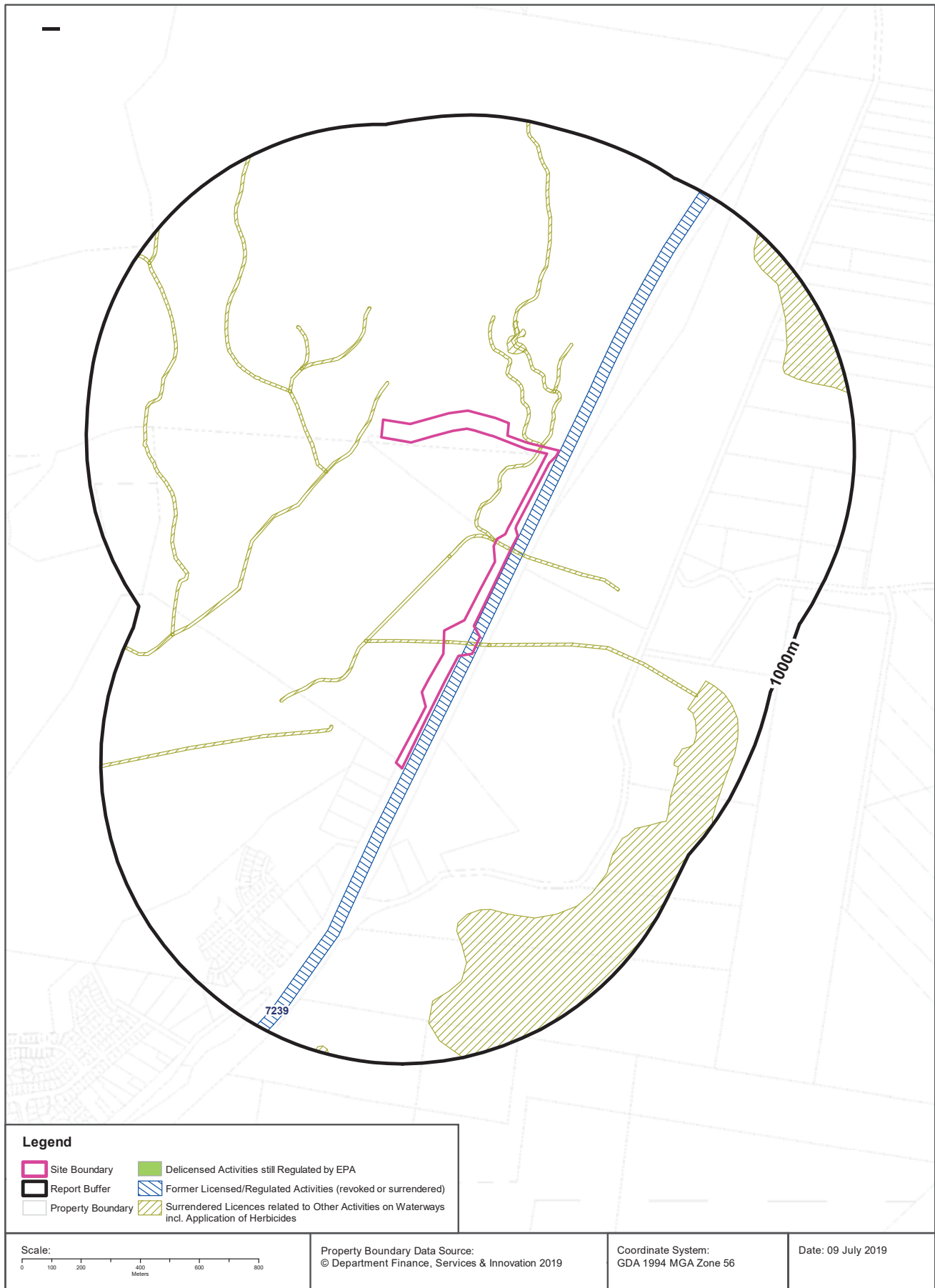
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



EPA Activities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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

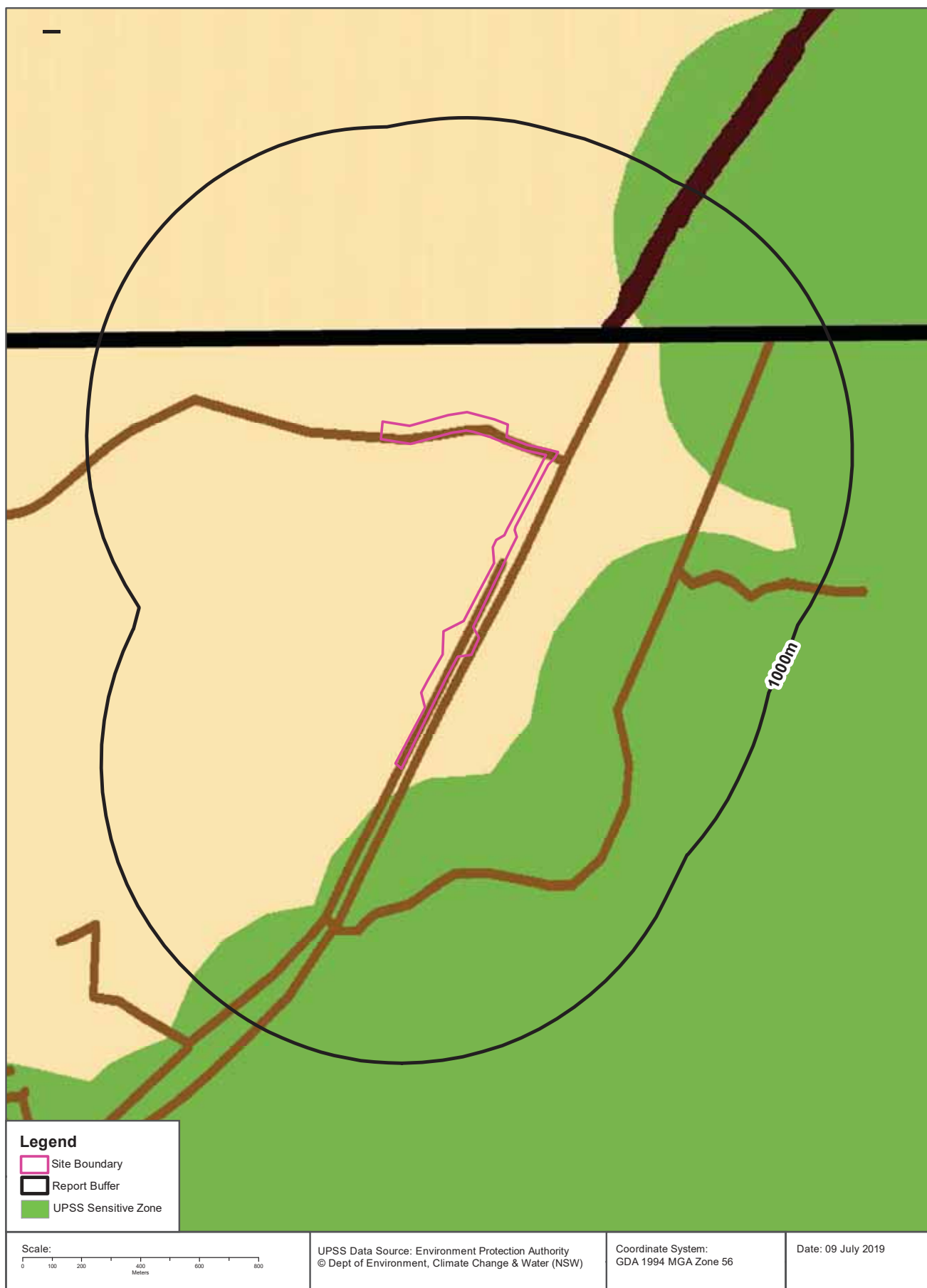
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
7239	ROADS & TRAFFIC AUTHORITY OF NEW SOUTH WALES	BETWEEN RAYMOND TERRACE AND, KARUAH, NSW 2324	Surrendered	06/09/2000	Road construction; Chemical Storage Facilities; Crushing, Grinding or Separating Works	Road Match	0m	Onsite
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite

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

UPSS Sensitive Zones

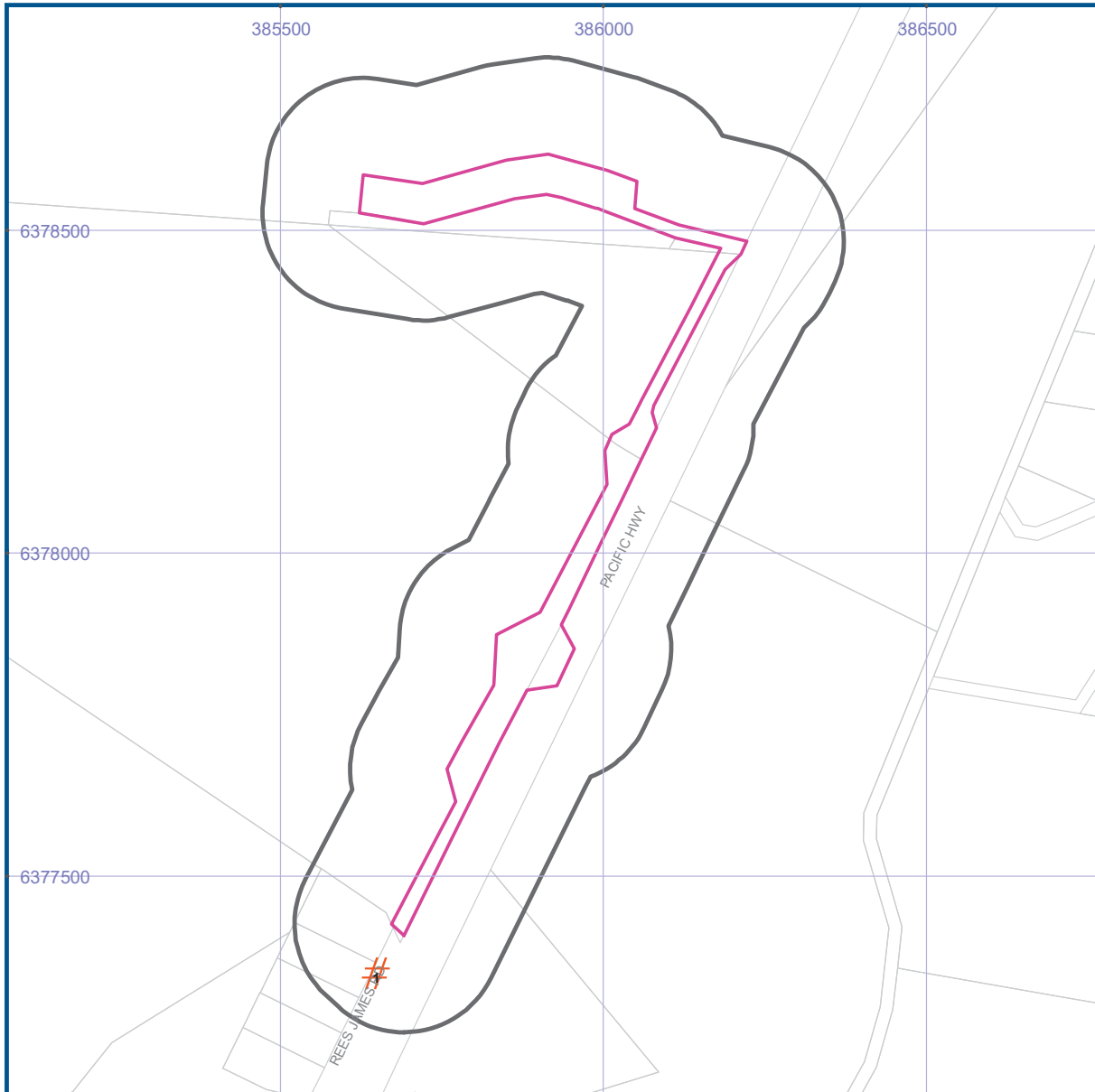
Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)






Historical Business Directories





Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace,
NSW 2324 (Part 1)

1991 Business to Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
Property Boundaries © NSW Department Finance, Services & Innovation 2019

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	ROAD TRANSPORT SERVICES - INTERSTATE.	Brown, W. J. & C. D. Transport, Rees James Rd, Raymond Terrace	93932	Road Match	3m

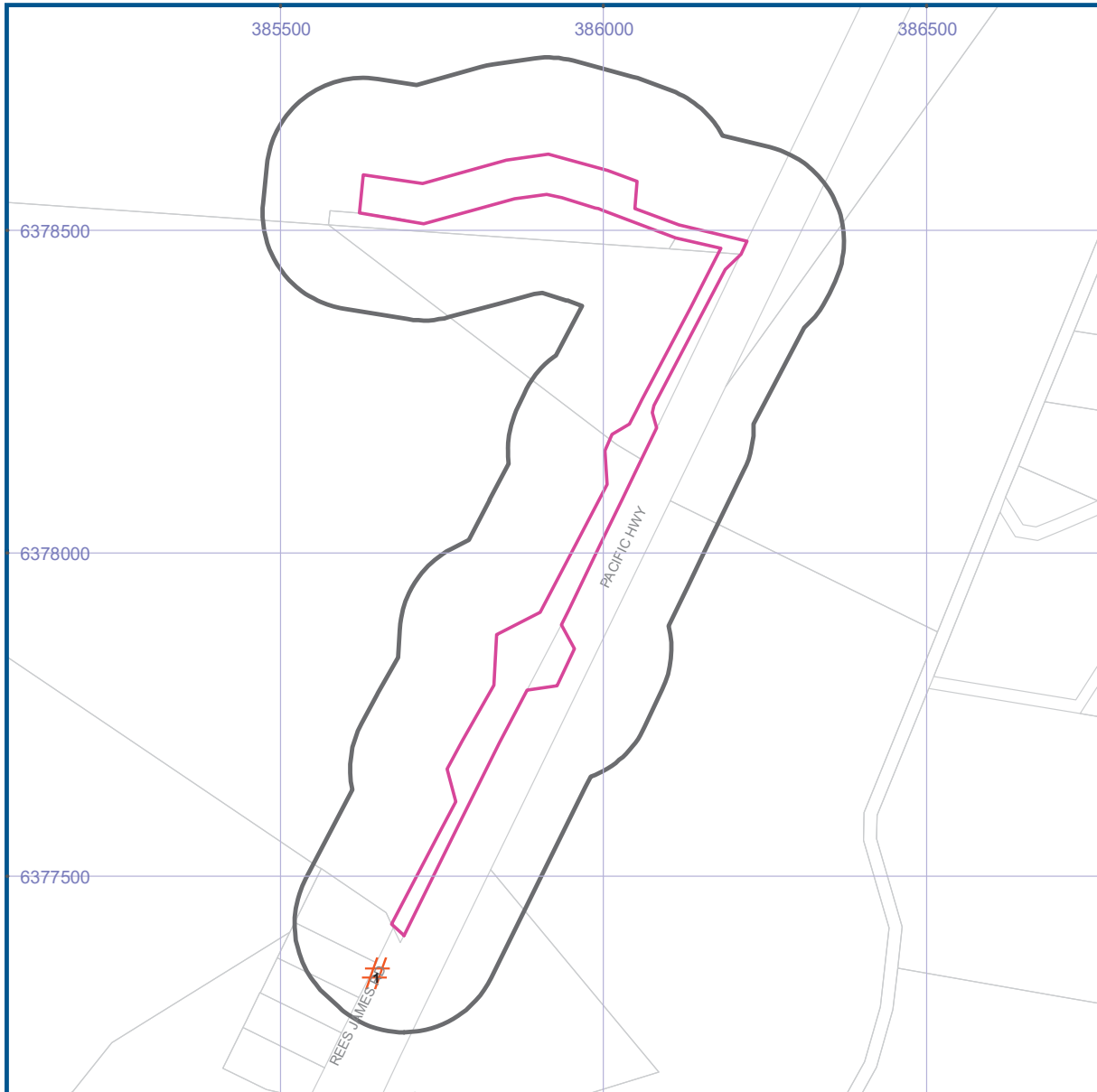
Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant




Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace,
NSW 2324 (Part 1)







1982 Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
Property Boundaries © NSW Department Finance, Services & Innovation 2019

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	NOT LISTED	Brown, W. J. & C. D. Transport, Rees James Rd Raymond Terrace	180773	Road Match	3m

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

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

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

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

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

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

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

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer						

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

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.

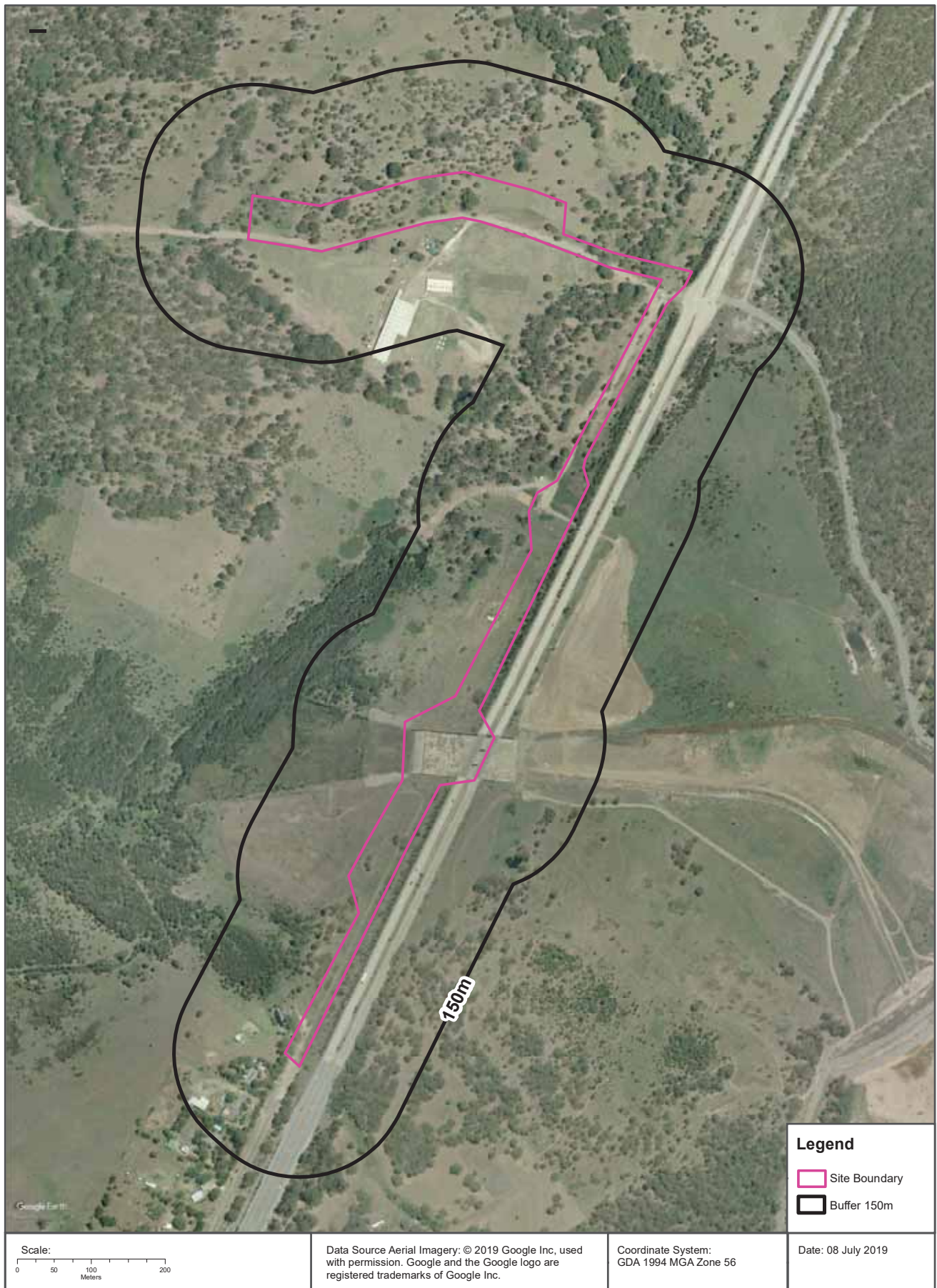
Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
	No records in buffer					

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

Aerial Imagery 2015

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)





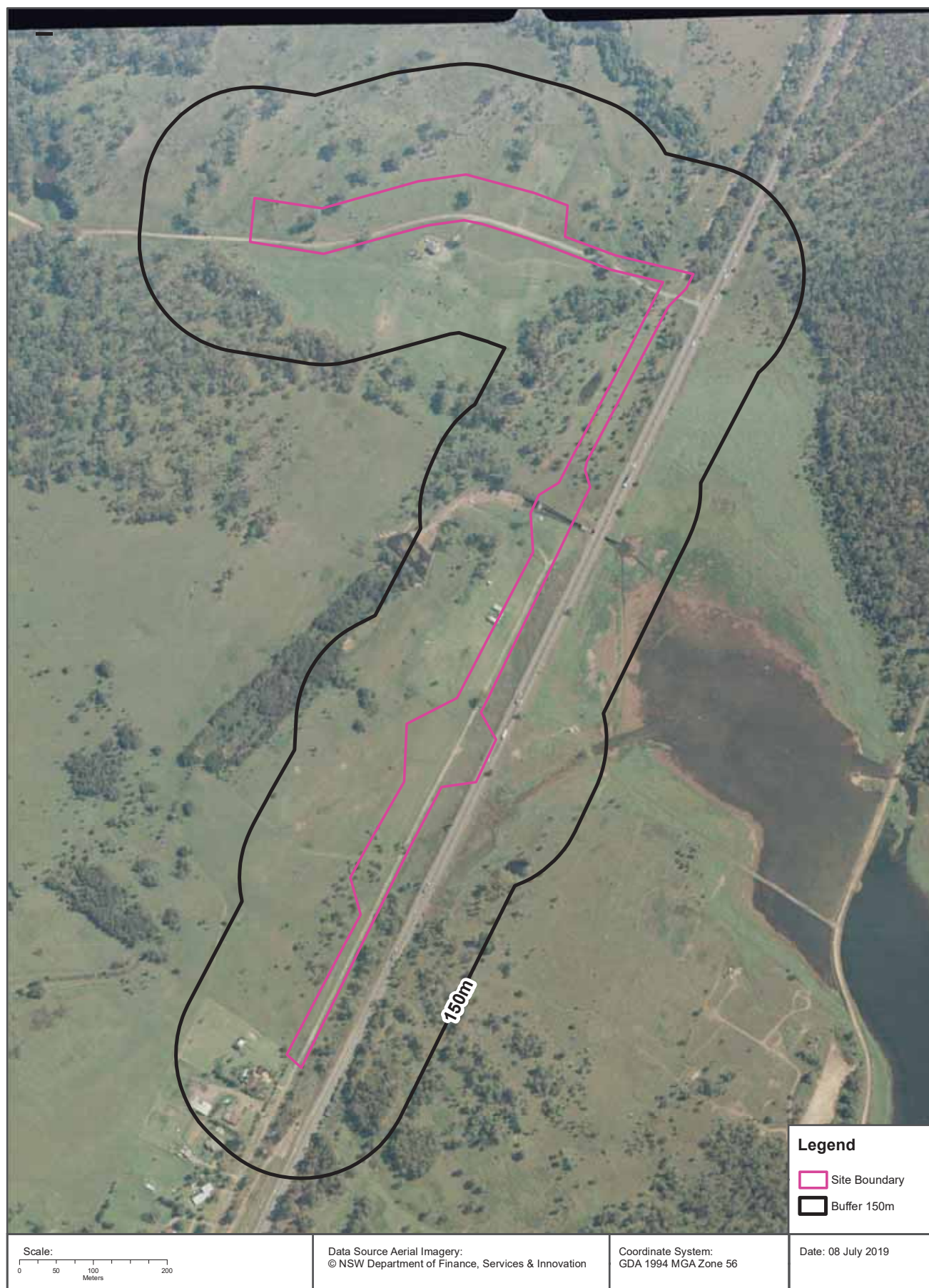
Aerial Imagery 2004

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



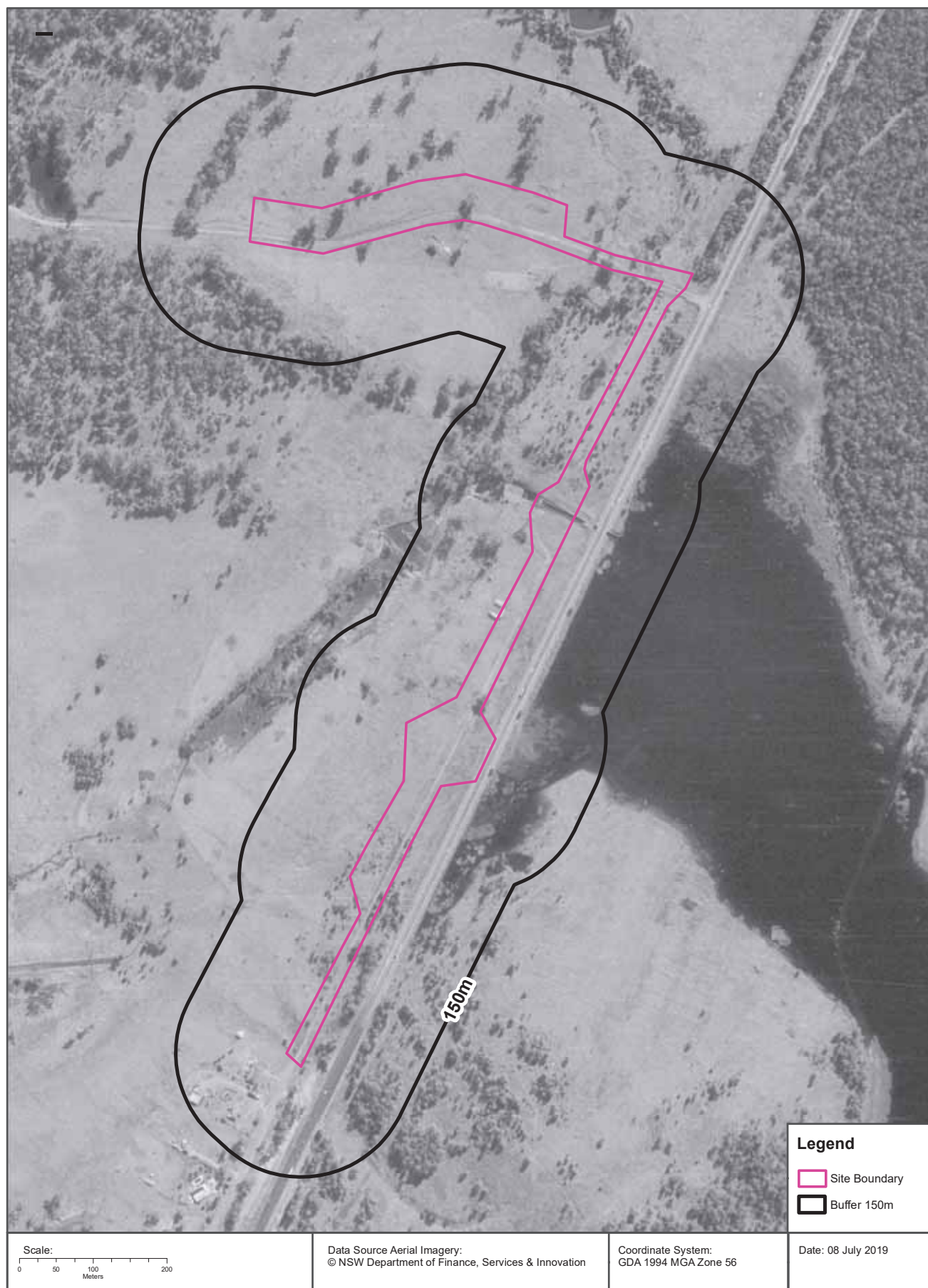
Aerial Imagery 1993

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Aerial Imagery 1984

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



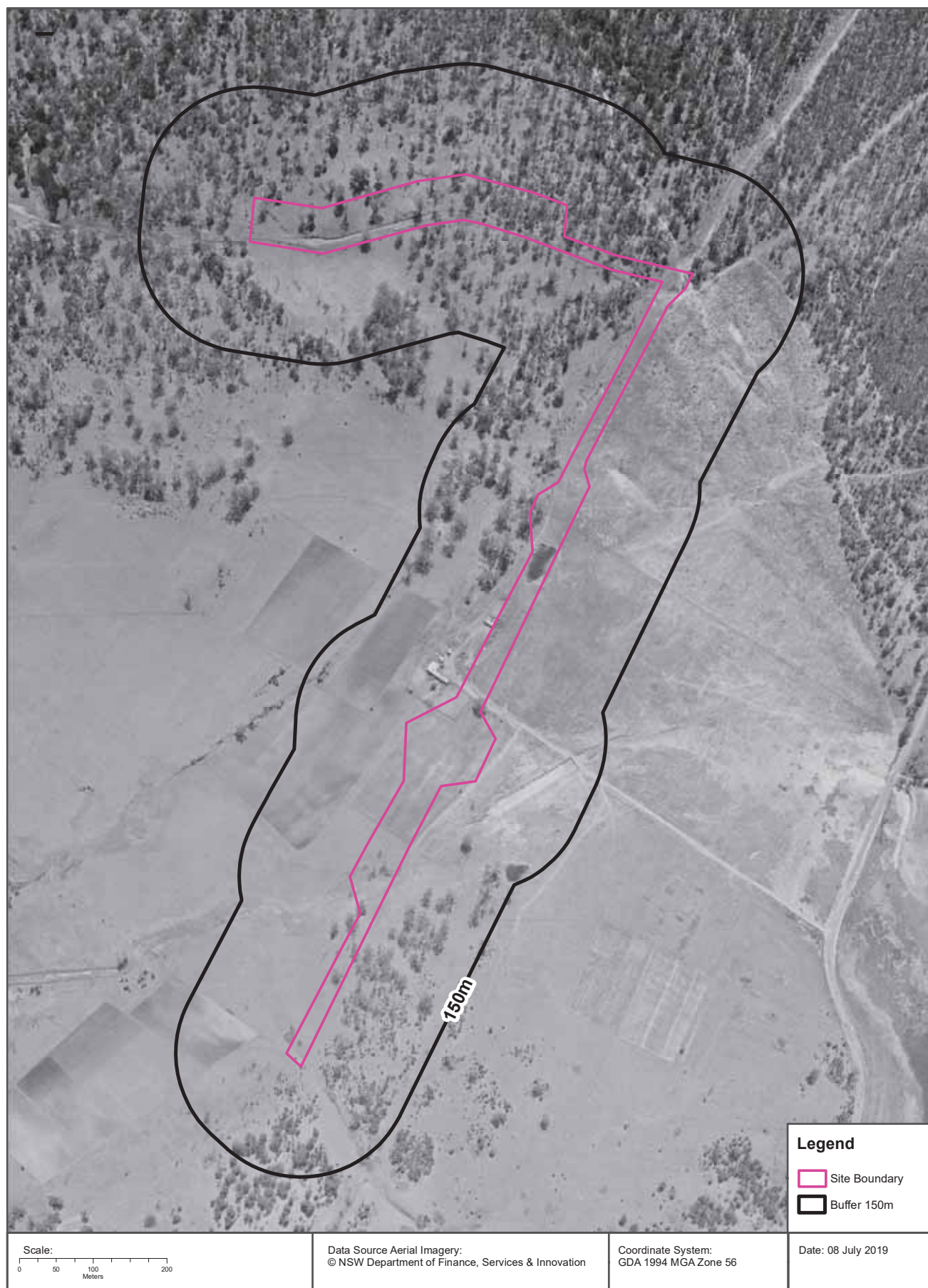
Aerial Imagery 1976

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



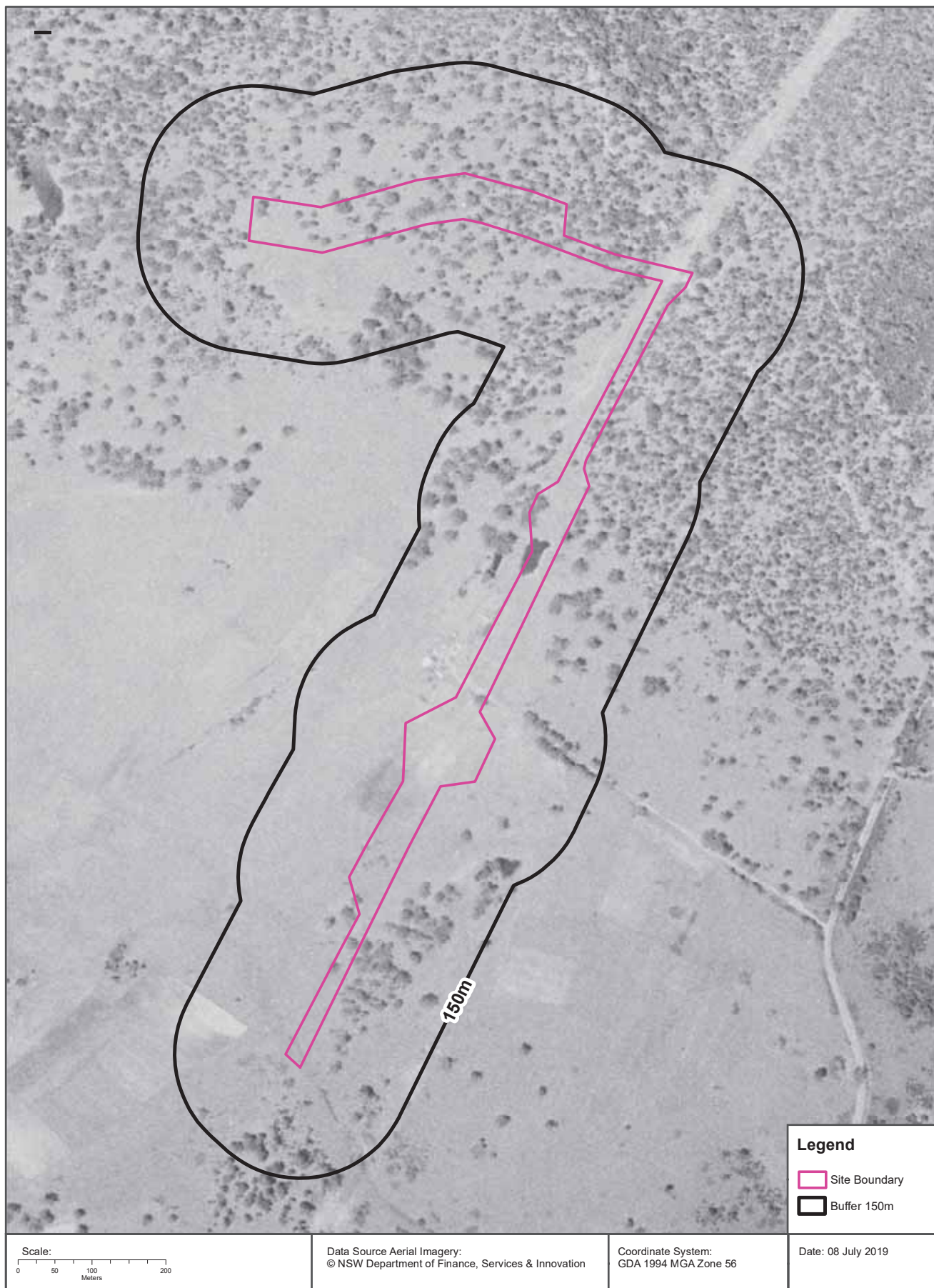
Aerial Imagery 1965

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



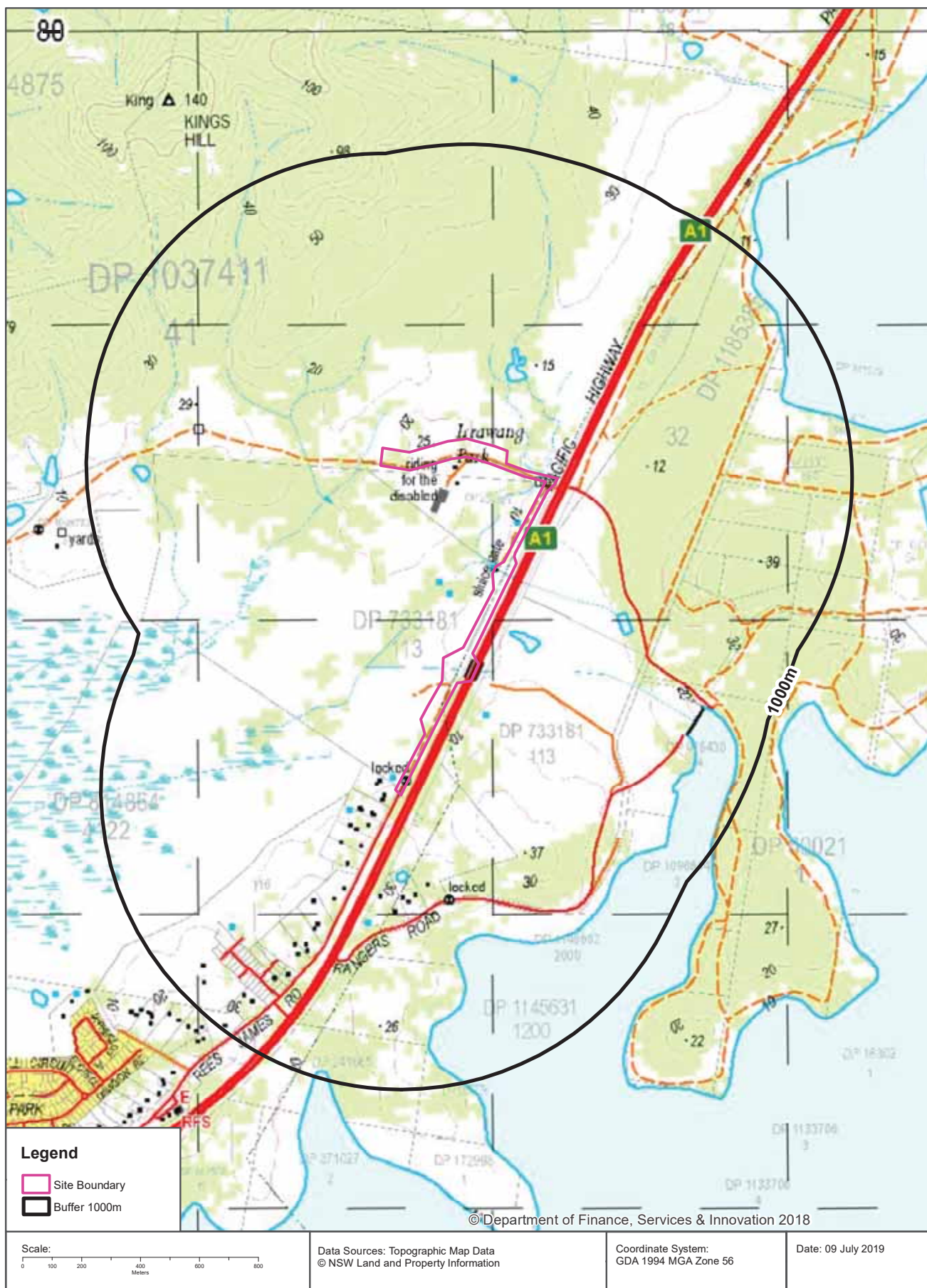
Aerial Imagery 1954

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



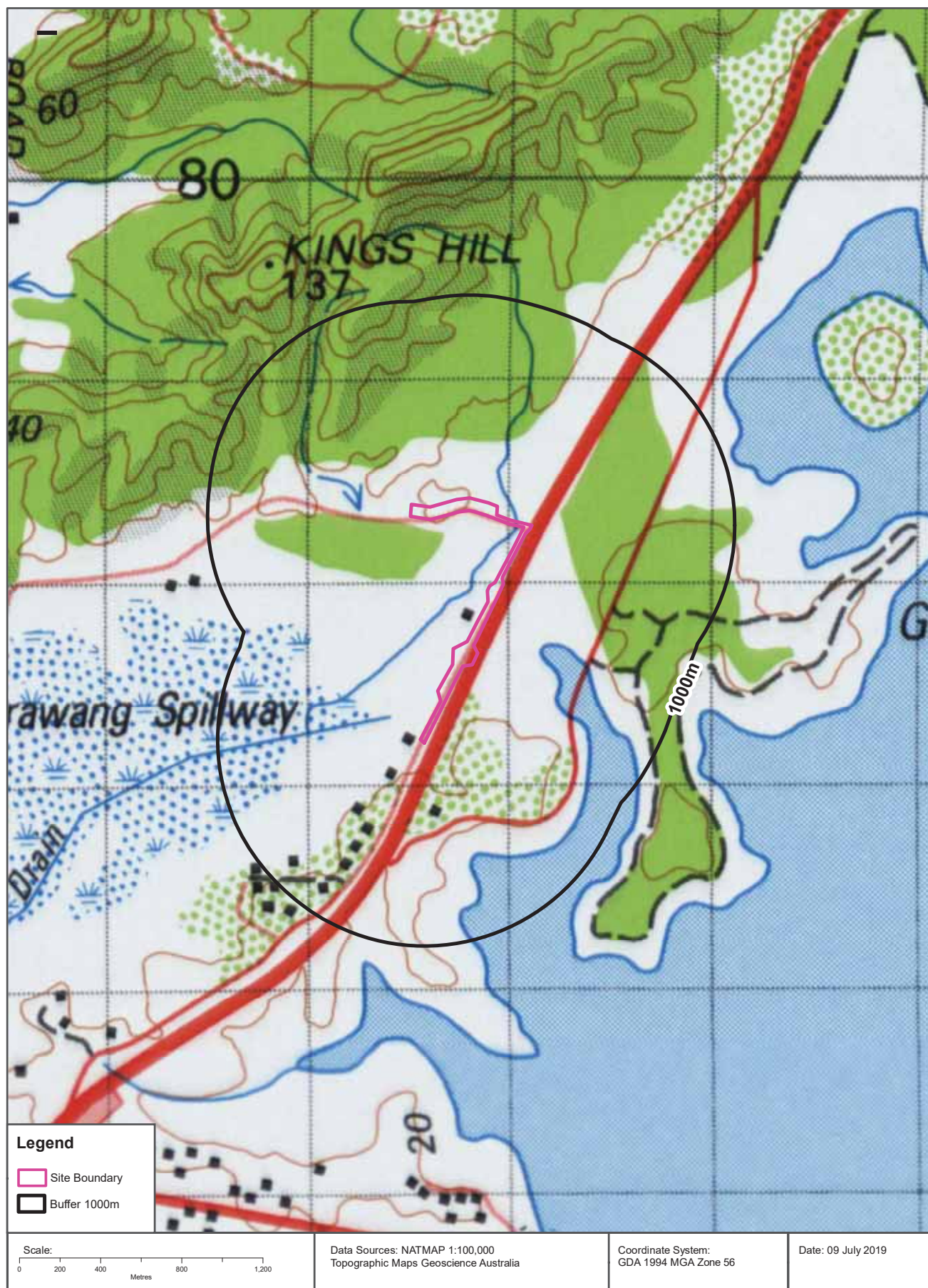
Topographic Map 2015

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



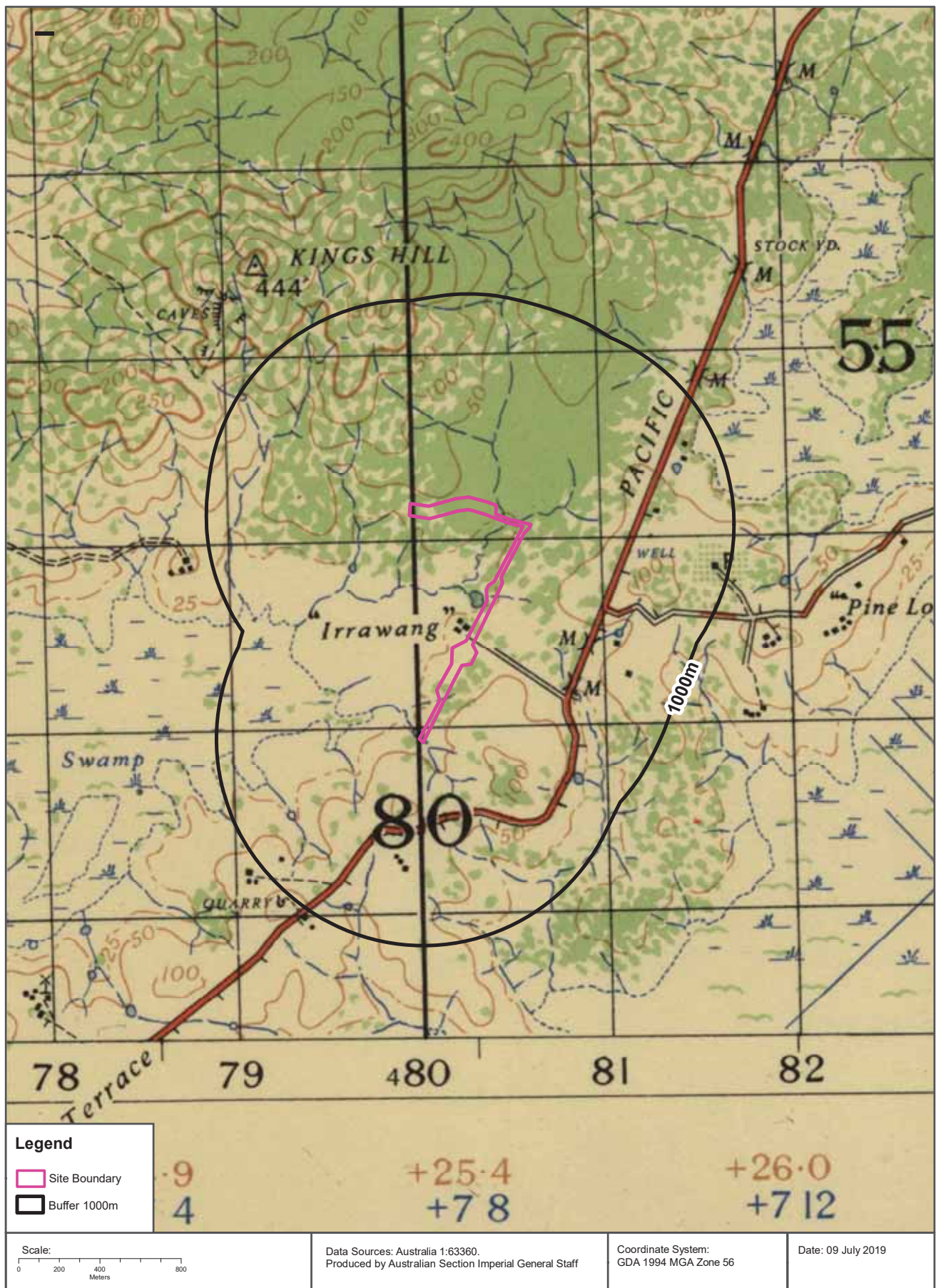
Historical Map 1981

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



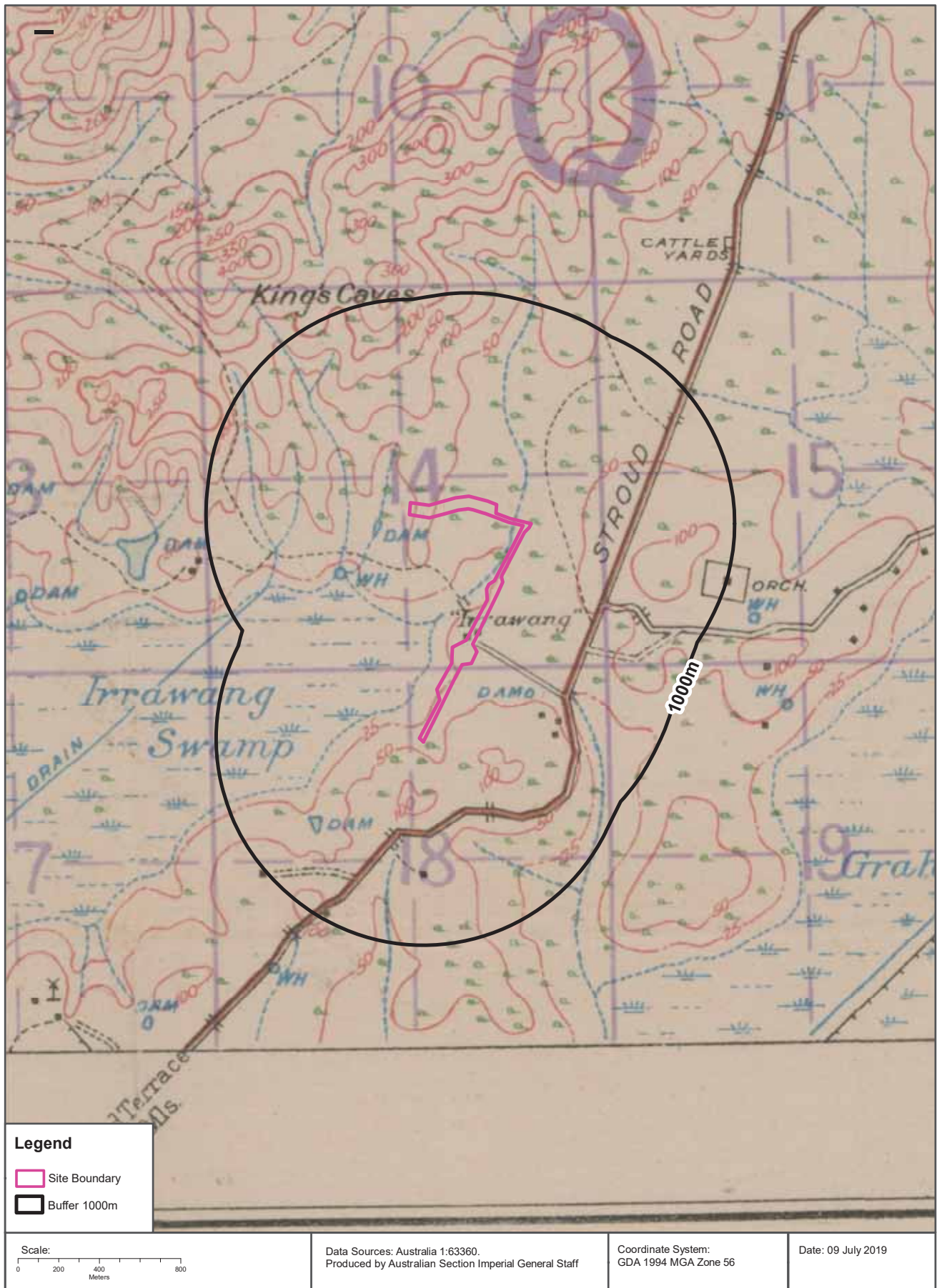
Historical Map c.1942

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



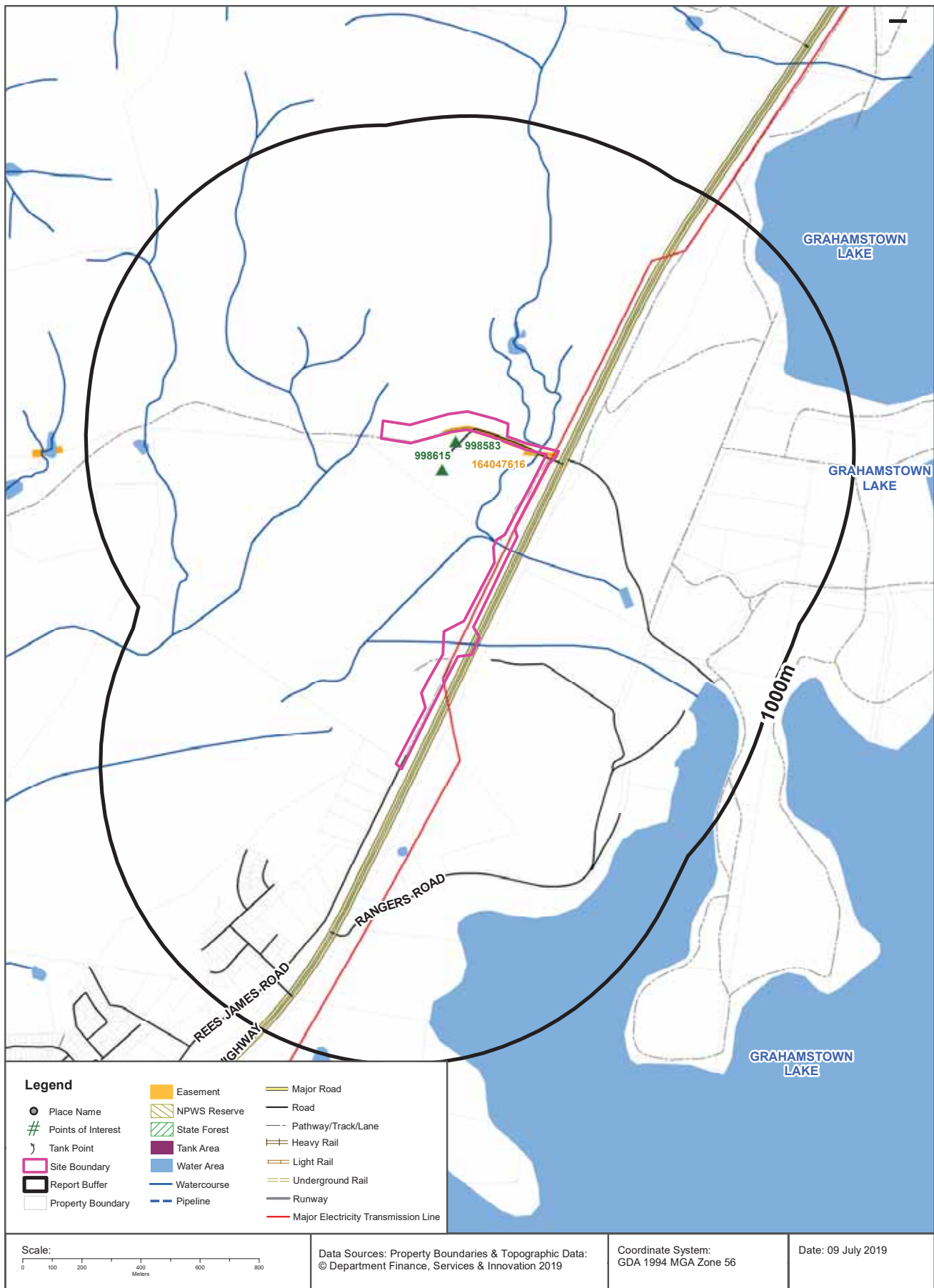
Historical Map c.1925

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Topographic Features

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Topographic Features

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
998583	Homestead	IRRAWANG PARK	33m	North
998615	Sports Centre	RIDING FOR THE DISABLED	114m	North

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

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Topographic Features

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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
	No records in buffer					

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

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Major Easements

What Major Easements exist within the dataset buffer?

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
164047616	Primary	Right of way	10m	0m	Onsite

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

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Topographic Features

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)

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National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

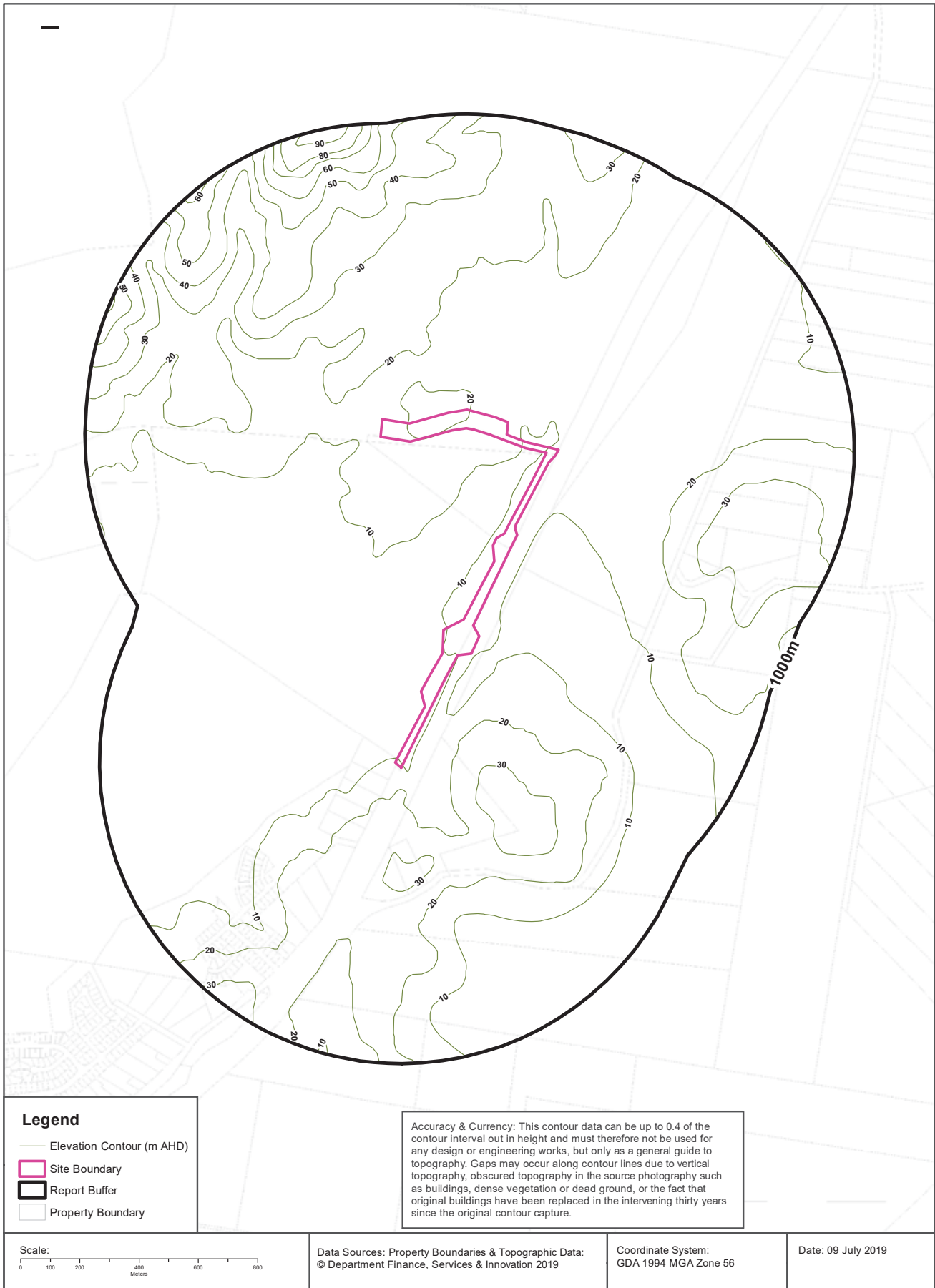
Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)

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Elevation Contours (m AHD)

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Hydrogeology & Groundwater

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Hydrogeology

Description of aquifers on-site:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Fractured or fissured, 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>

Botany Groundwater Management Zones

Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
N/A	No records in buffer		

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries

Hydrogeology & Groundwater

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
N/A	No records in buffer														

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

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Driller's Logs

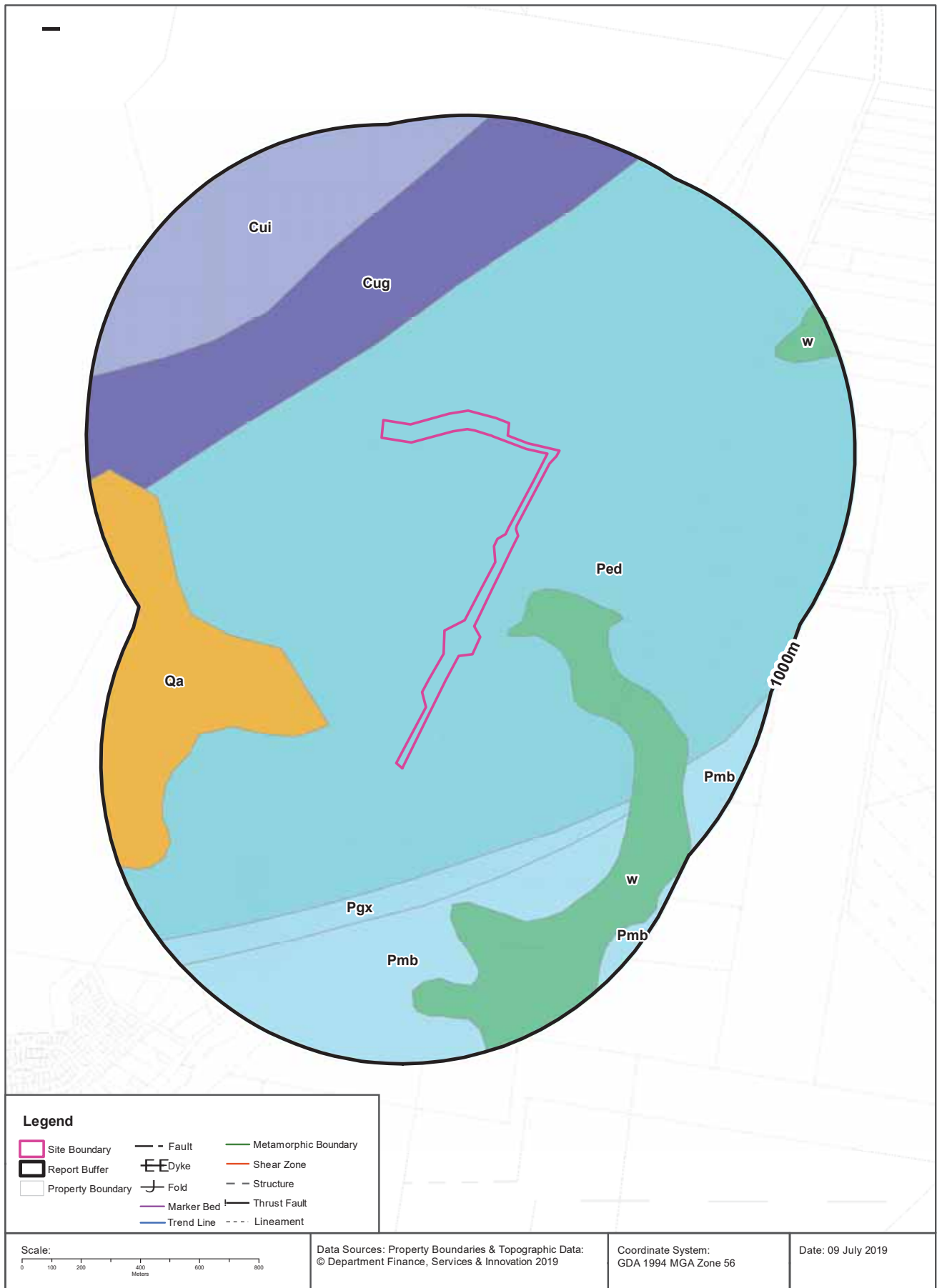
Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
No related drill log data			

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 1:250,000

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Geology

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Ped	Sandstone, lithic sandstone, conglomerate, siltstone, basalt	Dalwood Group	Dalwood Group		Palaeozoic			1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Cug	Tillite, varved siltstones, tuff, red and green zeolitic mudstone with dropstones interbedded within thick bedded lithic sandstone and conglomerate	Seaham Formation			Palaeozoic			1:250,000
Cui	Graded, massive, lithic arenites with interbeds of fine, laminated sandstone, shales, carbonaceous shales, poor coal and minor cherts	Mount Johnstone Formation			Palaeozoic			1:250,000
Ped	Sandstone, lithic sandstone, conglomerate, siltstone, basalt	Dalwood Group	Dalwood Group		Palaeozoic			1:250,000
Pgx	Coal seams, siltstone, sandstone, conglomerate	Greta Coal Measures			Palaeozoic			1:250,000
Pmb	Conglomerate, sandstone, siltstone	Branxton Formation	Maitland Group		Palaeozoic			1:250,000
Qa	Undifferentiated alluvial deposits; sand, silt, clay and gravel; some residual and colluvial deposits. Includes some channel, levee, lacustrine, floodplain and swamp deposits. May include some higher level Tertiary terraces	undifferentiated			Cainozoic			1:250,000
w	Water				Cainozoic			1:250,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:250,000

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

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Naturally Occurring Asbestos Potential

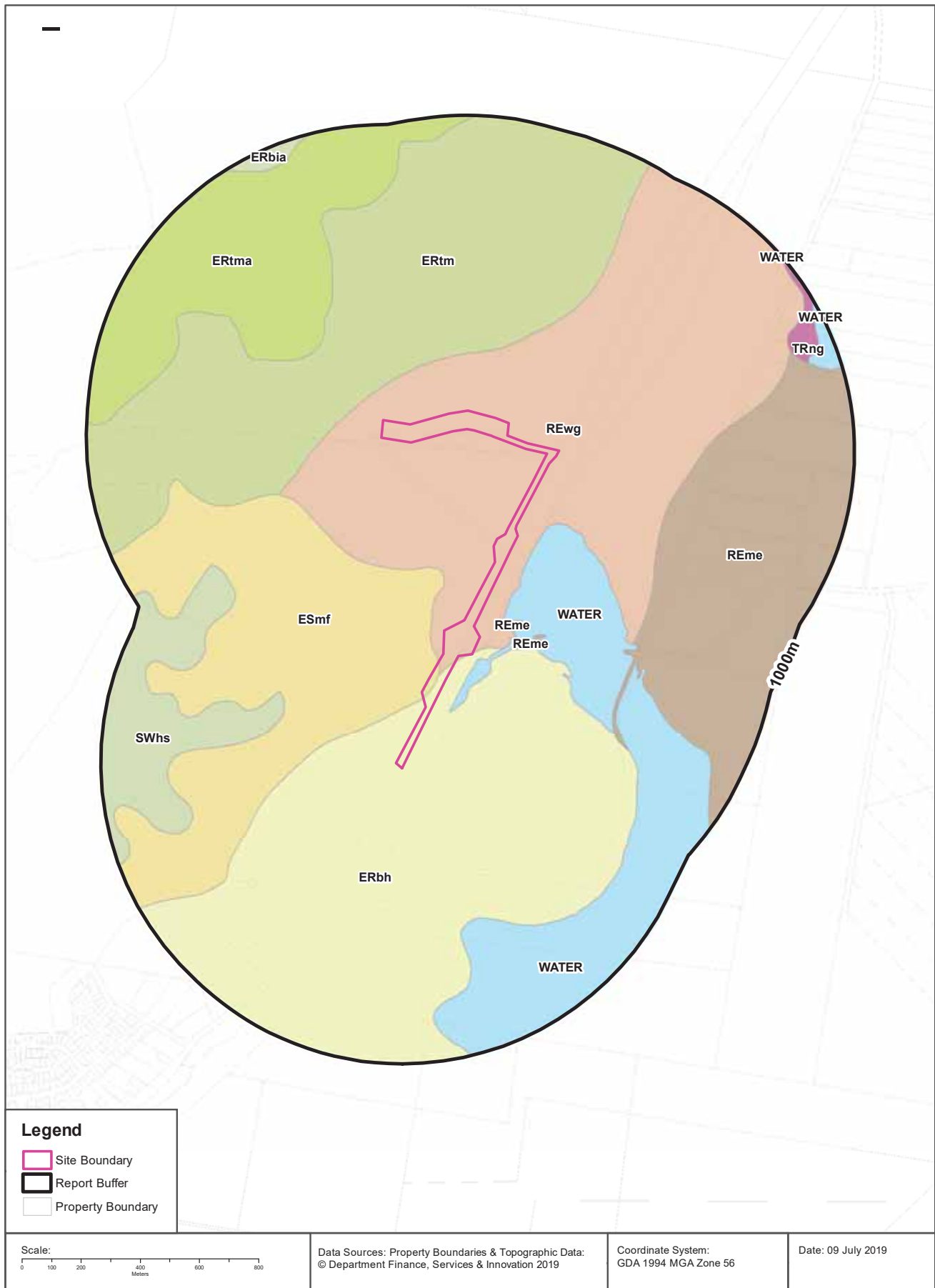
Naturally Occurring Asbestos Potential within the dataset buffer:

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

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Soils

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Soil Landscapes

What are the onsite Soil Landscapes?

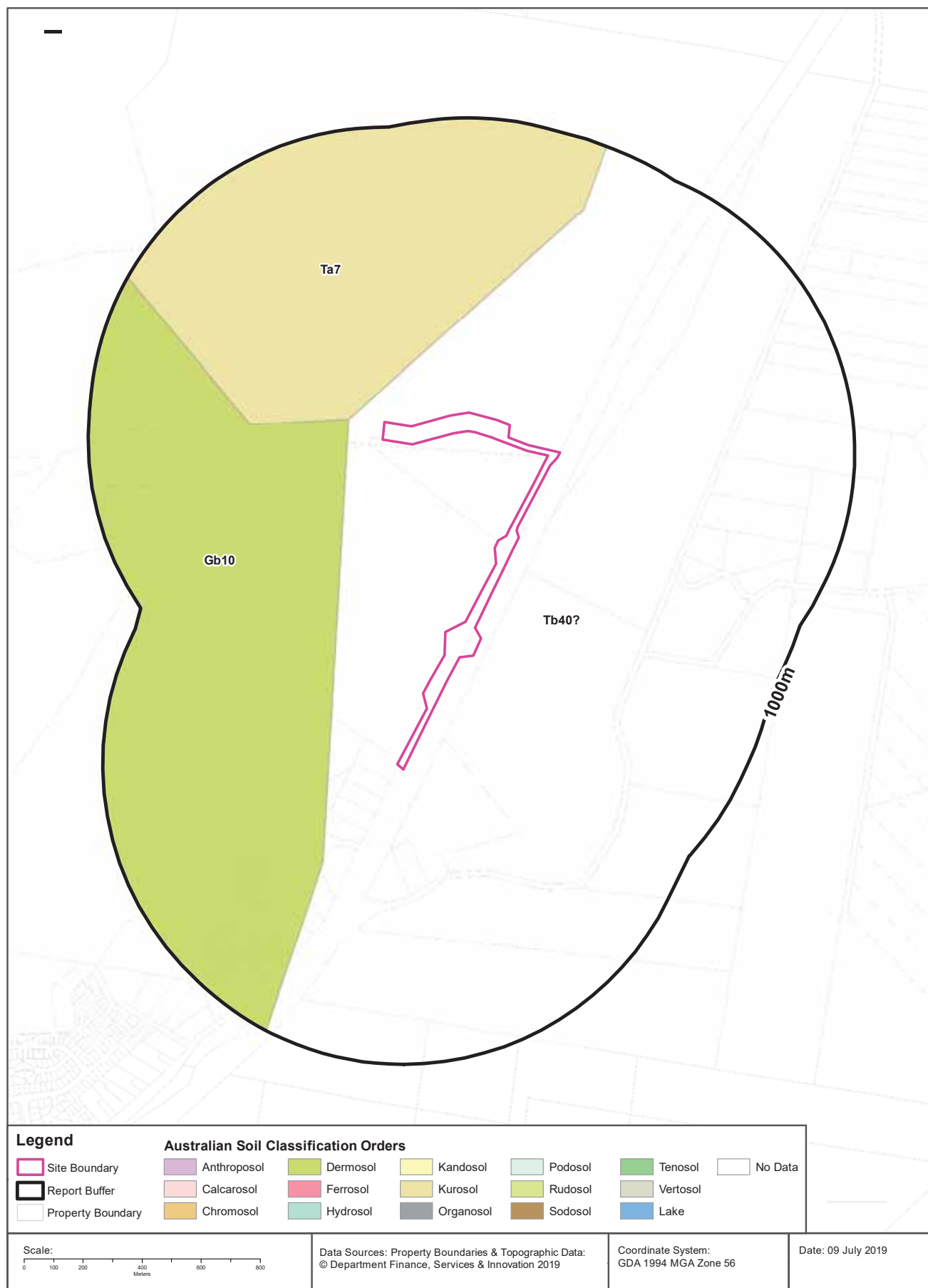
Soil Code	Name	Group	Process	Map Sheet	Scale
ERbh	BOLWARRA HEIGHTS		EROSIONAL	Newcastle	1:100,000
ESmf	MILLERS FOREST		ESTUARINE	Newcastle	1:100,000
REwg	WALLALONG		RESIDUAL	Newcastle	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
ERbh	BOLWARRA HEIGHTS		EROSIONAL	Newcastle	1:100,000
ERbia	BIRDSVIEW variant a		EROSIONAL	Newcastle	1:100,000
ERtm	TEN MILE ROAD		EROSIONAL	Newcastle	1:100,000
ERtma	TEN MILE ROAD variant a		EROSIONAL	Newcastle	1:100,000
ESmf	MILLERS FOREST		ESTUARINE	Newcastle	1:100,000
REme	MEDOWIE		RESIDUAL	Newcastle	1:100,000
REwg	WALLALONG		RESIDUAL	Newcastle	1:100,000
SWhs	HEXHAM SWAMP		SWAMP	Newcastle	1:100,000
TRng	NUNGRA		TRANSFERRAL	Newcastle	1:100,000
WATER	WATER		WATER	Newcastle	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage

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Soils

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Atlas of Australian Soils

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

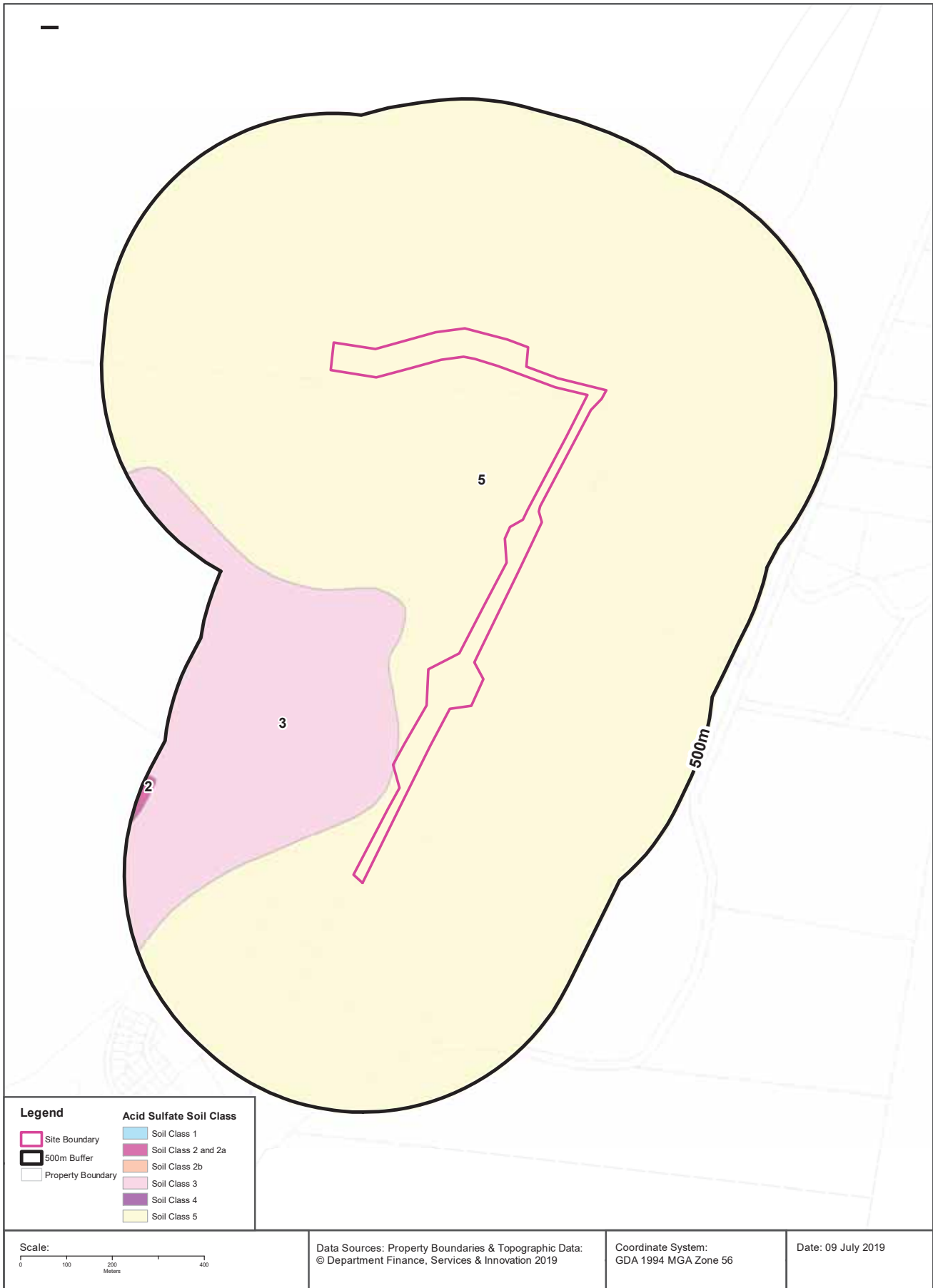
Map Unit Code	Soil Order	Map Unit Description	Distance
Tb40?	Kurosol?	Undulating to hilly areas with some steep slopes and cliffs, rock outcrops, and narrow terraced valleys: chief soils are hard acidic yellow mottled soils (Dy3.41) with some shallow soils such as (Um4.1) and (Uc4.1) on the steeper slopes. Associated are: (Gn2.2) soils and (Dd1) soils, both of which occur on slopes; undescribed soils in the valleys; and some (Dy5) and (Uc1 .2) soils along the coast. As mapped, small areas of units Gb10 and Cb28 are included.	0m
Ta7	Kurosol	Ridge and valley complex of moderately steep hill slopes and variable terrace formations in the major stream valleys: chief soils of the hill slopes are hard acidic yellow mottled soils (Dy3.21) in association with hard acidic red and red mottled soils (Dr2.21) and (Dr3.41), and also loamy soils having an A2 horizon (Um4.2) on mid and upper slopes and (Dy3.41) soils on lower slopes. Minor areas of other soils such as (Gn3.92) on limestone and (Gn3.42) on other basic rocks may occur. The terrace soils belong to unit Mj2.	89m
Gb10	Dermosol	River terraces, levees, flood-plains, coastal swamps, and tidal flats: this unit contains the same land forms and soils as unit Gb9, but in addition has (i) swamps and levees of the lower river flood-plain of (Uf6.6), (Ug5), and other undescribed soils; (ii) estuarine flats of peaty or organic soils over acid clays; and (iii) tidal mud flats. The soils of these areas are not well known but probably have similarities with the soils of units J3, Mc4, NY1, and NN1. The smaller areas mapped as unit Gb10 consist mainly of areas of (i) and/or (iii) above.	121m

Atlas of Australian Soils Data Source: CSIRO

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Acid Sulfate Soils

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Acid Sulfate Soils

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Environmental Planning Instrument - Acid Sulfate Soils

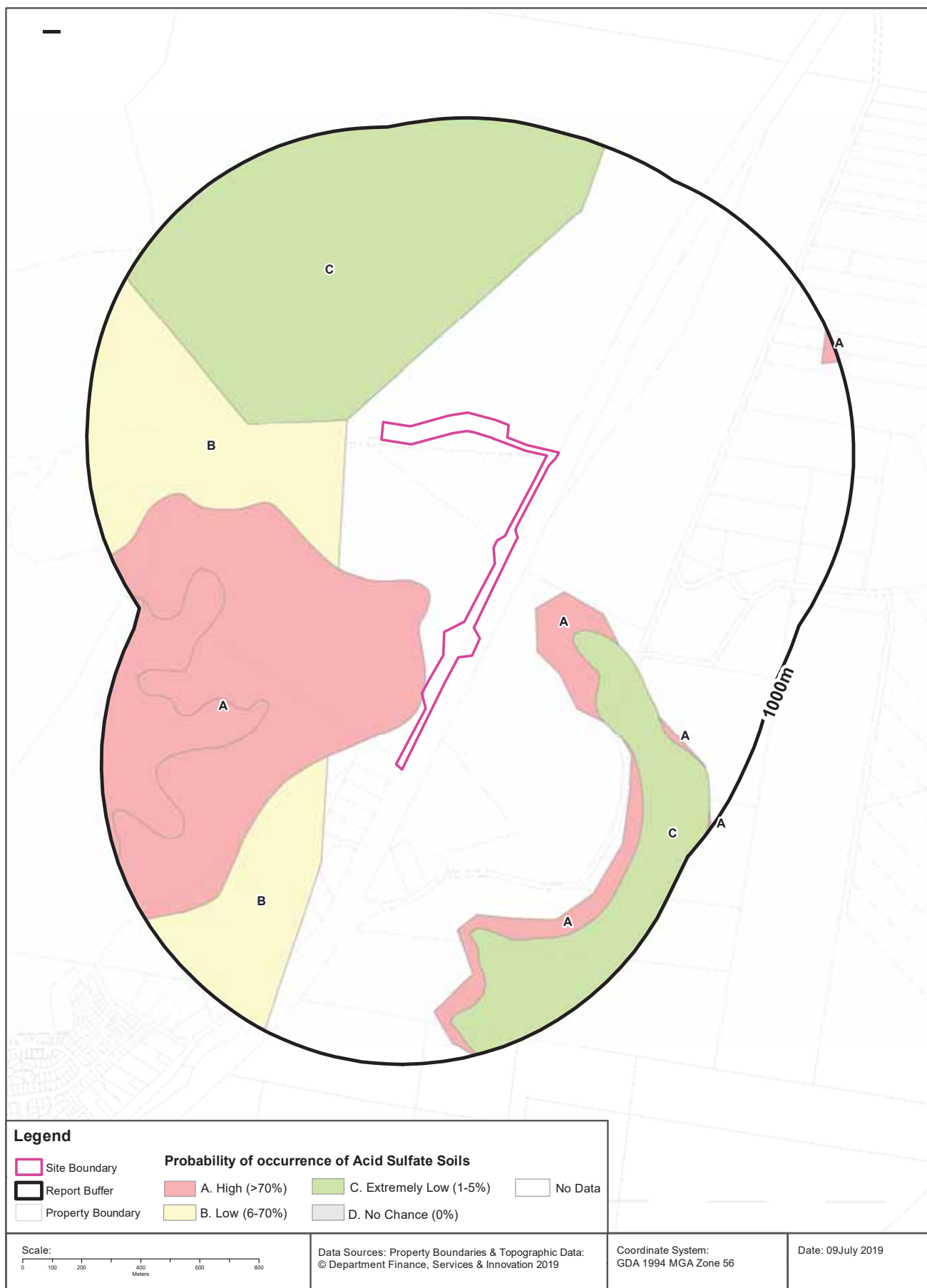
What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
3	Works more than 1 metre below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered more than 1 metre below natural ground surface, present an environmental risk	Port Stephens Local Environmental Plan 2013

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

Acid Sulfate Data Source Accessed 23/10/2018: NSW Crown Copyright - Planning and Environment
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Acid Sulfate Soils

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
A	High Probability of occurrence. >70% chance of occurrence.	0m
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	90m
B	Low Probability of occurrence. 6-70% chance of occurrence.	122m

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Dryland Salinity

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Dryland Salinity

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

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

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	0m	Onsite

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

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Mining Subsidence Districts

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining Subsidence District Data Source: © Land and Property Information (2016)
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State Environmental Planning Policy

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

State Significant Precincts

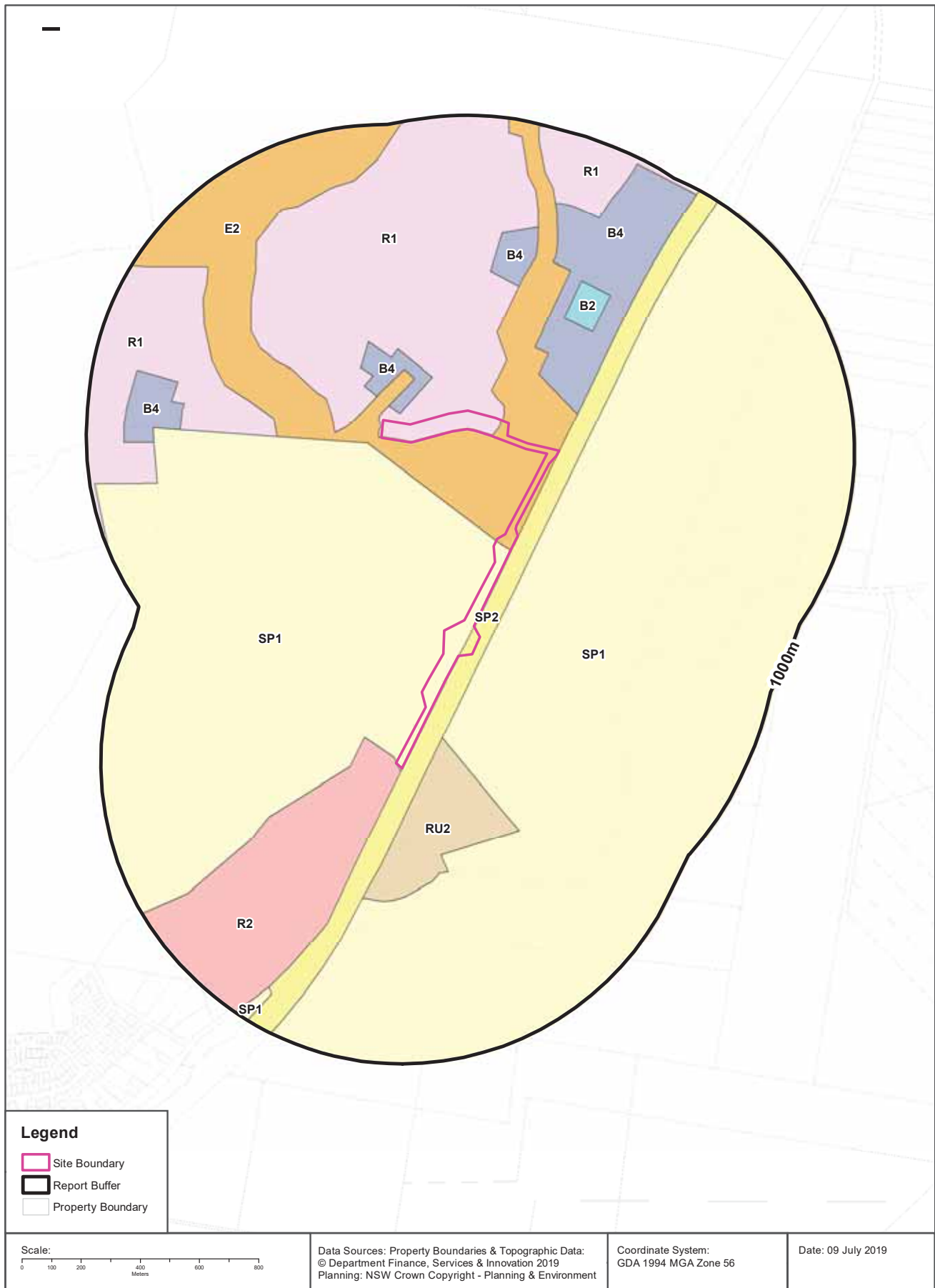
What SEPP State Significant Precincts exist within the dataset buffer?

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

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

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Environmental Planning Instrument

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Land Zoning

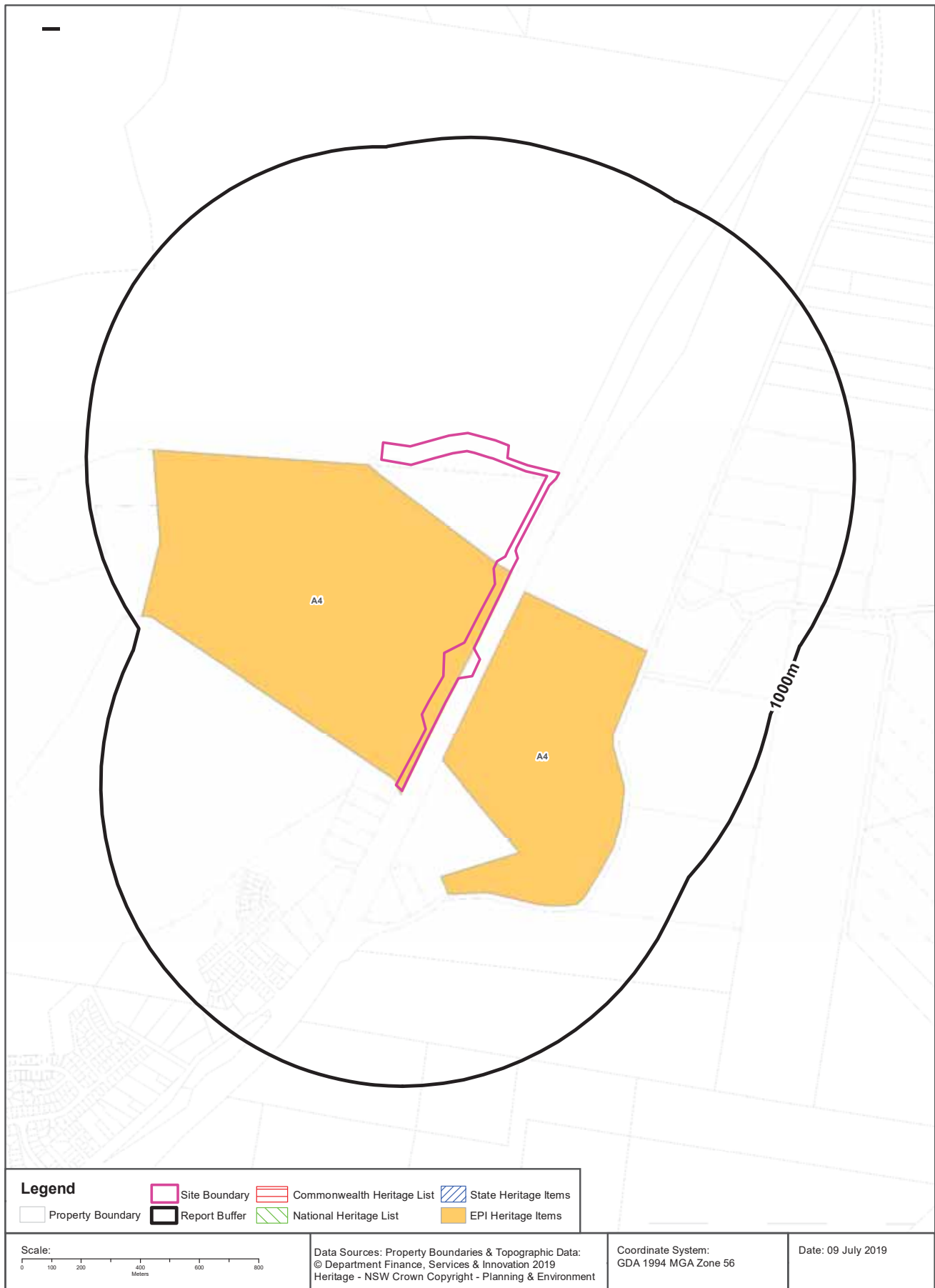
What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP1	Special Activities	Hunter Water Corporation	Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		0m	Onsite
R1	General Residential		Port Stephens Local Environmental Plan 2013	15/06/2018	15/06/2018	09/11/2018	Amendment No 22	0m	Onsite
E2	Environmental Conservation		Port Stephens Local Environmental Plan 2013	15/06/2018	15/06/2018	09/11/2018	Amendment No 22	0m	Onsite
SP2	Infrastructure	Classified Road	Port Stephens Local Environmental Plan 2013	15/06/2018	15/06/2018	09/11/2018	Amendment No 22	0m	Onsite
R2	Low Density Residential		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		0m	South West
B4	Mixed Use		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		32m	North West
SP1	Special Activities	Hunter Water Corporation	Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		32m	East
RU2	Rural Landscape		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		75m	South
B4	Mixed Use		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		137m	North East
R1	General Residential		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		354m	North West
B2	Local Centre		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		400m	North East
B4	Mixed Use		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		451m	North
B4	Mixed Use		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		676m	North West
R1	General Residential		Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		755m	North
SP1	Special Activities	Hunter Water Corporation	Port Stephens Local Environmental Plan 2013	23/12/2013	24/11/2017	09/11/2018		867m	South West

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Heritage Items

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Heritage

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Commonwealth Heritage List

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

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

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

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

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

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

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

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

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

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

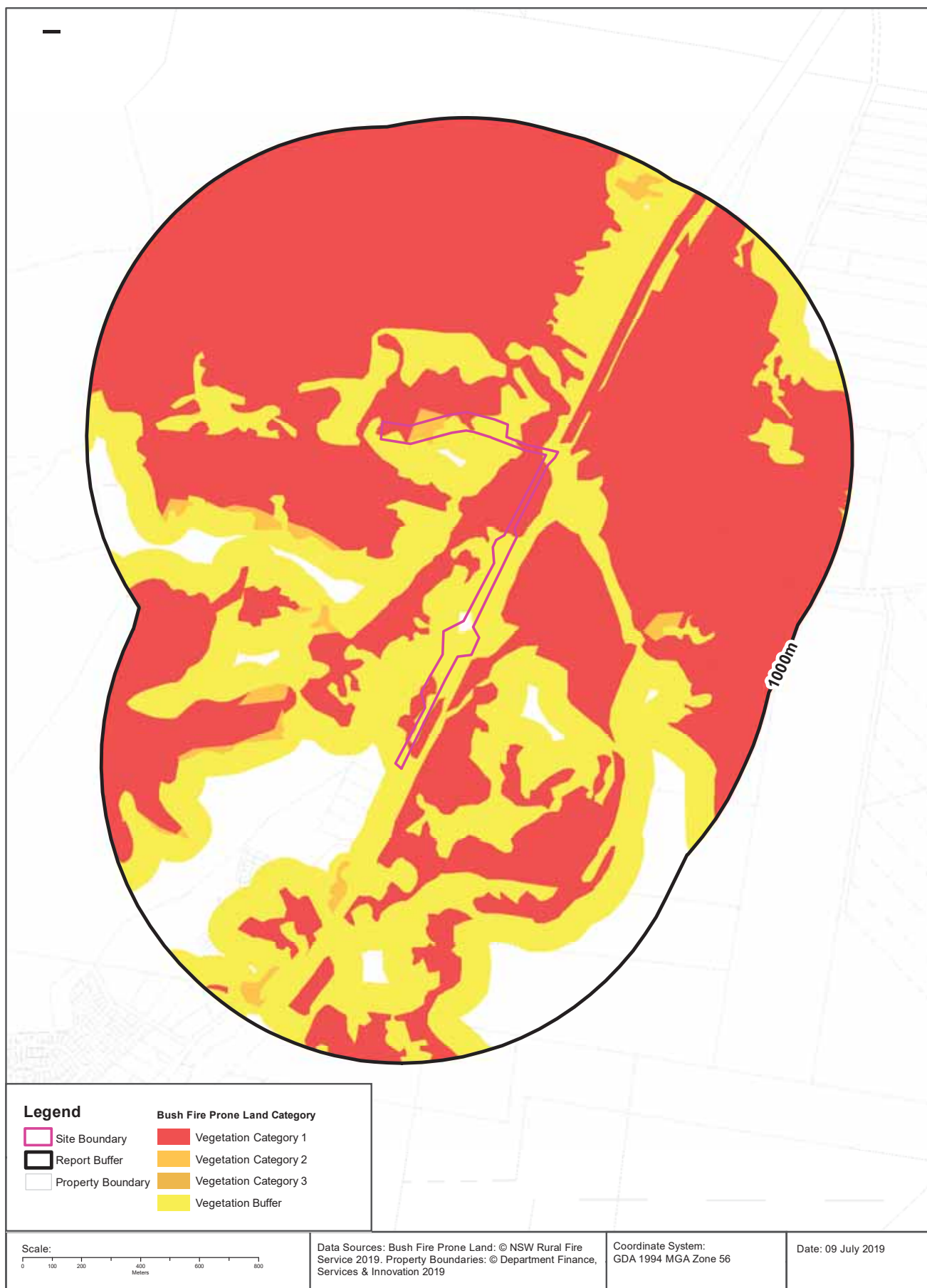
What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
A4	Irrawang Pottery Site	Item - Archaeological	Local	Port Stephens Local Environmental Plan 2013	16/06/2018	15/06/2018	15/06/2018	0m	Onsite
A4	Irrawang Pottery Site	Item - Archaeological	Local	Port Stephens Local Environmental Plan 2013	16/06/2018	15/06/2018	15/06/2018	32m	South East

Heritage Data Source: NSW Crown Copyright - Planning & Environment
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Natural Hazards - Bush Fire Prone Land

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Natural Hazards

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Bush Fire Prone Land

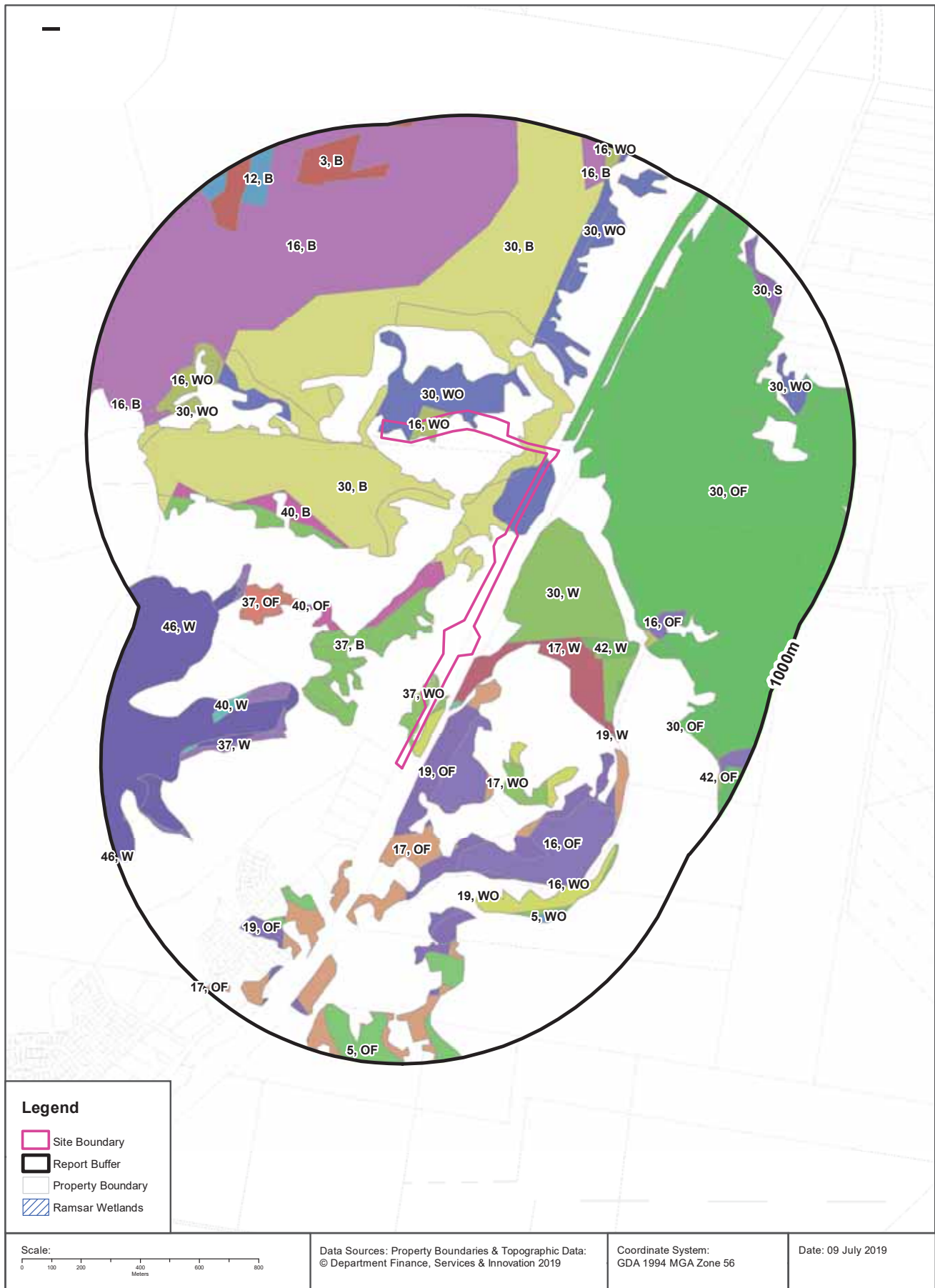
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	0m	Onsite
Vegetation Category 1	0m	Onsite
Vegetation Category 2	0m	Onsite

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

Ecological Constraints - Vegetation & Ramsar Wetlands

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Ecological Constraints

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Lower Hunter and Central Coast Regional Vegetation Survey

What vegetation from the Lower Hunter and Central Coast Regional Survey exists within the dataset buffer?

Map Id	Unit Desc	Canopy Code	Canopy Cover	Species	Distance	Direction
30	Coastal Plains Smooth-barked Apple Woodland	WO	Sparse (Woodland) 20-<50% cover	A. costata / C. gummifera / E. capitellata / E. umbra	0m	Onsite
16	Seaham Spotted Gum Iron Bark Forest	WO	Sparse (Woodland) 20-<50% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	0m	Onsite
37	Swamp Mahogany - Paperbark Forest	WO	Sparse (Woodland) 20-<50% cover	Melaleuca quinquinervia / E. robusta / C. glauca	0m	Onsite
17	Lower Hunter Spotted Gum - Ironbark Forest	WO	Sparse (Woodland) 20-<50% cover	C. maculata / E. fibrosa / E. punctata	0m	Onsite
30	Coastal Plains Smooth-barked Apple Woodland	B	Bushland - Extensive areas of native vegetation, may include Woodland, Open Woodland, Closed Forest etc.	A. costata / C. gummifera / E. capitellata / E. umbra	0m	Onsite
19	Hunter Lowland Redgum Forest	WO	Sparse (Woodland) 20-<50% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	0m	Onsite
17	Lower Hunter Spotted Gum - Ironbark Forest	W	Wetland	C. maculata / E. fibrosa / E. punctata	15m	South East
30	Coastal Plains Smooth-barked Apple Woodland	OF	Mid Dense (Open Forest) 50-<100% cover	A. costata / C. gummifera / E. capitellata / E. umbra	32m	North East
37	Swamp Mahogany - Paperbark Forest	B	Bushland - Extensive areas of native vegetation, may include Woodland, Open Woodland, Closed Forest etc.	Melaleuca quinquinervia / E. robusta / C. glauca	41m	South West
19	Hunter Lowland Redgum Forest	W	Wetland	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	52m	South
30	Coastal Plains Smooth-barked Apple Woodland	W	Wetland	A. costata / C. gummifera / E. capitellata / E. umbra	53m	South East
19	Hunter Lowland Redgum Forest	OF	Mid Dense (Open Forest) 50-<100% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	59m	South
17	Lower Hunter Spotted Gum - Ironbark Forest	OF	Mid Dense (Open Forest) 50-<100% cover	C. maculata / E. fibrosa / E. punctata	97m	South
40	Swamp Oak Rushland Forest	B	Bushland - Extensive areas of native vegetation, may include Woodland, Open Woodland, Closed Forest etc.	C. glauca / Melaleuca ericifolia / Baumea juncea	125m	South West
16	Seaham Spotted Gum Iron Bark Forest	OF	Mid Dense (Open Forest) 50-<100% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	127m	South
42	Riparian Melaleuca Swamp Woodland	W	Wetland	Melaleuca sieberi / E. robusta	336m	South East
37	Swamp Mahogany - Paperbark Forest	W	Wetland	Melaleuca quinquinervia / E. robusta / C. glauca	381m	South West
46	Freshwater Wetland Complex	W	Wetland	Ludwigia peploides subsp. montevidensis / Paspalum distichum / Eleocharis sphacelata / Juncus usitatus	391m	West
16	Seaham Spotted Gum Iron Bark Forest	B	Bushland - Extensive areas of native vegetation, may include Woodland, Open Woodland, Closed Forest etc.	C. maculata / E. crebra / E. punctata / E. fibrosa	442m	North
40	Swamp Oak Rushland Forest	OF	Mid Dense (Open Forest) 50-<100% cover	C. glauca / Melaleuca ericifolia / Baumea juncea	446m	West
37	Swamp Mahogany - Paperbark Forest	OF	Mid Dense (Open Forest) 50-<100% cover	Melaleuca quinquinervia / E. robusta / C. glauca	487m	West

Map Id	Unit Desc	Canopy Code	Canopy Cover	Species	Distance	Direction
42	Riparian Melaleuca Swamp Woodland	OF	Mid Dense (Open Forest) 50- <100% cover	Melaleuca sieberi / E. robusta	524m	South East
5	Alluvial Tall Moist Forest	OF	Mid Dense (Open Forest) 50- <100% cover	E. saligna / S. glomulifera / Glochidion ferdinandi	527m	South West
40	Swamp Oak Rushland Forest	W	Wetland	C. glauca / Melaleuca ericifolia / Baumea juncea	546m	South West
5	Alluvial Tall Moist Forest	WO	Sparse (Woodland) 20- <50% cover	E. saligna / S. glomulifera / Glochidion ferdinandi	596m	South
3	Hunter Valley Dry Rainforest	B	Bushland - Extensive areas of native vegetation, may include Woodland, Open Woodland, Closed Forest etc.	Ficus rubiginosa / Streblus brunonianus / C. maculata	803m	North West
12	Hunter Valley Moist Forest	B	Bushland - Extensive areas of native vegetation, may include Woodland, Open Woodland, Closed Forest etc.	C. maculata / E. punctata	825m	North West
30	Coastal Plains Smooth-barked Apple Woodland	S	Scrub	A. costata / C. gummifera / E. capitellata / E. umbra	846m	North East

Lower Hunter and Central Coast Regional Vegetation Survey: NSW Office of Environment and Heritage

Ramsar Wetlands

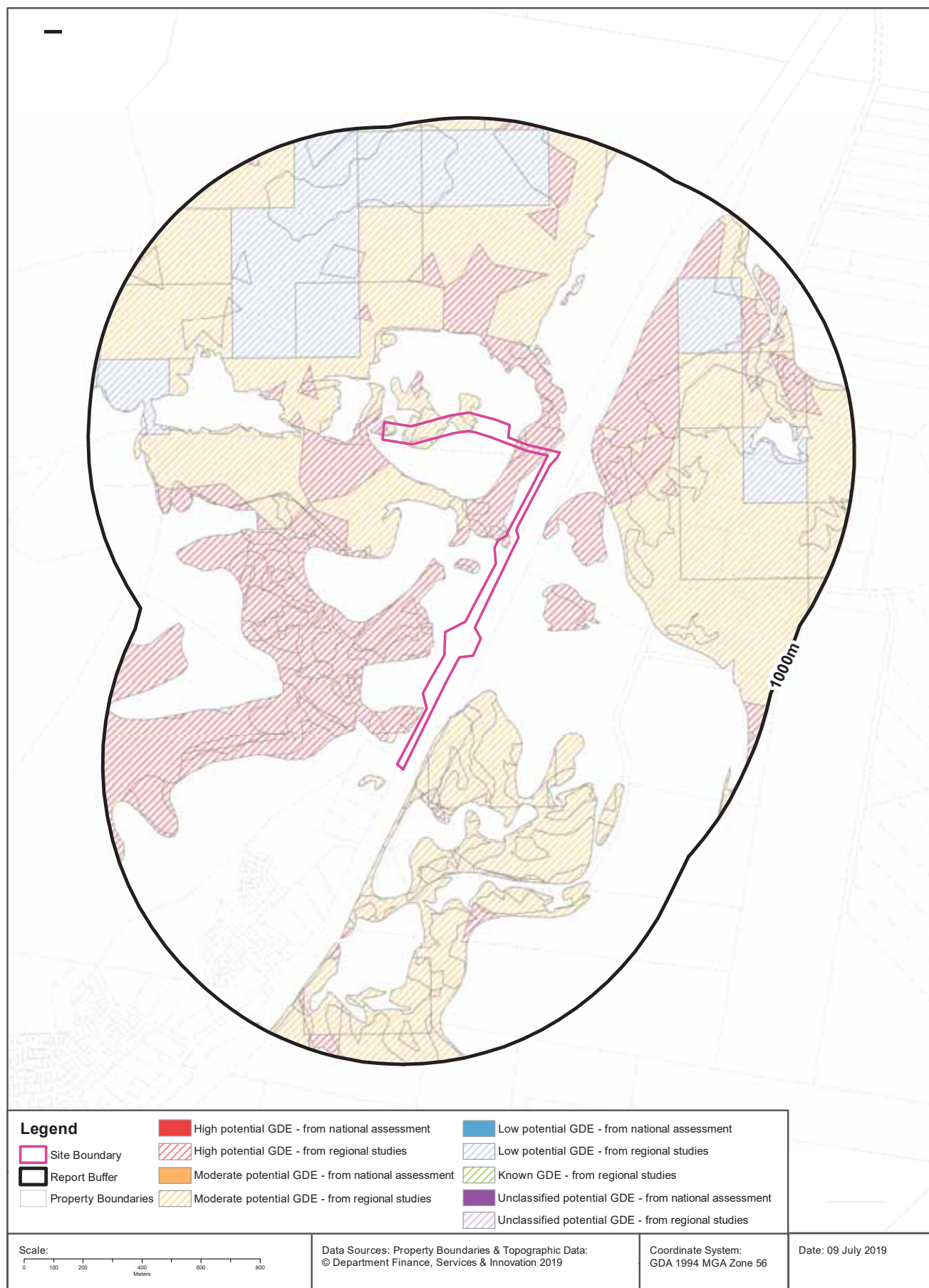
What Ramsar Wetland areas exist within the dataset buffer?

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

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Ecological Constraints

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

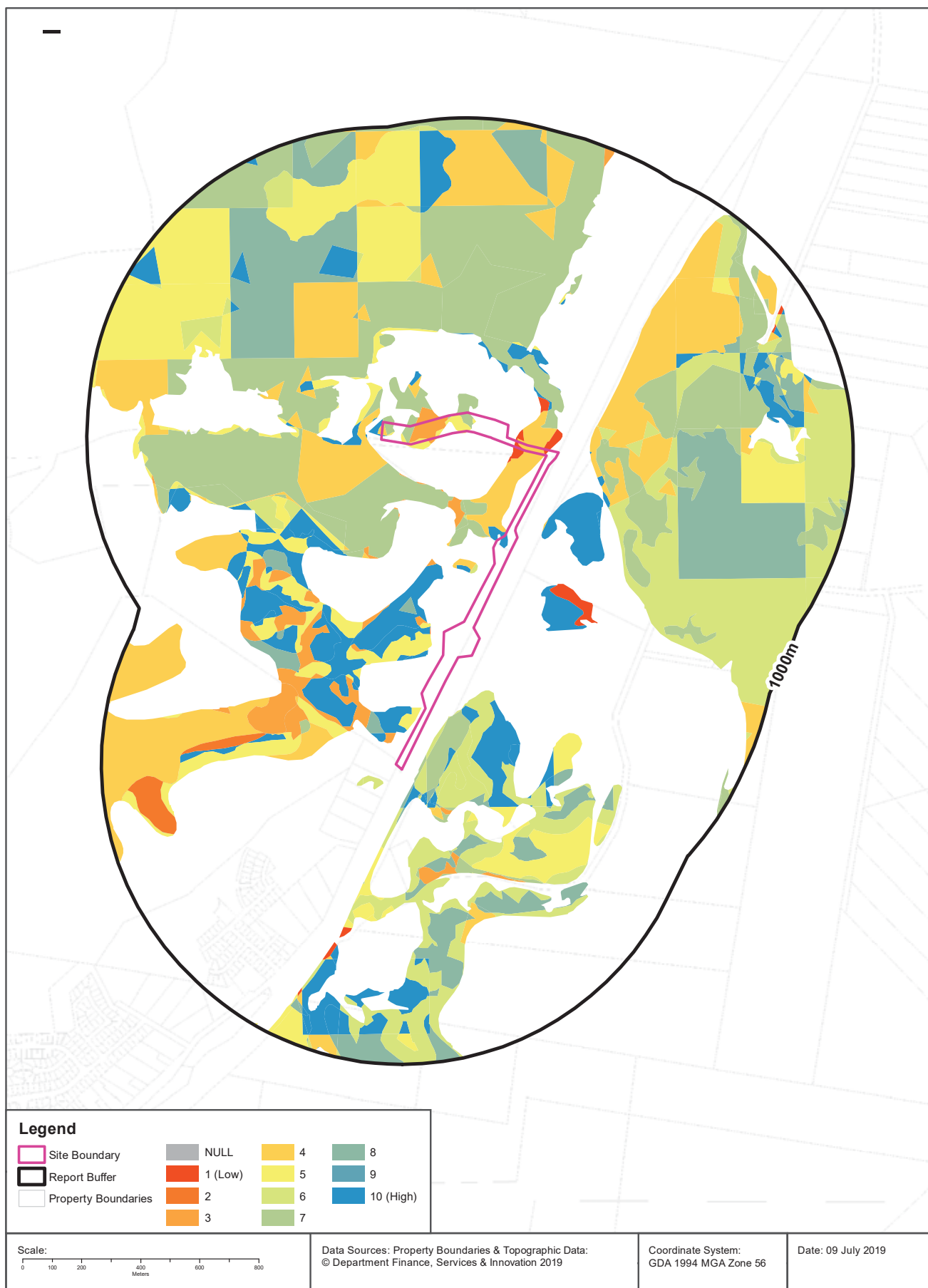
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	High potential GDE - from regional studies	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial	High potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m
Terrestrial	Moderate potential GDE - from regional studies	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial	Low potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		82m

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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Ecological Constraints - Inflow Dependent Ecosystems Likelihood

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)



Ecological Constraints

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial		1 Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m
Terrestrial		3 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial		4 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial		5 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial		7 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial		10 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m
Terrestrial		6 Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		41m
Terrestrial		2 Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		44m
Terrestrial		8 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		57m
Terrestrial		9 Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		648m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 1)

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	Crinia tinnula	Wallum Froglet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Uperoleia mahonyi	Mahony's Toadlet	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ardena pacificus	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Dromaius novaehollandiae	Emu	Endangered Population	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
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	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Hirundo rustica	Barn Swallow	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	Irediparra gallinacea	Comb-crested Jacana	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Leipoa ocellata	Malleefowl	Endangered	Not Sensitive	Vulnerable	
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	Merops ornatus	Rainbow Bee-eater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	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	Plegadis falcinellus	Glossy Ibis	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rhipidura fuliginosa	New Zealand Fantail (Lord Howe Is. subsp.)	Presumed Extinct	Not Sensitive	Extinct	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto longimembris	Eastern Grass Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand 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	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
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	Nyctophilus corbeni	Corben's Long-eared Bat	Vulnerable	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	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Phascogale tapoatafa	Brush-tailed Phascogale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascogale cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Potorous tridactylus	Long-nosed Potoroo	Vulnerable	Not Sensitive	Vulnerable	
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	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Angophora inopina	Charmhaven Apple	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Asperula asthenes	Trailing Woodruff	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Caladenia porphyrea		Not Listed	Category 2	Not Listed	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Commersonia prostrata	Dwarf Kerrawang	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Diuris arenaria	Sand Doubletail	Endangered	Category 2	Not Listed	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus parramattensis subsp. decadens		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Lindernia alsinoides	Noah's False Chickweed	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Mundia triglochinoides		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Persicaria elatior	Tall Knotweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pterostylis chaetophora		Vulnerable	Category 2	Not Listed	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Rhodomyrtus psidioides	Native Guava	Critically Endangered	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 09/07/2019

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Date: 09 Jul 2019 17:20:53

Reference: LS007293 EP

Address: Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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.

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Location Confidences

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

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb match	Georeferenced with the confidence of the general/approximate area
Road match	Georeferenced to the road or rail
Road intersection	Georeferenced to the road intersection
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	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
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	09/07/2019	09/07/2019	Daily	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	21/06/2019	19/06/2019	Monthly	1000	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	11/06/2019	11/06/2019	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	01/07/2019	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	07/05/2019	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program	Department of Defence	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	01/07/2019	01/07/2019	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/12/2018	13/12/2018	Annually	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	27/06/2019	27/06/2019	Monthly	1000	0	0	0
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	27/06/2019	27/06/2019	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	27/06/2019	27/06/2019	Monthly	1000	0	1	4
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	1	1	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	30
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	37
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	39
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	49
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	-	0	6
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	22
Points of Interest	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	Quarterly	1000	0	2	6
Tanks (Areas)	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Tanks (Points)	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	Quarterly	1000	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	3
State Forest	NSW Department of Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	16/01/2019	14/11/2018	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	2
Geological Units 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	3	-	5
Geological Structures 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
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	2	2	3
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning and Environment	05/07/2019	28/06/2019	Weekly	500	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	1	1	1
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	0
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning and Environment	05/07/2019	07/12/2018	Weekly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning and Environment	05/07/2019	28/06/2019	Weekly	1000	3	5	15
Commonwealth Heritage List	Australian Government Department of the Environment and Energy - Heritage Branch	16/01/2019	31/07/2018	Unknown	1000	0	0	0
National Heritage List	Australian Government Department of the Environment and Energy - Heritage Branch	16/01/2019	28/09/2018	Unknown	1000	0	0	0
State Heritage Register - Curtilages	NSW Office of Environment & Heritage	15/04/2019	09/11/2018	Quarterly	1000	0	0	0
Environmental Planning Instrument Heritage	NSW Department of Planning and Environment	05/07/2019	28/06/2019	Weekly	1000	1	1	2
Bush Fire Prone Land	NSW Rural Fire Service	28/05/2019	05/04/2019	Quarterly	1000	3	3	3
Lower Hunter and Central Coast Regional Vegetation Survey	NSW Office of Environment & Heritage	28/02/2015	16/11/2009	As required	1000	2	5	26
Ramsar Wetlands of Australia	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	4	5	5
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	3	9	9
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	09/07/2019	09/07/2019	Weekly	10000	-	-	-

Aerial Imagery 2018

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)



Contaminated Land & Waste Management Facilities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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
N/A	No records in buffer								

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
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Contaminated Land & Waste Management Facilities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority
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<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
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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: Geoscience Australia
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PFAS Investigation Sites

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

EPA PFAS Investigation Program

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

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

EPA PFAS Investigation Program: Environment Protection Authority
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Defence PFAS Investigation & Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

Defence 3 Year Regional Contamination Investigation Program

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

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

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

EPA Other Sites with Contamination Issues

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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
- Pasminco Lead Abatement Strategy Area

Sites within the dataset buffer:

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

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

EPA Activities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

Licensed Activities under the POEO Act 1997

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

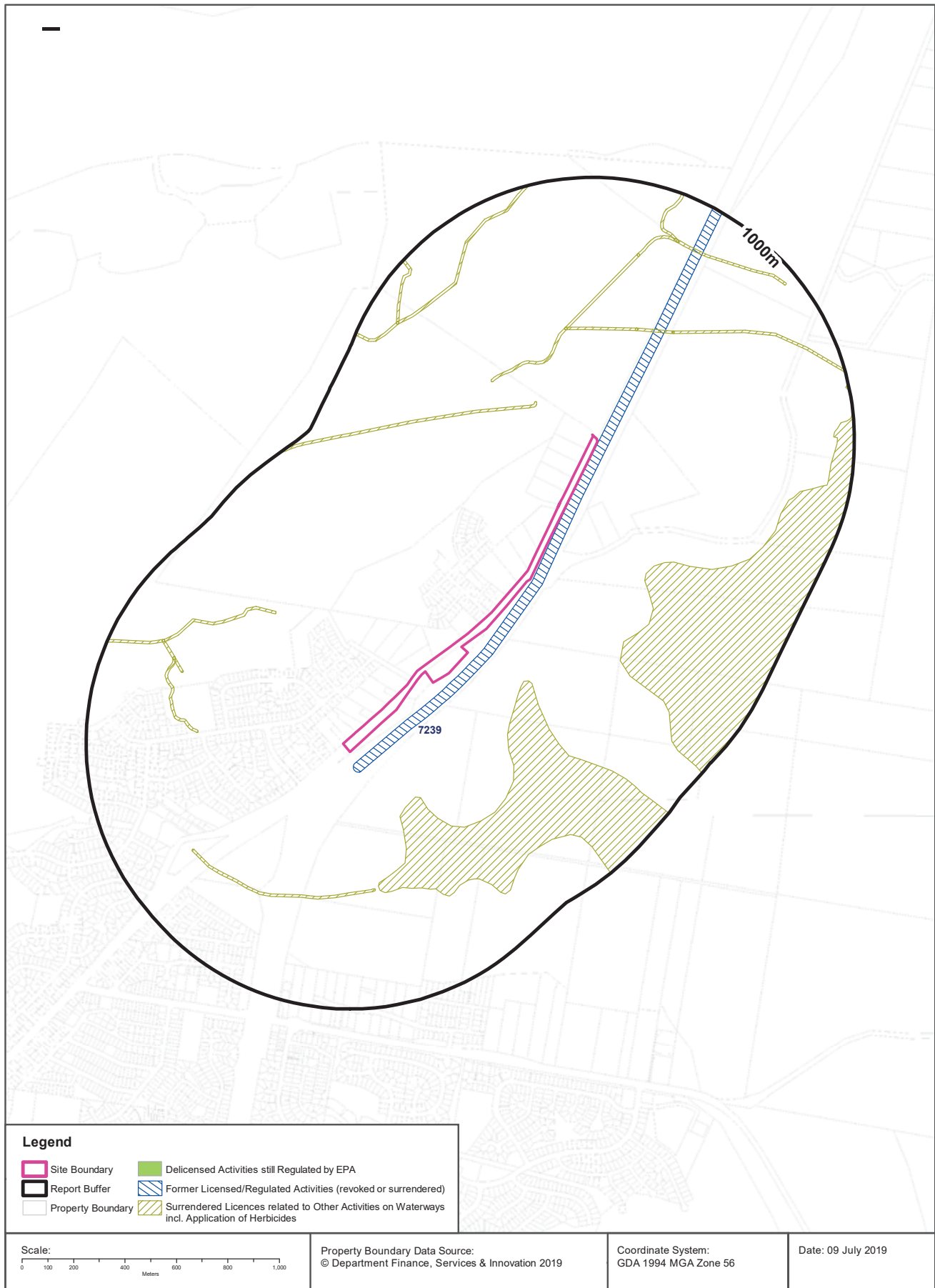
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)



EPA Activities

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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

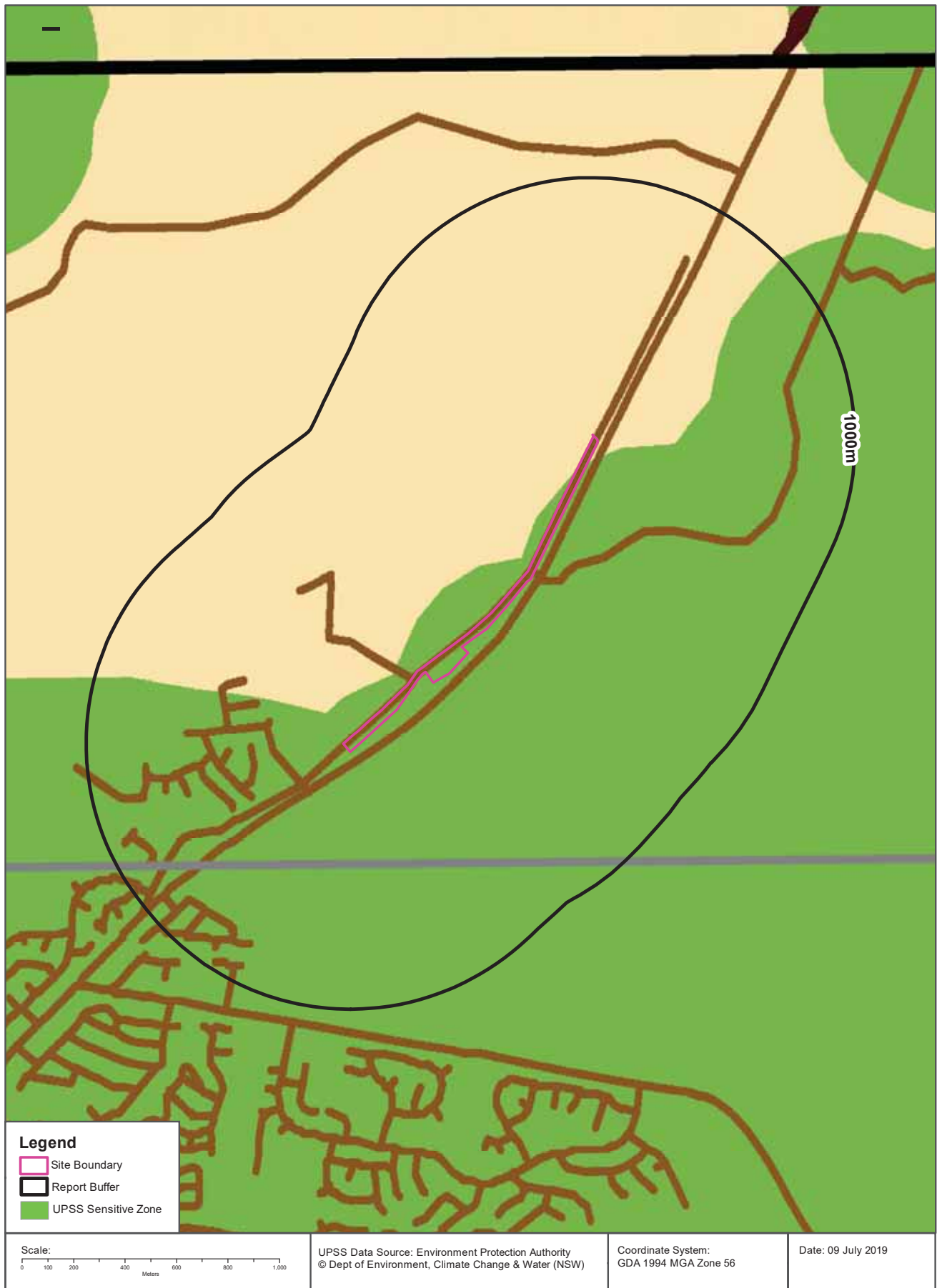
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
7239	ROADS & TRAFFIC AUTHORITY OF NEW SOUTH WALES	BETWEEN RAYMOND TERRACE AND, KARUAH, NSW 2324	Surrendered	06/09/2000	Road construction; Chemical Storage Facilities; Crushing, Grinding or Separating Works	Road Match	2m	North East
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	244m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	244m	-
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	244m	-

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

UPSS Sensitive Zones

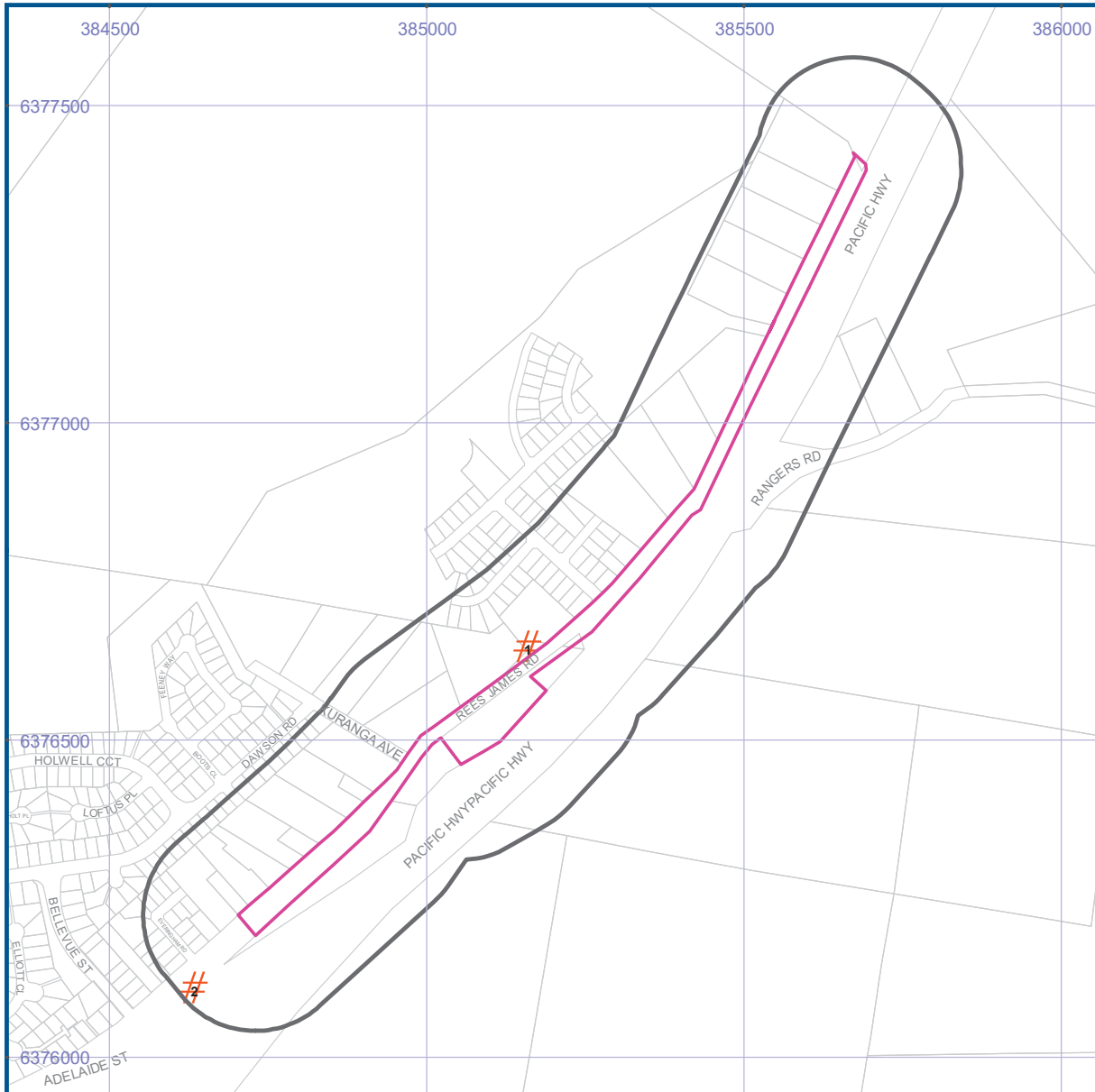
Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)






Historical Business Directories





Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

1991 Business to Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
Property Boundaries © NSW Department Finance, Services & Innovation 2019

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	ROAD TRANSPORT SERVICES - INTERSTATE.	Brown, W. J. & C. D. Transport, Rees James Rd, Raymond Terrace	93932	Road Match	0m
2	ROOF TRUSSES MFRS. &/OR DIST.	A P M Wood Products Pty Ltd., Pacific Hwy Heatherbrae, Raymond Terrace	93933	Road Match	108m
	GOVERNMENT DEPARTMENTS.	Ambulance Station., Pacific Hwy, Raymond Terrace	93795	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	Ampol Service Station., Pacific Hwy, Raymond Terrace	93872	Road Match	108m
	HIRE SERVICES.	Ark Hire., Pacific Hwy Motto Farm, Raymond Terrace	93819	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	Bogas., Pacific Hwy Heatherbrae, Raymond Terrace	93873	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	Bogas., Pacific Hwy, Raymond Terrace	93874	Road Match	108m
	MOTOR CAR DEALERS - NEW &/OR USED.	Cappiello Joe Motors., Pacific Hwy Heatherbrae, Raymond Terrace	93861	Road Match	108m
	DEMOLITION CONTRACTORS.	Carnall Removals Pty Ltd., Pacific Hwy, Raymond Terrace	93740	Road Match	108m
	FURNITURE REMOVALISTS &/OR STORAGE.	Carnall Removals Pty Ltd., Pacific Hwy, Raymond Terrace	93786	Road Match	108m
	RUBBISH &/OR GARBAGE CONTRACTORS.	Carnall Removals Pty Ltd., Pacific Hwy, Raymond Terrace	93935	Road Match	108m
	MOTOR CAR DEALERS - NEW &/OR USED.	Evans Dave Motors., Pacific Hwy Heatherbrae, Raymond Terrace	93862	Road Match	108m
	MONUMENTAL MASONS.	Fifstein J J & Sons., Pacific Hwy, Raymond Terrace	93855	Road Match	108m
	NURSERYMEN.	Florapark Nursery & Landscape Supplies Pty Ltd., Pacific Hwy, Raymond Terrace	93905	Road Match	108m
	FRUITERERS &/OR GREENGROCERS.	Heatherbrae Fruit Market., Pacific Hwy, Raymond Terrace	93776	Road Match	108m
	RESTAURANTS.	Heritage Restaurant The., Pacific Hwy, Raymond Terrace	93930	Road Match	108m

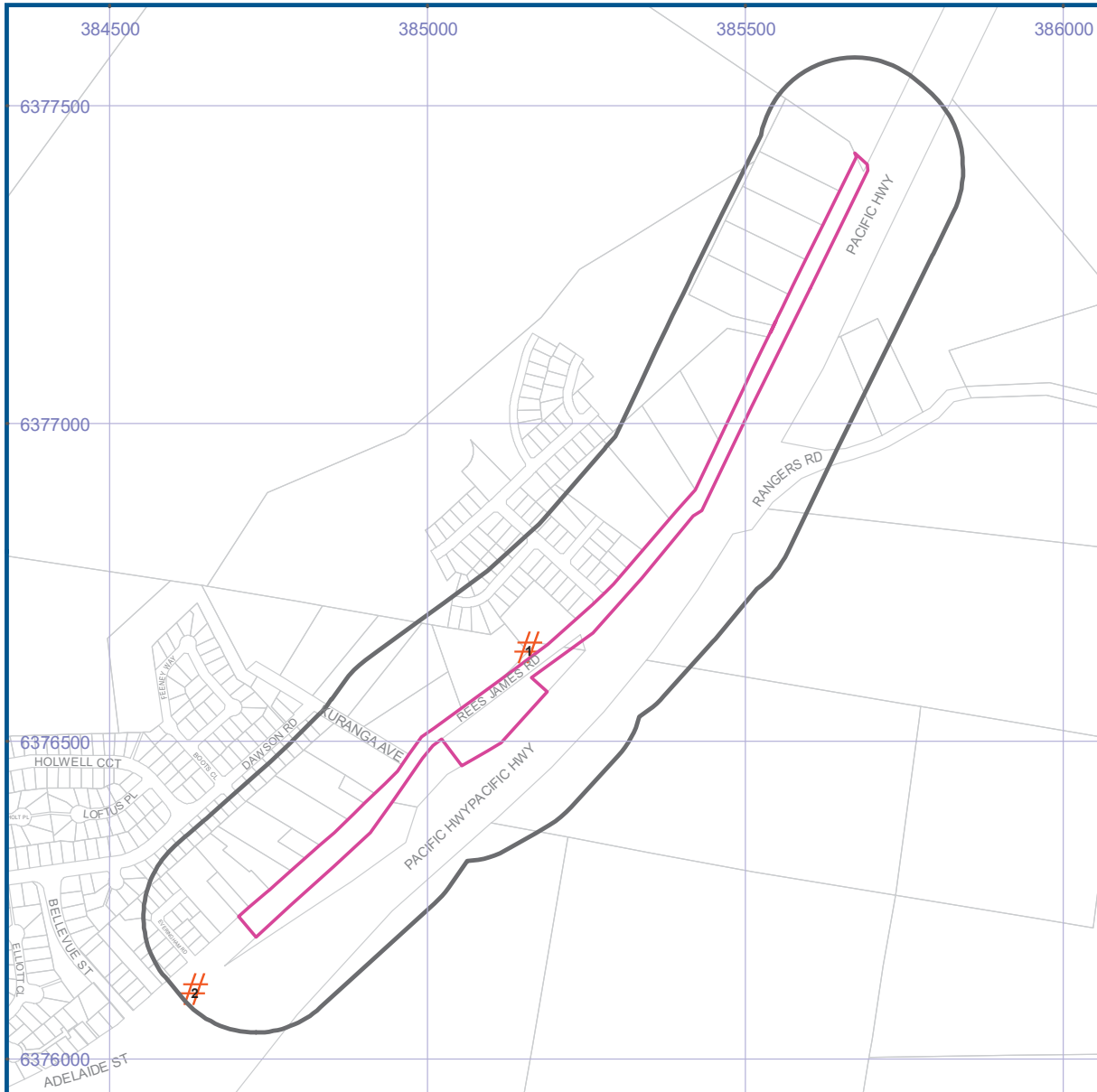
Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
2	CAMPING GROUNDS &/OR CARAVAN PARKS.	Mhaven Caravan Park., Pacific Hwy Heatherbrae, Raymond Terrace	93697	Road Match	108m
	HARDWARE - RETAIL	Motto Farm Building Supplies Pty Ltd., Pacific Hwy Motto Farm, Raymond Terrace	93816	Road Match	108m
	TIMBER MERCHANTS &/OR SAWMILLERS.	Motto Farm Building Supplies Pty Ltd., Pacific Hwy Motto Farm, Raymond Terrace	93958	Road Match	108m
	MOTELS.	Motto Farm Homestead., Pacific Hwy, Raymond Terrace	93856	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	N R Ma Depot., 189 Pacific Hwy, Raymond Terrace	93880	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	Roadhouse., Pacific Hwy, Raymond Terrace	93871	Road Match	108m
	FISH MERCHANTS - RETAIL.	SandyS Seafood., Pacific Hwy Heatherbrae, Raymond Terrace	93767	Road Match	108m
	MOTELS.	Sleepy Hill Motel., Pacific Hwy, Raymond Terrace	93858	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	Terrace Service Station., Pacific Hwy, Raymond Terrace	93881	Road Match	108m
	ROOF TRUSSES MFRS. &/OR DIST.	Terrace Timber Trusses., Pacific Hwy Heatherbrae, Raymond Terrace	93934	Road Match	108m
	TYRE DEALERS &/OR RETREADERS &/OR VULCANISERS.	Terrace Tyre Service Pty Limited., Pacific Hwy, Raymond Terrace	93963	Road Match	108m
	BUILDERS &/OR BUILDING CONTRACTORS.	Vanreid Industries Pty Ltd., Pacific Hwy Heatherbrae, Raymond Terrace	93675	Road Match	108m
	MOTOR TOWING SERVICES.	Williams River Auto Port., Pacific Hwy, Raymond Terrace	93892	Road Match	108m
	MOTOR GARAGES & SERVICE STATIONS.	Williams River Auto Port., Pacific Hwy, Raymond Terrace	93882	Road Match	108m



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Historical Business Directories





Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace,
NSW 2324 (Part 2)

1982 Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
Property Boundaries © NSW Department Finance, Services & Innovation 2019

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	NOT LISTED	Brown, W. J. & C. D. Transport, Rees James Rd Raymond Terrace	180773	Road Match	0m
2	NOT LISTED	Ambulance Station, Pacific Highway Raymond Terrace	180747	Road Match	108m
	NOT LISTED	Ampol Service Station, Pacific Highway Raymond Terrace	180749	Road Match	108m
	NOT LISTED	Ark Hire, Pacific Highway Raymond Terrace	180754	Road Match	108m
	NOT LISTED	Asset Annexes, Lot 22, Pacific Highway., Motto Farm Raymond Terrace	180755	Road Match	108m
	NOT LISTED	Bessent, P. Autos, Pacific Highway Raymond Terrace	180762	Road Match	108m
	NOT LISTED	Bonetti Upholstery, Pacific Highway Raymond Terrace	180768	Road Match	108m
	NOT LISTED	BP Greenhill Park Service Station, 239 Pacific Highway Raymond Terrace	180770	Road Match	108m
	NOT LISTED	BP Pacific Service Station, Pacific Highway Raymond Terrace	180772	Road Match	108m
	NOT LISTED	C & S Constructions, Gent Engr., Lot 22 Pacific Highway Raymond Terrace	180776	Road Match	108m
	NOT LISTED	Collins, R. R., Mixed Busns., Pacific Highway Raymond Terrace	180785	Road Match	108m
	NOT LISTED	Croese, Greg Pty. Ltd., Tmbr. Mercht., Pacific Highway., Motto Farm Raymond Terrace	180791	Road Match	108m
	NOT LISTED	Edstein, J. J. & Sons, MonmntlMason, Pacific Highway Raymond Terrace	180800	Road Match	108m
	NOT LISTED	Florapark Nursery Pty. Ltd., Pacific Highway Raymond Terrace	180806	Road Match	108m
	NOT LISTED	Golden Top, Take Away Fd., 199 Pacific Highway Raymond Terrace	180812	Road Match	108m
	NOT LISTED	Growers Market, Pacific Highway Raymond Terrace	180815	Road Match	108m
	NOT LISTED	Hunter Valley Caravan Sales, Pacific Highway Raymond Terrace	180825	Road Match	108m

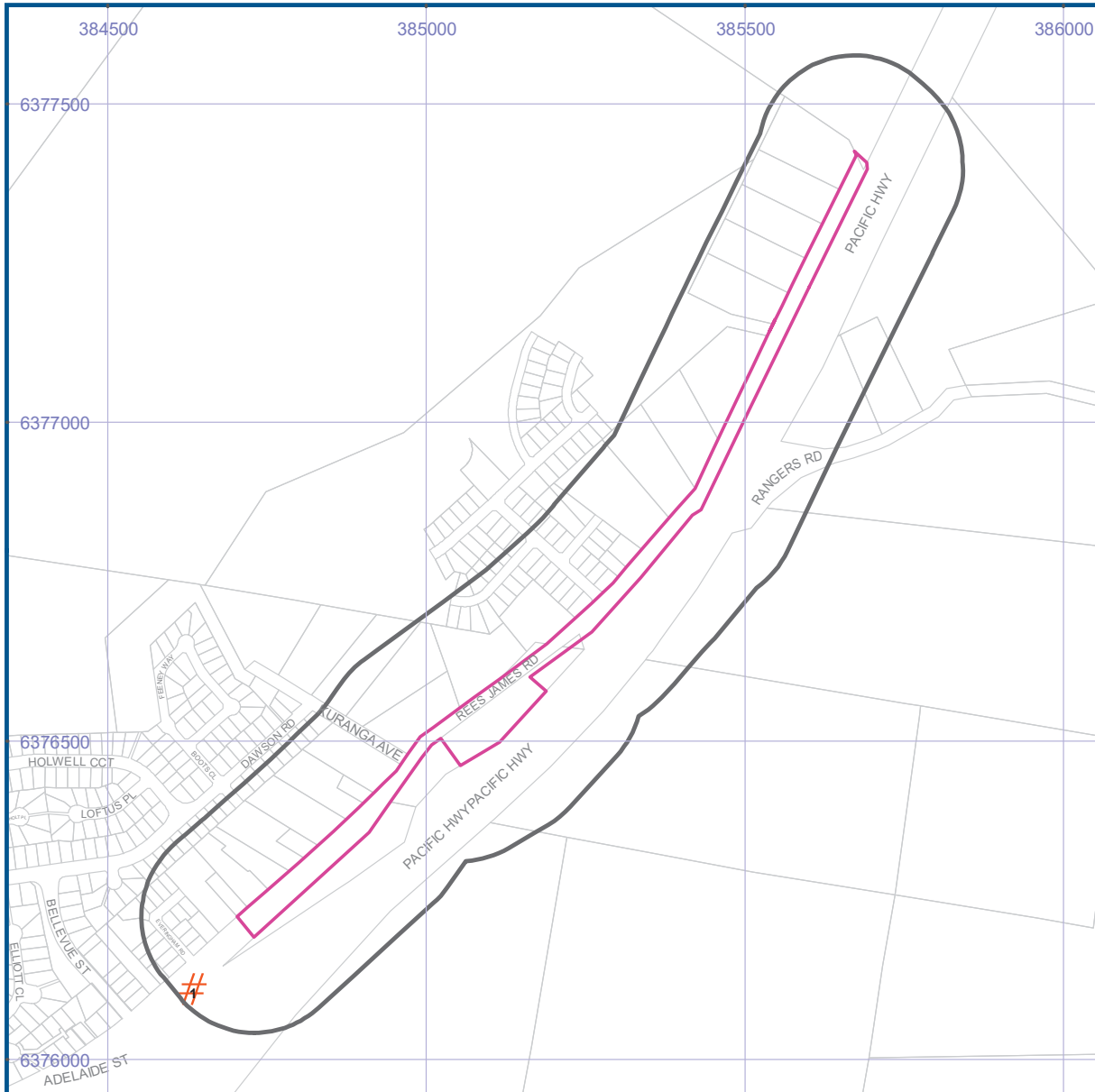
Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
2	NOT LISTED	Leonardo Da Pizza, 201 Pacific Highway Raymond Terrace	180836	Road Match	108m
	NOT LISTED	Mandarin Inn, 199 Pacific Highway Raymond Terrace	180839	Road Match	108m
	NOT LISTED	McIntosh Meats, 199 Pacific Highway Raymond Terrace	180837	Road Match	108m
	NOT LISTED	Mobil Service Station, Pacific Highway Raymond Terrace	180846	Road Match	108m
	NOT LISTED	Motto Farm Building Supplies Pty. Ltd., Pacific Highway Raymond Terrace	180850	Road Match	108m
	NOT LISTED	N.R.M.A. Depot, Pacific Highway., ' Raymond Terrace	180854	Road Match	108m
	NOT LISTED	Overland Caravans, Pacific Highway Raymond Terrace	180861	Road Match	108m
	NOT LISTED	Port Stephens Concrete; Pacific H'way Motto Farm Raymond Terrace	180868	Road Match	108m
	NOT LISTED	Raymond Terrace Roadhouse, Pacific Hwy Raymond Terrace	180890	Road Match	108m
	NOT LISTED	Rust Rid Hunter Valley, Pacific Highway Raymond Terrace	180896	Road Match	108m
	NOT LISTED	Shortland, L. L., Dr., Pacific Highway Raymond Terrace	180902	Road Match	108m
	NOT LISTED	Sleepy Hill Motel, Pacific Highway Raymond Terrace	180905	Road Match	108m
	NOT LISTED	Terrace Automotive Repairs, Pacific Highway Raymond Terrace	180916	Road Match	108m
	NOT LISTED	Terrace Colonial Motel, The, 130 Pacific Highway., - Raymond Terrace	180920	Road Match	108m
	NOT LISTED	Terrace Tavern, Pacific Highway Raymond Terrace	180930	Road Match	108m
	NOT LISTED	Terrace Toyota, Pacific Highway Raymond Terrace	180932	Road Match	108m
	NOT LISTED	Terrace Tyre Service Pty. Limited, 'Pacific Highway Raymond Terrace	180933	Road Match	108m
	NOT LISTED	Total Service Station. Pacific Highway Raymond Terrace	180936	Road Match	108m
	NOT LISTED	Williams River Auto Port, Pacific Highway., Raymond Terrace	180946	Road Match	108m
	NOT LISTED	Young & Green Pty. Ltd., Mtr.Dir., Pacific Highway Raymond Terrace	180952	Road Match	108m




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Historical Business Directories





Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace,
NSW 2324 (Part 2)

1970 Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
Property Boundaries © NSW Department Finance, Services & Innovation 2019

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Ampol Service Station, Pacific Hghwy., Raymond Terrace	624028	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	B.P. Green Hill Park Service Station, 243 Pacific Hghwy., Raymond Terrace	624029	Road Match	108m
	MIXED BUSINESSES	Bellhavan Caravan Park, Pacific Hghwy., Raymond Terrace	624011	Road Match	108m
	CAMPING GROUNDS & CARAVAN PARKS	Bellhaven Caravan Park, Pacific Hghwy., Raymond Terrace	623935	Road Match	108m
	BUILDERS & CONTRACTORS	Boots, A. C. L., 175 Pacific Hghwy., Raymond Terrace	623922	Road Match	108m
	FUNERAL DIRECTORS	Boots, A. C. L., 175 Pacific Hghwy., Raymond Terrace	623962	Road Match	108m
	JOINERY MANUFACTURERS	Boots, A. C. L., 175 Pacific Hghwy., Raymond Terrace	623994	Road Match	108m
	PAINTERS, PAPERHANGERS & DECORATORS	Boots, A. C. L., 175 Pacific Hghwy., Raymond Terrace	624038	Road Match	108m
	CARRIERS & CARTAGE CONTRACTORS	Brown, W., Pacific Hghwy., Raymond Terrace	623937	Road Match	108m
	ROAD TRANSPORT SERVICES-INTERSTATE	Brown, W., Pacific Hghwy., Raymond Terrace	624050	Road Match	108m
	MONUMENTAL MASONS	Edstein, J. J. & Sons, Pacific Hghwy., Raymond Terrace	624016	Road Match	108m
	STONE MASONS	Edstein, J. J. & Sons, Pacific Hghwy., Raymond Terrace	624061	Road Match	108m
	FLORISTS-RETAIL	Flora Park Nurseries, Pacific Hghwy., Raymond Terrace	623959	Road Match	108m
	NURSERYMEN	Flora Park Nurseries, Pacific Hghwy., Raymond Terrace	624036	Road Match	108m
	MIXED BUSINESSES	Heatherbrae Store, Pacific Hghwy., Raymond Terrace	624012	Road Match	108m
	FRUITERERS & GREENGROCERS	Kiem, J. J. & I. T., 199 Pacific Hghwy., Raymond Terrace	623961	Road Match	108m

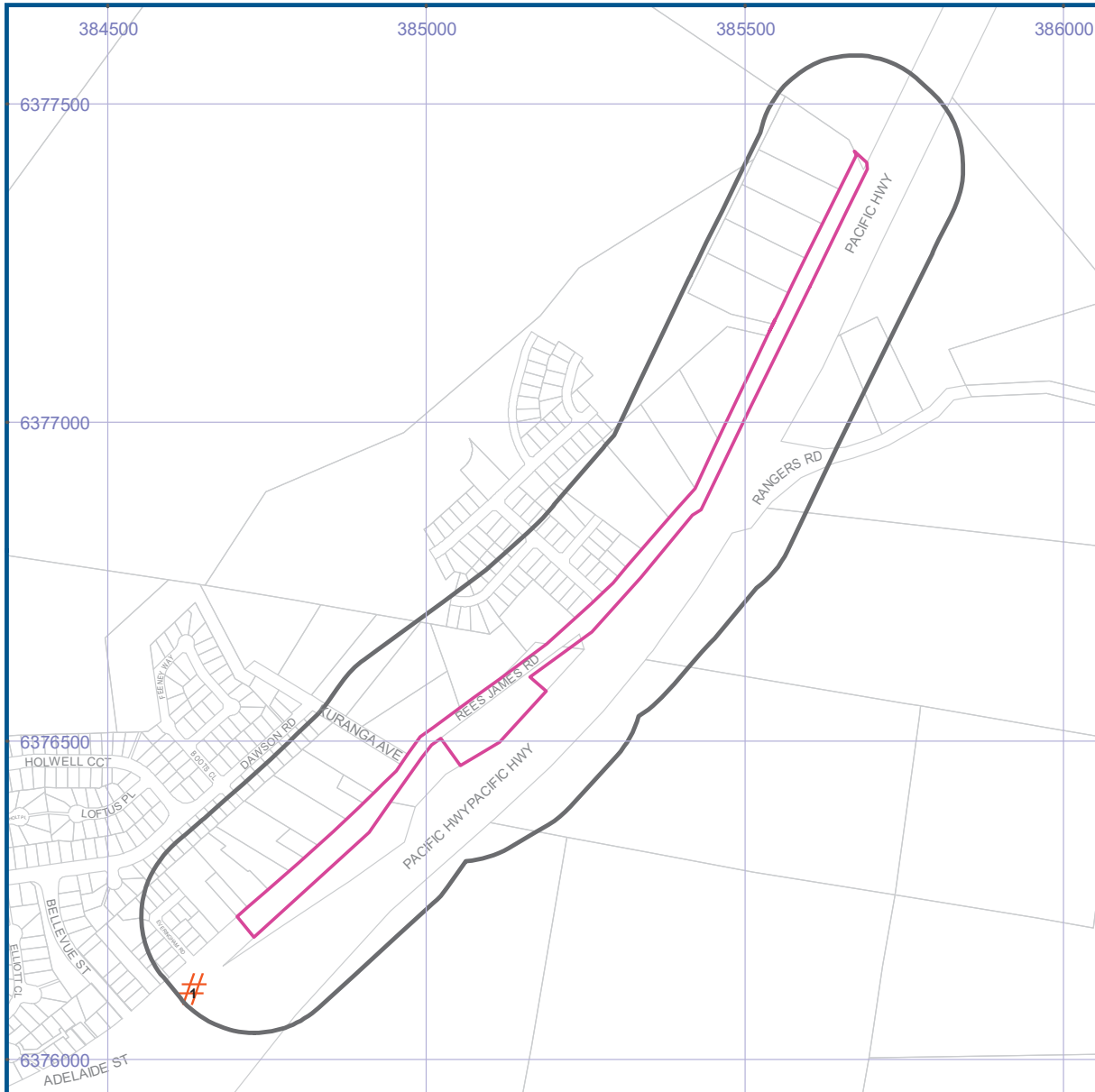
Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Kime & Stephen Pty. Ltd., Pacific Hghwy., Raymond Terrace	624019	Road Match	108m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Kime & Stephen Pty. Ltd., Pacific Hghwy., Raymond Terrace	624021	Road Match	108m
	MOTOR GARAGES & ENGINEERS	Kime & Stephen Pty. Ltd., Pacific Hghwy., Raymond Terrace	624022	Road Match	108m
	MOTOR TOWING SERVICES	Kime & Stephen Pty. Ltd., Pacific Hghwy., Raymond Terrace	624033	Road Match	108m
	GOVERNMENT DEPARTMENTS	Post Office, Pacific Hghwy., Raymond Terrace	623967	Road Match	108m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Public School, Pacific Hghwy., Raymond Terrace	624053	Road Match	108m
	CAFES, TEA ROOMS & COFFEE LOUNGES	Raymond Terrace Auto Chef, Pacific Hghwy., Raymond Terrace	623931	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Raymond Terrace Auto Chef, Pacific Hghwy., Raymond Terrace	624031	Road Match	108m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Raymond Terrace High School, Pacific Hghwy., Raymond Terrace	624054	Road Match	108m
	HARDWARE & BUILDERS' SUPPLIES	Raymond Terrace Timber Supply, Pacific Hghwy., Raymond Terrace	623981	Road Match	108m
	TOOL DEALERS-RETAIL	Raymond Terrace Timber Supply, Pacific Hghwy., Raymond Terrace	624069	Road Match	108m
	TIMBER MERCHANTS & SAWMILLERS	Raymond Terrace Timber Supply., Pacific Hghwy., Raymond Terrace	624067	Road Match	108m
	MEDICAL PRACTITIONERS	Shortland, L., Pacific Hghwy., Raymond Terrace	624004	Road Match	108m
	MOTELS	Sleepy Hill Motel, Pacific Hghwy., Raymond Terrace	624017	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Snappy Jack's Auto Port, 149 Pacific Hghwy., Raymond Terrace	624032	Road Match	108m
	MOTELS	Terrace Colonial Motel (The), Pacific Hghwy., Raymond Terrace	624018	Road Match	108m
	BATTERY SALES & SERVICE	Terrace Tyre Service, Pacific Hghwy., Raymond Terrace	623914	Road Match	108m
	TYRE DEALERS, RETREADERS & VULCANIZERS	Terrace Tyre Service, Pacific Hghwy., Raymond Terrace	624071	Road Match	108m
	MOTOR GARAGES & ENGINEERS	Total Raymond Terrace Service Station, Pacific Hghwy., Raymond Terrace	624023	Road Match	108m
	TIMBER MERCHANTS & SAWMILLERS	Treemiller Pty. Ltd., Pacific Hghwy., Raymond Terrace	624068	Road Match	108m
	BUILDERS & CONTRACTORS	Vanreid Industries Pty. Ltd., Pacific Hghwy., Raymond Terrace	623923	Road Match	108m
	HARDWARE & BUILDERS' SUPPLIES	Vanreid Industries Pty. Ltd., Pacific Hghwy., Raymond Terrace	623983	Road Match	108m
	MOTOR GARAGES & ENGINEERS	William's River Auto Port, Pacific Hghwy., Raymond Terrace	624024	Road Match	108m




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Historical Business Directories





Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace,
NSW 2324 (Part 2)

1961 Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
Property Boundaries © NSW Department Finance, Services & Innovation 2019

Historical Business Directories

Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace, NSW 2324 (Part 2)

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
	No records in buffer					

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:

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	MOTOR OIL & SPIRIT DEPOTS	Ampol Petroleum Limited., Pacific Highway., Raymond Terrace	168522	Road Match	108m
	CAMPING GROUNDS & CARAVAN PARKS	Bellhaven Caravan Park, Pacific Highway., Raymond Terrace	168351	Road Match	108m
	BUILDERS & CONTRACTORS	Berthold, A., Pacific Highway., Raymond Terrace	168329	Road Match	108m
	BUILDERS & CONTRACTORS	Boots, A. C. L., 175 Pacific Highway., Raymond Terrace	168330	Road Match	108m
	FUNERAL DIRECTORS	Boots, A. C. L., 175 Pacific Highway., Raymond Terrace	168423	Road Match	108m
	JOINERY MANUFACTURERS	Boots, A. C. L., 175 Pacific Highway., Raymond Terrace	168473	Road Match	108m
	PAINTERS, PAPERHANGERS & DECORATORS	Boots, A. C. L., 175 Pacific Highway., Raymond Terrace	168551	Road Match	108m
	STATIONERS-RETAIL	Coulter Motors Shell Pacific Highway Raymond Terrace, Raymond Terrace	168587	Road Match	108m
	MOTOR GARAGES & ENGINEERS	Coulter Motors, Old Site, Pacific Highway., Raymond Terrace	168518	Road Match	108m
	MOTOR LAUNDRIES	Coulter Motors, Pacific Highway., Raymond Terrace	168521	Road Match	108m
	BATTERY SERVICE STATIONS	Coulter Motors, Pacific Highway., Raymond Terrace	168318	Road Match	108m
	INSURANCE AGENTS	Coulter Motors, Pacific Highway., Raymond Terrace	168466	Road Match	108m
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Coulter Motors, Pacific Highway., Raymond Terrace	168508	Road Match	108m
	MOTOR PAINTERS & PANEL BEATERS	Coulter Motors, Pacific Highway., Raymond Terrace	168526	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Coulter Motors, Pacific Highway., Raymond Terrace	168528	Road Match	108m
	MOTOR TOWING SERVICES	Coulter Motors, Pacific Highway., Raymond Terrace	168535	Road Match	108m

Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	TYRE & TUBE DEALERS	Coulter Motors, Pacific Highway., Raymond Terrace	168606	Road Match	108m
	WELDERS-ELECTRIC &/OR OXY	Coulter Motors, Pacific Highway., Raymond Terrace	168616	Road Match	108m
	NURSERYMEN	Flora Park, Pacific Highway., Raymond Terrace	168541	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Highway Service Station, Pacific Highway, Raymond Terrace	168529	Road Match	108m
	BATTERY SERVICE STATIONS	Highway Service Station, Pacific Highway., Raymond Terrace	168319	Road Match	108m
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Highway Service Station, Pacific Highway., Raymond Terrace	168509	Road Match	108m
	TYRE & TUBE DEALERS	Highway Service Station, Pacific Highway., Raymond Terrace	168607	Road Match	108m
	INSURANCE AGENTS	Kime & Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168469	Road Match	108m
	BATTERY SERVICE STATIONS	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168320	Road Match	108m
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168510	Road Match	108m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168514	Road Match	108m
	MOTOR GARAGES & ENGINEERS	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168519	Road Match	108m
	MOTOR PAINTERS & PANEL BEATERS	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168527	Road Match	108m
	MOTOR TOWING SERVICES	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168536	Road Match	108m
	TYRE & TUBE DEALERS	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168608	Road Match	108m
	WELDERS-ELECTRIC &/OR OXY	Kime and Stephen Pty. Ltd., Pacific Highway., Raymond Terrace	168618	Road Match	108m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Public School, Pacific Highway., Raymond Terrace	168575	Road Match	108m
	MILK & FRUIT JUICE BARS & CONFECTIONERS	Raymond Terrace Auto Port, Pacific Highway., Raymond Terrace	168498	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Raymond Terrace Auto Port, Pacific Highway., Raymond Terrace	168532	Road Match	108m
	TYRE & TUBE DEALERS	Raymond Terrace Auto Port, Pacific Highway., Raymond Terrace	168609	Road Match	108m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Raymond Terrace High School, Pacific Highway., Raymond Terrace	168576	Road Match	108m
	PAINT, VARNISH, OIL & COLOUR MERCHANTS	Raymond Terrace Timber Supply, Pacific Highway., Raymond Terrace	168548	Road Match	108m
	BUILDERS' SUPPLIERS	Raymond Terrace Timber Supply, Pacific, Raymond Terrace	168335	Road Match	108m
	TIMBER MERCHANTS & SAWMILLERS	Raymond Terrace Timber Supply., Pacific Highway., Raymond Terrace	168599	Road Match	108m
	BATTERY SERVICE STATIONS	Shell Auto Port, Pacific Highway., Raymond Terrace	168322	Road Match	108m
	MEDICAL PRACTITIONERS	Shortland, L., Pacific Highway., Raymond Terrace	168489	Road Match	108m
	BATTERY SERVICE STATIONS	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168323	Road Match	108m
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168513	Road Match	108m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168517	Road Match	108m
	MOTOR GARAGES & ENGINEERS	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168520	Road Match	108m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168534	Road Match	108m
	TYRE & TUBE DEALERS	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168612	Road Match	108m

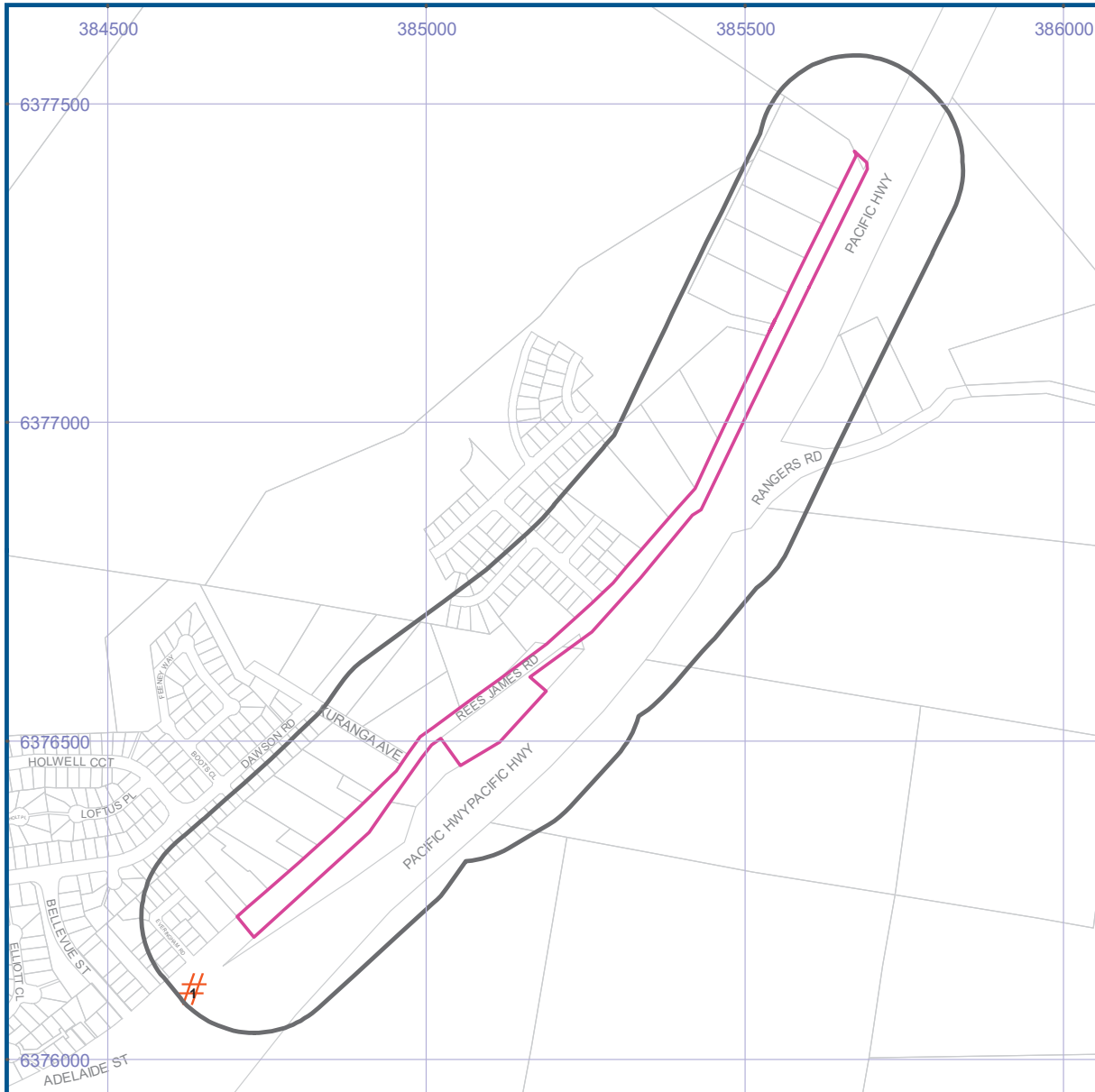
Map Id	Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
1	WELDERS-ELECTRIC &/OR OXY	Terrace Service Station (The), Pacific Highway., Raymond Terrace	168619	Road Match	108m




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Historical Business Directories





Kings Hill-Raymond Terrace Alignment, Pacific Highway, Raymond Terrace,
NSW 2324 (Part 2)

1950 Business Directory Records



-  Site Boundary
-  Buffer 150m
-  Property Boundaries

Projected Coordinate System:
GDA94 MGA Zone 56

-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Data Sources: Universal Business Directories (UBD), derived data, licensed from Hardie Grant.
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