

Preliminary Site Investigation (PSI)

186 Tocal Road, Bolwarra Heights

304000882.100



Prepared for
HGBE Properties Pty Ltd

9 March 2023



now



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Executive Summary

Stantec was commissioned by HGBE Properties Pty Ltd on behalf of Brad Everett (the “Client”, to prepare a Preliminary Site Investigation (PSI) report for the proposed residential subdivision within Lot 21/DP998784 located at 186 Tocal Road, Bolwarra Heights, NSW (the “Site”), with the extent of the area shown on Figure 1, attached in Appendix A.

Stantec were provided with a layout plan of the proposed subdivision prepared by High Definition Design Pty Ltd (Project No. HD360, Drawing No. HD03, Rev, Dated 29.10.2022). Based on review of the plan and discussions with the client, it is understood that the proposed subdivision comprises creation of twelve (12) residential lots (101, 201-210), one (1) internal road, and a drainage basin. The drawing is attached in Appendix A

The PSI included a Site inspection and desktop study of available historical data including a review of the MCC Planning Certificate, historical aerial photographs, and the NSW EPA database. The objectives of the investigation were to assess:

- > The potential for the past and present activities undertaken on and adjacent to the Site to have affected soil and groundwater at the Site.
- > The need for any further assessment or remedial works before definitive conclusions could be made on the suitability of the Site for use.

Based on the available historical data, Stantec Site inspection and public searches, the Site was predominately used for rural residential land use from the 1976 imagery. Prior to this, the Site can be described as undeveloped grassland. There was evidence of light cattle grazing across the Site.

The surrounding areas were originally undeveloped grassland. There was an increase in residential development between the years 1984 and 2010, with the areas to the north, east and south all experiencing growth.

Review of the Maitland Local Environmental Plan (LEP) 2011 Acid Sulfate Soils Risk Map [1] indicates the Site is situated within Class 5 Acid Sulfate Soils. Class 5 indicates that *“works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metres AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk”*.

No potential indicators of Acid Sulfate Soils or Potential Acid Sulfate Soils were noted during the Site walkover undertaken. The conclusions of the preliminary acid sulfate assessment indicate no acid sulfate is present on Site.

In accordance with the State Environmental Planning Policy (Resilience and Hazards) [2], which requires the planning authority to consider whether the Site is suitable for the proposed usage prior to approving and determining a development application, Stantec has undertaken a Preliminary Site Investigation (PSI). Based on the findings of the PSI, Stantec did not identify gross contamination or potentially contaminating activities previously undertaken on Site that would render the Site unsuitable for its proposed use.

Based on Site history and Site inspection, Stantec have identified no indication of gross contaminating activities having been undertaken on Site. The Site can be made suitable for the proposed land use, based on the recommendations below:

- > An unexpected finds protocol should be in place to address any potential contamination (although minor) if encountered during construction phase. An unexpected finds protocol has been prepared and is contained in Appendix C.
- > If potential contamination is encountered, Site works will be ceased, and a suitable environmental consultant will be engaged for assessment as per the unexpected finds protocol.
- > Assessment of existing access tracks and fill pads on Site for either potential reuse or offsite disposal. This can be done during construction phase of the development and under the unexpected finds protocol.
- > Any soil to be excavated and transported off Site for disposal requires classification in accordance with relevant guidelines including NSW EPA Waste Classification Guidelines.

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1 Introduction

This report presents the findings of a Preliminary Site Investigation (PSI) undertaken by Stantec Australia Pty Ltd (Stantec) for a proposed residential development at 186 Tocal Road, Bolwarra Heights, NSW.

1.1 Background

Stantec was commissioned by HGBE Properties Pty Ltd on behalf of Brad Everett (the “Client”, to prepare a Preliminary Site Investigation (PSI) report for the proposed residential subdivision within Lot 21/DP998784 located at 186 Tocal Road, Bolwarra Heights, NSW (the “Site”), with the extent of the area shown on Figure 1, attached in Appendix A.

Stantec were provided with a layout plan of the proposed subdivision prepared by High Definition Design Pty Ltd (Project No. HD360, Drawing No. HD03, Rev, Dated 29.10.2022). Based on review of the plan and discussions with the client, it is understood that the proposed subdivision comprises creation of twelve (12) residential lots (101, 201-210), one (1) internal road, and a drainage basin. The drawing is attached in Appendix A

The PSI included a Site inspection and desktop study of available historical data including a review of the MCC Planning Certificate, historical aerial photographs, and the NSW EPA database. A Lotsearch Report (LS039848_EP). was acquired from Lotsearch Pty Ltd to assist with the PSI which is attached in Appendix B.

The assessment was undertaken with reference to the following guidelines:

- > ‘NSW EPA (2020) guidelines for “Consultants Reporting on Contaminated Land, Contaminated land guidelines’ [3]
- > ‘National Environment Protection Measure (NEPM) for the Assessment of Site Contamination, 1999’ [4]
- > ‘State Environmental Planning Policy (Resilience and Hazards) [2]

1.2 Purpose & Objectives

The purpose of this PSI is to provide the Client with preliminary advice on the contamination status of the Site and subsequent implications for the intended use. The PSI has reviewed current and historical activities undertaken at the Site and provides a preliminary environmental assessment of the potential for soil and/or groundwater contamination to be present on the Site.

The objectives of the PSI are to:

- > To the extent practicable, identify the potential for past or present activities on; and surrounding the Site, to have impacted soil or groundwater at the Site.
- > Identify potential areas and contaminants of concern at the Site.
- > Identify potential receptors of concern and assess the potential for the protected beneficial uses of the land to be impacted due to contamination.
- > To make a preliminary assessment of whether contamination is likely to affect the future use or development of the Site.
- > Assess the requirement, if any, for further environmental investigation to assess or make the Site suitable for the proposed use.

1.3 Scope

1.3.1 PSI

Stantec carried out the following tasks in order to satisfy the purpose and objectives of the PSI assessment.

Defined the Site, Features & Surrounds:

- > Obtained the property title description from a Land-data Property Report.
- > Defined the Site boundaries based on title information, available data and established a Site base plan.
- > Identified the Site features.

- > Defined the topography, surface water drainage of the Site and its proximity to the nearest surface water body.
- > Identified the location of nearby sensitive environments and receptors such as residential, child-care and primary schools, wetlands, streams or rivers.
- > Identified the zoning of the Site under the local Planning Scheme.

Hydrogeology & Groundwater Resource Use

- > Ascertained the potential utilisation of groundwater at and near the Site through a search of the NSW Groundwater Database at NSW Office of Water website.

Review of Public Records on Site History

Review publicly available documents relevant to the Site including:

- > Historical and current maps of the area.
- > Selected historical aerial photos available from the Department of Lands.
- > Undertake review of the NSW EPA Contaminated Lands Register to identify nearby contaminated sites reported to the NSW EPA under section 60 of the CLM (1997).

Site Inspection & Surrounds

- > Confirmed the Site features and identified any visible evidence of fuel storage tanks (above or below ground) and other infrastructure with potential to act as a source of soil and/or groundwater.
- > Confirmed the soil type and looked for evidence of Site cutting and filling.
- > Assessed the surrounding area (to a radius of approximately 500 m) for potential sources of contamination of soil or groundwater at the Site.

Reporting

- > Preparation of this Preliminary Site Investigation (PSI) report to document the assessment activities and results to including findings and recommendations relevant to the objectives of the assessment.
- > Developed a Conceptual Site Model (CSM) for the Site, identifying complete and potential pathways between known and potential sources and receptors. This CSM is incorporated in this investigation report.

2 Site Inspection & Surrounding Environment

2.1 Site Identification

The subject Site details are presented in Table 2-1 below. For Site location, refer to Drawing 1 in Appendix A.

Table 2-1 Site Details

Site Address	186 Tocal Road, Bolwarra Heights, NSW, 2320
Lot Number and Deposited Plan	Lot 21/DP998784
Site Area	Approx. 7.1 ha
Local Government Area	Maitland City Council
Relative Zoning	R5 - Large Lot Residential

2.2 Site Use & Infrastructure

A Site inspection was undertaken by Stantec on the 17th of November 2022 to identify and map salient features of the Site and surrounding area. Site features and observations are detailed in Table 2-2 below with Site Photographs attached in Appendix B.

Table 2-2 Site Features and Observations

Item	Observations
Site use	<ul style="list-style-type: none"> Residential
Weather condition	<ul style="list-style-type: none"> Sunny
Site slope and drainage features	<ul style="list-style-type: none"> Site slope trend typically east at slopes in the order of 6 to 10°, and locally steeper in the eastern portion of the Site. There is a large drainage channel beginning in the centre of the Site, which feeds into a dam located in the eastern portion of the Site.
Nearby water bodies	<ul style="list-style-type: none"> A dam was present in the eastern portion of the Site.
Site surface coverings	<ul style="list-style-type: none"> Predominately grass pasture occupies the majority of the Site. An increase in vegetation is found along the drainage channel on Site, with scattered mature trees in the eastern portion of the Site and surrounding the dwelling in the northwest.
Surface soils	<ul style="list-style-type: none"> Based on visual inspection, surface soils predominately comprised natural Silty Sand materials.
Site cut and fill	<ul style="list-style-type: none"> Minor cut and fill associated with building pads, under the dwelling and sheds on Site. Minor fill operations associated with improving the trafficability and maintenance of the drainage channel in the centre of the Site.
Buildings	<ul style="list-style-type: none"> A residential dwelling was present in the north-western portion of the Site. The dwelling was of brick construction. Two galvanised steel sheds were located on the southern border of the Site. Rural machinery such as tractor and ride on lawn mower stored in sheds. Minor storage of fuels and greases associated with general use of machinery.

Item	Observations
Potential asbestos in building materials	<ul style="list-style-type: none"> ▪ Potential Asbestos Containing Materials (ACM) to be present in the eaves of the dwelling on Site.
Manufacturing, industrial or chemical processes and infrastructure	<ul style="list-style-type: none"> ▪ Not Observed.
Fuel storage tanks (USTs/ASTs)	<ul style="list-style-type: none"> ▪ Not Observed.
Dangerous goods	<ul style="list-style-type: none"> ▪ Not Observed.
Presence of stockpiles, fly tipping or anthropogenic materials	<ul style="list-style-type: none"> ▪ There is the remnants of a gravel stockpile along the western border of the Site, next to an access track into the Site. ▪ Evidence of former stockpiles comprising soil and rock in the centre of the Site. The material appeared to be spread within the vicinity of the drainage line, improving trafficability. No foreign materials were observed in this area. ▪ Scattered foreign materials surrounding the sheds, such as empty metal drums, tyres, galvanised sheeting and scrap metal.
Liquid waste disposal features	<ul style="list-style-type: none"> ▪ Not Observed.
Evidence of previous site contamination investigations	<ul style="list-style-type: none"> ▪ Not Observed.
Evidence of land contamination (staining or odours)	<ul style="list-style-type: none"> ▪ Not observed.
Evidence of groundwater contamination	<ul style="list-style-type: none"> ▪ Not Observed.
Groundwater use	<ul style="list-style-type: none"> ▪ Not Observed.
Vegetation	<ul style="list-style-type: none"> ▪ Predominately grass cover, with some mature trees in the southeast and surrounding the dwelling.
Site fencing	<ul style="list-style-type: none"> ▪ Fencing on Site comprises wire picket and wooden fences.
Additional Notes and Observations	<ul style="list-style-type: none"> ▪ N/A

2.3 Surrounding Environment & Land Uses

The Site is located within a residential area with land uses around the Site detailed in the Table 2-3 below.

Table 2-3 Surrounding Land Use

Direction	Land Use or Activity
North	<ul style="list-style-type: none"> ▪ Large residential lots are found immediately north.
West	<ul style="list-style-type: none"> ▪ Tocal Road is found immediately west, with dense bushland beyond it.
East	<ul style="list-style-type: none"> ▪ Large residential lots are found immediately east.
South	<ul style="list-style-type: none"> ▪ Large residential lots are found immediately south.

The area is serviced by public roads and access to the Site is via Tocal Road, Bolwarra Heights.

3 Published Data

3.1 Regional Geology

With reference to the Lotsearch Report (LS039848_EP), it is found that the Site is underlain by the Branxton Formation (Pmtb). The Branxton Formation is described to comprise of conglomerate, sandstone, siltstone and residual soils derived from the weathering of these deposits. The Lotsearch report is attached in Appendix B.

3.2 Hydrogeology

A search of the NSW Groundwater Database from Department of Primary Industries – Office of Water NSW, found two (2) wells within 500m of the Site, and one (1) more found within 1000m of the Site. The searches are presented in Table 3-1 below and in the Lotsearch Report (LS039848_EP), attached in Appendix B.

Table 3-1 Groundwater Boreholes within 1km of the Site.

NSW Bore ID	Bore Type	Status	Bore Depth (m)	Height Datum	Salinity	Distance from Site
GW062573	Water Supply	Unknown	-	AHD	3001-7000ppm	479m Northwest
GW204724	Water Supply	Functioning	72.0	AHD	-	482m South
GW200540	Water Supply	Unknown	22.2	AHD	3500	629m South

3.3 Acid Sulfate Soils

3.3.1 Maitland Local Environmental Plan (LEP) 2011

Review of the Maitland Local Environmental Plan (LEP) 2011 Acid Sulfate Soils Risk Map [1] indicates the Site is situated within Class 5 Acid Sulfate Soils. Class 5 indicates that *“works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metres AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk”*.

Class 2 Acid Sulfate Soils are mapped 432m east of the Site. Class 2 indicates that *‘Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk’*

3.4 EPA Records Search

3.4.1 Contaminated Land Record of Notice

The Contaminated Land Record of Notice is maintained by the Office of Environment and Heritage (OEH) in accordance with Part 5 of the Contaminated Land Management (CLM) Act 1997 and contains regulatory notices issued by the Environment Protection Authority (EPA) in relation to contaminated sites.

A search of NSW EPA Record of Notices revealed no notices within 1km of Lot 21/DP998784. Search records are attached in Appendix Bas part of the Lotsearch Report (LS039848_EP).

3.4.2 PoEO Public Register

The PoEO Public Register under Section 308 of the Protection of the Environment Operations (PoEO) Act 1997 contains Environment Protection Licences (EPLs), applications and notices issued by the EPA.

The search revealed two (2) licensed activities within a 1km radius of the Site. The search results are presented in Table 3-2 below and attached in Appendix Bas part of the Lotsearch Report (LS039848_EP).

Table 3-2 PoEO Public Register

EPL	Organisation	Name	Address	Activity	Distance from Site
10393	Maitland City Council	All Waterbodies in The Maitland Local Government Area	Maitland	Other activities	On Site
3142	Australian Rail Track Corporation Limited		AUSTRALIAN RAIL TRACK CORPORATION (ARTC) NETWORK, SYDNEY, NSW 2001	Railway systems activities	644m north-west

Furthermore four (4) licensed activities now surrendered were found within 1km of the Site. The search results are presented in Table 3-3 below and attached in Appendix Bas part of the Lotsearch Report (LS039848_EP).

Table 3-3 Licensed activities now surrendered found within 1km of the Site.

License No.	Organization	Location	Status	Date Issued	Activity	Distance from Site
4653	Luhrmann Environment Management Pty Ltd	Waterways Throughout NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	On Site
4838	Robert Orchard	Various Waterways throughout NSW – Sydney NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	On Site
6630	Sydney Weed & Pest Management Pty Ltd	Waterways Throughout NSW, Prospect 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	On Site
12439	State of NSW (Department of Primary Industries – Lands)	Soil Conservation Service, Waterways within the Hunter Valley Flood Mitigation Scheme, Maitland	Surrendered	13/02/2007	Other Activities - Application of Herbicides	341m East

3.4.3 List of NSW Contaminated Sites Notified to the EPA

A search of the List of NSW Contaminated Sites Notified to the EPA didn't identify any contaminated sites within 1 km of the Site. The search results are presented in Appendix B, as part of the Lotsearch Report (LS039848_EP).

3.4.4 National Waste Management Site Database

A search of the list of sites that are part of the National Waste Management Site Database didn't identify any sites within 1km of the Site. The search results are presented in Appendix B, as part of the Lotsearch Report (LS039848_EP).

3.4.5 Delicensed Activities still regulated by the EPA

A search of the list of sites that are part of the Delicensed Activities still regulated by the EPA Database didn't identify any sites within 1km of the Site. The search results are presented in Appendix B, as part of the Lotsearch Report (LS039848_EP).

4 Site History

4.1 General

The Site history comprised review of Lotsearch Report (LS039848_EP), and Section 10.7 planning certificates undertaken for Lot 21/DP998784 as well as available published data and aerial photography review, all attached in Appendix B. The Site history is detailed herein.

4.1.1 Maitland City Council (MCC) Planning Information

A Section 10.7(2) Planning Certificate search was undertaken for Lot 21/DP998784. No notations of potential contamination issues were detailed in regard to Lot21/DP998784.

The complete certificates are attached in Appendix B and summarised in Table 4.1 below.

Table 4-1 Summary of Section 10.7 Planning Certificate for Lot 21/DP998784

Matters Pursuant to Section 10.7(2)	Lot 2 DP 998784
Zoning & Land Use	R5 Large Lot Residential
Development Control Plan (DCP)	Maitland DCP 2011 Applies to this land
Critical Habitat	Land is NOT identified as a critical habitat
Conservation Area & Environmental Heritage	Land is NOT identified as having either Conservation or Environmental Heritage value
Coal Mine Subsidence Act 2017	Land is NOT within a proclaimed Mine Subsidence District
Road Widening & Realignment	Land is NOT affected by road realignment or road widening
Flood Related Development Controls	The land or part of the land is NOT within the flood planning area and subject to flood related development controls.
Land Reserved for Acquisition	Land is NOT subjected to Land Reserved for Acquisition.
Biodiversity Certified Land	Land is NOT biodiversity certified land.
Bushfire Prone Land	Land is identified as being bushfire prone land.
Property Vegetation Plans	Land is NOT subject to a property vegetation plan under the Native Vegetation Act 2003
Loose-fill asbestos information	There are no premises on the subject land listed to contain or have contained loose-fill asbestos insulation.
Contaminated Land	<ul style="list-style-type: none"> i) The land to which this certificate relates is NOT significantly contaminated land within the meaning of the Contaminated Land Management Act 1997. ii) The land to which this certificate relates is NOT subject to a management order within the meaning of the Contaminated Land Management Act 1997. iii) The land to which this certificate relates is NOT the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997. iv) The land to which this certificate relates is NOT the subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997. v) Council has NOT been provided with a site audit statement, within the meaning of the Contaminated Land Management Act 1997, for the land to which this Certificate relates.

4.1.2 Review of the Historical Aerial Photos

Stantec has conducted a review of historical aerial photographs or available aerial imagery, current Site inspection, previous investigations, and knowledge of the area.

A summary of the interpreted Site features is detailed in Table 4-2 and aerial photographs are provided in Lotsearch report attached.

Table 4-2 Aerial Imagery Review

Date	Reference	Observations
1940	B & W Scale: N/A	<p>Onsite:</p> <ul style="list-style-type: none"> The Site predominately comprises grass cover, with scattered young to mature trees. There is what appears to be a drainage channel in the middle of the Site, which feeds to a dam in the eastern portion of the Site. <p>Offsite:</p> <ul style="list-style-type: none"> The majority of the Site is surrounded by undeveloped grass land. Tocal Road is found immediately east of the Site, with a pocket of bushland beyond this. There is another road to the northeast of the Site. There is a large drainage channel located to the northwest of the Site.
1954	Greyscale Scale: N/A	<p>Onsite:</p> <ul style="list-style-type: none"> Generally consistent with the 1940 photograph <p>Offsite:</p> <ul style="list-style-type: none"> Generally consistent with the 1940 photograph, with the exception of a drainage channel and dam is now visible to the south. There is also a dam now visible to the north of the Site.
1967	Greyscale Scale: N/A	<p>Onsite:</p> <ul style="list-style-type: none"> Generally consistent with the 1954 photograph. <p>Offsite:</p> <ul style="list-style-type: none"> Generally consistent with the 1954 photograph.
1976	Greyscale Scale: N/A	<p>Onsite:</p> <ul style="list-style-type: none"> A residential dwelling with associated driveway has been constructed in the north-western portion of the Site. A shed has been constructed on the southern border of the Site, with associated access tracks connecting it to the dwelling. There also appears to be a cattle yard adjacent to the shed. Many of the trees onsite have been cleared, with a cluster of new young trees now present in the southeast. <p>Offsite:</p> <ul style="list-style-type: none"> A residential dwelling and a couple of sheds have been constructed to the north. There are several access tracks to the south of the Site. A few new dams have been constructed to the north, east and south. A road has been constructed to the northwest, off of Tocal Road.
1984	Colour Scale:N/A	<p>Onsite:</p> <ul style="list-style-type: none"> Generally consistent with the 1976 photograph. <p>Offsite:</p> <ul style="list-style-type: none"> There are a few of new structures built to the north. The closest structure to the north appears to have multiple vehicles stored in a hardstand area. Associated gardens/ trees have been planted around the structures. Many trees have been planted immediately north of the Site.
1993	Colour Scale:N/A	<p>Onsite:</p> <ul style="list-style-type: none"> A smaller shed has been constructed adjacent the existing shed. <p>Offsite:</p> <ul style="list-style-type: none"> Construction of a residential development is undergoing to the south, with multiple roads and dwellings now present. The planted trees immediately north have been subject to some clearing.
2001	Colour Scale:N/A	<p>Onsite:</p> <ul style="list-style-type: none"> Generally consistent with the 1993 photograph, with the exception of some minor clearing in the centre of the Site. <p>Offsite:</p> <ul style="list-style-type: none"> Residential development to the south has been finalised, with multiple dwellings and internal roads now present.

		<ul style="list-style-type: none"> ▪ Area to the immediate north has also been subject to residential development, with several dwellings also constructed further north. ▪ Vegetation growth is apparent to the east.
2006	Colour Scale:N/A	<p>Onsite:</p> <ul style="list-style-type: none"> ▪ Appears to have been some disturbance on Site, in the form of vegetated stockpiles in the centre and access tracks in the east. <p>Offsite:</p> <ul style="list-style-type: none"> ▪ Residential development to the south subject to significant vegetation growth. ▪ More residential development to the east and north.
2010	Colour Scale:N/A	<p>Onsite:</p> <ul style="list-style-type: none"> ▪ Generally consistent with the 2006 photograph. <p>Offsite:</p> <ul style="list-style-type: none"> ▪ Surrounding residential dwellings experiencing more development.
2015	Colour Scale: N/A	<p>Onsite:</p> <ul style="list-style-type: none"> ▪ Some minor disturbance apparent in the western portion of the Site. ▪ A fenced area has been constructed in the north-eastern portion of the Site, likely agricultural. <p>Offsite:</p> <ul style="list-style-type: none"> ▪ Generally consistent with the 2010 photograph.
2022	Colour Scale: N/A	<p>Onsite:</p> <ul style="list-style-type: none"> ▪ Cattle noted on the northern border of the Site. ▪ Various materials are present just north of the sheds. <p>Offsite:</p> <ul style="list-style-type: none"> ▪ Generally consistent with the 2015 photograph.

4.2 Summary of Site History

Based on the available historical data, Stantec Site inspection and public searches, the Site was predominately used for rural residential land use from the 1976 imagery. Prior to this, the Site can be described as undeveloped grassland. There was evidence of light cattle grazing across the Site.

The surrounding areas were originally undeveloped grassland. There was an increase in residential development between the years 1984 and 2010, with the areas to the north, east and south all experiencing growth.

5 Areas & Contaminants of Potential Concern

The assessment has identified several potential sources of contamination (and related Contaminants of Potential Concern – COPC), which are summarised in below. Identified areas of concern can be seen approximately depicted on Drawing 1 attached in Appendix A.

Table 5-1 Areas & Contaminants of Potential Concern

Area of Environmental Concern (AoEC)	Site Activity / Potential Source	Contaminants of Potential Concern (CoPC)	Comments	
<i>Onsite Sources</i>				
A	Stockpiles	<ul style="list-style-type: none"> ▪ Potential uncontrolled fill and anthropogenic materials 	<ul style="list-style-type: none"> ▪ Metals, ▪ PAH, TRH, BTEXN ▪ OCP/OPP ▪ Anthropogenic materials ▪ Asbestos 	<ul style="list-style-type: none"> ▪ Remnants of a small-scale stockpiling area was found in the centre of the Site ▪ It is envisaged Stockpiles comprised of soil and rock. ▪ A former remnant Gravel stockpile located on the western boundary of the site. ▪ Potential importation, stockpiles appear to be site won and sourced from localized earthworks within the drainage line area and crossing.
B	Grass Pasture	<ul style="list-style-type: none"> ▪ Cattle grazing ▪ Agricultural activities 	<ul style="list-style-type: none"> ▪ OCP/OPP and metals 	<ul style="list-style-type: none"> ▪ Potential use of pesticides
C	Previous Earthworks	<ul style="list-style-type: none"> ▪ Potential minor cut and fill operations for levelling for animal stable construction ▪ Potential imported fill 	<ul style="list-style-type: none"> ▪ 8 Heavy Metals ▪ PAH, TRH BTEXN ▪ OCP/OPP ▪ Asbestos 	<ul style="list-style-type: none"> ▪ Potential for uncontrolled fill material present onsite for onsite leveling with building footprints ▪ Minor cut operations within the drainage / gully area ▪ Formation of access tracks and driveways
D	Machinery Use	<ul style="list-style-type: none"> ▪ Agricultural Use 	<ul style="list-style-type: none"> ▪ 8 Heavy Metals ▪ PAH, TRH BTEXN 	<ul style="list-style-type: none"> ▪ Potential machinery uses on Site. ▪ Potential isolated leaks and spills.
E	Buildings / Sheds	<ul style="list-style-type: none"> ▪ Potential hazardous building materials and storage of chemicals ▪ Potential leaking and spills with stored machinery 	<ul style="list-style-type: none"> ▪ Potential storage of pesticides, chemicals & fuels. ▪ Metals ▪ ACM ▪ PAH, TRH BTEXN ▪ OCP/OPP 	<ul style="list-style-type: none"> ▪ Sheds were constructed of galvanized sheeting. ▪ Potential ACM in the eaves of the dwelling. ▪ Rural machinery stored in sheds ▪ Small scale storage of fuels and greases for maintenance and operation of mowers and tractors.

Area of Environmental Concern (AoEC)	Site Activity / Potential Source	Contaminants of Potential Concern (CoPC)	Comments	
F	Cattle Pen	<ul style="list-style-type: none"> ▪ Cattle grazing ▪ Agricultural activities ▪ Concrete driveway 	<ul style="list-style-type: none"> ▪ Heavy metals ▪ PAH, TRH, BTEXN ▪ OCP, OPP ▪ Foreign materials 	<ul style="list-style-type: none"> ▪ Potential contamination associated with cattle pen / grazing activities.
<i>Offsite Sources</i>				
-	Tocal Road	<ul style="list-style-type: none"> ▪ Potential contaminant run off from Tocal Road to the west. 	<ul style="list-style-type: none"> ▪ Heavy Metals ▪ PAH, TRH, BETXN. ▪ OCP/OPP 	<ul style="list-style-type: none"> ▪ Tocal Road is on the western border and higher in elevation than the Site.

6 Conceptual Site Model

6.1 Preliminary Conceptual Site Model

Generally, a conceptual Site Model (CSM) provides an assessment of the fate and transport of COPCs relative to site-specific subsurface conditions regarding their potential risk to human health and the environment. The CSM considers site-specific factors including:

- > Source(s) of contamination,
- > Identification of contaminants of potential concern (COPCs) associated with past (and present) source(s),
- > Vertical, lateral, and temporal distribution of COPCs,
- > Site specific lithological information including soil type(s), depth to groundwater, effective porosity, and groundwater flow velocity,
- > Actual or potential receptors considering both current and future land use for both the Site and adjacent properties, and any sensitive ecological receptors.

Based on the information sourced in this report, a preliminary CSM has been developed and is outlined in the Table 6-1 below. Additional details are included in the sections that follow as necessary.

Table 6-1 Preliminary Conceptual Site Model

Conceptual Site Model Element	Description
Site History	<ul style="list-style-type: none"> ▪ Residential land use.
Site Current and Future Use	<ul style="list-style-type: none"> ▪ Residential subdivision.
Site Geology	<ul style="list-style-type: none"> ▪ No intrusive investigation was undertaken during the current assessment. ▪ Based on Site conditions and published data and previous investigations, the subsurface conditions can be generally summarised as natural materials with some isolated filling associated with hardstand area, access tracks and stockpiles.
Site Hydrogeology	<ul style="list-style-type: none"> ▪ Groundwater assessment was not undertaken as part of the scope.
Area of Environmental Concern (AoEC) - Onsite	<ul style="list-style-type: none"> ▪ Potential contamination associated with use of pesticides on Site. ▪ Potential contamination associated with uncontrolled fill on Site. ▪ Potential contaminated soils associated with machinery use on Site. ▪ Potential contaminated soils beneath and surrounding structures on Site. ▪ Potential contaminated soils associated with stockpiles noted across the Site. ▪ Potential contaminated soils associated with the cattle pen on Site.
Media Potentially Impacted	<ul style="list-style-type: none"> ▪ Potentially contaminated surficial soils onsite. ▪ Potentially contaminated underlying soils onsite. ▪ Potentially contaminated fill materials onsite. ▪ Potentially contaminated groundwater under the Site.
Potential Human Receptors	<ul style="list-style-type: none"> ▪ Local residents (onsite). ▪ Local residents and surrounding properties (offsite).
Potential Environmental Receptors	<ul style="list-style-type: none"> ▪ Flora and fauna. ▪ On-site and surrounding soils. ▪ Nearby waterbodies – i.e., dams on and off Site.
Potential Exposure Pathways	<ul style="list-style-type: none"> ▪ Air – inhalation of dusts. ▪ Soil – dermal / direct contact. ▪ Lateral migration via surficial runoff.

6.2 Data Gaps

Based on the inspection, the potential for contamination at this Site is not considered to present a significant constraint on the proposed redevelopment of subject Site. However, it must be appreciated that assessment was limited to review of historical data and observations within the subject Site, with no intrusive sampling undertaken.

- > No intrusive subsurface investigation or sampling spatially and vertically during the current assessment.
- > No laboratory analysis.
- > No groundwater samples collected; however, groundwater contamination is considered unlikely.
- > No sampling / analysis of existing stockpiles or stockpile footprints on Site.
- > No dangerous goods search was undertaken for the Site; however, it is unlikely to be present.

7 Discussions and Conclusions

Stantec have undertaken a Preliminary Site Investigation (PSI) of Lot 21/DP998784, located at 186 Tocal Road, Bolwarra Heights, NSW. The objectives of the investigation were to assess:

- > The potential for past and present activities undertaken on and adjacent to the Site to have affected soil and groundwater at the Site.

The need for any further assessment or remedial works before definitive conclusions could be made on the suitability of the Site for use. Based on the review of the Site history and Site inspection, Stantec identified the following potential sources of contamination at or adjacent the Site as detailed in Table 5-1.

Prior to the year 1940, information on the Site usage is limited. However, from the 1940 photograph, Stantec inferred that the Site was utilised as undeveloped grassland / pastures. This usage continued until 1976, when review of historical data indicated the Site the was used for rural residential land use with light cattle grazing.

The surrounding areas were originally undeveloped grassland. There was an increase in residential development between the years 1984 and 2010, with the areas to the north, east and south all experiencing growth.

During the inspection, no indication of staining or olfactory indication of hydrocarbons, nor fibrous sheeting materials were observed across the surface. Potential asbestos containing materials (ACM) were observed within the eaves of the existing residential dwelling.

Based on the historical review, the 2006 photograph indicated the presence of several small stockpiles within the central portion of the Site, which were no longer visible in the 2015 photograph. The stockpiles were located within the vicinity of the drainage channel.

Observations of the former stockpiled area and placement indicated that the area generally comprised of soil and rock materials, with the absence of foreign materials. Based on the geotechnical inspection, it was considered that the stockpiled materials may have been imported to Site with the materials utilised for the maintenance within the drainage area and to improve trafficability. The stockpile remnants were spread across this area.

Localised cut and fill operations were evident along driveways / access tracks and to form building pads for structures. It is envisaged that the fill materials were likely to be Site won, given the small scale of earthworks.

Anthropogenic materials such as empty drums, tyres, metal fragments, galvanised sheeting and domestic refuse commonly associated with rural properties were observed and were predominately located within the vicinity of the existing sheds. Hand removal of these items can be undertaken during the construction phase of the development. Following removal of the items, visual assessment should be undertaken to confirm removal and suitability.

The existing sheds contained rural machinery such as mowers, a tractor and equipment for maintenance. Small scale storage of fuels and greases were noted and were associated with the maintenance and use of the machinery. No spills or staining were observed within the accessible area of the Site.

Based on the desktop review, no significant potential contamination sources are considered to be low risk and could be dealt with by following the recommendations outlined in section 8.3 below. An unexpected finds protocol has been developed to address any potential contamination if encountered during construction phase and can be found attached in Appendix C.

In accordance with the State Environmental Planning Policy (Resilience and Hazards) [2], which requires the planning authority to consider whether the Site is suitable for the proposed usage prior to approving and determining a development application, Stantec has undertaken a Preliminary Site Investigation (PSI). Based on the findings of the PSI, Stantec did not identify gross contamination or potentially contaminating activities previously undertaken on Site that would render the Site unsuitable for its proposed use as a residential subdivision.

8 Recommendations

Based on the review of the Site history and Site inspection, Stantec identified no indication of gross contaminating activities having been undertaken on or adjacent to the Site. The Site can be made suitable for the proposed land use, based on the recommendations below:

- > An unexpected finds protocol has been developed (Appendix C) to address any potential contamination if encountered during construction phase. Construction should be managed with the unexpected finds protocol in place.
 - If potential contamination is encountered, Site works will be ceased, and suitable environmental consultant will be engaged for assessment as per the unexpected finds protocol.
- > Assessment of any stockpiles & access tracks on Site for either potential reuse or offsite disposal. This can be undertaken during construction phase of the development and under the unexpected finds protocol.
- > Any soil to be excavated and transported offsite for disposal require classification in accordance with the NSW EPA Waste Classification Guidelines.
- > Presence of any sundry items to be assessed for offsite disposal or reuse. This can be undertaken during the construction phase. Following removal of the items, visual assessment should be undertaken to confirm removal and suitability.
- > Prior to demolition or removal of structures, structures should be assessed / surveyed for hazardous materials. If hazardous materials are identified, the materials to be managed accordingly.
- > Geotechnical assessment of the localised potential fill material for onsite reuse, if required.

9 References

- [1] Maitland City Council, "Maitland Local Environmental Plan 2011," in *Acid Sulfate Soils Map - Sheet ASS_004D - Map ID 5050_COM_ASS_004D_020_20110401*, maitland City Council, 1/4/2011.
- [2] NSW Government, Stage of Environmental Planning Policy (Resilience and Hazards), 2021.
- [3] NSW EPA, Consultants reporting on contaminated land guidelines, NSW Environmental Protection Authority, 2020.
- [4] National Environment Protection (Assessment of Site Contamination) Measure 1999, Schedule B1 Guidelines on Investigation Levels for Soil and Groundwater, National Environment Protection Council (NEPC), 16 May 2013.
- [5] NSW Government, "ePlanning Spatial Viewer," 2020. [Online]. Available: <https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address>. [Accessed 2021 July 9].
- [6] Standards Australia, Australian Standard - Guide to the investigation and sampling of sites with potentially contaminated soils - part one: non-volatile and semi-volatile compounds, 2005.
- [7] NSW DEC, Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition), Department of Environment and Conservation NSW, 2017.
- [8] NSW Government, "Minview," 2020. [Online]. Available: <https://minview.geoscience.nsw.gov.au/#/?lon=151.4946&lat=-32.72147&z=18&bm=bm1&l=ge611:n:100,ge610:n:100,ge69:n:100,ge68:n:100,ge67:n:100,ge66:n:100,ge65:n:100,ge64:n:100,ge63:n:100,ge62:n:100,ge61:n:100,ge612:y:100,hi1:n:25,wa1:y:100,ut1:y:50,ad0:y:100>.

APPENDIX

A

SITE DRAWINGS



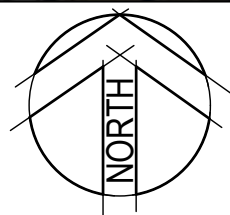
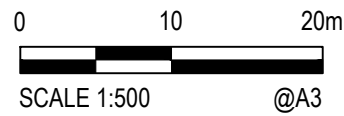
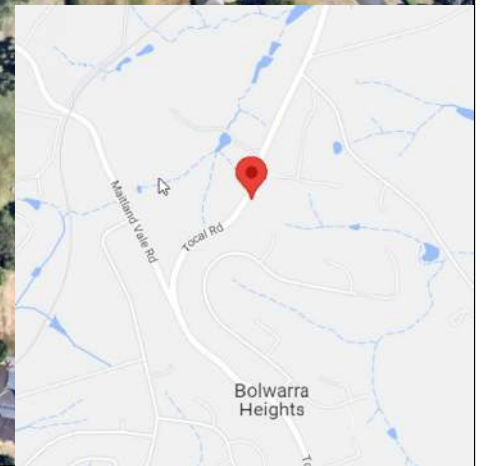
now



DATE PLOTTED: 9 March 2023 11:12 AM BY: BROCK COLLINSON

NOTES:
Image underlay adapted from metromaps aerial imagery.

LEGEND:



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Drawn BC	Date 09/03/2023
Checked	Date
Designed BC	Date 09/03/2023
Verified	Date
Approved	

Client	HGBE Properties Pty Ltd
Project	Preliminary Site Investigation
Title	Areas of Environmental Concern 186 Tocal Road Bolwarra Heights

Status	PRELIMINARY		
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Project Number	304000882	Scale	1:500
Figure Number	1	Size	A3
Revision			1

XREF: CAD File: N:\Projects\8101723_3041304000882_Tocal Road Bolwarra Heights_Data\A3\DrawingSite plan.dwg

186 Tocal Road, Bolwarra Heights

APPENDIX

B

DATA REVIEW

 **Cardno**

now

 **Stantec**



LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 23 Jan 2023 12:19:06

Reference: LS039848 EP

Address: 186 Tocal Road, Bolwarra Heights, NSW 2320

Disclaimer:

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features. You should obtain independent advice before you make any decision based on the information within the report. The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	04/11/2022	04/11/2022	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	22/08/2022	22/08/2022	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	10/01/2023	12/12/2022	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	20/12/2022	20/12/2022	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority	06/12/2022	14/07/2021	Quarterly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	23/08/2022	13/07/2012	Annually	1000m	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	10/01/2023	23/09/2022	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	06/01/2023	06/01/2023	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	06/01/2023	06/01/2023	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	13/12/2022	13/12/2022	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	02/09/2022	02/09/2022	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	16/02/2022	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	20/12/2022	20/12/2022	Monthly	1000m	1	1	2
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	20/12/2022	20/12/2022	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	20/12/2022	20/12/2022	Monthly	1000m	3	3	4
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	2	2
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	0
Points of Interest	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	5
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	15/11/2022	15/11/2022	Quarterly	1000m	0	0	2
State Forest	Forestry Corporation of NSW	16/08/2022	14/08/2022	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	10/02/2022	31/12/2021	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	29/08/2022	19/08/2019	Annually	1000m	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	28/03/2022	23/02/2018	Annually	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	24/01/2022	24/01/2022	Annually	2000m	0	0	3

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
NSW Seamless Geology Single Layer: Rock Units	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	1	1	8
NSW Seamless Geology – Single Layer: Trendlines	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	0	0	0
NSW Seamless Geology – Single Layer: Geological Boundaries and Faults	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	18/08/2022	27/07/2020	Annually	1000m	1	1	4
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	14/12/2022	02/12/2022	Monthly	500m	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	1	1	1
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	09/11/2022	09/11/2022	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	13/12/2022	13/12/2022	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	13/12/2022	13/12/2022	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	13/12/2022	13/12/2022	Monthly	1000m	7	7	8
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	15/11/2021	07/12/2018	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	15/12/2022	02/12/2022	Monthly	1000m	1	2	10
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	18/10/2022	01/07/2022	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	14/12/2022	02/12/2022	Monthly	1000m	0	0	1
Bush Fire Prone Land	NSW Rural Fire Service	23/01/2023	25/10/2022	Weekly	1000m	2	3	4
Lower Hunter and Central Coast Regional Vegetation Survey	NSW Office of Environment & Heritage	28/02/2015	16/11/2009	Annually	1000m	1	2	14
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	28/03/2022	19/03/2020	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	1	1
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	1	1
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	23/01/2023	23/01/2023	Weekly	10000m	-	-	-

Site Diagram

186 Total Road, Bolwarra Heights, NSW 2320



Legend Site Boundary Internal Parcel Boundaries	Total Area: 71139m ² Total Perimeter: 1.32km	Scale:
	Disclaimers: Measurements are approximate only and may have been simplified or smaller lengths removed for readability. Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.	Data Source Aerial Imagery: © Aerometrex Pty Ltd
		Date: 23 January 2023

Contaminated Land

186 Tocal Road, Bolwarra Heights, NSW 2320

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
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

186 Tocal Road, Bolwarra Heights, NSW 2320

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

Waste Management & Liquid Fuel Facilities

186 Tocal Road, Bolwarra Heights, NSW 2320

National Waste Management Site Database

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

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

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

National Liquid Fuel Facilities

National Liquid Fuel Facilities within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
N/A	No records in buffer										

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

PFAS Investigation & Management Programs

186 Tocal Road, Bolwarra Heights, NSW 2320

EPA PFAS Investigation Program

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

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

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

Defence PFAS Investigation Program

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

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

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

Defence PFAS Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

186 Tocal Road, Bolwarra Heights, NSW 2320

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

186 Tocal Road, Bolwarra Heights, NSW 2320

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
- Pasmenco Lead Abatement Strategy Area

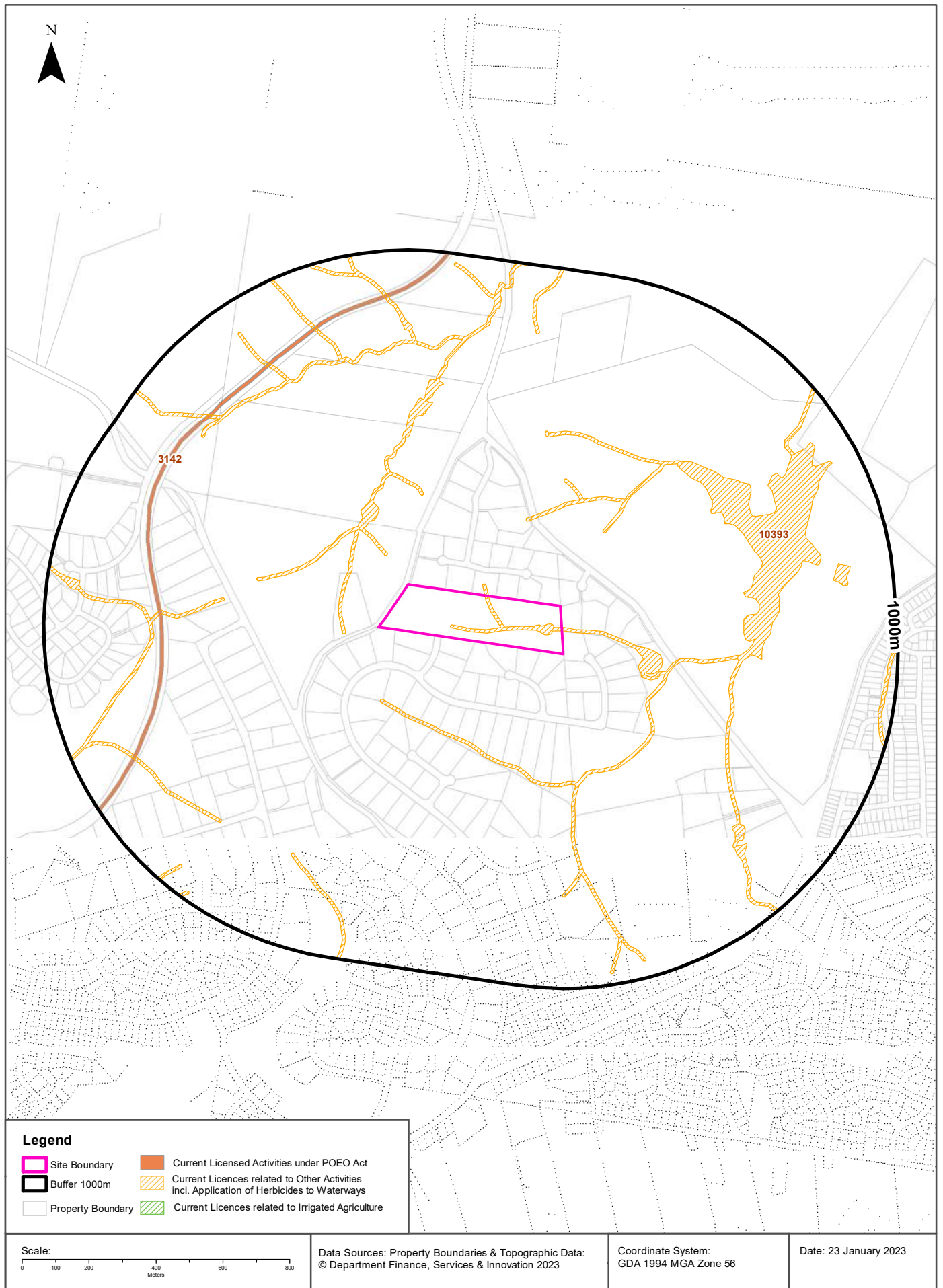
Sites within the dataset buffer:

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

Current EPA Licensed Activities

186 Total Road, Bolwarra Heights, NSW 2320



EPA Activities

186 Tocal Road, Bolwarra Heights, NSW 2320

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
10393	MAITLAND CITY COUNCIL	ALL WATERBODIES IN THE MAITLAND LOCAL GOVERNMENT AREA	.	MAITLAND	Other activities	Network of Features	0m	On-site
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		AUSTRALIAN RAIL TRACK CORPORATION (ARTC) NETWORK, SYDNEY, NSW 2001		Railway systems activities	Network of Features	644m	North West

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

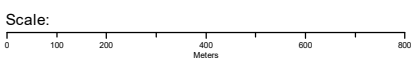
Delicensed & Former Licensed EPA Activities

186 Tocal Road, Bolwarra Heights, NSW 2320



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Delicensed Activities still Regulated by EPA
- Former Licensed/Regulated Activities (revoked or surrendered)
- Surrendered Licences related to Other Activities on Waterways incl. Application of Herbicides



Property Boundary Data Source:
© Department Finance, Services & Innovation 2023

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

EPA Activities

186 Tocal Road, Bolwarra Heights, NSW 2320

Delicensed Activities still regulated by the EPA

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

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

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

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

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

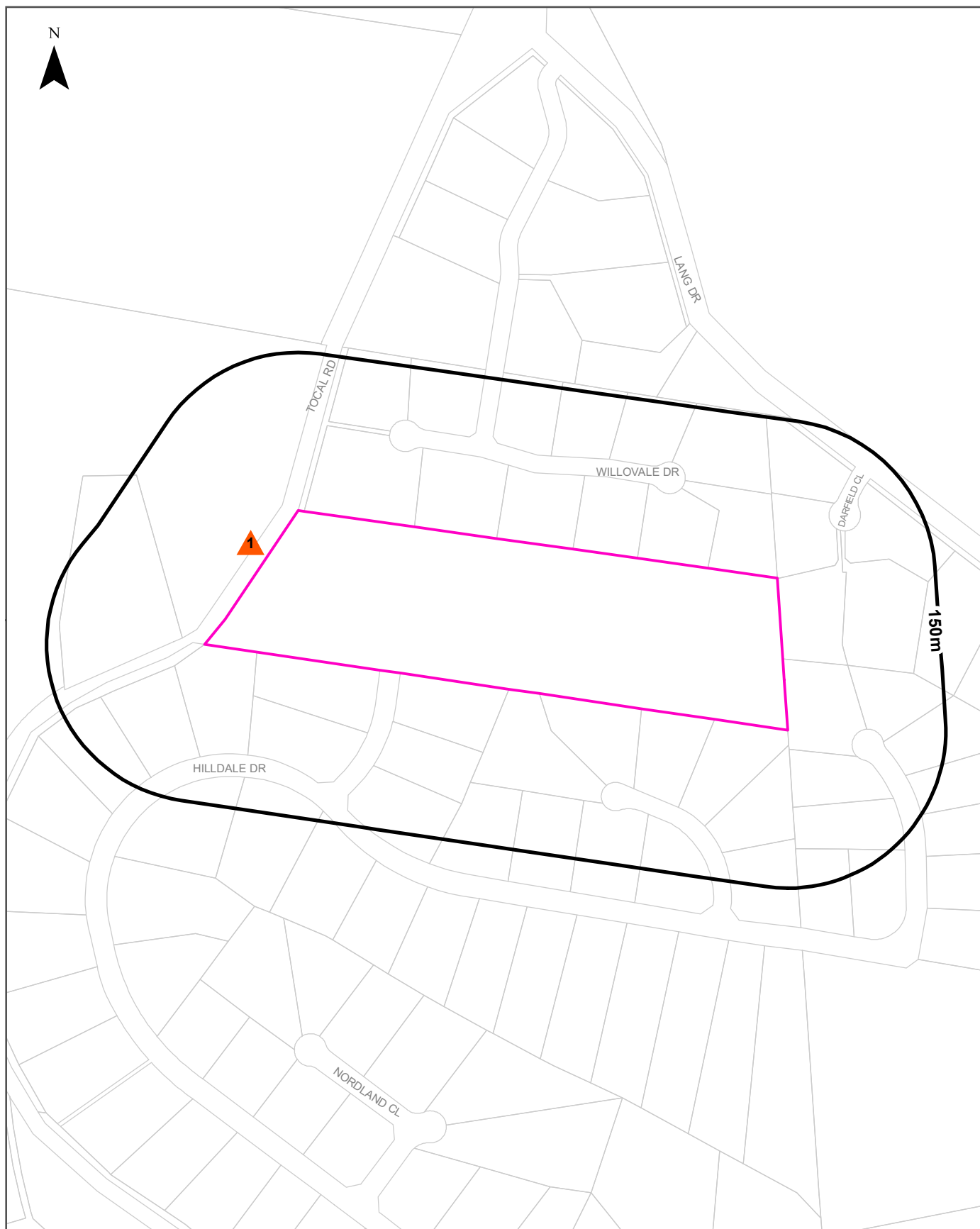
Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
12439	STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands)	Soil Conservation Service, Waterways within the Hunter Valley Flood Mitigation Scheme, MAITLAND	Surrendered	13/02/2007	Other Activities - Application of Herbicides	Network of Features	341m	East

Former Licensed Activities Data Source: Environment Protection Authority

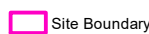






© State of New South Wales through the Environment Protection Authority

Historical Business Directories

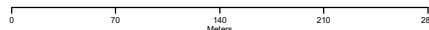
186 Tocal Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m
-  Property Boundary
-  Business directory records mapped to a specific premise
-  Business directory records mapped to a road intersection
-  Business directory records mapped to a road corridor
-  Business directory records mapped to a general area

Scale:



Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

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

Historical Business Directories

186 Tocal Road, Bolwarra Heights, NSW 2320

Business Directory Records 1950-1991 Premise or Road Intersection Matches

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

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

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

Business Directory Records 1950-1991 Road or Area Matches

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

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	BUILDERS & CONTRACTORS	King, C. R., Tocal Rd., Largs	157663	1961	Road Match	0m
	BUILDERS & BUILDING CONTRACTOR	King, C. R., Tocal Rd. Largs	116617	1950	Road Match	0m

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Historical Business Directories

186 Tocal Road, Bolwarra Heights, NSW 2320

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
N/A	No records in buffer						

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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
N/A	No records in buffer					



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

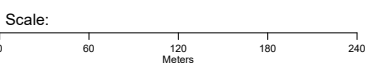
Aerial Imagery 2022

186 Total Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

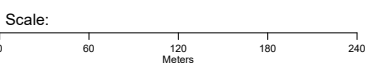
Aerial Imagery 2015

186 Total Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

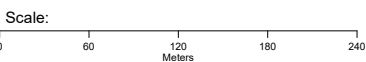
Aerial Imagery 2010

186 Total Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

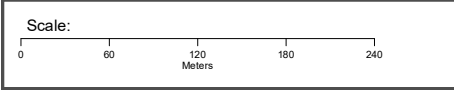
Aerial Imagery 2006

186 Tocal Road, Bolwarra Heights, NSW 2320



Legend

- Site Boundary
- Buffer 150m



Data Source Aerial Imagery: © 2023 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

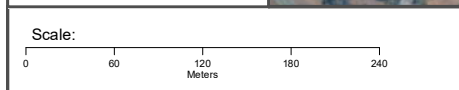
Aerial Imagery 2001

186 Total Road, Bolwarra Heights, NSW 2320



Legend

- Site Boundary
- Buffer 150m



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 January 2023

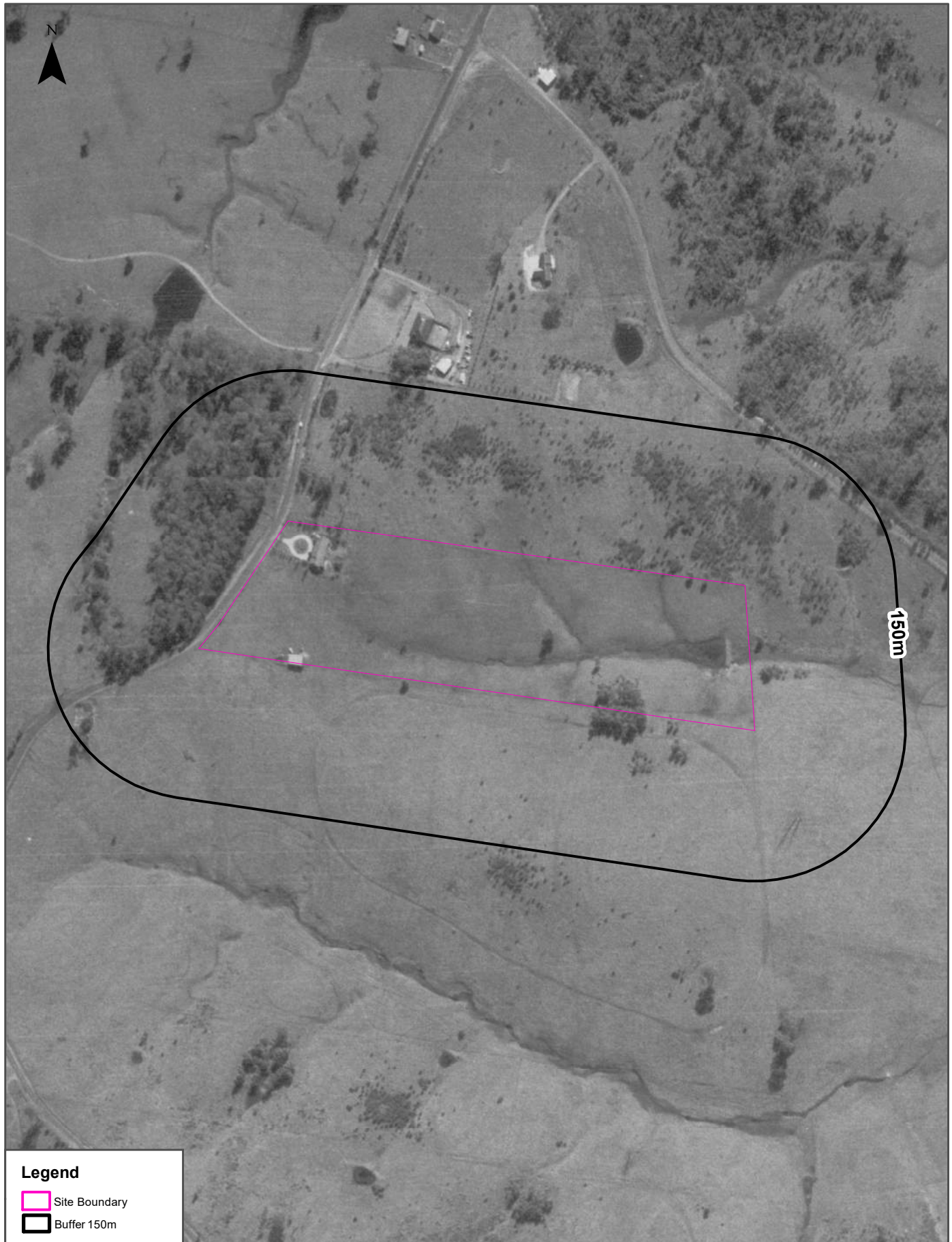
Aerial Imagery 1993

186 Tocal Road, Bolwarra Heights, NSW 2320





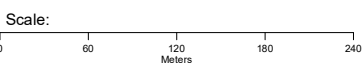
Aerial Imagery 1984

186 Tocal Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



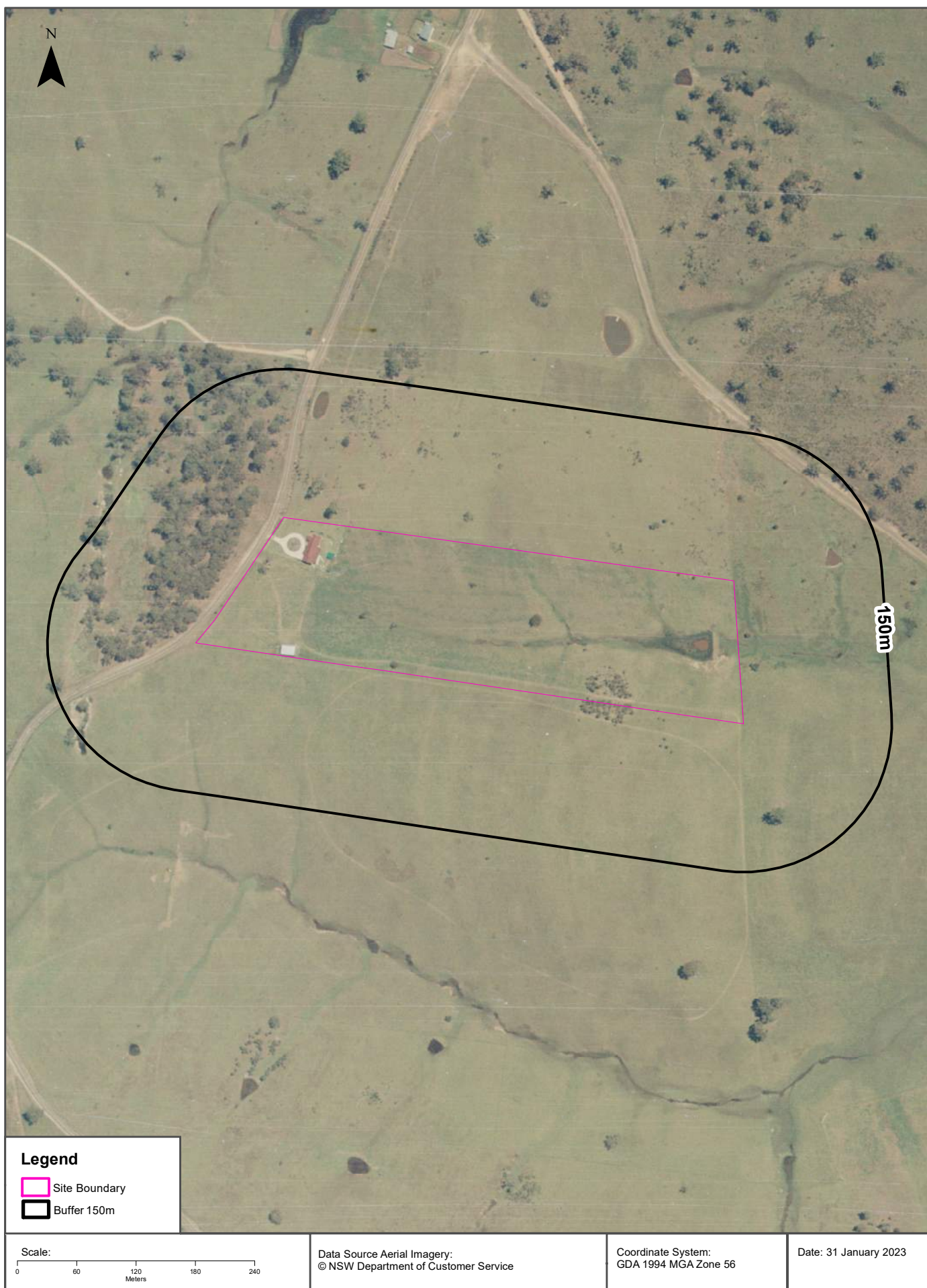
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

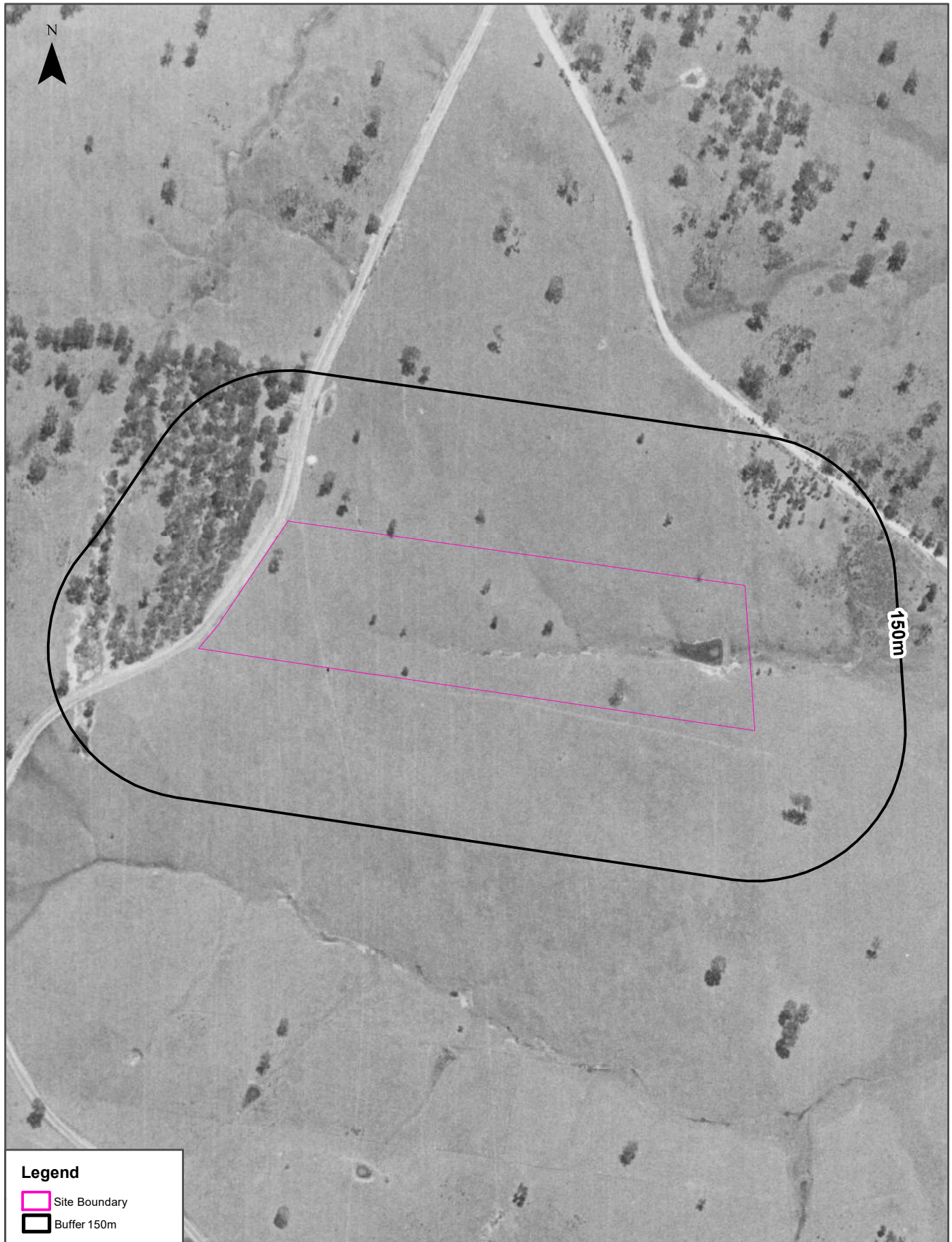
Aerial Imagery 1976

186 Tocal Road, Bolwarra Heights, NSW 2320





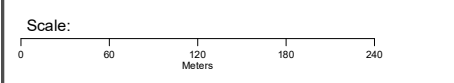
Aerial Imagery 1967

186 Total Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



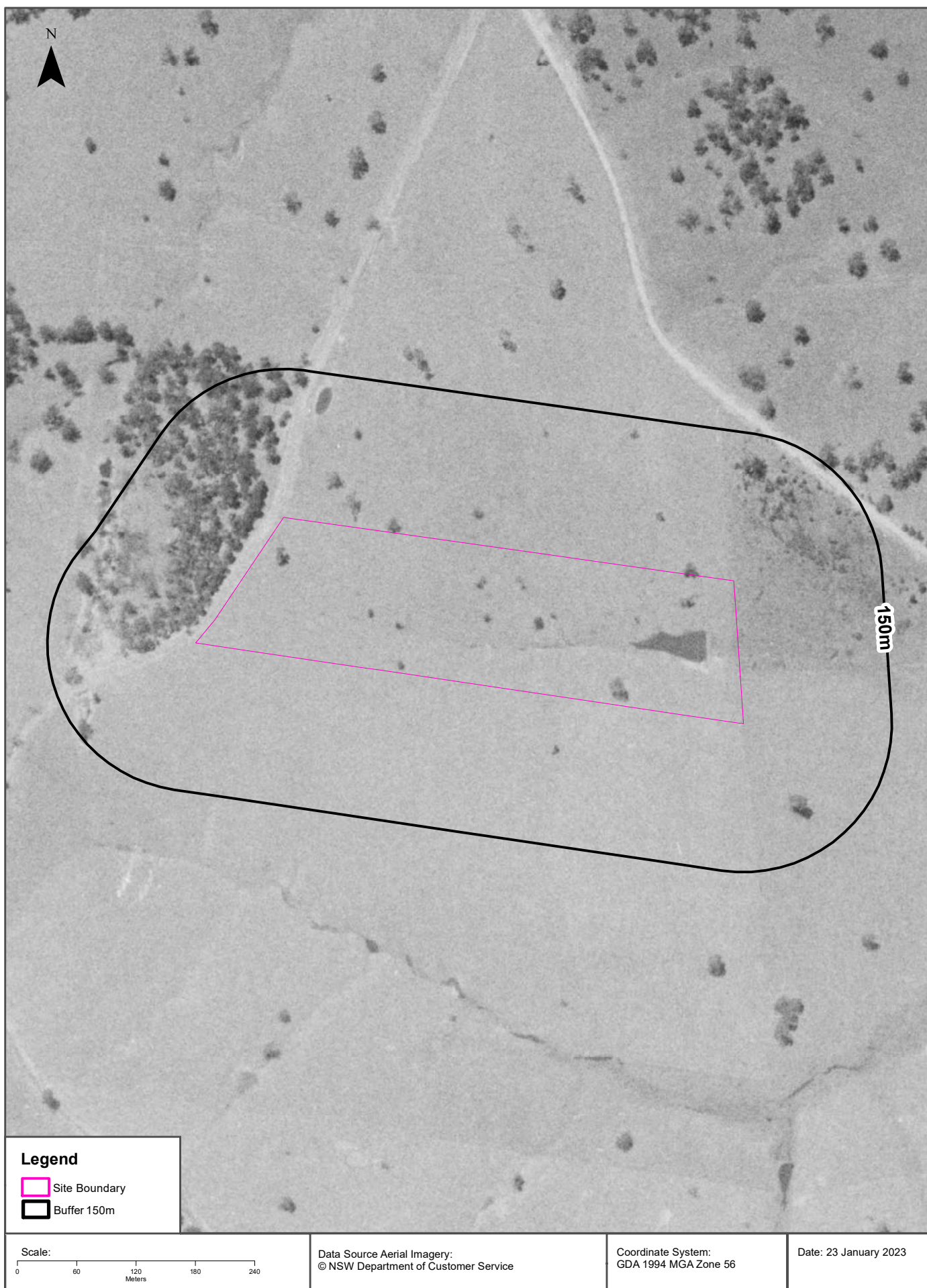
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

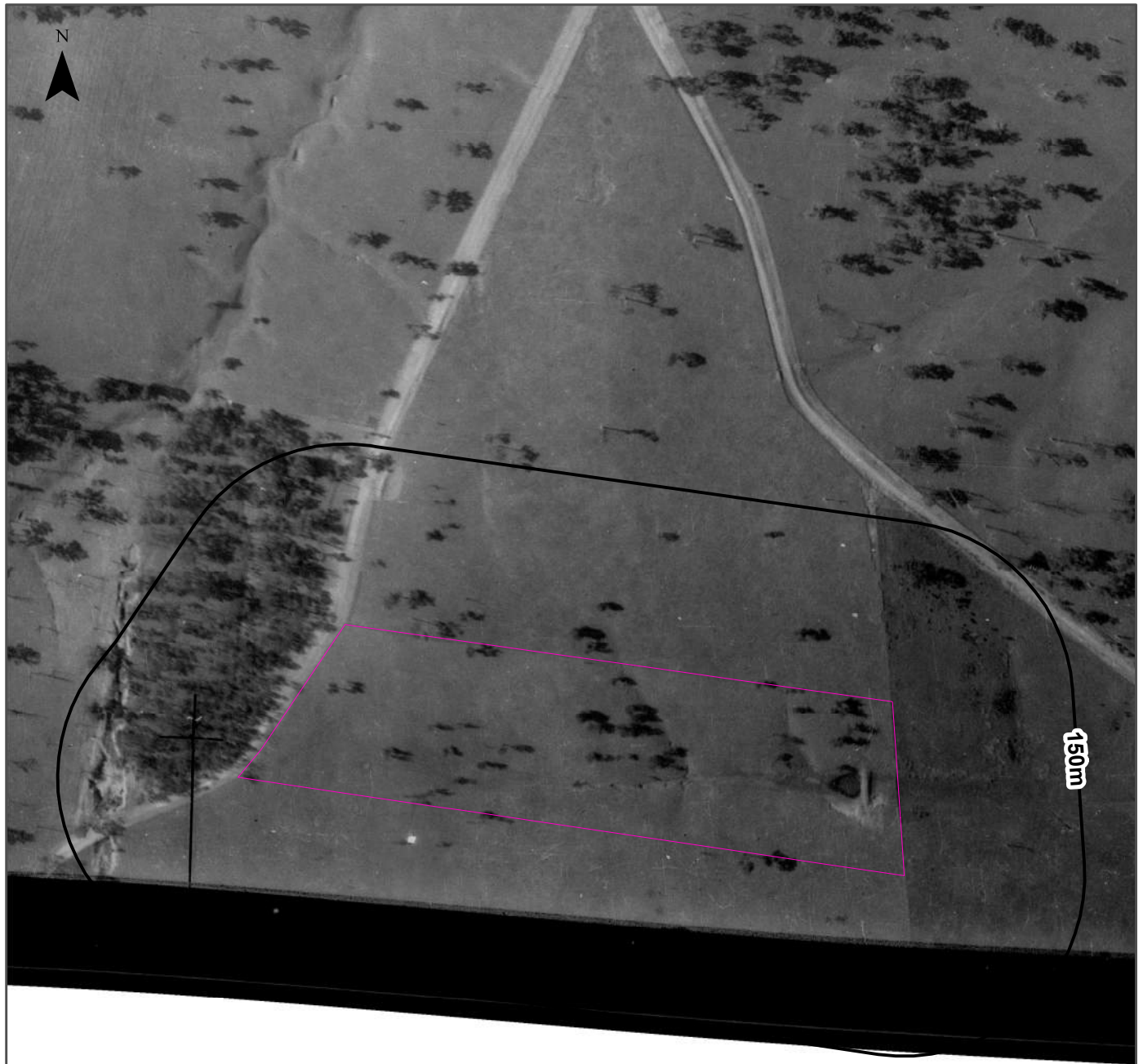
Aerial Imagery 1954

186 Tocal Road, Bolwarra Heights, NSW 2320





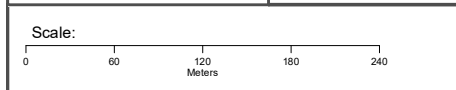
Aerial Imagery 1940

186 Tocal Road, Bolwarra Heights, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



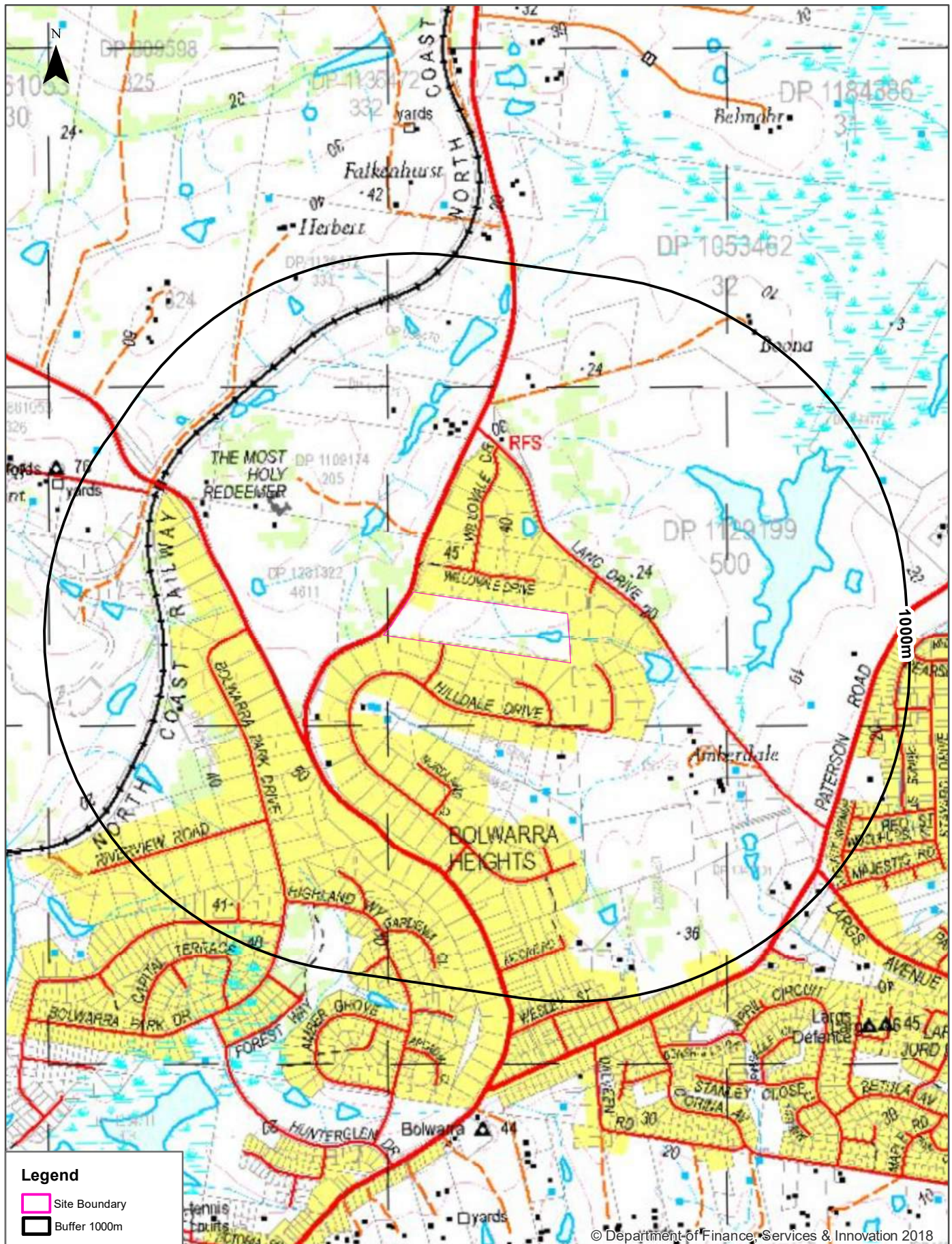
Data Source Aerial Imagery: ©2022 Geoscience Australia

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

Topographic Map 2015

186 Total Road, Bolwarra Heights, NSW 2320



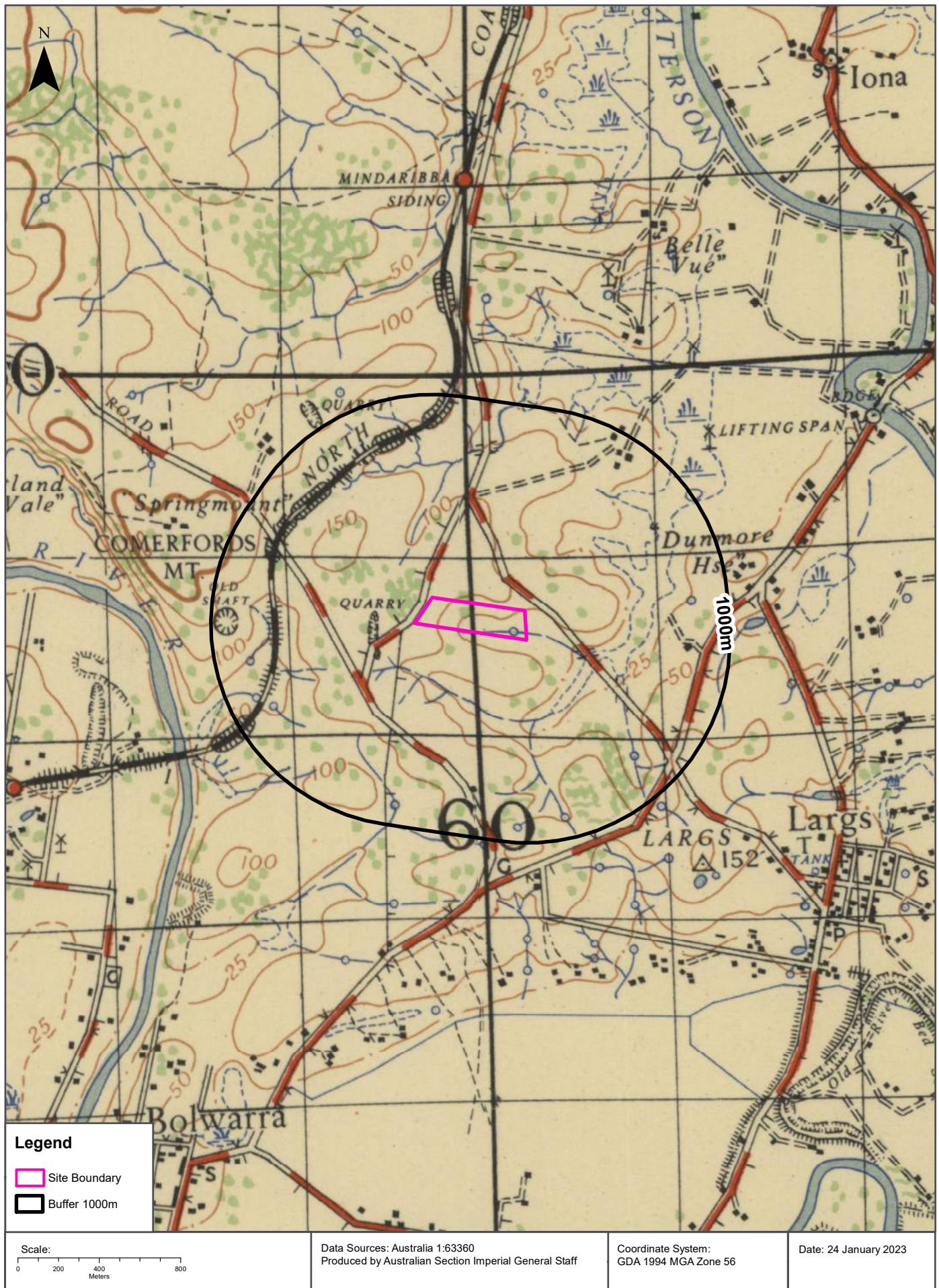
Historical Map 1981

186 Tocal Road, Bolwarra Heights, NSW 2320



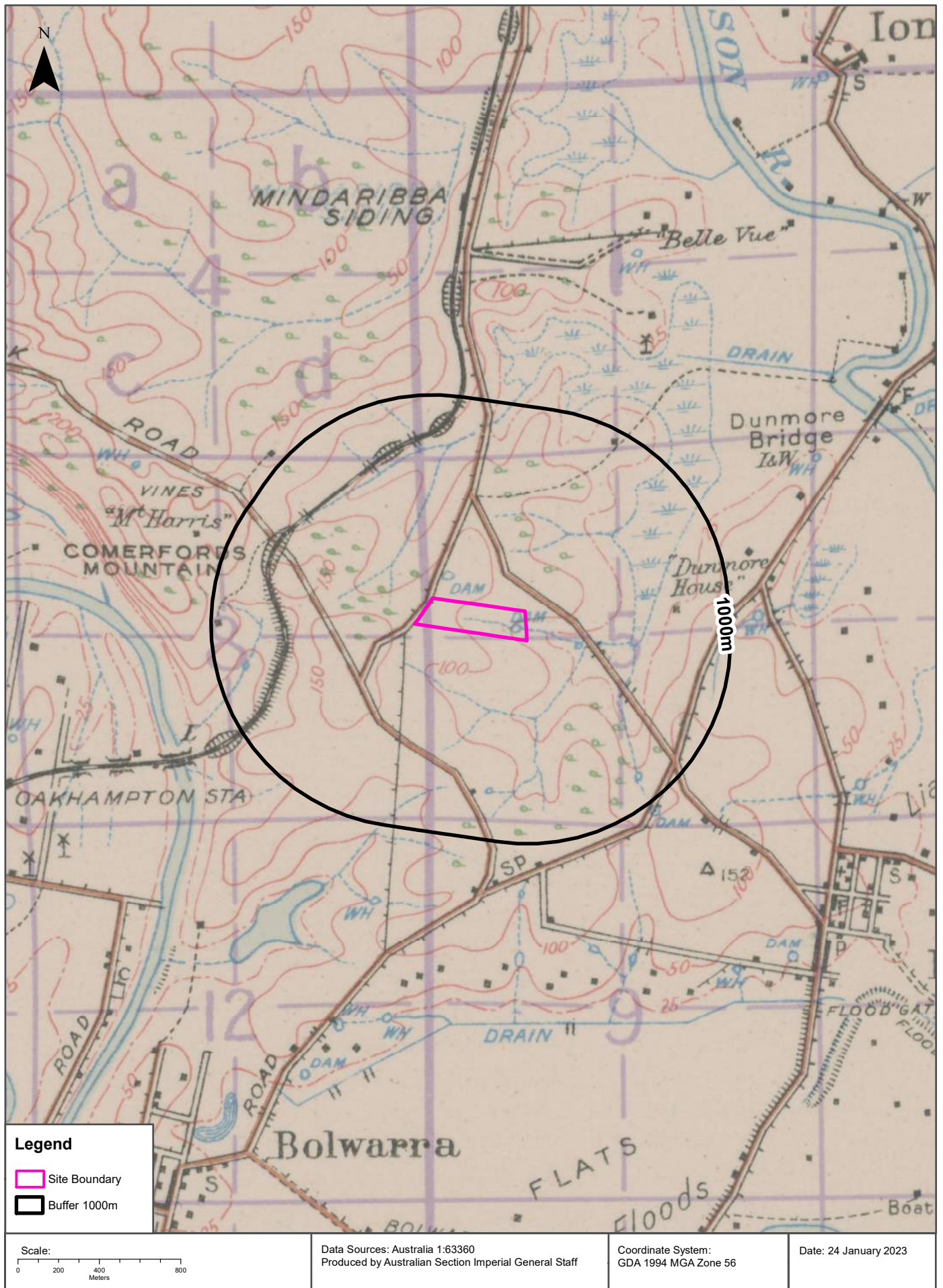
Historical Map c.1942

186 Tocal Road, Bolwarra Heights, NSW 2320



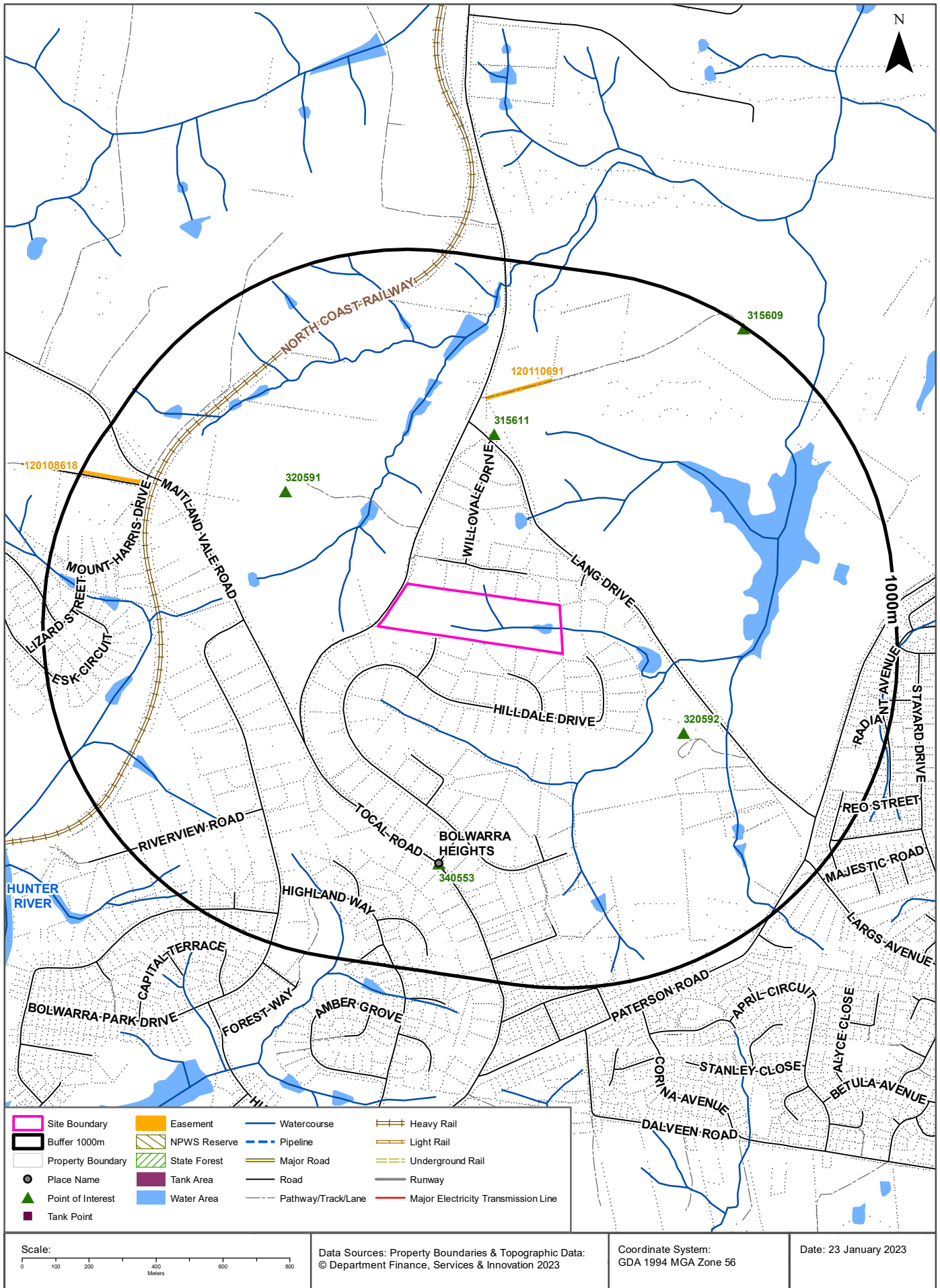
Historical Map c.1925

186 Tocal Road, Bolwarra Heights, NSW 2320



Topographic Features

186 Total Road, Bolwarra Heights, NSW 2320



Topographic Features

186 Tocal Road, Bolwarra Heights, NSW 2320

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
320592	Homestead	AMBERDALE	432m	South East
320591	Convent/Monastery	THE MOST HOLY REDEEMER	456m	North West
315611	Firestation - Bush	BOLWARRA-LARGS RFB	479m	North
340553	Suburb	BOLWARRA HEIGHTS	675m	South
315609	Homestead	BOONA	994m	North East

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

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Topographic Features

186 Tocal Road, Bolwarra Heights, NSW 2320

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?

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

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

Tanks (Points)

What are the Tank Points located within the dataset buffer?

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

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

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

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

Major Easements

What Major Easements exist within the dataset buffer?

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120110691	Primary	Undefined		579m	North
120108618	Primary	Undefined		828m	West

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

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Topographic Features

186 Tocal Road, Bolwarra Heights, NSW 2320

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

National Parks and Wildlife Service Reserves

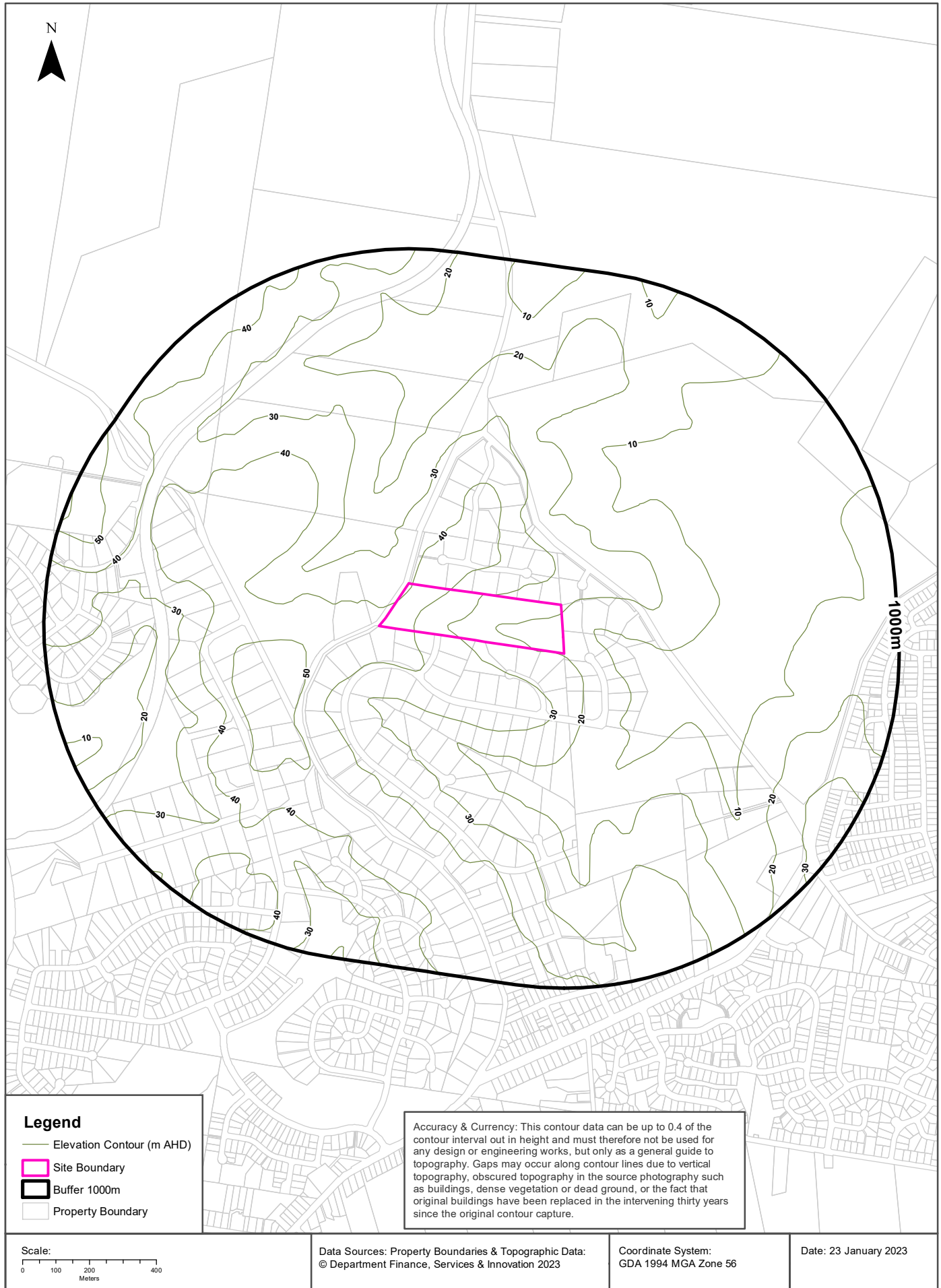
What NPWS Reserves exist within the dataset buffer?

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

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Elevation Contours (m AHD)

186 Total Road, Bolwarra Heights, NSW 2320



Hydrogeology & Groundwater

186 Tocal Road, Bolwarra Heights, NSW 2320

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive highly productive aquifers	0m	On-site

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>

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

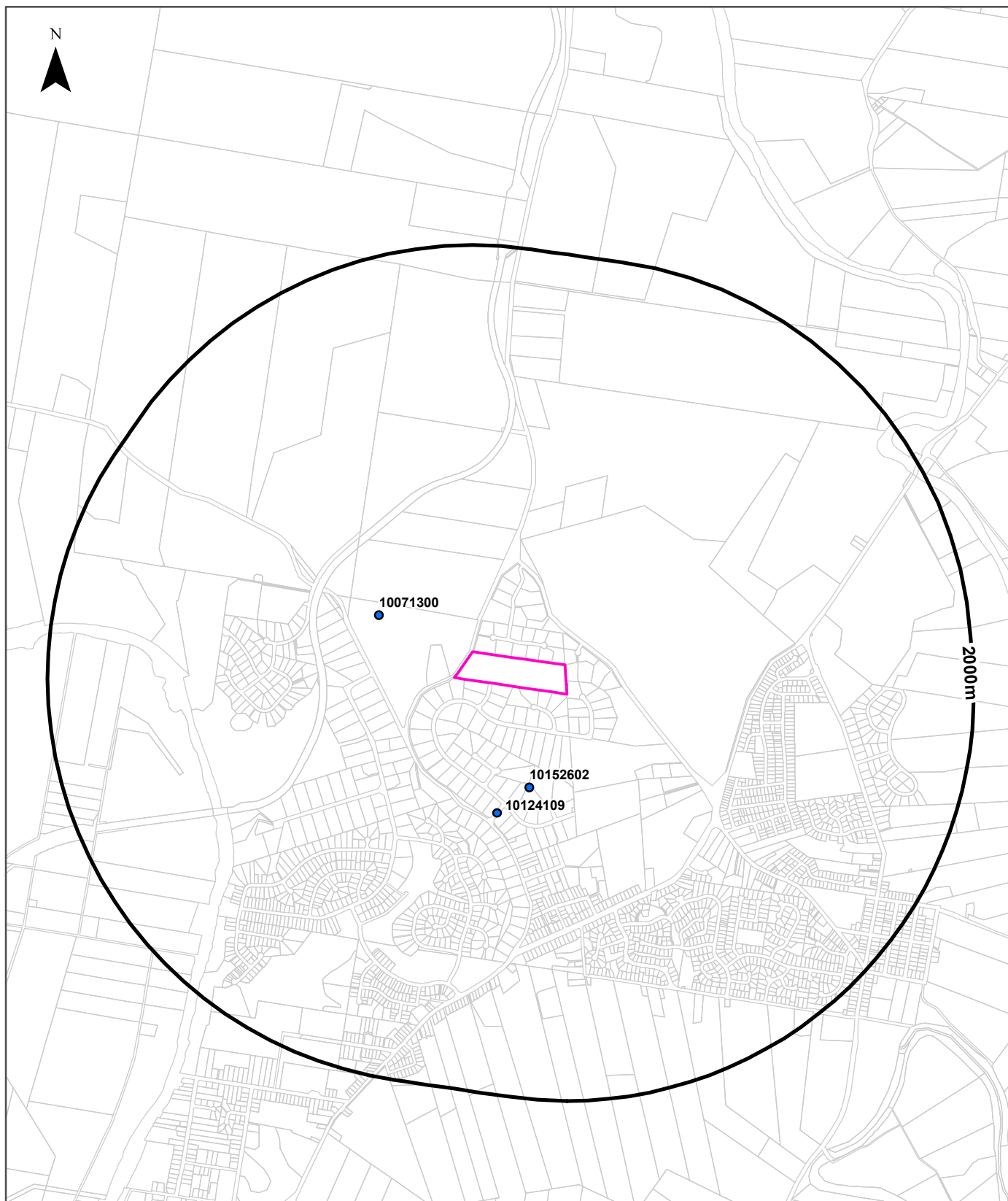
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

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

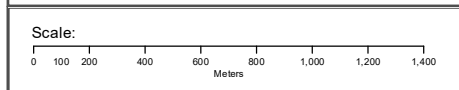
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

186 Total Road, Bolwarra Heights, NSW 2320



Legend		
Site Boundary	Borehole	Monitoring
Buffer 2000m	Commercial and Industrial	Other; Unknown
Property Boundary	Dewatering	Stock and Domestic
	Exploration	Water Supply
	Irrigation	



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

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

Hydrogeology & Groundwater

186 Tocal Road, Bolwarra Heights, NSW 2320

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10071300	GW062573	Water Supply	Unknown	01/04/1986			AHD	3001-7000 ppm			479m	North West
10152602	GW204724	Water Supply	Functioning	07/05/2020	72.00		AHD				482m	South
10124109	GW200540	Water Supply	Unknown	13/03/2002	22.20		AHD	3500	0.725	1.00	629m	South

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

Hydrogeology & Groundwater

186 Tocal Road, Bolwarra Heights, NSW 2320

Driller's Logs

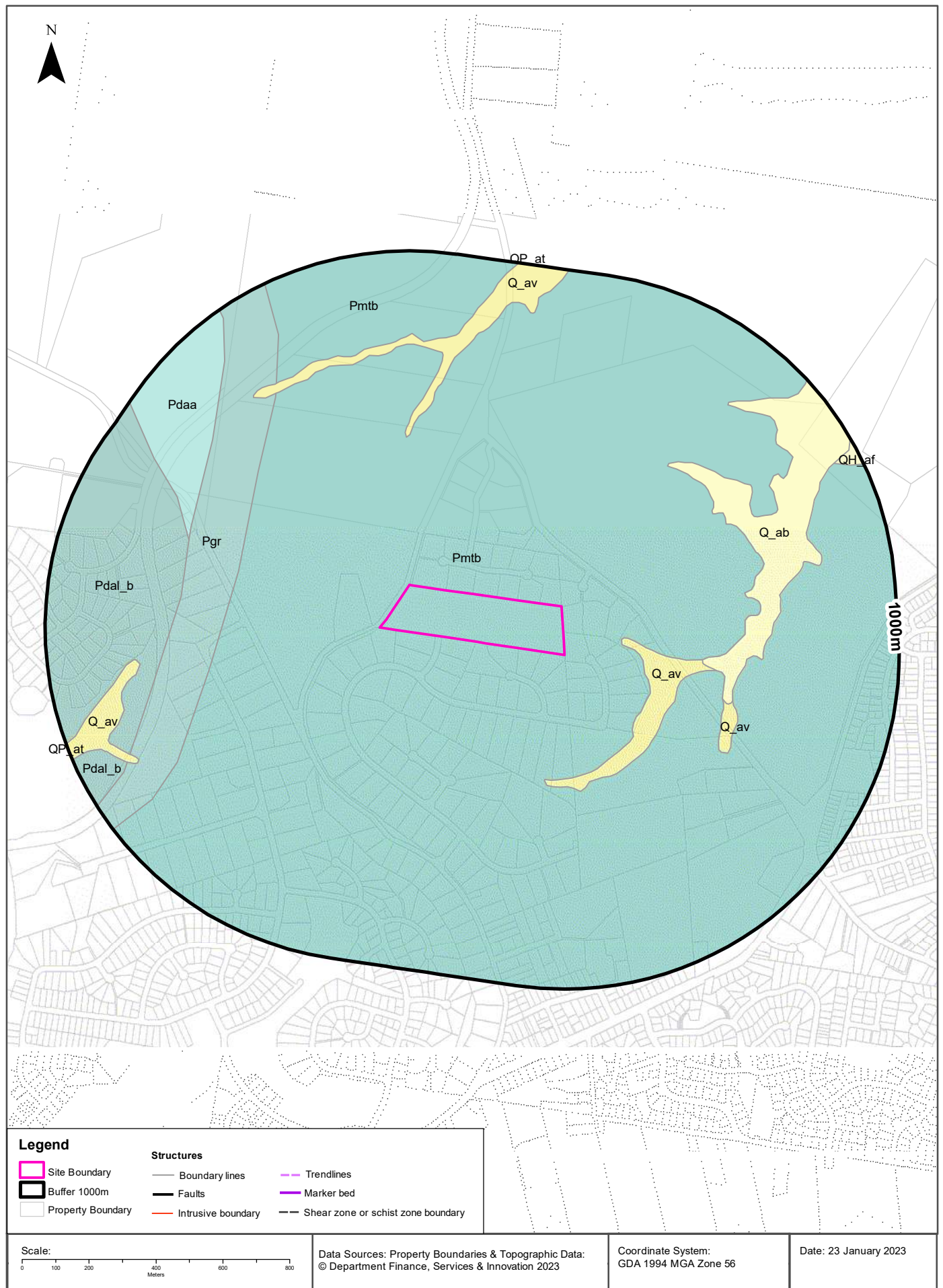
Drill log data relevant to the boreholes within the dataset buffer:

NGIS Bore ID	Drillers Log	Distance	Direction
10071300	0.00m-2.00m Clay 2.00m-45.00m Sandstone Water Supply	479m	North West
10124109	0.00m-0.10m topsoil 0.10m-0.50m clay (moist, brown) 0.50m-1.50m clay (tan) 1.50m-8.00m sandstone (grey and orange layers, approx 0.5, thick) 8.00m-9.00m sandstone (brown-orange) 9.00m-13.00m sandstone (grey) 13.00m-13.20m water cut 13.20m-16.00m sandstone (grey) 16.00m-16.30m water cut 16.30m-18.00m sandstone (grey) 18.00m-21.00m shale (grey) 21.00m-21.40m water cut 21.40m-22.20m shale (grey)	629m	South

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

Geology

186 Total Road, Bolwarra Heights, NSW 2320



Geology

186 Tocal Road, Bolwarra Heights, NSW 2320

Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Pmtb	Branxton Formation	Conglomerate, sandstone, siltstone.	/Maitland Group//Branxton Formation//	Roadian (base) to Roadian (top)	Conglomerate	0m
Q_av	Alluvial valley deposits	Silt, clay, (fluvially deposited) lithic to quartz-lithic sand, gravel.	/Alluvium//Alluvial valley deposits//	Quaternary (base) to Now (top)	Clastic sediment	172m
Q_ab	Alluvial backswamp deposits	Organic-rich mud, peat, silt, clay.	/Alluvium//Alluvial backswamp deposits//	Quaternary (base) to Now (top)	Organic rich sediment	411m
Pgr	Greta Coal Measures	Sandstone, siltstone, pellet claystone, coal, chert, sporadic conglomerate.	/Greta Coal Measures///	Permian (base) to Permian (top)	Sandstone	452m
Pdal_b	Lochinvar Formation - basalt	Amygdaloidal basalt.	/Dalwood Group//Lochinvar Formation/Lochinvar Formation - basalt/	Permian (base) to Permian (top)	Basalt	601m
Pdaa	Allandale Formation	Conglomerate, lithic sandstone.	/Dalwood Group//Allandale Formation//	Permian (base) to Permian (top)	Conglomerate	627m
QH_af	Alluvial floodplain deposits	Silt, very fine- to medium-grained lithic to quartz-rich sand, clay.	/Alluvium//Alluvial floodplain deposits//	Holocene (base) to Now (top)	Clastic sediment	920m
QP_at	Alluvial terrace deposits	Silt, clay, (fluvially-deposited) fine- to medium-grained quartz-lithic sand, polymictic gravel.	/Alluvium//Alluvial terrace deposits//	Quaternary (base) to Now (top)	Clastic sediment	995m

Linear Geological Structures

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

Map ID	Feature Description	Map Sheet Name	Distance
No Features			

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

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW
 Creative Commons 4.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/4.0/au/deed.en>

Naturally Occurring Asbestos Potential

186 Tocal Road, Bolwarra Heights, NSW 2320

Naturally Occurring Asbestos Potential

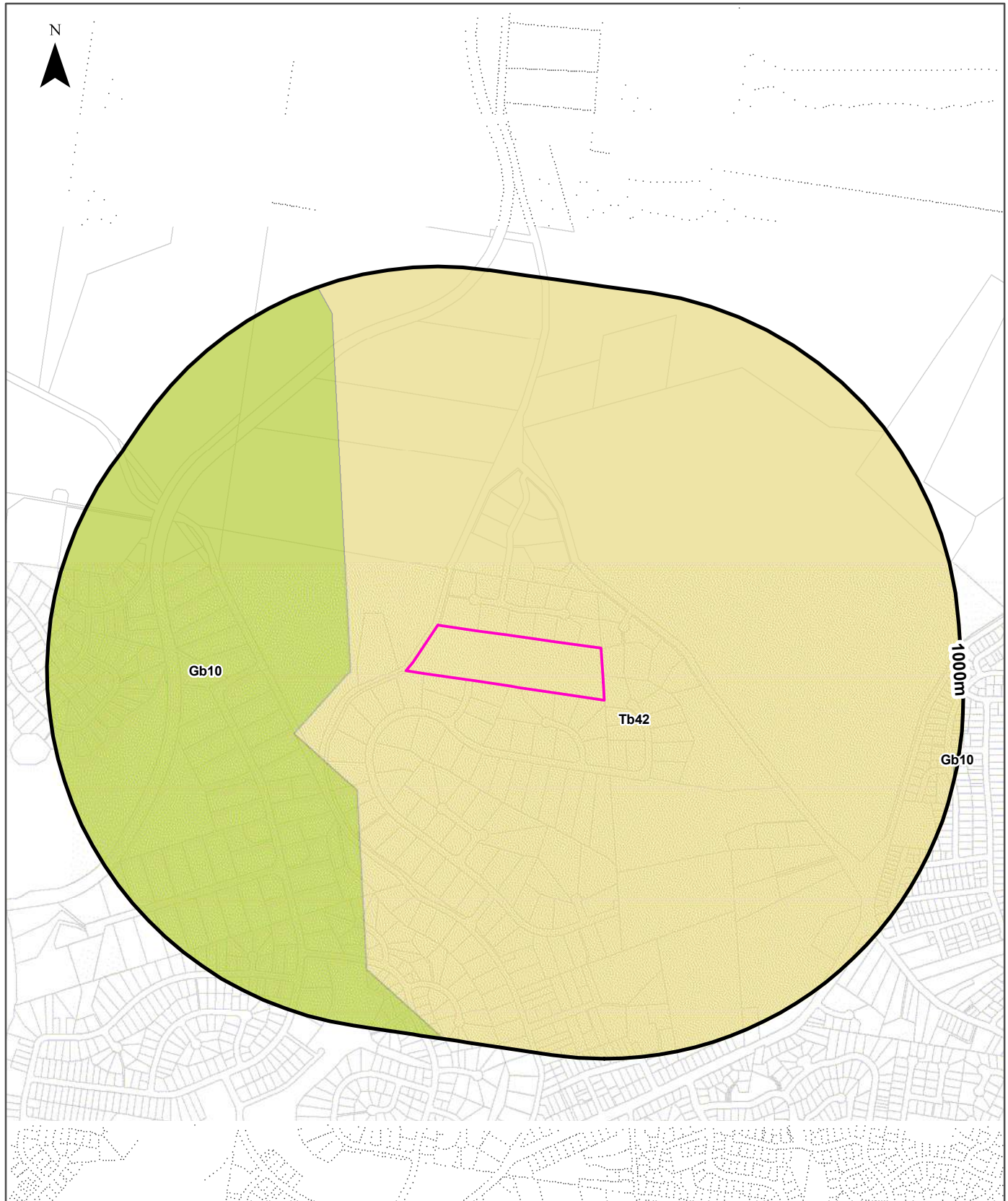
Naturally Occurring Asbestos Potential within the dataset buffer:

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

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

Atlas of Australian Soils

186 Tocal Road, Bolwarra Heights, NSW 2320



Legend Site Boundary Buffer 1000m Property Boundary		Australian Soil Classification Orders <table border="0"> <tr> <td> Anthroisol</td> <td> Dermosol</td> <td> Kandosol</td> <td> Podosol</td> <td> Tenosol</td> <td> No Data</td> </tr> <tr> <td> Calcarosol</td> <td> Ferrosol</td> <td> Kurosol</td> <td> Rudosol</td> <td> Vertosol</td> <td></td> </tr> <tr> <td> Chromosol</td> <td> Hydrosol</td> <td> Organosol</td> <td> Sodosol</td> <td> Lake</td> <td></td> </tr> </table>						Anthroisol	Dermosol	Kandosol	Podosol	Tenosol	No Data	Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol		Chromosol	Hydrosol	Organosol	Sodosol	Lake	
Anthroisol	Dermosol	Kandosol	Podosol	Tenosol	No Data																				
Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol																					
Chromosol	Hydrosol	Organosol	Sodosol	Lake																					
Scale: 		Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2023		Coordinate System: GDA 1994 MGA Zone 56		Date: 23 January 2023																			

Soils

186 Tocal Road, Bolwarra Heights, NSW 2320

Atlas of Australian Soils

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

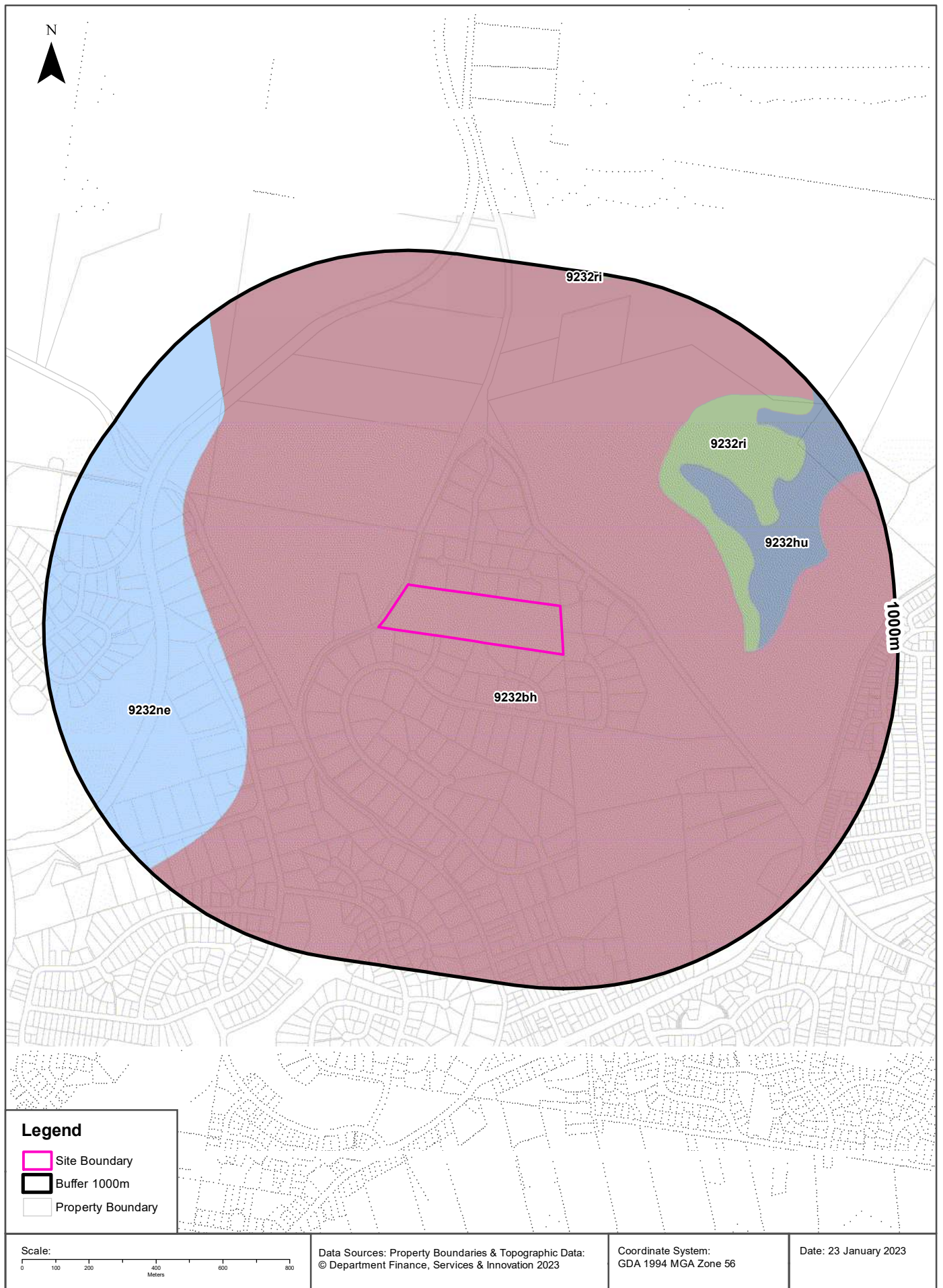
Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Tb42	Kurosol	Undulating to hilly with a general ridge, slope, and valley sequence throughout; some outcropping sandstone or conglomerate on the ridges, occasionally some escarpments: chief soils are hard acidic yellow mottled soils (Dy3.41), possibly with (Dy3.42). Associated are: narrow ridges of shallow (Dy3.41) and (Dr3.41) soils, both often containing ironstone gravel; (Dr2.41) soils on broader ridges some broad sandy flats of (Dy5.81) soils containing ironstone gravels; dunes of (Uc1.2) soils on local sand deposits; and various undescribed soils along the streams where salinity is a common local feature.	0m	On-site
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.	155m	West

Atlas of Australian Soils Data Source: CSIRO

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Soil Landscapes of Central and Eastern NSW

186 Tocal Road, Bolwarra Heights, NSW 2320



Soils

186 Tocal Road, Bolwarra Heights, NSW 2320

Soil Landscapes of Central and Eastern NSW

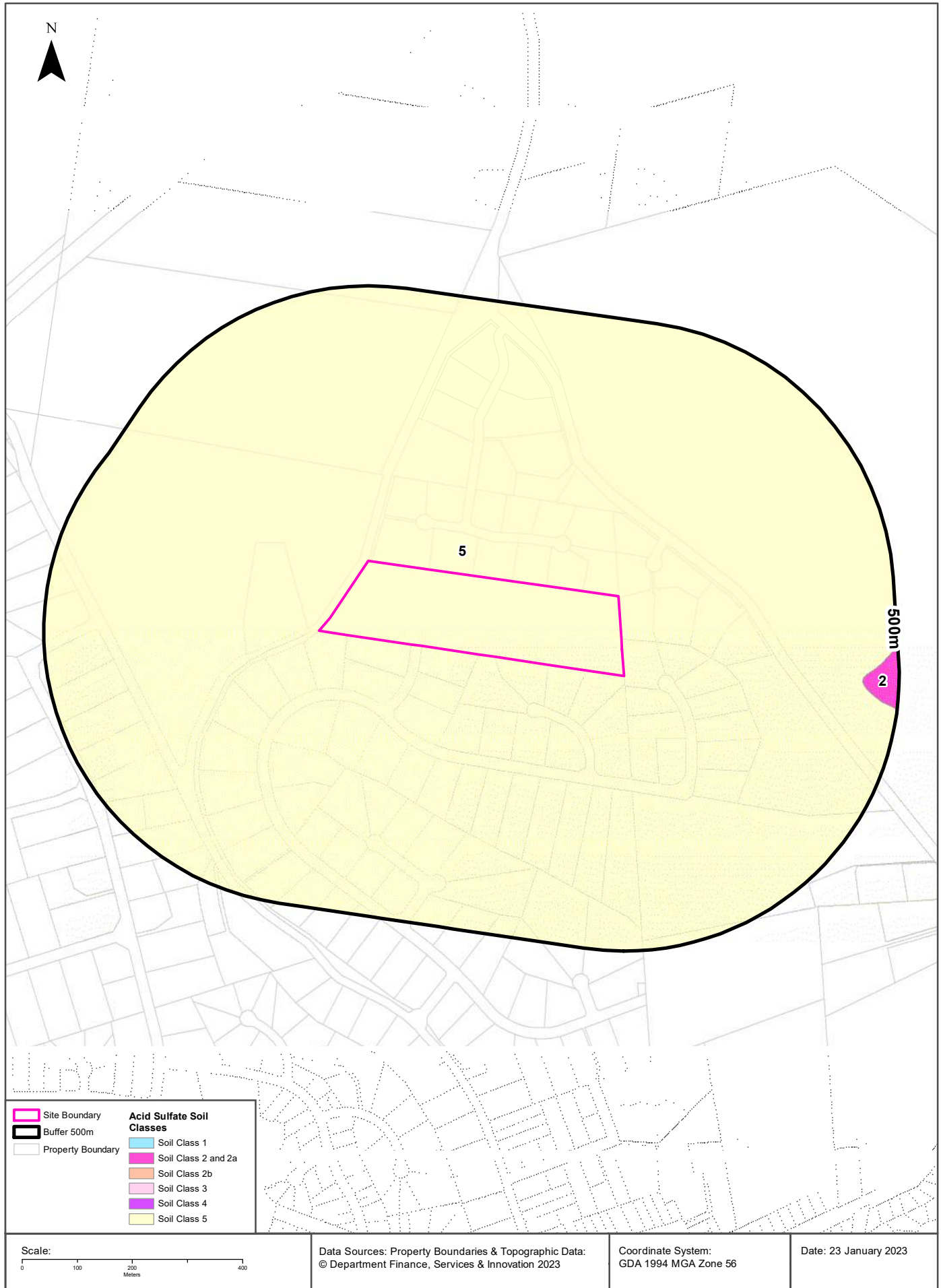
Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9232bh	Bolwarra Heights	0m	On-site
9232ri	Rivermead	458m	North East
9232ne	North Eelah	461m	West
9232hu	Hunter	534m	East

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

186 Total Road, Bolwarra Heights, NSW 2320



Acid Sulfate Soils

186 Tocal Road, Bolwarra Heights, NSW 2320

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
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Maitland Local Environmental Plan 2011

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

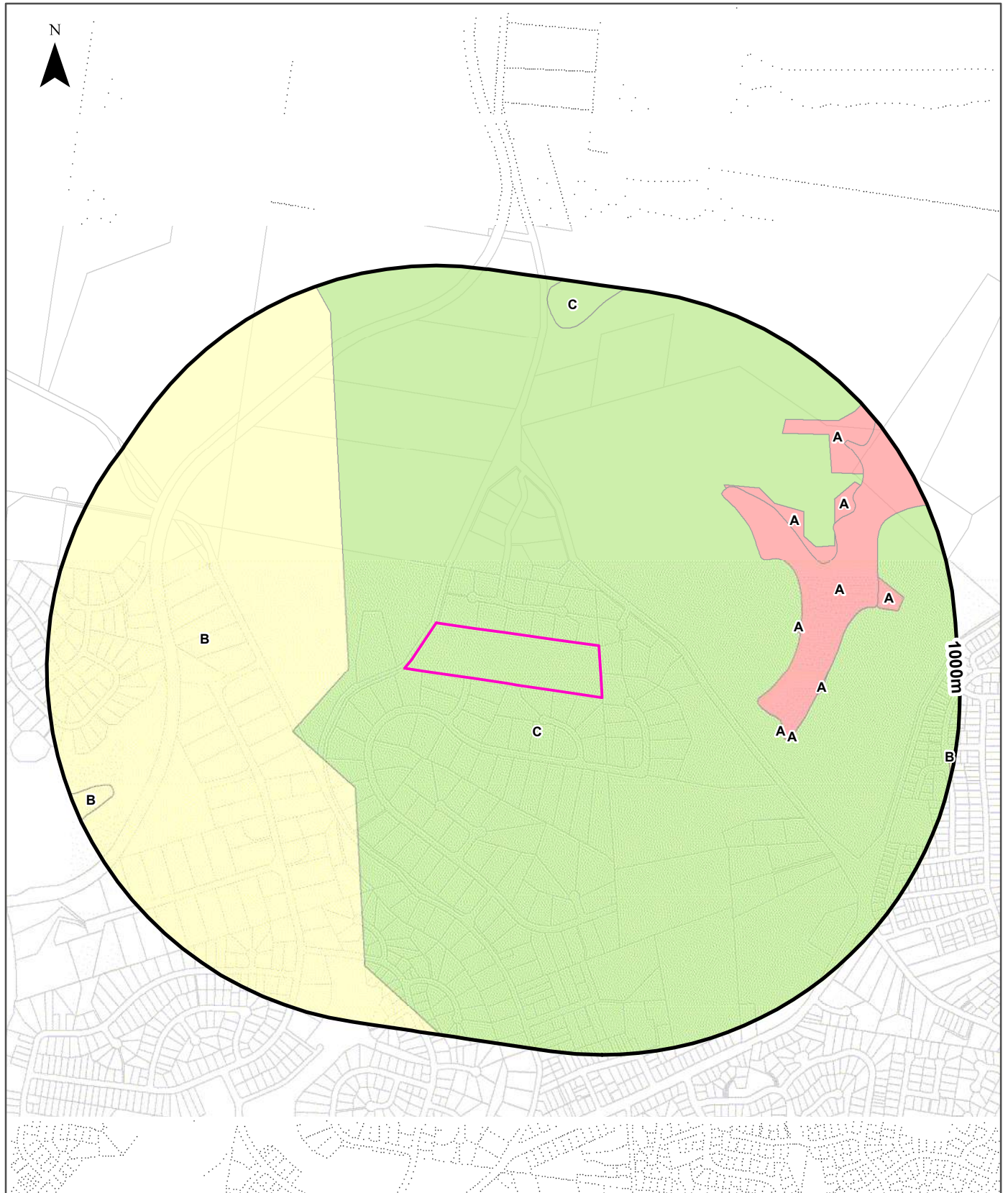
Soil Class	Description	EPI Name	Distance	Direction
2	Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk	Maitland Local Environmental Plan 2011	432m	East

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Atlas of Australian Acid Sulfate Soils

186 Total Road, Bolwarra Heights, NSW 2320



Legend Site Boundary Buffer 1000m Property Boundary		Probability of occurrence of Acid Sulfate Soils A. High (>70%) B. Low (6-70%) C. Extremely Low (1-5%) D. No Chance (0%) No Data	
Scale: 0 100 200 400 600 800 Meters		Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2023	Coordinate System: GDA 1994 MGA Zone 56
			Date: 23 January 2023

Acid Sulfate Soils

186 Tocal Road, Bolwarra Heights, NSW 2320

Atlas of Australian Acid Sulfate Soils

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

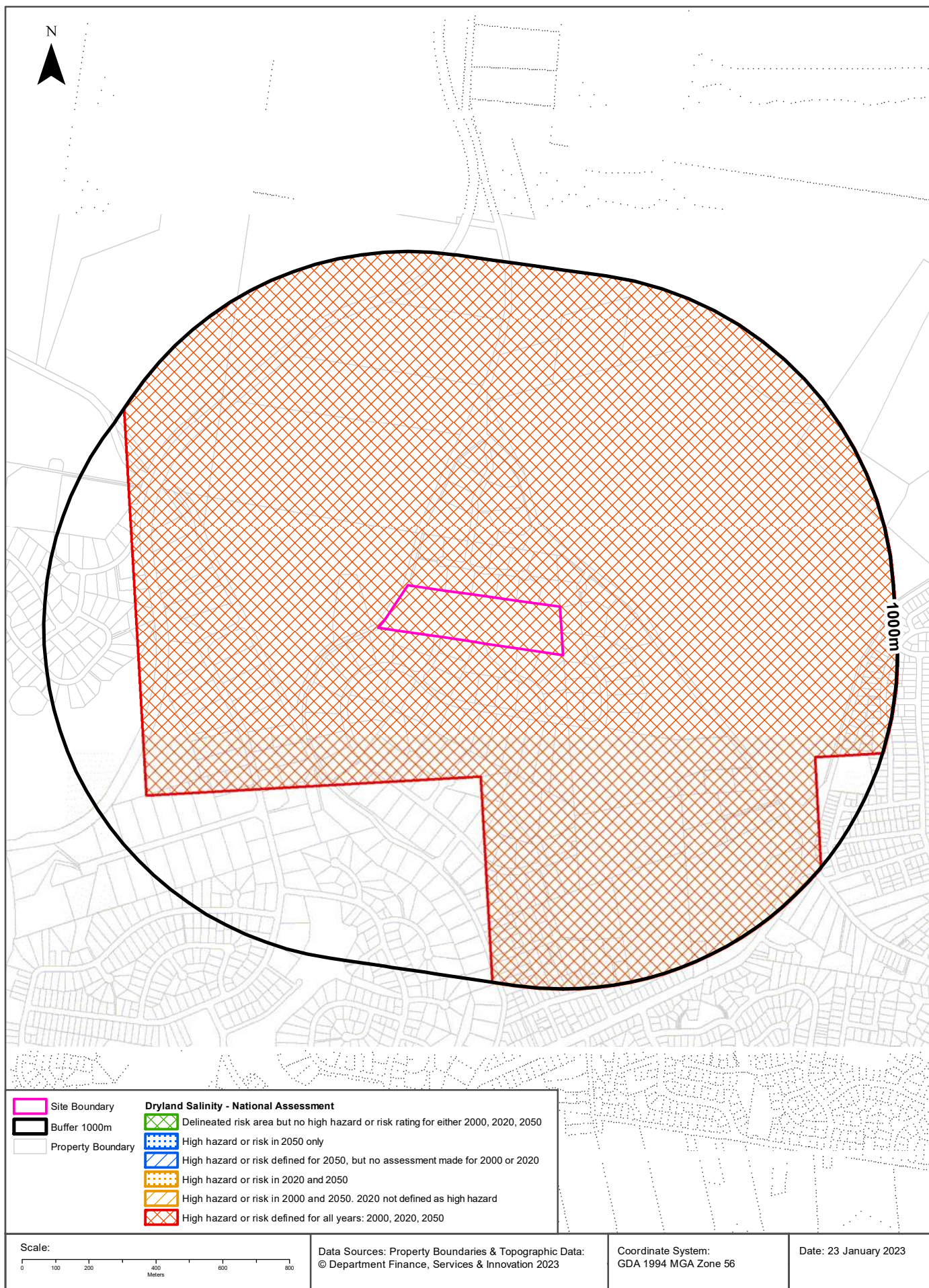
Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site
A	High Probability of occurrence. >70% chance of occurrence.	743m	North East
B	Low Probability of occurrence. 6-70% chance of occurrence.	883m	West

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Dryland Salinity

186 Total Road, Bolwarra Heights, NSW 2320



Dryland Salinity

186 Tocal Road, Bolwarra Heights, NSW 2320

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	On-site

Dryland Salinity Data Source : National Land and Water Resources Audit

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

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

Mining

186 Tocal Road, Bolwarra Heights, NSW 2320

Mining Subsidence Districts

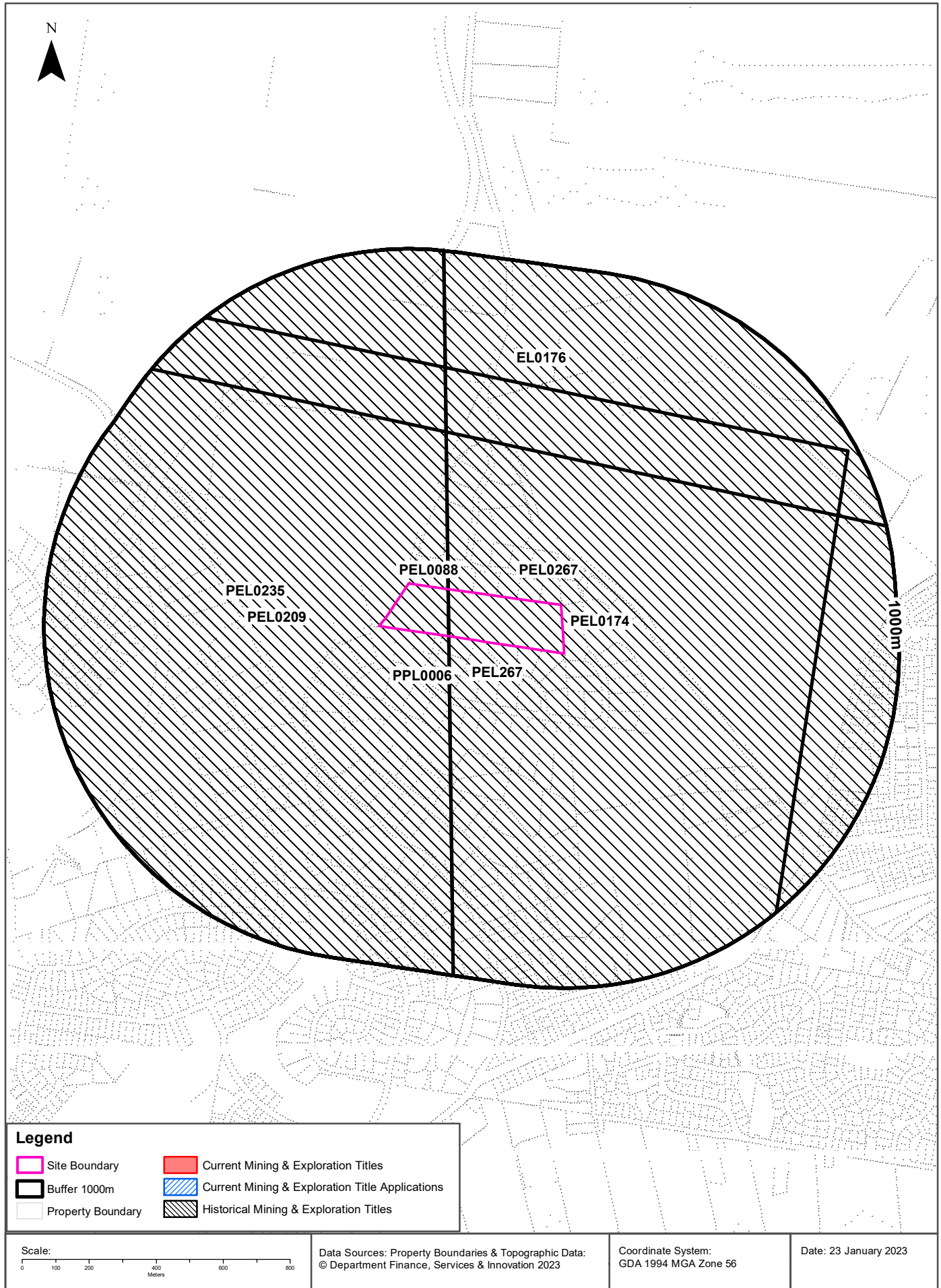
Mining Subsidence Districts within the dataset buffer:

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

Mining Subsidence District Data Source: © Land and Property Information (2016)
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Mining & Exploration Titles

186 Total Road, Bolwarra Heights, NSW 2320



Mining

186 Tocal Road, Bolwarra Heights, NSW 2320

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

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

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

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

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

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

Mining

186 Tocal Road, Bolwarra Heights, NSW 2320

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0088	PLANET EXPLORATION COMPANY PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0209	EARTH RESOURCES AUSTRALIA PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0174	NSW OIL AND GAS COMPANY NL			PETROLEUM	Petroleum	0m	On-site
PEL267	AGL UPSTREAM INVESTMENTS PTY LIMITED	19930413	19991205	MINERALS		0m	On-site
PEL0235	EASTMET LTD	19810504		PETROLEUM	Petroleum	0m	On-site
PPL0006	PLANET EXPLORATION	19060305		PETROLEUM	Petroleum	0m	On-site
PEL0267	SYDNEY OIL CO (NSW) PTY LTD, MANVANE PTY LTD AUSTRALIA NL, BASE RESOURCES LTD, SEAHAWK OIL AUSTRALIA NL, READING & BATES	19850801	20150607	PETROLEUM	Petroleum	0m	On-site
EL0176	LEFTWICH, R W	19690501	19700501	MINERALS	Cu Pb Zn Ag	434m	North

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

State Environmental Planning Policy

186 Tocal Road, Bolwarra Heights, NSW 2320

State Significant Precincts

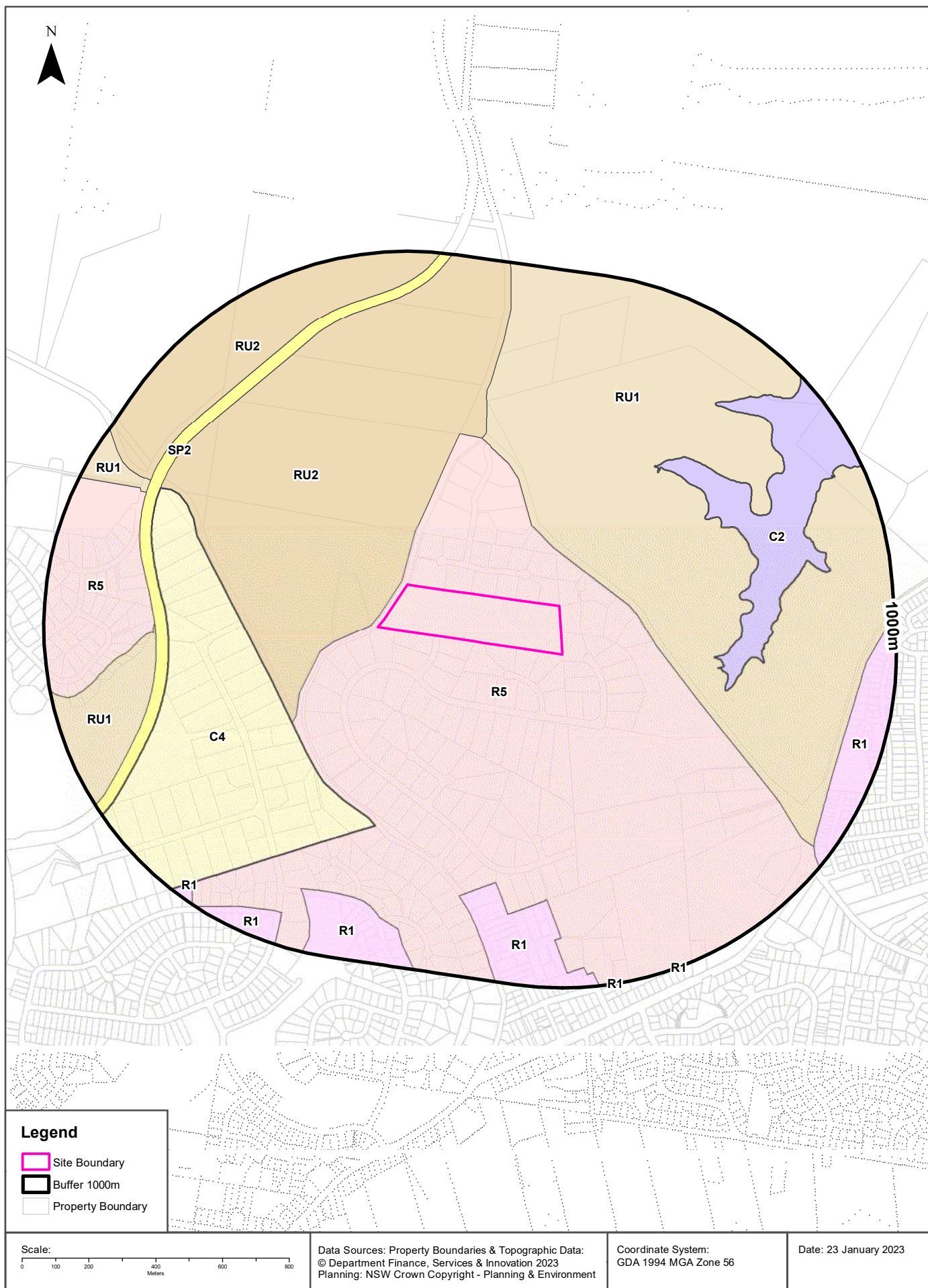
What SEPP State Significant Precincts exist within the dataset buffer?

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

186 Tocal Road, Bolwarra Heights, NSW 2320



Environmental Planning Instrument

186 Tocal Road, Bolwarra Heights, NSW 2320

Land Zoning

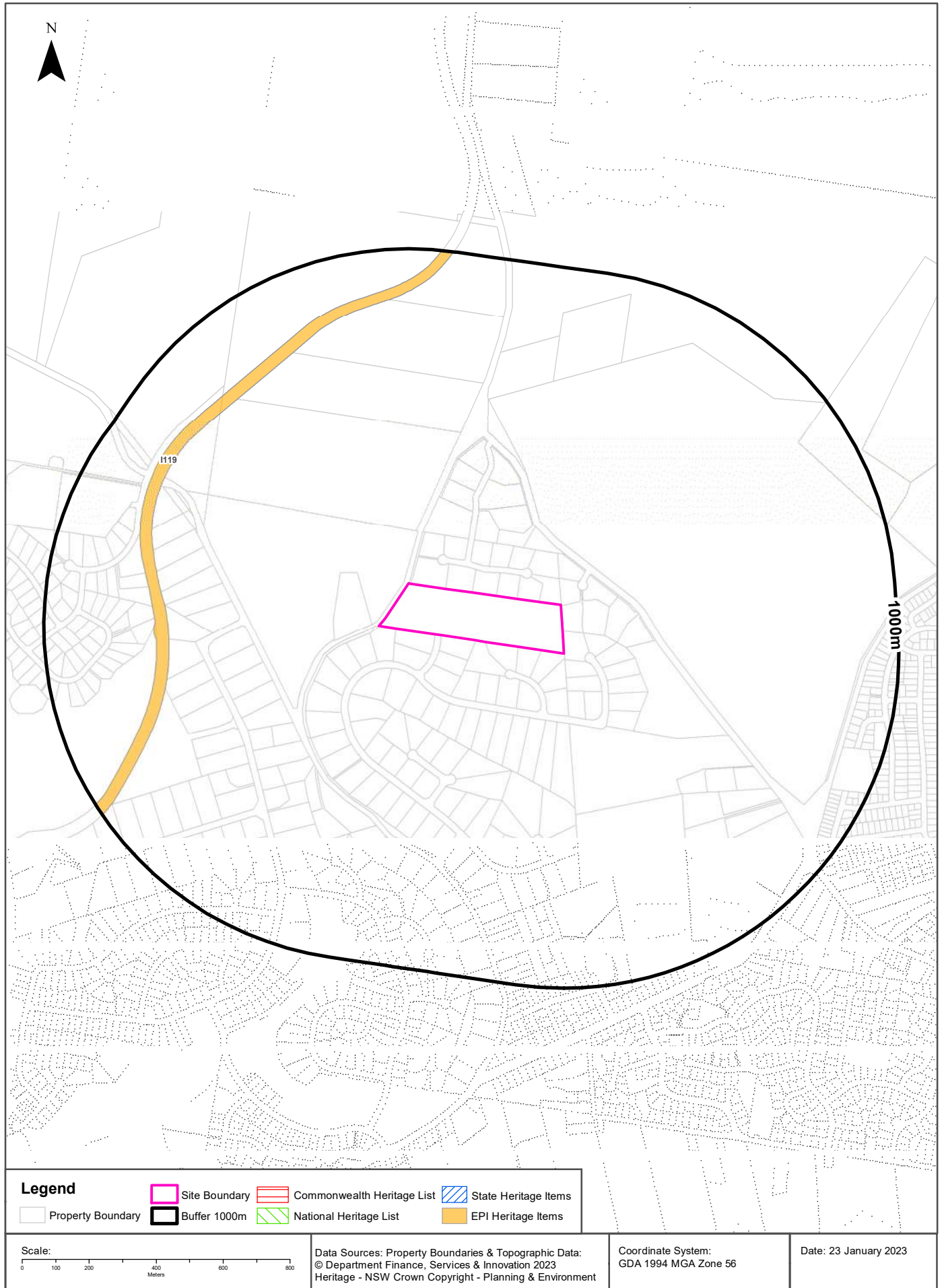
What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R5	Large Lot Residential		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	09/09/2022		0m	On-site
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	09/09/2022		20m	North West
RU1	Primary Production		Maitland Local Environmental Plan 2011	25/08/2017	25/08/2017	09/09/2022	Amendment No 21	129m	North East
C4	Environmental Living		Maitland Local Environmental Plan 2011	05/11/2021	01/12/2021	09/09/2022	Standard Instrument (Local Environmental Plans) Amendment (Land Use Zones) Order 2021	356m	South West
C2	Environmental Conservation		Maitland Local Environmental Plan 2011	05/11/2021	01/12/2021	09/09/2022	Standard Instrument (Local Environmental Plans) Amendment (Land Use Zones) Order 2021	453m	East
SP2	Infrastructure	Railway	Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	09/09/2022		628m	North West
RU1	Primary Production		Maitland Local Environmental Plan 2011	04/12/2020	04/12/2020	09/09/2022	Amendment No 26	665m	West
R5	Large Lot Residential		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	09/09/2022		668m	West
R1	General Residential		Maitland Local Environmental Plan 2011	13/06/2014	13/06/2014	09/09/2022	Amendment No 7	705m	South
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	09/09/2022		788m	North West

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Heritage Items

186 Tocal Road, Bolwarra Heights, NSW 2320



Heritage

186 Tocal Road, Bolwarra Heights, NSW 2320

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

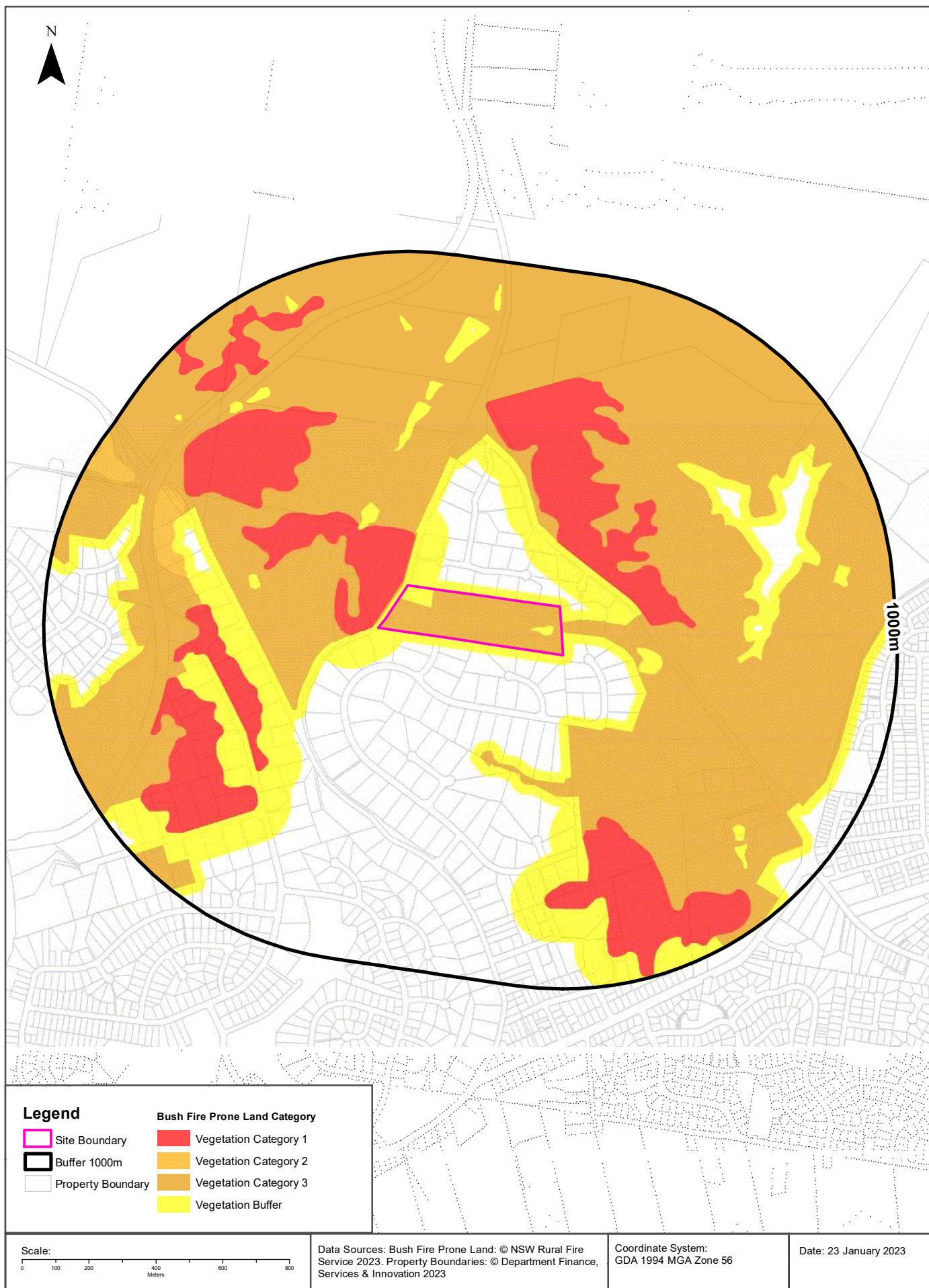
What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I119	Government Railway	Item - General	Local	Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	14/01/2022	628m	North West

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Natural Hazards - Bush Fire Prone Land

186 Total Road, Bolwarra Heights, NSW 2320



Natural Hazards

186 Tocal Road, Bolwarra Heights, NSW 2320

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 Category 3	0m	On-site
Vegetation Buffer	0m	On-site
Vegetation Category 1	17m	North West
Vegetation Category 2	593m	West

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

Ecological Constraints

186 Tocal Road, Bolwarra Heights, NSW 2320

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
19	Hunter Lowland Redgum Forest	OF	Mid Dense (Open Forest) 50-<100% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	0m	On-site
17	Lower Hunter Spotted Gum - Ironbark Forest	OF	Mid Dense (Open Forest) 50-<100% cover	C. maculata / E. fibrosa / E. punctata	5m	West
17	Lower Hunter Spotted Gum - Ironbark Forest	S	Scrub	C. maculata / E. fibrosa / E. punctata	148m	East
19	Hunter Lowland Redgum Forest	S	Scrub	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	148m	North East
19	Hunter Lowland Redgum Forest	WO	Sparse (Woodland) 20-<50% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	224m	North West
17	Lower Hunter Spotted Gum - Ironbark Forest	W	Wetland	C. maculata / E. fibrosa / E. punctata	339m	East
17	Lower Hunter Spotted Gum - Ironbark Forest	WO	Sparse (Woodland) 20-<50% cover	C. maculata / E. fibrosa / E. punctata	349m	West
16	Seaham Spotted Gum Iron Bark Forest	OF	Mid Dense (Open Forest) 50-<100% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	447m	West
5	Alluvial Tall Moist Forest	W	Wetland	E. saligna / S. glomulifera / Glochidion ferdinandi	504m	East
17	Lower Hunter Spotted Gum - Ironbark Forest	OW	Very Sparse (Open Woodland) 10-20% cover	C. maculata / E. fibrosa / E. punctata	633m	East
19	Hunter Lowland Redgum Forest	OW	Very Sparse (Open Woodland) 10-20% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	649m	South East
16	Seaham Spotted Gum Iron Bark Forest	WO	Sparse (Woodland) 20-<50% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	690m	North West
19	Hunter Lowland Redgum Forest	W	Wetland	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	690m	East
16	Seaham Spotted Gum Iron Bark Forest	OW	Very Sparse (Open Woodland) 10-20% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	812m	North West

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

Ramsar Wetlands

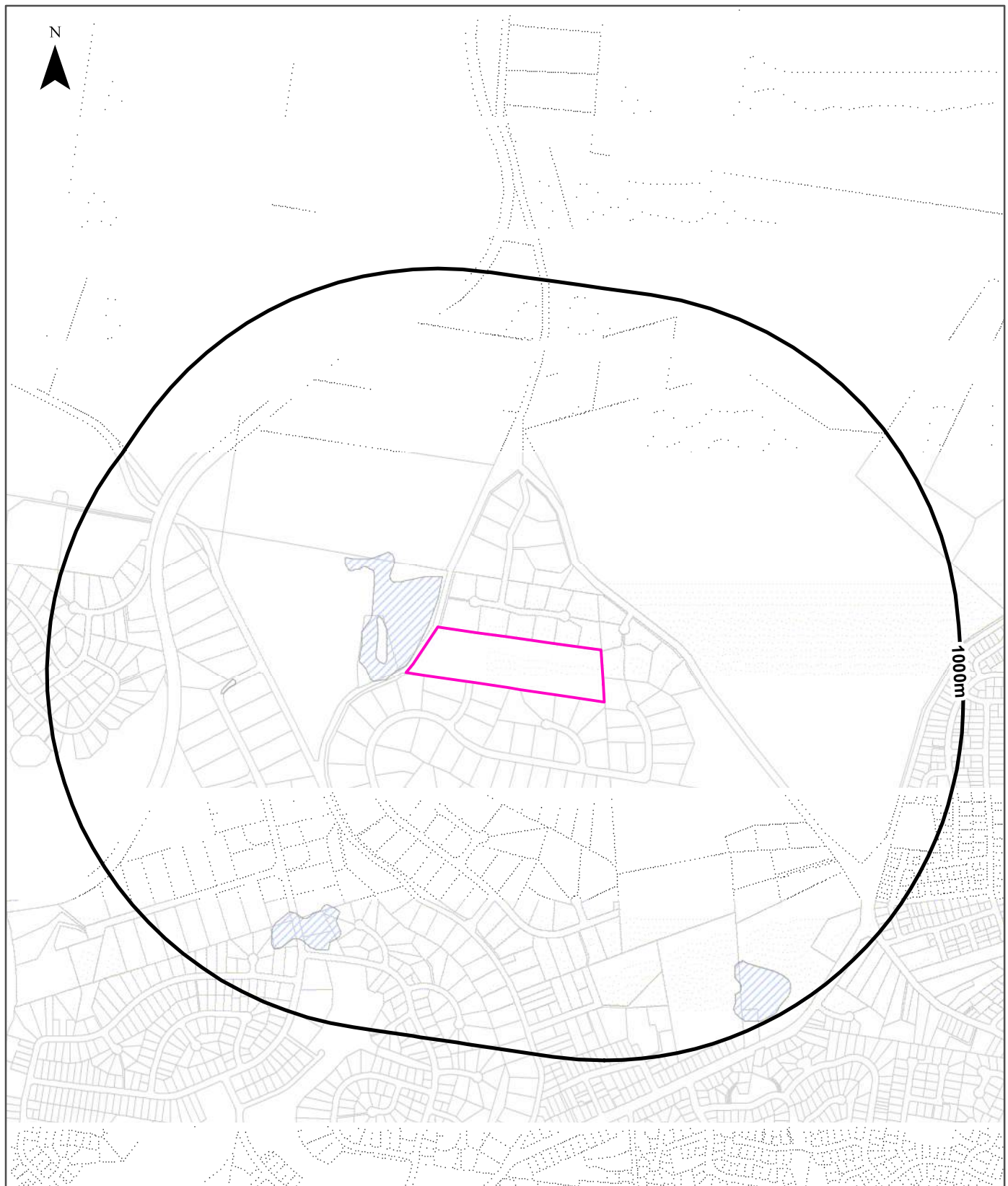
What Ramsar Wetland areas exist within the dataset buffer?

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 Agriculture, Water and the Environment

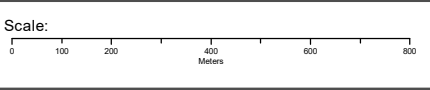
Ecological Constraints - Groundwater Dependent Ecosystems Atlas

186 Total Road, Bolwarra Heights, NSW 2320



Legend

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



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

Coordinate System:
GDA 1994 MGA Zone 56

Date: 23 January 2023

Ecological Constraints

186 Tocal Road, Bolwarra Heights, NSW 2320

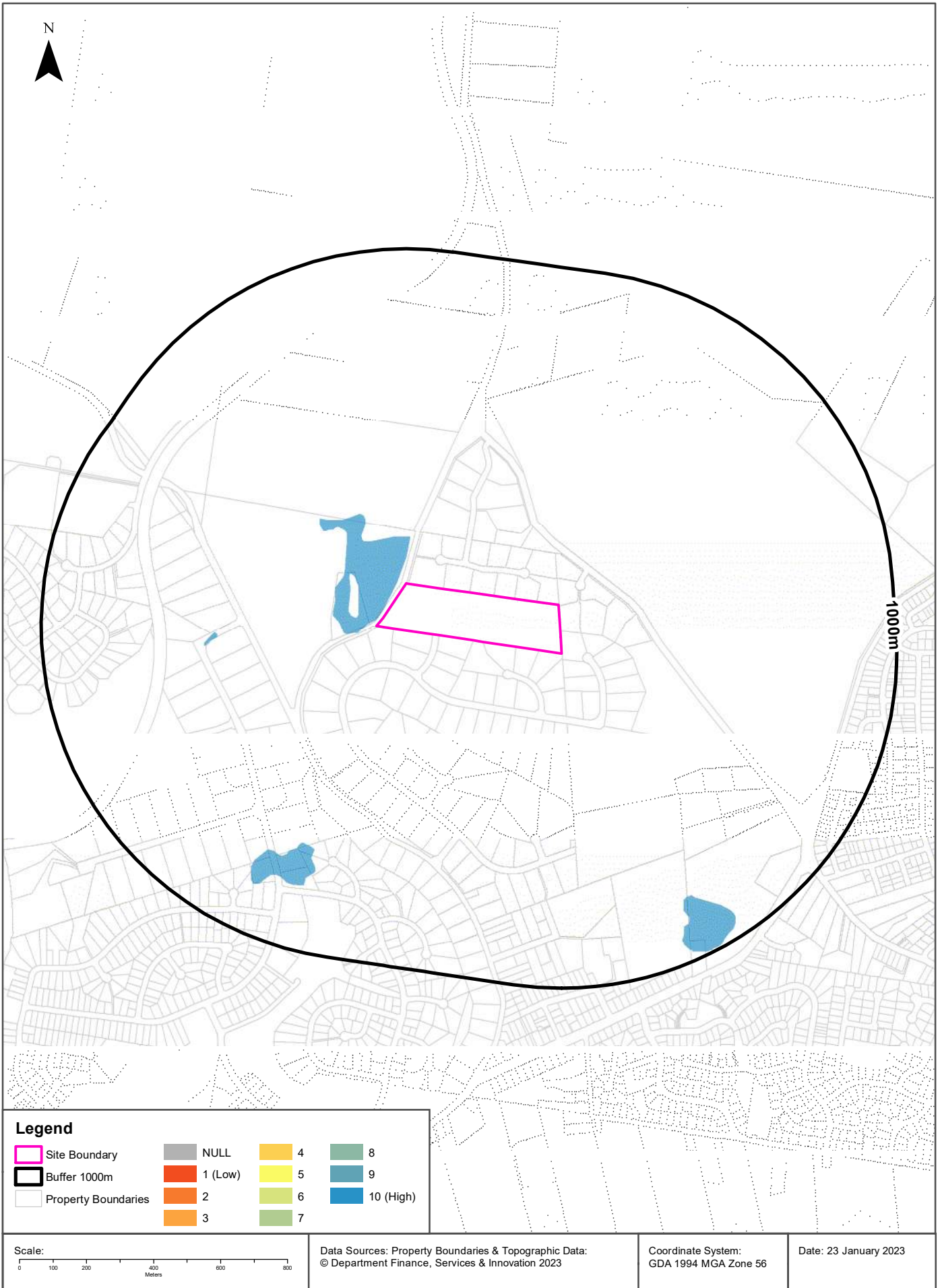
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Low potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		14m	North West

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

186 Tocal Road, Bolwarra Heights, NSW 2320



Ecological Constraints

186 Tocal Road, Bolwarra Heights, NSW 2320

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	10	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		14m	North West

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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Ecological Constraints

186 Tocal Road, Bolwarra Heights, NSW 2320

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	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Litoria littlejohni	Littlejohn's Tree Frog	Endangered	Not Sensitive	Endangered	
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	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; 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	Vulnerable	
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
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	Cuculus optatus	Oriental Cuckoo	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
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;JAMBA
Animalia	Aves	Gelochelidon nilotica	Gull-billed Tern	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Irediparra gallinacea	Comb-crested Jacana	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Melanodryas cucullata cucullata	Hooded Robin (south-eastern form)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Motacilla flava	Yellow Wagtail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pachycephala inornata	Gilbert's Whistler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	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	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Thinornis cucullatus	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Greater Glider	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascogale tapoatafa	Brush-tailed Phascogale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Endangered	Not Sensitive	Endangered	
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 trougtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Cymbidium canaliculatum	Tiger Orchid	Endangered Population	Category 2	Not Listed	
Plantae	Flora	Eucalyptus camaldulensis	River Red Gum	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus glaucina	Slaty Red Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pterostylis chaetophora		Vulnerable	Category 2	Not Listed	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Rhodomyrtus psidioides	Native Guava	Critically Endangered	Not Sensitive	Critically Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Rutidosia heterogama	Heath Wrinklewort	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	

Data does not include NSW category 1 sensitive species.

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

Location Confidences

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

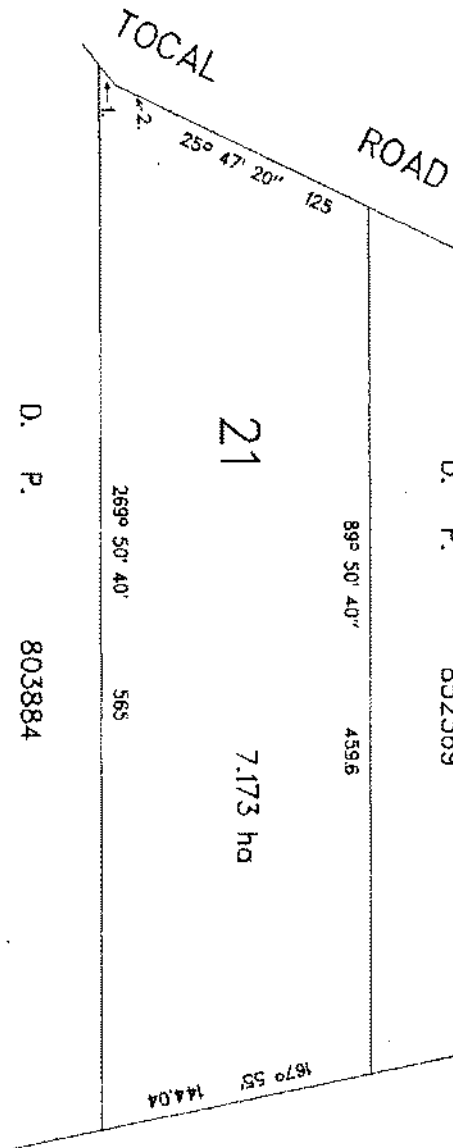
LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered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

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D. P. 852569
 89° 50' 40" 459.6
 21 7.173 ha
 269° 50' 40" 565
 D. P. 803884

LINE	BEARING	DISTANCE
1	51° 13' 20"	13.44
2	27° 09' 20"	22.67

SCHEDULE

D P 9 9 8 7 8 4

Registered: OM 6-8-1996

Title System: OLD SYSTEM

Purpose: LIMITED FOLIO CREATION

Ref. Map: 1993 (L)#

Last Plan: DP977073

C A. 6 8 7 3 7
 PLAN OF LAND COMPRISED IN
 DEED BK. 4133 NO. 572

Lengths are in metres.
 Reduction Ratio 1: 2500

L.G.A.: MAITLAND
 LOCALITY: BOLWARRA HEIGHTS
 PARISH: MIDDLEHOPE
 COUNTY: DURHAM

THIS PLAN WAS PREPARED SOLELY TO IDENTIFY THE LAND IN THE ABOVE DEED AND THE BOUNDARIES HAVE NOT BEEN INVESTIGATED BY THE REGISTRAR GENERAL
 THIS PLAN IS NOT A CURRENT PLAN IN TERMS OF SEC. 327AA LOCAL GOVERNMENT ACT, 1919.



Certificate No.: PC/2022/2919
Certificate Date: 07/10/2022
Fee Paid: \$62.00
Receipt No.: 1407224
Your Reference: 2000q-73690

SECTION 10.7 PLANNING CERTIFICATE
Environmental Planning and Assessment Act, 1979 as amended

APPLICANT: The Search People
ess@thesearchpeople.com.au

PROPERTY DESCRIPTION: 186 Tocal Road BOLWARRA HEIGHTS NSW 2320

PARCEL NUMBER: 28241

LEGAL DESCRIPTION: Lot 21 DP 998784

IMPORTANT: Please read this Certificate carefully.

The information provided in this Certificate relates only to the land described above. If you need information about an adjoining property or nearby land, a separate certificate will be required.

All information provided is correct as at the date of issue of this Certificate. However, it is possible for changes to occur at any time after the issue of this Certificate.

For more information on the Planning Certificate please contact our Customer Experience team on 4934 9700.

SECTION 10.7(2)

The following matters relate to the land, as required by section 10.7(2) of the *Environmental Planning and Assessment Act (1979)* ("the Act") and clause 284 and Schedule 2 of the *Environment Planning and Assessment Regulation 2021*.

ITEM 1 - Names of relevant planning instruments and development control plans

The following environmental planning instruments and development control plans apply to the carrying out of development on the land:

State Environmental Planning Policies

The Minister for Planning has notified that the following State Environmental Planning Policies (SEPPs) shall be specified on Certificates under Section 10.7 of the *Environmental Planning and Assessment Act, 1979*.

The land is affected by the following State Environmental Planning Policies:

- SEPP (Biodiversity and Conservation) 2021
- SEPP (Industry and Employment) 2021
- SEPP (Primary Production) 2021
- SEPP (Planning Systems) 2021
- SEPP (Housing) 2021
- SEPP Building Sustainability Index: BASIX 2004
- SEPP (Exempt and Complying Development Codes) 2008
- SEPP (Resources and Energy) 2021
- SEPP (Transport and Infrastructure) 2021
- SEPP (Resilience and Hazards) 2021

Local Environmental Plan (LEP)

Maitland LEP 2011, published 16 December 2011, applies to the land.

Development Control Plan prepared by Council

Maitland Development Control Plan 2011 applies to the land.

The following proposed environmental planning instruments and draft development control plans are or have been the subject of community consultation or on public exhibition under the *Environmental Planning and Assessment Act 1979*, apply to the carrying out of development on the land and:

Planning Proposal for a Local Environmental Plan

No draft local Environmental Plans that have been on public exhibition under the Act are applicable to the land.

Detailed information on draft environmental planning instruments is available at the NSW Department of Planning and Environment Current LEP Proposals website;

or Maitland City Council's website.

Draft Development Control Plans

No draft Development Control Plan(s) that have been on public exhibition under the Act are applicable to the land.

Draft State Environmental Planning Policies

No draft State Environmental Planning Policy(s) applying to the land is, or has been publicised the subject of community consultation or on public exhibition under the Act.

ITEM 2 – Zoning and land use under relevant planning instruments

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a State Environmental Planning Policy or proposed State Environmental Planning Policies)

Zone and Land Use Table from Local Environmental Plan

R5 Large Lot Residential

a) Purpose/Objective

- To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality
- To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future
- To ensure that development in the area does not unreasonably increase the demand for public services or public facilities
- To minimise conflict between land uses within this zone and land uses within adjoining zones

b) Permitted with Consent

Bed and breakfast accommodation; Building identification signs; Business identification signs; Dual occupancies; Dwelling houses; Home-based child care; Home industries; Neighbourhood shops; Oyster aquaculture; Pond-based aquaculture; Roads; Tank-based aquaculture; Any other development not specified in item 2 or 4

c) Permitted without Consent

Home occupations

d) Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Entertainment facilities; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex

services); Industrial retail outlets; Industrial training facilities; Industries; Information and education facilities; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Registered clubs; Research stations; Residential accommodation; Restricted premises; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies.

Detailed information on the land zone mapping is available at the NSW Department of Planning and Environment ePlanning Spatial Viewer website; or Maitland City Council's website.

Note: On 1 December 2022, Business and Industrial zones will be replaced by the new Employment zones under the Standard Instrument (Local Environmental Plans) Order 2006. The Department of Planning and Environment is currently exhibiting details of how each Local Environmental Plan that includes a current Business or Industrial zone will be amended to use the new Employment zones. The Explanation of Intended Effect (EIE) and a searchable web tool that displays the current and proposed zone for land covered in this public exhibition is available on the Planning Portal.

Additional permitted uses

No environmental planning instrument applies additional permitted use provisions to this land.

Note: Detailed information on the local environmental plan is available at NSW Legislation – In force legislation.

Whether development standards applying to the land fix minimum land dimensions for the erection of a dwelling house on the land and, if so, the fixed minimum land dimensions.

For the land zoned R5 Large Lot Residential the Maitland LEP 2011 does not contain a development standard specifying the land dimensions required to permit the erection of a dwelling house on the land.

Is the land in an area of outstanding biodiversity value under the Biodiversity Conservation Act 2016?

The land IS NOT identified in an area of outstanding biodiversity value under the Biodiversity Conservation Act.

Is the land within a conservation area, however described?

The land IS NOT in a Heritage Conservation Area.

Is there an item of environmental heritage in a local environmental plan?

The land does NOT contain an item of Environmental Heritage.

Note: An item of environmental heritage, namely Aboriginal heritage, listed on the Aboriginal Heritage Information Management System (AHIMS), may be situated on the land. The Department of Planning and Environment, Biodiversity and Conservation Division.

ITEM 3 – Contribution plans

The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

- Maitland S94A Levy Contributions Plan 2006
- Maitland City Wide Section 94 Contributions Plan 2016
- Maitland S94 Contributions Plan (City Wide) 2006

If the land is in a special contributions area under the Act, Division 7.1, the name of the area.

The land IS NOT in a special contributions area.

Note: In addition to the above developer contribution plans, Development Servicing Plans for water and sewer connection may be applicable, attracting additional contributions for the development, particularly where development will connect to water and/or sewer services.

ITEM 4 – Complying Development

If the land is land on which complying development may be carried out under each of the complying development codes under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008, because of that Policy, clause 1.17A(1)(c)–(e), (2), (3) or (4), 1.18(1)(c3) or 1.19.

Complying development under the **Housing Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Low Rise Medium Density Housing Code and Greenfield Housing Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Rural Housing Code** may be carried out on the land.

Complying development under the **Housing Alterations Code** may be carried out on the land.

Complying development under the **General Development Code** may be carried out on the land.

Complying development under the **Commercial and Industrial Alterations**

Code may be carried out on the land.

Complying development under the **Commercial and Industrial (New Buildings and Additions) Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Subdivisions Code** may be carried out on the land.

Complying development under the **Demolition Code** may be carried out on the land.

Complying development under the **Fire Safety Code** may be carried out on the land.

Complying development under the **Container Recycling Facilities Code** may not be carried out on the land.

Note: Despite the above provisions, if only part of a lot is subject to an exclusion or exemption under Clause 1.17A or Clause 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) Amendment (Commercial and Industrial Development and Other Matters) 2013, complying development may be carried out on that part of the lot that is not affected by the exclusion or exemption. *The complying development may not be carried out on the land because of the following provisions of Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the Policy.*

The provisions of Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 are not identified on the land. Complying development may be undertaken in accordance with the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 as amended.

Note: This Information needs to be read in conjunction with the whole of the State Environment Planning Policy. If an identification, restriction or characteristic of land referred to above is not located on or does not comprise, the whole of the relevant land, complying development may be carried out on any part of the land not so identified, restricted or characterised.

Note: Information regarding whether the property is affected by flood related development controls or is bushfire prone land is identified in other sections of this certificate. If your property is identified as being impacted by bushfire or flooding, a specific technical assessment of these issues will be required as part of any Complying Development Certificate application under the State Environment Planning Policy, or a development application for any other type of development requiring consent from Council.

Note: Despite any references above advising that Complying Development may be undertaken on the land, certain Complying Development may be precluded from occurring on the land due to requirements contained in the remainder of State Environment Planning Policy (Exempt and Complying Development Codes) 2008. It is necessary to review the State Environment Planning Policy in detail to ensure that specific types of complying development may be undertaken on the land.

If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that

- (a) a restriction applies to the land, but it may not apply to all of the land,***
- (b) and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.***

If the complying development codes are varied, under that Policy, clause 1.12, in relation to the land.

There are no variations to the exempt development codes within the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 that apply in the Maitland local government area.

For further information on complying development, please refer to the Department of Planning and Environment.

ITEM 5 – Exempt Development

If the land is land on which exempt development may be carried out under each of the exempt development codes under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008, because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

If exempt development may not be carried out on the land because of 1 of those clauses, the reasons why it may not be carried out under the clause.

If the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land, a statement that

- a) a restriction applies to the land, but it may not apply to all of the land, and***
- b) the council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land.***

If the exempt development codes are varied, under that Policy, clause 1.12, in relation to the land.

ITEM 6 – Affected building notices and building product rectification orders

Whether the council is aware that –

The Council IS NOT aware of any affected building notice which is in force in respect of the land.

The Council is NOT aware of any building product rectification order which is in force in respect of the land and that has not been fully complied with.

The Council IS NOT aware of any notice of intention to make a building product

rectification order being given in respect of the land and that is outstanding.

ITEM 7 – Land Reserved for Acquisition

Whether an environmental planning instrument or proposed environmental planning instrument referred to in section 1 makes provision in relation to the acquisition of the land by an authority of the State, as referred to in the Act, section 3.15.

No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

ITEM 8 – Road widening and road realignment

Whether the land is affected by road widening or road realignment under –

- a) The land is NOT affected by road widening under Division 2 of Part 3 of the Roads Act 1993.
- b) The land is NOT affected by road widening under any environmental planning instrument
- c) The land is NOT affected by any road-widening or realignment under any resolution of the Council

Note: This item relates to Council's road proposals only. Other authorities, including the NSW Roads and Traffic Authority may have road widening proposals.

ITEM 9 – Flood related development controls

The land or part of the land IS NOT within the flood planning area and subject to flood related development controls.

The land or part of the land IS NOT between the flood planning area and the probable maximum flood and subject to flood related development controls.

The Maitland LEP 2011 identifies the flood planning level (FPL) as the level of a 1:100 ARI flood event plus 0.5m freeboard. The probable maximum flood has the same meaning as the Floodplain Development Manual.

Note in this section – **flood planning area** has the same meaning as in the Floodplain Development Manual. **Floodplain Development Manual** means the Floodplain Development Manual (ISBN 0 7347 5476 00) published by the NSW Government in April 2005. **probable maximum flood** has the same meaning as in Floodplain Development Manual

Note: The information provided in item 9 is based on the data and information presently available to the Council and on development controls in force as at the date of this certificate. The identification of land as not being subject to flood related development controls does not mean that the land is not, or may not be, subject to flooding or that the land will not in the future be subject to flood related development controls, as additional data and information regarding the land become available.

ITEM 10 – Council and other public authority policies on hazard risk restrictions

Whether any of the land is affected by an adopted policy that restricts the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding.

All land within the Maitland Local Government Area has the potential to contain acid sulfate soils. Clause 7.1 of the Maitland Local Environmental Plan 2011 generally applies. Development consent is required where works described in the Table to this clause are proposed on land shown on the Maitland LEP 2011 Acid Sulfate Soils Map as being of the class specified for those works.

The Council has adopted by resolution a policy on contaminated land which may restrict the development of the land to which this certificate relates. This policy is implemented when zoning or land use changes are proposed on lands which:

- are considered to be contaminated; or
- which have previously been used for certain purposes; or
- which have previously been used for certain purposes but Council's records do not have sufficient information about previous use of the land to determine whether the land is contaminated; or
- have been remediated for a specific use.

Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.

Note in this section –

adopted policy means a policy adopted –

- a) by the council, or
- b) by another public authority, if the public authority has notified the council that the policy will be included in a planning certificate issued by council.

ITEM – 11 Bush fire prone land

If any of the land is bush fire prone land, designated by the Commissioner of the NSW Rural Fire Service under the Act, section 10.3, a statement that all or some of the land is bush fire prone land.

The land is mapped as bushfire prone land and as such restrictions may apply to new development on this land.

Note – In accordance with the *Environmental Planning and Assessment Act 1979*, bush fire prone land, in relation to area, means land recorded for the time being as bush fire prone on a bush fire prone land map for the area. This mapping is subject to periodic review.

Note – The identification of land as not being bushfire prone does not mean that the land is not, or may not be affected by bushfire or that the land will not in the future be subject to bushfire related development controls, as additional data and information regarding the land become available.

ITEM – 12 Loose-fill asbestos insulation

If the land includes residential premises, within the meaning of the Home Building Act 1989, Part 8, Division 1A, that are listed on the Register kept under that Division, a statement to that effect.

There are no premises on the subject land listed on the register.

ITEM – 13 Mine subsidence

Whether the land is declared to be a mine subsidence district, within the meaning of the Coal Mine Subsidence Compensation Act 2017.

The land has NOT been proclaimed to be within a Mine Subsidence District under the meaning of section 20 of the Coal Mine Subsidence Compensation Act 2017.

ITEM – 14 Paper subdivision information

There is no development plan that applies to the:

- 1) Land or that is proposed to be subject to a consent ballot
- 2) There is no subdivision order that applies to the land.

ITEM – 15 Property vegetation plans

If the land in relation to which a property vegetation plan is approved and in force under the Native Vegetation Act 2003, Part 4, a statement to that effect, but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act.

The Council has not received any notification from Hunter Local Land Services that this land is affected by a property vegetation plan under Part 4 of the Native Vegetation Act 2003 (and that continues in force).

ITEM – 16 Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under the Biodiversity Conservation Act 2016, Part 5, a statement to that effect, but only if the council has been notified of the existence of the agreement by the biodiversity Conservation Trust.

The Council is not aware if the land is a biodiversity stewardship site under a biodiversity stewardship agreement under part 5 of the *Biodiversity Conservation Act 2016*.

Note – Biodiversity stewardship agreements include biobanking agreements under the *Threatened Species Conservation Act 1995*, Part 7A that are taken to be biodiversity stewardship agreements under the *Biodiversity Conservation Act 2016*, Part 5.

ITEM 17 – Biodiversity certified land

If the land is biodiversity certified land under the Biodiversity Conservation Act 2016, Part 8, a statement to that effect.

The land is not biodiversity certified land under Part 8 of the Biodiversity Conservation Act 2016.

Note – Biodiversity certified land includes land certified under the *Threatened Species Conservation Act 1995*, Part 7AA that is taken to be certified under the *Biodiversity Conservation Act 2016*, Part 8.

ITEM 18 – Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land, but only if the council has been notified of the order.

Council has NOT received notification from the Land and Environment Court of NSW that the land is affected by an Order under Trees – (Disputes Between Neighbours) Act 2006.

ITEM 19 – Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

If the *Coastal Management Act 2016* applies to the council, whether the owner, or a previous owner, of the land has given written consent to the land being subject to annual charges under the *Local Government Act 1993*, section 496B, for coastal protection services that relate to existing coastal protection works.

The owner (or any previous owner) of the land has NOT consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

Note - In this section existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B.

Note - Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011

ITEM 20 – Western Sydney Aerotropolis

The State Environmental Planning Policy (Precincts – Western Parkland City) 2021 does not apply to land within the Maitland City Council local government area.

ITEM 21 – Development consent conditions for seniors housing

If State Environmental Planning Policy (Housing) 2021, Chapter 3, Part 5 applies to the land, any conditions of a development consent granted after 11 October 2007 in relation to the land that are of the kind set out in that Policy, section 88(2).

Clause 88(2) of the *State Environmental Planning Policy (Housing) 2021* restricts occupation of development approved for seniors housing to:

- a) Seniors or people who have a disability
- b) People who live in the same household with seniors or people who have a disability,
- c) Staff employed to assist in the administration and provision of services to housing provided under this Part.

ITEM 22 – Site compatibility certificates and development consent conditions for affordable rental housing

Whether there is a current site compatibility certificate under State Environmental Planning Policy (Housing) 2021, or a former site compatibility certificate, of which the council is aware, in relation to proposed development on the land and, if there is a certificate –

- a) the period for which the certificate is current, and
- b) that a copy may be obtained from the Department.

If State Environmental Planning Policy (Housing) 2021, Chapter 2, Part 2, Division 1 or 5 applies to the land, any conditions of a development consent in relation to the land that are of a kind referred to in that Policy, section 21(1) or 40(1).

Any conditions of a development consent in relation to land that are kind referred to in State Environmental Planning Policy (Affordable Rental Housing) 2009, clause 17(1) or 38(1).

Note - No Seniors Housing development consent conditions apply to this land.

Note - In this section - Former site compatibility certificate means a site compatibility certificate issued under State Environmental Planning Policy (Affordable Rental Housing) 2009.

Council is unaware if a Site Compatibility Certificate (Affordable Rental Housing) has been issued in accordance with State Environmental Planning Policy (Affordable Rental Housing) 2009.

Note. The following matters are prescribed by section 59(2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate.

Contaminated Land

- a) The land to which this certificate relates is NOT significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.
- b) The land to which this certificate relates is NOT subject to a management order within the meaning of the Contaminated Land Management Act 1997.
- c) The land to which this certificate relates is NOT the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.
- d) The land to which this certificate relates is NOT the subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.
- e) Council has NOT been provided with a site audit statement, within the meaning of the Contaminated Land Management Act 1997, for the land to which this Certificate relates.

David Evans
General Manager



HUNTER WATER CORPORATION

A.B.N. 48 228 513 448

SERVICE LOCATION PLAN - WATER ONLY

Enquiries: 1300 657 657



APPLICATION NUMBER: 1842839
 APPLICANT NAME: Hillis Solicitors
 RATEABLE PREMISE NO.: 8691010969
 PROPERTY ADDRESS: 166 TOCAL RD BOLWARRA HEIGHTS 2320
 LOT/SECTION/DP-SP: 21/DP 998784

APPLICANT REF: P-OR-ZBGTXWAGVJIT
 166 TOCAL RD
 BOLWARRA HEIGHTS NSW



IMPORTANT:
 IF THIS PLAN INDICATES A SEWER CONNECTION IS AVAILABLE OR PROPOSED FOR THE SUBJECT PROPERTY, IT IS THE INTENDING OWNERS RESPONSIBILITY TO DETERMINE WHETHER IT IS PRACTICABLE TO DISCHARGE WASTEWATER FROM ALL PARTS OF THE PROPERTY TO THAT CONNECTION.
 ANY INFORMATION ON THIS PLAN MAY NOT BE UP TO DATE AND THE CORPORATION ACCEPTS NO RESPONSIBILITY FOR ITS ACCURACY.

SEWER POSITIONS APPROXIMATE ONLY.
 SUBJECT PROPERTY BOLD.
 ALL MEASUREMENTS ARE METRIC.

IF A SEWER MAIN IS LAID WITHIN THE BOUNDARIES OF THE LOT, SPECIAL REQUIREMENTS FOR THE PROTECTION OF THE SEWER MAIN APPLY (SEE THE SEWER MAIN DESIGN SPECIFICATIONS) PRIOR TO PURCHASE. PHONE 1300 657 657 FOR MORE INFORMATION.
 A SEWER MAIN IS NOT AVAILABLE TO WHICH THE PROPERTY CAN BE CONNECTED.

PARAMETRIC DATA © I.P. OF NSW
 CONTOUR DATA © Municipal Council of Enquiries
 SEWER MAINS © RECYCLED WATER UTILITY DATA © HUNTER WATER CORPORATION

Date: 5/10/2022
 Scale: at A3 1:2,000

RESIDENTIAL PROPERTY REQUISITIONS ON TITLE

Vendor: Dianne Barbara Tume & Melanie Anne Tume
Purchaser:
Property: 186 Tocal Road, Bolwarra Heights NSW 2320
Dated:

Possession and tenancies

1. Vacant possession of the Property must be given on completion unless the Contract provides otherwise.
2. Is anyone in adverse possession of the Property or any part of it?
3.
 - (a) What are the nature and provisions of any tenancy or occupancy?
 - (b) If they are in writing, all relevant documentation should be produced, found in order and handed over on completion with notices of attornment.
 - (c) Please specify any existing breaches.
 - (d) All rent should be paid up to or beyond the date of completion.
 - (e) Please provide details of any bond together with the Rental Bond Board's reference number.
 - (f) If any bond money is held by the Rental Bond Board, the appropriate transfer documentation duly signed should be handed over on completion.
4. Is the Property affected by a protected tenancy (a tenancy affected by Parts 2, 3, 4 or 5 of the *Landlord and Tenant (Amendment) Act 1948 (NSW)*)? If so, please provide details.
5. If the tenancy is subject to the *Residential Tenancies Act 2010 (NSW)*:
 - (a) has either the vendor or any predecessor or the tenant applied to the NSW Civil and Administrative Tribunal for an order?
 - (b) have any orders been made by the NSW Civil and Administrative Tribunal? If so, please provide details.

Title

6. Subject to the Contract, on completion the vendor should be registered as proprietor in fee simple of the Property free from all encumbrances and notations.
7. On or before completion, any mortgage, caveat, writ or priority notice must be discharged, withdrawn, cancelled or removed as the case may be or, in the case of a mortgage, caveat or priority notice, an executed discharge or withdrawal or removal handed over on completion.
8. Are there any proceedings pending or concluded that could result in the recording of any writ on the title to the Property or in the General Register of Deeds? If so, full details should be provided at least 14 days prior to completion.
9. When and where may the title documents be inspected?
10. Are any chattels or fixtures subject to any hiring or leasing agreement or charge or to any security interest under the *Personal Properties Securities Act 2009 (Cth)*? If so, details must be given and all indebtedness cleared and title transferred unencumbered to the vendor prior to completion.

Adjustments

11. All outgoing referred to in clause 14.1 of the Contract must be paid up to and including the date of completion.
12. Is the vendor liable to pay land tax or is the Property otherwise charged or liable to be charged with land tax? If so:
 - (a) to what year has a return been made?
 - (b) what is the taxable value of the Property for land tax purposes for the current year?
13. The vendor must serve on the purchaser a current land tax certificate (issued under Section 47 of the *Land Tax Management Act 1956 (NSW)*) at least 14 days before completion.

Survey and building

14. Subject to the Contract, survey should be satisfactory and show that the whole of the Property is available and that there are no encroachments by or upon the Property and that all improvements comply with local government/planning legislation.
15. Is the vendor in possession of a survey report? If so, please produce a copy for inspection prior to completion. The original should be handed over on completion.
16.
 - (a) Have the provisions of the *Local Government Act (NSW)*, the *Environmental Planning and Assessment Act 1979 (NSW)* and their regulations been complied with?
 - (b) Is there any matter that could justify the making of an upgrading or demolition order in respect of any building or structure?
 - (c) Has the vendor a Building Certificate which relates to all current buildings or structures? If so, it should be handed over on completion. Please provide a copy in advance.
 - (d) Has the vendor a Final Occupation Certificate issued under the *Environmental Planning and Assessment Act 1979 (NSW)* for all current buildings or structures? If so, it should be handed over on completion. Please provide a copy in advance.
 - (e) In respect of any residential building work carried out in the last 7 years:
 - (i) please identify the building work carried out;
 - (ii) when was the building work completed?
 - (iii) please state the builder's name and licence number;
 - (iv) please provide details of insurance under the *Home Building Act 1989 (NSW)*.

17. Has the vendor (or any predecessor) entered into any agreement with or granted any indemnity to the Council or any other authority concerning any development on the Property?
18. If a swimming pool is included in the sale:
- (a) did its installation or construction commence before or after 1 August 1990?
 - (b) has the swimming pool been installed or constructed in accordance with approvals under the *Local Government Act 1919 (NSW)* and *Local Government Act 1993 (NSW)*?
 - (c) does it comply with the provisions of the *Swimming Pools Act 1992 (NSW)* and regulations relating to access? If not, please provide details of the exemptions claimed;
 - (d) have any notices or orders issued or been threatened under the *Swimming Pools Act 1992 (NSW)* or regulations?
 - (e) if a certificate of non-compliance has issued, please provide reasons for its issue if not disclosed in the contract;
 - (f) originals of certificate of compliance or non-compliance and occupation certificate should be handed over on settlement.
- 19.
- (a) To whom do the boundary fences belong?
 - (b) Are there any party walls?
 - (c) If the answer to Requisition 19(b) is yes, specify what rights exist in relation to each party wall and produce any agreement. The benefit of any such agreement should be assigned to the purchaser on completion.
 - (d) Is the vendor aware of any dispute regarding boundary or dividing fences or party walls?
 - (e) Has the vendor received any notice, claim or proceedings under the *Dividing Fences Act 1991 (NSW)* or the *Encroachment of Buildings Act 1922 (NSW)*?

Affectations

20. Is the vendor aware of any rights, licences, easements, covenants or restrictions as to use other than those disclosed in the Contract?
21. Is the vendor aware of:
- (a) any road, drain, sewer or storm water channel which intersects or runs through the land?
 - (b) any dedication to or use by the public of any right of way or other easement over any part of the land?
 - (c) any latent defects in the Property?
22. Has the vendor any notice or knowledge that the Property is affected by the following:
- (a) any resumption or acquisition or proposed resumption or acquisition?
 - (b) any notice requiring work to be done or money to be spent on the Property or any footpath or road adjoining? If so, such notice must be complied with prior to completion.
 - (c) any work done or intended to be done on the Property or the adjacent street which may create a charge on the Property or the cost of which might be or become recoverable from the purchaser?
 - (d) any sum due to any local or public authority? If so, it must be paid prior to completion.
 - (e) any realignment or proposed realignment of any road adjoining the Property?
 - (f) any contamination including, but not limited to, materials or substances dangerous to health such as asbestos and fibreglass?
- 23.
- (a) Does the Property have the benefit of water, sewerage, drainage, electricity, gas and telephone services?
 - (b) If so, do any of the connections for such services pass through any adjoining land?
 - (c) Do any service connections for any other Property pass through the Property?
24. Has any claim been made by any person to close, obstruct or limit access to or from the Property or to an easement over any part of the Property?

Capacity

25. If the Contract discloses that the vendor is a trustee, evidence should be produced to establish the trustee's power of sale.

Requisitions and transfer

26. If not attached to the Contract and the transaction is not an excluded transaction, any *clearance certificate* under Section 14-220 of Schedule 1 of the *Taxation Administration Act 1953 (Cth)* should be served on the purchaser at least 7 days prior to completion.
27. If the transfer or any other document to be handed over on completion is executed pursuant to a power of attorney, then at least 7 days prior to completion a copy of the registered power of attorney should be produced and found in order.
28. If the vendor has or is entitled to have possession of the title deeds the Certificate Authentication Code must be provided 7 days prior to settlement.
29. Searches, surveys, enquiries and inspection of title deeds must prove satisfactory.
30. The purchaser reserves the right to make further requisitions prior to completion.
31. Unless we are advised by you to the contrary prior to completion, it will be assumed that your replies to these requisitions remain unchanged as at the completion date.

186 Tocal Road, Bolwarra Heights

APPENDIX

C

UNEXPECTED FINDS PROTOCOL



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Unexpected Finds Protocol (UFP)

186 Tocal Road, Bolwarra Heights

304000882



Prepared for
HGBE Properties Pty Ltd

9th March 2023

 **Cardno**

now

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1 Introduction

This Unexpected Finds Protocol (UFP) has been developed for the proposed residential subdivision located at 186 Tocal Road, Bolwarra Heights (the 'Site'). Stantec were provided with a layout plan of the proposed subdivision prepared by High Definition Design Pty Ltd (Project No. HD360, Drawing No. HD03, Rev, Dated 29.10.2022).

Based on review of the plan and discussions with the client, it is understood that the proposed subdivision comprises creation of:

- > Twelve (12) residential lots (101, 201-210),
- > One (1) internal road, and
- > A drainage basin.

The purpose of the Unexpected Finds Protocol is to document the process for evaluating any unexpected environmental finds during the project, and to specify safety measures to be implemented to manage such circumstances and prevent any adverse environmental and human health impacts.

1.1 Scope

This Unexpected Finds Protocol (UFP) is specific to the proposed residential subdivision located at 186 Tocal Road, Bolwarra Heights NSW (the 'Site'). It provides guidance and procedures for dealing with any unexpected finds that may be encountered during the disturbance works carried out on Site.

1.2 References

The following documents have been reviewed in preparation of this Unexpected Finds Protocol:

- > National Parks and Wildlife Act 1974 (NSW)
- > Coroners Act 2009 (NSW)
- > Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)
- > Heritage Act 1977 (NSW)
- > National Environmental Protection Measure (1999)

2 Procedure

2.1 General

The following procedure should be used to assess any unexpected finds that are encountered throughout the duration of the project. Unexpected finds may include but are not limited to heritage items, unidentified filling, odorous or stained soils, and suspected asbestos materials. All Site personnel are required to report any unexpected finds to the site manager, if observed during the course of their works.

2.2 Training and Induction of Personnel

Personnel involved in the project on Site are to be inducted to the unexpected finds protocol.

Site inductions would include making workers and site personnel aware of the possibility of unexpected finds. Inductions will also include the immediate course of actions to be taken by workers if they were to find anything, including stopping work, notifying their supervisor immediately and completing the Incident Report forms. The induction should be reinforced at daily toolbox meetings.

2.3 Initial Response

If any unexpected/unidentified material is uncovered during disturbance works, the following procedure should be followed;

- > Cease all works in the immediate area.
- > Identify the category of the find (Contaminated Soils, Heritage, uncovering of Asbestos Materials etc).
- > Delineate and restrict access to the area using fencing and /or appropriate barriers and signage.
- > Ensure appropriate training and PPE is available for any persons required to enter the area.
- > Document the nature of the find.
- > Engage a suitably qualified consultant to assess the unexpected find.
- > The consultant will assess the unexpected find and provide advice regarding the preliminary assessment with reference to Sections 2.4 – 2.8 below, which will include the following:
 - The need for further immediate management controls if required;
 - Further assessment and / or remediation works required in accordance with relevant guidelines;
 - Preparation of Remediation Action Plan (RAP) if required or provide clean up advice;
 - If required, clean up strategies of the affected area will be implemented.
 - If appointed, correspondence with a Site Auditor shall be undertaken.

Works within the affected area are not to recommence until it is deemed safe and suitable for works to continue. Written confirmation shall be undertaken by the appropriate consultant following appropriate advice and clean up procedures.

2.4 Skeletal Remains

In the event that skeletal remains are uncovered and the remains are not immediately identifiable as non-human remains, a qualified archaeologist should be engaged to determine their origin. If the skeletal remains are identifiable as human remains, the Local Police should be contacted to assess the discovery. Under no circumstances should the skeletal remains be disturbed without prior consultation with the relevant authorities which may include the coroner, police, Office of Environment & Heritage, aboriginal groups or a qualified anthropologist.

2.5 Aboriginal Heritage

In the event that any relic, artefact or material that is suspected of being Aboriginal Heritage is uncovered, works must cease immediately in the area. The Office of Environment and Heritage (OEH) should be notified, as well as the National Parks and Wildlife Service, NSW Police and local Aboriginal Stakeholders.

The Office of Environment and Heritage requires notification and an AHIP permit is required prior to the removal of any Aboriginal artefacts. An AHIP permit is issued under the National Parks and Wildlife Act and applications can be made directly to the OEH.

2.6 Archaeological Heritage

Items of archaeological heritage may be uncovered during disturbance works. Items of archaeological heritage may include Aboriginal artefacts or remains, European artefacts following settlement. European heritage may include items such as roadways (telford & corduroy timber road bases etc), kerbing, culverts, building foundations and tools. A suitably qualified archaeologist should be engaged to assess the find.

2.7 Potentially Contaminated Soils

In the event that any odorous, stained or unidentified soils are uncovered during the site works, a suitable qualified environmental consultant should be engaged to assess the material and the following procedures should apply:

- > Excavation works at that part of the Site where suspect soil material was encountered should cease until an inspection by an environmental consultant is carried out;
- > Based on a visual inspection, the consultant will provide guidance on health and safety of remedial works, soil storage and soil disposal to allow construction works to proceed if possible;

Based on sampling and analysis the consultant will provide advice as to any additional requirements (i.e. managed on Site or any offsite disposal requirements).

2.8 Asbestos Containing Materials

Contingency measures must be developed to evaluate any unexpected finds of suspected asbestos containing materials. These are to specify safety measures that can be implemented to manage and prevent any adverse environmental and human health impacts. Appropriate contingency measures in relation to asbestos impacted soils and suspected asbestos containing materials (ACM) include:

- > Where suspected ACM is encountered excavation works must cease until an inspection by an environmental consultant is carried out;
- > Any illegal dumping containing suspected asbestos bearing material or synthetic mineral fibres should be inspected by an environmental consultant.

Following a visual inspection; and sampling if necessary, the consultant will provide interim advice on health and safety requirements to allow construction works to proceed if possible;

Based on sampling and analysis the consultant will provide advice as to any additional requirements (i.e. management or disposal requirements).

Following an inspection and sampling for laboratory testing (where required), works can continue following the consultants written advice.

2.9 Summary

Where an area is identified as containing an isolated find, works must cease, and an inspection and sampling (where required) shall be undertaken by a suitable qualified consultant in accordance with Sections 2.4 to 2.8.

Works within the area shall only recommence following the advice of the suitable qualified personal.

An Unexpected Finds Protocol procedure form is available attached to this UFP document.

