REPORT TO

HEALTH INFRASTRUCTURE

ON

PRELIMINARY SITE INVESTIGATION (DESKTOP CONTAMINATION ASSESSMENT)

FOR

PROPOSED SOIL CONSERVATION WORKS

AT

LOT 2 DP1281576, PRINCES HIGHWAY, MORUYA, NSW

Date: 14 December 2022
Ref: E33942PLrpt2Rev1

JKEnvironments
www.jkenvironments.com.au

T: +61 2 9888 5000
JK Environments Pty Ltd
ABN 90 633 911 403

Report prepared by:

Harry Leonard
Senior Environmental Scientist

Report reviewed by:

Brendan Page
Principal Associate | Environmental Scientist
CEnvP SC (No: SC40059)

For and on behalf of
JKE
PO BOX 976
NORTH RYDE BC NSW 1670

DOCUMENT REVISION RECORD

Report Reference	Report Status	Report Date
E33942PLrpt2	Final Report	8 December 2022
E33942PLrpt2Rev1	Final Report – minor revisions	14 December 2022

Executive Summary

Health Infrastructure ('the client') care of Root Partnerships commissioned JK Environments (JKE) to undertake a Preliminary Site Investigation (PSI) for the proposed soil conservation works at Lot 2 DP1281576 Princes Highway, Moruya, NSW ('the site'). This report presents the findings of the 'desktop contamination assessment' component of the PSI. The 'intrusive investigation' component of the PSI is to be reported under a separate cover.

The purpose of the investigation is to make a preliminary assessment of site contamination. The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2 attached in the appendices.

The primary aims of the investigation were to: identify past or present potentially contaminating activities at the site; identify the potential for site contamination; and assess the need for further investigation. The objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and land use by completing a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Prepare a conceptual site model (CSM); and
- Assess whether an intrusive investigation is required.

The scope of work included the following:

- Review of site information, including background and site history information from various sources outlined in the report;
- A walkover site inspection; and
- Preparation of a report presenting the results of the investigation, including a CSM.

The scope of work was undertaken with reference to the National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013) (NEPM 2013), other guidelines made under or with regards to the Contaminated Land Management Act (1997) and State Environmental Planning (Resilience and Hazards) 2021 (formerly known as SEPP55).

Based on the information reviewed and a weight of evidence assessment of the site history documentation, and site observations made by JKE, we consider that the site has been historically used for grazing purposes since at least 1961 and it is presumed to have been of similar use before this time. The immediate surrounds appeared to have been used for similar purposes, with the exception of the low-density residential properties to the north and south of the site. There were no historical structures on site and the site inspection and aerial photographs did not identify evidence of filling.

Based on the scope of work undertaken for this assessment, JKE identified the following potential contamination sources/AEC:

- Sediment runoff from nearby stormwater drains; and
- Historical agricultural use.

Considering the above, and based on a qualitative assessment of various lines of evidence as discussed throughout this report, JKE are of the opinion that there is a potential for site contamination.

Based on the potential contamination sources/AEC identified, and the potential for contamination, further investigation of the contamination conditions is considered to be required. We note that agricultural activities are listed in Table 1 of the SEPP55 Planning Guidelines as activities that may cause contamination.

The SEPP55 Planning Guidelines state that "*A detailed investigation is only necessary when a preliminary investigation indicates that the land is contaminated or that it is, or was, formally used for an activity listed in Table 1 and a land use change is proposed that has the potential to increase the risk of exposure to contamination.*". A Detailed Site Investigation (DSI) is therefore required.

JKE are of the opinion that the historical land uses and potential sources of contamination identified would not preclude the proposed development. A preliminary intrusive investigation is recommended in the first instance to assess the potential for the CoPC to occur in soil and to inform the design of the DSI. Following the preliminary intrusive investigation, a Sampling, Analysis and Quality Plan (SAQP), supported by a refined CSM, should be prepared for the DSI prior to commencement.

We note that the western part of the site is within an acid sulfate soil (ASS) risk area, therefore an ASS assessment or acid sulfate soil management plan (ASSMP) will likely be required. A preliminary waste classification (for soil) is also recommended if there is to be surplus soil waste generated during the project. Waste classification information can be obtained during the intrusive investigations and will assist with cost estimating for construction.

The conclusions and recommendations should be read in conjunction with the limitations presented in the body of this report.

Table of Contents

List of Tables

Attachments

Abbreviations

Asbestos Containing Material	**ACM**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Acid Sulfate Soil	**ASS**
Below Ground Level	**BGL**
Benzene, Toluene, Ethylbenzene, Xylene	**BTEX**
Contaminated Land Management	**CLM**
Contaminant(s) of Potential Concern	**CoPC**
Chain of Custody	**COC**
Conceptual Site Model	**CSM**
Development Application	**DA**
Detailed Site Investigation	**DSI**
Environment Protection Authority	**EPA**
Environmental Site Assessment	**ESA**
Fibre Cement Fragment(s)	**FCF**
JK Environments	**JKE**
Map Grid of Australia	**MGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Polycyclic Aromatic Hydrocarbons	**PAH**
Potential ASS	**PASS**
Polychlorinated Biphenyls	**PCBs**
Per-and Polyfluoroalkyl Substances	**PFAS**
Protection of the Environment Operations	**POEO**
Review of Environmental Factors	**REF**
Site Audit Statement	**SAS**
Site Audit Report	**SAR**
Secretary's Environmental Assessment Requirements	**SEARs**
Standing Water Level	**SWL**
State Significant Development Application	**SSDA**
Total Recoverable Hydrocarbons	**TRH**
United States Environmental Protection Agency	**USEPA**
Underground Storage Tank	**UST**

Units

Metres BGL	**mBGL**
Metres	**m**

1 INTRODUCTION

Health Infrastructure ('the client') care of Root Partnerships commissioned JK Environments (JKE) to undertake a Preliminary Site Investigation (PSI) for the proposed soil conservations works at Lot 2 DP1281576 Princes Highway, Moruya, NSW ('the site'). This report presents the findings of the 'desktop contamination assessment' component of the PSI. The 'intrusive investigation' component of the PSI is to be reported under a separate cover.

The purpose of the investigation is to make a preliminary assessment of site contamination with regards to State Environmental Planning Policy (Resilience and Hazards) 2021[1] (formerly known as SEPP55). The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2 attached in the appendices.

This report supports a Review of Environmental Factors (REF) prepared for Health Infrastructure NSW pursuant to part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the undertaking of soil conservation works and the construction of a new road at Lot 2 DP 1281576, Princes Highway, Moruya.

Geotechnical investigations were undertaken in conjunction with this assessment by JK Geotechnics (JKG). The results of the JKG investigations are presented separate reports (Project Ref: 33942LT). This report should be read in conjunction with the JKG reports.

1.1 The Site

The site of the soil conservation works, and ancillary road works is located on the Princes Highway in the NSW south coast town of Moruya. The site is legally described as Lot 2 DP 1281576 and is a large vacant greenfield site. The soil conservation works will facilitate the ongoing management of the greenfield lot. To the west of the site is Moruya TAFE, and to the north is a small residential subdivision called Mynora Estate. An aerial figure of the site is shown in **Plate 1** below.

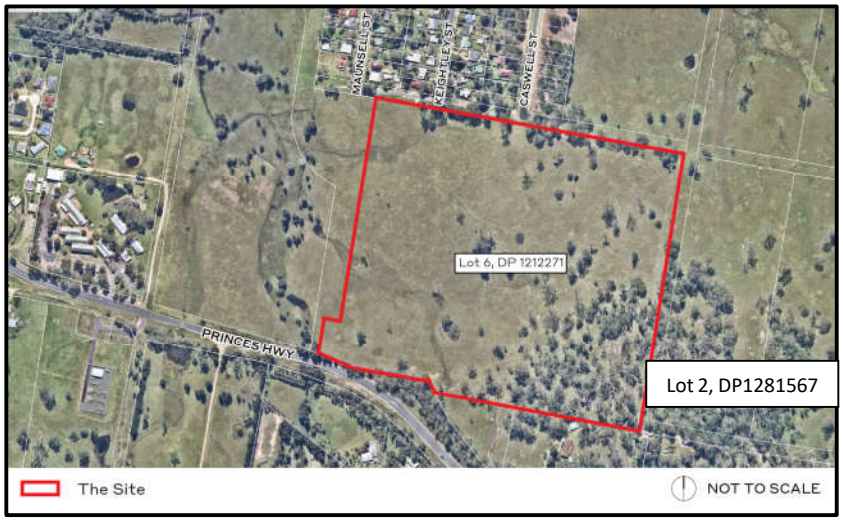


Plate 1: Proposed site location.

[1] *State Environmental Planning Policy (Resilience and Hazards) 2021* (NSW) (referred to as SEPP Resilience and Hazards 2021)

1.2 Proposed Development Details

The works proposed under the REF include the following:

- Construction of three erosion and sediment basins, ranging between 507m^2 and 990m^2 in area.
- Construction of an ancillary road into the site to facilitate construction access into the site.

JKE understand from the civil plans that excavation for the sediment basins will be required to a maximum depth of approximately 2.5m below the existing ground level. A further detailed description of the proposed works is contained in the REF report prepared by Ethos Urban.

Selected civil plans issued to JKE are attached in the appendices.

1.3 Aim and Objectives

The primary aims of the investigation were to: identify past or present potentially contaminating activities at the site; identify the potential for site contamination; and assess the need for further investigation. The objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and land use by completing a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Prepare a conceptual site model (CSM); and
- Assess whether an intrusive investigation is required.

1.4 Scope of Work

The investigation was undertaken generally in accordance with a JKE proposal (Ref: EP53393PL) of 1 February 2021 and written acceptance from the client via the Health Infrastructure Consultancy Agreement (Contract No.: HI21018) of 22 March 2021. The scope of work was specified in the Request for Tender (Section 4.4 of HI21018) and included the following:

- Review of site information, including background and site history information from various sources outlined in the report;
- A walkover site inspection; and
- Preparation of a report presenting the results of the investigation, including a CSM.

The scope of work was undertaken with reference to the National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)[2], guidelines made under or with regards to the Contaminated Land Management Act (1997)[3] and SEPP Resilience and Hazards 2021. A list of reference documents/guidelines is included in the appendices.

[2] National Environment Protection Council (NEPC), (2013). *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013).* (referred to as NEPM 2013)

[3] Contaminated Land Management Act 1997 (NSW) (referred to as CLM Act 1997)

2 SITE INFORMATION

2.1 Site Identification

Table 2-1: Site Identification

Current Site Owner (certificate of title):	Unknown (title records were not searched)
Site Address:	Princes Highway, Moruya, NSW
Lot & Deposited Plan:	Lot 2 in DP1281576
Current Land Use:	Vacant/Grazing
Proposed Land Use:	Soil Conservation Works (Ancillary Roads and Sediment Basins)
Local Government Authority (LGA):	Eurobodalla Shire Council
Current Zoning:	R2: Low Density Residential; and RU1: Primary Production
Site Area (m^2) (approx.):	22 hectares (220,000m^2)
RL (AHD in m) (approx.):	7-40
Geographical Location (MGA56) (approx. centre of site):	E: 237791.215 N: 6020766.839

2.2 Site Location and Regional Setting

The site is located in a predominantly residential and rural area of Moruya and is bound by Princes Highway to the south and partially by Albert Street to the north. Racecourse Creek is located approximately 550m to the north-west of the site.

2.3 Topography

The site is located within an area of undulating regional topography. The site itself comprises two hill peaks in the north-east and south-east corners of the site. The south-east hill slopes down towards the north and west at a gradient of between approximately 7° to 11°. The north-east hill slopes down towards the north, west and south at a gradient of between approximately 3° to 7°.

There are two tributaries (creek lines) that extend westward through the site (see Figure 2) and flow towards the low-lying, western areas of the site. These appeared to flow towards more significant tributaries of Racecourse Creek, beyond the western site boundary.

2.4 Site Inspection

A walkover inspection of the site was undertaken by JKE on 25 March 2021. The inspection was limited to accessible areas of the site and immediate surrounds. Selected site photographs obtained during the inspection are attached in the appendices.

A summary of the inspection findings is outlined in the following subsections:

2.4.1 Current Site Use and/or Indicators of Former Site Use

At the time of the inspection, the site was vacant and utilised for grazing of a small herd of cattle. The majority of the site was grassed, with some large native eucalypt trees across the eastern and southern portions of the site. Granite bedrock outcropping was visible at the highest points of the hills, with large boulders also visible at the surface mid-way down the hill slopes.

2.4.2 Boundary Conditions, Soil Stability and Erosion

The site was fenced by a timber and wire fence that ran the entire perimeter of the property and appeared in good condition. No evidence of erosion or soil runoff was identified at the time of the inspection, despite the recent significant rain event.

2.4.3 Presence of Drums/Chemical Storage and Waste

No drums, containers or evidence of chemical storage were identified at the site.

2.4.4 Evidence of Cut and Fill

The site appeared to follow that natural topography of the land and surrounds, with no evidence of cut or filling. There was no evidence of filling or other waste in the vicinity of the creek lines. The small dams appeared to be have been formed by pushing up the native soils to form small embankments on the low side of the creek lines.

2.4.5 Visible or Olfactory Indicators of Contamination (odours, spills etc)

No visible or olfactory indicators of contamination were identified at the time of the inspection.

2.4.6 Drainage and Services

The surface water runoff is presumed to follow in sympathy with the varying slopes of the site, then generally tending towards the west along the creek lines. A stormwater drain located on Albert Street to the north of the site appeared to drain onto the site and meetup with the northern-most creek line.

2.4.7 Sensitive Environments

From the observation during the site walkover, the creek lines were found to support various forms of freshwater ecology such as fish, frogs and aquatic plants, as well as native plant life.

2.4.8 Landscaped Areas and Visible Signs of Plant Stress

All vegetation at the site including large native trees and grass cover were in good condition with no obvious sign of dieback or stress observed at the time of the inspection.

2.5 Surrounding Land Use

During the site inspection, JKE observed the following land uses in the immediate surrounds:

- North – Braemar Drive, Albert Street and low density residential;
- South – Princes Highway and low density residential;
- East – Vacant/grazing land; and
- West – Vacant/grazing land.

JKE did not observe any land uses in the immediate surrounds that were identified as potential contamination sources for the site.

2.6 Underground Services

The 'Dial Before You Dig' (DBYD) plans were reviewed for the investigation in order to establish whether any major underground services exist at the site or in the immediate vicinity that could act as a preferential pathway for contamination migration. Major services were not identified that would be expected to act as preferential pathways for contamination migration.

2.7 Local Meteorology

Prior to the site walkover inspection, a significant rainfall event had occurred in the local area. This rainfall created areas of surface water ponding across the site, particularly in the creek lines and low-lying areas in the west of the site.

2.8 Section 10.7 Planning Certificate

The section 10.7 (2 and 5) planning certificates were ordered for the investigation and the certificates had not been received at the date of this report. The results will be provided when received.

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

Regional geological information was reviewed for the investigation. The information was sourced from the Lotsearch report attached in the appendices[4]. The report indicates that the site is underlain by Moruya Tonalite of the Moruya Suite, which typically consists of tonalite, granodiorite, biotite, granite, adamellite, diorite and gabbro.

The Moruya 1:25,000 Quaternary Geology Sheet indicates that most of the site is underlain by bedrock of the Moruya Supersuite. However, along to the creek lines adjacent to the western site boundary, Quaternary aged alluvial and colluvial fan soils are mapped. These soils comprise *"fluvial sand, silt, gravel, clay"*.

3.2 Acid Sulfate Soil (ASS) Risk and Planning

A review of the acid sulfate soil (ASS) risk map prepared by Department of Land and Water Conservation (1997)[5] indicated that the site is partially located in an area classed as having 'low probability' of occurrence of ASS materials within 1 metre of the ground surface. The low probability risk area is predominantly located to the west of the site and only partially encroaches into the far western section of the site into the proposed location of Sediment Basin 1 (see the basin shown on the proposed civil plans in Appendix B).

ASS information presented in the Lotsearch report indicated that the western portion of the site is located within a Class 2 ASS risk area. Works in a Class 2 risk area that could pose an environmental risk in terms of ASS include all works below existing ground level and works by which the water table is likely to be lowered. The proposed Sediment Basin 1 is located on the boundary of the Class 2 risk area.

3.3 Hydrogeology

Hydrogeological information was reviewed for the investigation. The information was sources from the Lotsearch report attached in the appendices. The report indicates that the regional aquifer on-site and, in the areas, immediately surrounding the site includes fractured or fissured, extensive aquifers of low to moderate productivity. There was a total of 44 registered bores within the report buffer of 2,000m. In summary:

- The nearest registered bore was located approximately 418m from the site. This was utilised for domestic/stock purposes;
- The bores were generally registered for a mixture of monitoring, domestic and domestic stock purposes;
- The drillers log information from the closest registered bores typically identified clay or sandy soil to depths of 0.9-8.0m, underlain by granite bedrock. Standing water levels (SWLs) in the bores ranged from 2.0m below ground level (BGL) to 25.0mBGL.

[4] We note that the Lotsearch report was generated prior to the formation of Lot 2 DP1281576 and consequently the site boundary shown in the Lotsearch report includes additional land to the west of Lot 2 DP1281576

[5] Department of Land and Water Conservation, (1997). *1:25,000 Acid Sulfate Soil Risk Map (Series 8926S3,Moruya, Ed 2)*

The information reviewed for the investigation indicated that the subsurface conditions across the majority of the site (particularly in the development footprint) are likely to consist of relatively low permeability (residual) soils overlying shallow bedrock. The potential for viable groundwater abstraction and use of groundwater under these conditions is considered to be low. Use of groundwater is not proposed as part of the development. The majority of the registered bores are located in the low-lying land to the west of the site.

Considering the local topography and surrounding land features, JKE anticipate the overall groundwater flow direction to be towards the west.

3.4 Water Bodies

Several small dams were located along the creek lines and these appeared relatively full during the inspection due to the recent rain event. The upper sections of the creek lines on site were not expected to permanently hold water. The site location and regional topography indicates that water from the creek lines on site would flow towards the west, linking up with other tributaries of Racecourse Creek.

4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs and Historical Maps

Historical aerial photographs were reviewed for the assessment. The information was sourced from the Lotsearch report. The historical maps dated 1943, 1971 and 2015 did not identify any pertinent features on site or in the immediate surrounds.

A summary of the relevant information is presented in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1961	**On-site:** The site appeared to be vacant and grassed (likely used for grazing purposes). The south-eastern corner of the site appeared to be covered with vegetation. **Off-site:** The surrounds appeared similar to the site and were most likely used for grazing and/or agricultural purposes. Minor roads and several small residential-type dwellings were visible to the north of the site. The Princes Highway was visible to the south of the site.
1966-1979	The site and surrounding features appeared generally similar to the previous photograph.
1981	**On-site:** The site appeared similar to the previous photographs. **Off-site:** The area to the north of the site appeared to be further developed for residential purposes, with additional roads and sub-divisions for housing evident.
1989-2020	The site and surrounding features appeared generally similar to the previous photograph. Additional residential development had occurred to the north and south of the site.

4.2 NSW EPA and Department of Defence Records

A review of the NSW EPA and Department of Defence databases was undertaken for the assessment. Information from the following databases were sourced from the Lotsearch report:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;
- Records of sites notified in accordance with the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[6];
- Licensed activities under the Protection of the Environment Operations Act (1997)[7];
- Sites being investigated under the NSW EPA per-and polyfluoroalkyl substances (PFAS) investigation program;
- Sites being investigated by the Department of Defence for PFAS contamination; and
- Sites being managed by the Department of Defence for PFAS contamination.

[6] NSW EPA, (2015). *Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997.* (referred to as Duty to Report Contamination)

[7] Protection of the Environment Operations Act 1997 (NSW) (referred to as POEO Act 1997)

The search included the site and surrounding areas in the report buffer. The results included the following:

- A Caltex service station was listed within the report buffer under Section 58 of the CLM Act 1997. However, this property is located approximately 945m north-west of the site (down gradient) and is not considered to represent an off-site source of contamination; and
- The Moruya Sewage Treatment Plant was licensed under the POEO Act 1997. This property is located approximately 480m north of the site (down gradient) and therefore is not considered to represent an off-site source of contamination.

4.3 Historical Business Directory and Additional Lotsearch Information

Historical business records and other relevant information were reviewed for the assessment. The information was sourced from the Lotsearch report and summarised in the following table:

Table 4-2: Historical Business Directory and other Records

Records	On-site	Off-site
Historical dry cleaners, motor garages and service stations	None	There were several service stations and dry cleaners listed in the report buffer between 1961-1991. These properties were a listed as 'road match' in the database rather than a "premise match", therefore the exact location cannot be predicted with confidence. The properties were all associated with the Princes Highway which indicates the businesses were actually located some distance from the site. Therefore, these properties/activities are not considered to represent an off-site source of contamination.
Other historical businesses that could represent potential sources of contamination	None	None
National waste management site database	None	None
National liquid fuel facilities	None	There were three listed liquid fuel facilities within the report buffer. These were petrol stations located over 500m from the site. Due to the distance of these properties from the site, they are not considered to represent an off-site source of contamination.
Mapped heritage items	None	Various heritage items were mapped in the report buffer. These are not considered to have any relevance in the context of the investigation objectives.
Mapped ecological constraints	None	Various ecological items were mapped in the report buffer. These are not considered to have any relevance in the context of the investigation objectives.
Mapped naturally occurring asbestos	None	None

4.4 Summary of Site History Information

Based on the information reviewed and a weight of evidence assessment of the site history documentation, and site observations made by JKE, we consider that the site has been historically used for grazing purposes since at least 1961 and it is presumed to have been of similar use before this time. The immediate surrounds appeared to have been used for similar purposes, with the exception of the low-density residential properties to the north and south of the site.

There were no historical structures on site and the site inspection and aerial photographs did not identify evidence of filling.

4.5 Integrity of Site History Information

The majority of the site history information was obtained from government organisations as outlined in the relevant sections of this report. The veracity of the information from these sources is considered to be relatively high. A certain degree of information loss can be expected given the lack of specific land use details over time. JKE have relied upon the Lotsearch report and have not independently verified any information contained within. However, it is noted that the Lotsearch report is generated based on databases maintained by various government agencies and is expected to be reliable.

5 CONCEPTUAL SITE MODEL

NEPM (2013) defines a CSM as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM for the site is presented in the following sub-sections and is based on the site information (including the site inspection information) and the review of site history information. Reference should also be made to the figures attached in the appendices.

5.1 Potential Contamination Sources/AEC and CoPC

The potential contamination sources/AEC and CoPC are presented in the following table:

Table 5-1: Potential (and/or known) Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Sediment runoff from nearby stormwater drains – There is a potential for contaminant transport in sediment/runoff from nearby roadways. A stormwater pipe discharges in an area adjoining the central northern boundary of the site. It is anticipated that the stormwater (and sediment loading within the stormwater) could eventuate in the northern-most creek line and flow westward to the low-lying area at the western end of the site. We note that the land use in these nearby, off-site areas are benign (i.e. residential, rather than heavy industry) and the potential for contamination to be associated with this AEC is relatively low.	Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (referred to as total recoverable hydrocarbons – TRHs), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos.
Historical agricultural use – The site appears to have been used for low-intensity grazing purposes. This could have resulted in contamination across the site via use of machinery and potential (although unlikely) use of pesticides. There was no evidence of on-site irrigation pipework (e.g. pipework potentially containing asbestos) during the inspection, however, the presence of such pipework cannot be ruled out	Heavy metals, TRHs, PAHs, OCPs and asbestos JKE note that OCPs only became commercially available in the 1940s. Prior to this time pesticides were predominantly heavy metal compounds.

Based on the site inspection and historical assessment, JKE are of the opinion that there is a low potential for the site to have been used for activities associated with per- and polyfluoroalkyl substances (PFAS). We note that Appendix B2 of the PFAS National Environmental Management Plan (2020)[8] refers to 'agriculture' more broadly as an activity potentially associated with PFAS, however this relates to use of fire fighting foams in the poultry industry, or with adjuvant or active ingredients in fertilisers and pesticides.

Given the apparent low-intensity grazing activities at the site, use of pesticides is unlikely. It is also considered unlikely that stock feed (which is another potential source of OCPs) would have been imported. On this basis, we do not consider PFAS to be CoPC. This should be re-evaluated in the event that OCPs are identified in soil.

[8] Heads of EPA Australia and New Zealand, (2020). *PFAS National Environmental Management Plan Version 2.0* (referred to as PFAS NEMP)

5.2 Mechanism for Contamination, Affected Media, Receptors and Exposure Pathways

The mechanisms for contamination, affected media, receptors and exposure pathways relevant to the potential contamination sources/AEC are outlined in the following CSM table:

Table 5-2: Conceptual Site Model

Potential mechanism for contamination	The potential mechanisms for contamination are most likely to include 'top-down' impacts, spills and runoff from stormwater/sediment.
Affected media	Soil has been identified as the potentially affected medium. The potential for groundwater impacts is considered to be relatively low. However, groundwater would need to be considered in the event mobile/leachable contamination was identified in soil. The potential for soil vapour impacts is also considered to be relatively low. Soil vapour would need to be considered in the event that volatile TRHs, BTEX and/or naphthalene (PAH compound) was identified in soil.
Receptor identification	The receptor identification and pathways/exposure assessment have considered a broader range of receptors that would apply in the context of the overall site development for a more sensitive land use, not only those receptors applicable in the context of the REF. Human receptors include site occupants/users (including adults and children), construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users in a residential setting. Ecological receptors include terrestrial organisms and plants within unpaved areas (including the proposed landscaped areas), and freshwater ecology in the dams and creeks.
Potential exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants) and vapours (volatile TRH and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and future use of the site. Potential exposure pathways for ecological receptors include primary contact and ingestion. Exposure during future site use could occur via direct contact with soil in unpaved areas, inhalation of airborne asbestos fibres during soil disturbance, or inhalation of vapours within future buildings and/or enclosed/semi-enclosed spaces during excavation works.
Potential exposure mechanisms	The following have been identified as potential exposure mechanisms for site contamination: • Vapour intrusion into trenches/excavation during excavation/construction (either from soil contamination or volatilisation of contaminants from groundwater); • Contact (dermal, ingestion or inhalation) with exposed soils during excavation and construction works or in unpaved areas; • Migration of stormwater (and sediment) onto the site and into the creek lines/dams via overland flows; and • Migration of groundwater into nearby water bodies, including aquatic ecosystems.

5.3 Assessment of Data Gaps

JKE has undertaken a preliminary data gap analysis based on the findings of the investigation. The data gaps and comments are outlined in the following table:

Table 5-3: Data Gap Assessment

Data Gap	JKE Comments
Historical land titles search	A land titles search was outside the scope of the desktop assessment. Although it is unlikely that information from the land titles records would alter the CSM, a search of these records should occur for completeness.
Council Records	The review of council records was limited to planning-related information within the section 10.7 certificates and/or within the Local Environmental Plan (as outlined in the Lotsearch report). Although it is unlikely that additional information from the local council would alter the CSM, a search of local records in relation to the property file and building/development records should occur for completeness. The Section 10.7 certificates did not arrive by the release date of this report. The results will be provided when received.
SafeWork NSW	A search of SafeWork NSW records for licences to store dangerous goods was outside the scope of the desktop assessment. Although it is unlikely that SafeWork NSW records exist for the site, a search of these records should occur for completeness.
Sampling/analysis of media	Sampling and analysis of media identified in the CSM was not undertaken. Recommendations to address this data gap have been included in this report.

6 CONCLUSIONS

6.1 Contamination Sources/AEC and Potential for Site Contamination

Based on the scope of work undertaken for this assessment, JKE identified the following potential contamination sources/AEC:

- Sediment runoff from nearby stormwater drains; and
- Historical agricultural use.

Considering the above, and based on a qualitative assessment of various lines of evidence as discussed throughout this report, JKE are of the opinion that there is a potential for site contamination.

6.2 Need for Further Investigation

Based on the potential contamination sources/AEC identified, and the potential for contamination, further investigation of the contamination conditions is considered to be required. We note that agricultural activities are listed in Table 1 of the SEPP55 Planning Guidelines as activities that may cause contamination.

The SEPP55 Planning Guidelines state that "*A detailed investigation is only necessary when a preliminary investigation indicates that the land is contaminated or that it is, or was, formally used for an activity listed in Table 1 and a land use change is proposed that has the potential to increase the risk of exposure to contamination.*". A Detailed Site Investigation (DSI) is therefore required.

6.3 Conclusions and Recommendations

JKE are of the opinion that the historical land uses and potential sources of contamination identified would not preclude the proposed development. A preliminary intrusive investigation is recommended in the first instance to assess the potential for the CoPC to occur in soil and to inform the design of the DSI. Following the preliminary intrusive investigation, a Sampling, Analysis and Quality Plan (SAQP), supported by a refined CSM, should be prepared for the DSI prior to commencement.

We note that the south-western part of the site is within an ASS risk area, therefore an ASS assessment and/or acid sulfate soil management plan (ASSMP) will likely be required. A preliminary waste classification (for soil) is also recommended if there is to be surplus soil waste generated during the project. Waste classification information can be obtained during the intrusive investigations and will assist with cost estimating for construction.

JKE consider that the assessment objectives outlined in Section 1.3 have been addressed.

7 LIMITATIONS

The following limitation apply to this investigation:

- JKE accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- This report was produced based on information gathered as part of previous investigations associated with other proposed developments on the site;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the JKE proposal; and terms of contract between JKE and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- This report has been prepared in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, JKE has not undertaken any verification process, except where specifically stated in the report;
- JKE has not investigated off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- JKE accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- JKE have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. JKE should be contacted immediately in such circumstances; and
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

Important Information About This Report

These notes have been prepared by JKE to assist with the interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors:
This report has been prepared in response to specific project requirements as stated in the JKE proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

- The proposed land use is altered;
- The defined subject site is increased or sub-divided;
- The proposed development details including size, configuration, location, orientation of the structures or landscaped areas are modified;
- The proposed development levels are altered, eg addition of basement levels; or
- Ownership of the site changes.

JKE will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by JKE to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment for any purpose other than that originally intended without first conferring with the consultant.

Changes in Subsurface Conditions:
Subsurface conditions are influenced by natural geological and hydrogeological process and human activities. Groundwater conditions are likely to vary over time with changes in climatic conditions and human activities within the catchment (e.g. water extraction for irrigation or industrial uses, subsurface waste water disposal, construction related dewatering). Soil and groundwater contaminant concentrations may also vary over time through contaminant migration, natural attenuation of organic contaminants, ongoing contaminating activities and placement or removal of fill material. The conclusions of an assessment report may have been affected by the above factors if a significant period of time has elapsed prior to commencement of the proposed development.

This Report is based on Professional Interpretations of Factual Data:
Site assessments identify actual subsurface conditions at the actual sampling locations at the time of the investigation. Data obtained from the sampling and subsequent laboratory analyses, available site history information and published regional information is interpreted by geologists, engineers or environmental scientists and opinions are drawn about the overall subsurface conditions, the nature and extent of contamination, the likely impact on the proposed development and appropriate remediation measures.

Actual conditions may differ from those inferred, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise the impact. For this reason, site owners should retain the services of their consultants throughout the development stage of the project, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

Investigation Limitations:
Although information provided by an investigation can reduce exposure to the risk of the presence of contamination, no investigation can eliminate the risk. Even a rigorous professional assessment may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

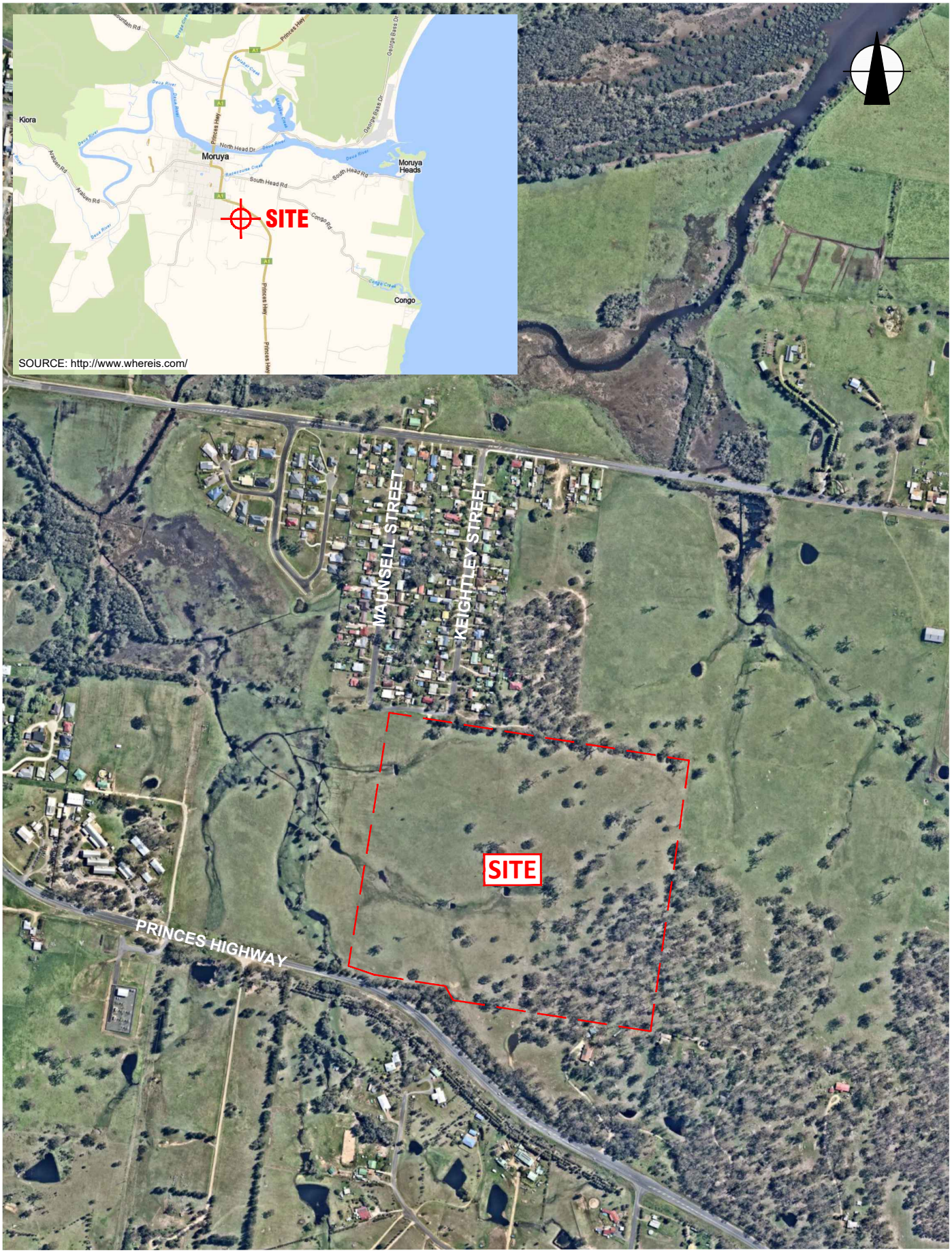
Misinterpretation of Reports by Design Professionals:
Costly problems can occur when design professionals develop plans based on misinterpretation of the report. To minimise problems associated with misinterpretations, the environmental consultant should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to contamination issues.

Logs Should not be Separated from the Report:
Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however contractors can still misinterpret the logs during bid preparation if separated from the text of the assessment. If this occurs, delays, disputes and unanticipated costs may result. In all cases it is necessary to refer to the rest of the report to obtain a proper understanding of the assessment. Please note that logs with the 'Environmental Log' header are not suitable for geotechnical purposes as they have not been peer reviewed by a Senior Geotechnical Engineer.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete report should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of subsurface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations such as contractors.

Read Responsibility Clauses Closely:
As the investigation is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the report, and you are encouraged to read them closely.

Appendix A: Report Figures



AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

This plan should be read in conjunction with the Environmental report.

Title: **SITE LOCATION PLAN**

Location: LOT 2, DP1281576, PRINCES HIGHWAY, MORUYA, NSW

Project No: E33942PL

Figure No: 1

JKEnvironments

PLOT DATE: 22/08/2022 10:37:31 AM DWG FILE: S:\S EIS\SC EIS JOBS\33000'S\E33942PL MORUYA\CAD\E33942PL.DWG

LEGEND

APPROXIMATE SITE BOUNDARY

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 35 70 105 140 175

SCALE 1:3500 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SITE LAYOUT PLAN**

Location: LOT 2, DP1281576, PRINCES HIGHWAY, MORUYA, NSW

Project No: E33942PL

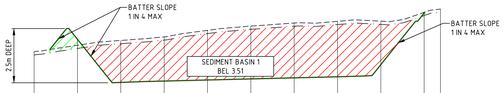
Figure No: 2

JKEnvironments

PLOT DATE: 22/08/2022 10:40:06 AM DWG FILE: S:\5 EIS\5C EIS JOBS\33000\SIE33942PL MORUYA\CAD\E33942PL.DWG

Appendix B: Site Information

Proposed Civil Plans

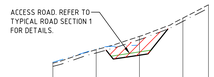


DATUM 1.5

SC01										
DESIGN SURFACE		5.511	3.523	3.595	3.634	3.683	3.733	3.782	4.345	6.723
BULK EARTHWORKS SURFACE		5.511	3.523	3.595	3.634	3.683	3.733	3.782	4.345	6.723
GRANITE SURFACE - XW (EXTREMELY WEATHERED)										
GRANITE SURFACE - DW (DISTINCTLY WEATHERED)										
STRIPPED 150mm SURFACE	4.785	5.988	5.310	5.475	5.774	5.976	6.114	6.192	6.300	6.607	6.755
EXISTING SURFACE	6.935	5.238	5.460	5.625	5.924	6.126	6.264	6.342	6.350	6.757	6.905
CHAINAGES	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	93.753

1 in 500 HORIZONTAL
1 in 100 VERTICAL

SC01 LONGITUDINAL SECTION

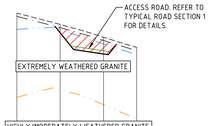


DATUM 9.4

SC02					
DESIGN SURFACE				12.693	
BULK EARTHWORKS SURFACE				11.743	
GRANITE SURFACE - XW (EXTREMELY WEATHERED)	11.693	12.275			
GRANITE SURFACE - DW (DISTINCTLY WEATHERED)					
STRIPPED 150mm SURFACE	11.423	12.043	12.660	13.501	14.175
EXISTING SURFACE	11.573	12.193	12.810	13.651	14.265
CHAINAGES	0.000	10.000	20.000	30.000	35.911

1 in 500 HORIZONTAL
1 in 100 VERTICAL

SC02 LONGITUDINAL SECTION

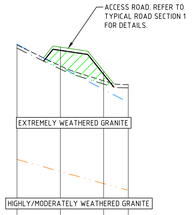


DATUM 14.4

SC03					
DESIGN SURFACE			20.543	19.564	
BULK EARTHWORKS SURFACE			20.393	19.414	
GRANITE SURFACE - XW (EXTREMELY WEATHERED)	20.560	20.527		19.879	19.385
GRANITE SURFACE - DW (DISTINCTLY WEATHERED)	17.433	17.761		17.076	16.414
STRIPPED 150mm SURFACE	21.152	20.930		20.039	19.566
EXISTING SURFACE	21.302	20.780		20.189	19.716
CHAINAGES	0.000	10.000		20.000	27.647

1 in 500 HORIZONTAL
1 in 100 VERTICAL

SC03 LONGITUDINAL SECTION



DATUM 1.5

SC04				
DESIGN SURFACE		10.156	9.467	
BULK EARTHWORKS SURFACE		10.006	8.897	
GRANITE SURFACE - XW (EXTREMELY WEATHERED)	10.283	9.243	8.199	
GRANITE SURFACE - DW (DISTINCTLY WEATHERED)	6.972	6.434	3.856	
STRIPPED 150mm SURFACE	10.193	9.141	8.452	8.275
EXISTING SURFACE	10.263	9.291	8.602	8.425
CHAINAGES	0.000	10.000	20.000	25.663

1 in 500 HORIZONTAL
1 in 100 VERTICAL

SC04 LONGITUDINAL SECTION

LEGEND

FILL FROM STRIPPED SURFACE TO UNDERSIDE OF BULK EARTHWORKS LEVELS

CUT FROM STRIPPED SURFACE TO UNDERSIDE OF BULK EARTHWORKS LEVELS

NOTES

1. EXISTING SURFACE LEVELS ARE INTERPOLATED FROM INFORMATION SUPPLIED BY 'LTS' PTY LTD REFERENCE 51266 001DT ISSUE 1 DATED 23/02/21
2. GRANITE SURFACE LEVELS INTERPOLATED FROM BOREHOLE LOGS SUPPLIED BY 'JKGEOTECHNICS' PTY LTD REF: 33942LTrpt2 DATED: 21ST MAY 2021

Rev	Description	Date	By	App
B	ISSUED FOR REF SUBMISSION	06.12.22	DH	SN
A	ISSUED FOR REF SUBMISSION	30.11.22	DH	SN

PRINTING FILE REQUIREMENTS
DESIGN PDF FILES GENERATED FROM THIS DIGITAL FILE HAVE BEEN CONFIGURED FOR PRINTING IN COLOUR ONLY. IT IS THE RESPONSIBILITY OF THE END USER TO HAVE PLANS PRINTED IN COLOUR FORMAT SO THAT THE DESIGN INFORMATION CAN BE INTERPRETED CORRECTLY

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

NSW GOVERNMENT Health Infrastructure

MEINHARDT BONACCI
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9019 7518
info@meinhardt-bonacci.com
www.meinhardt-bonacci.com
© Copyright

Project Name: SOIL CONSERVATION WORKS
PRINCES HWY, MORUYA NSW 2537

Drawing Title: BULK EARTHWORKS SITE SECTIONS

REF SUBMISSION

Designed	AM	Approved	
Drawn	DH	Date	NOV. 2022
Scale	AS SHOWN	North	
Date	NOV. 2022	Project Ref	
Sheet	A1	Drawing No	ERH-HI-CV-DWG-DD-01-PW-0521
		Rev	B

Plotted: 06.12.22 at 2:37 PM By: Dorsley Herrera

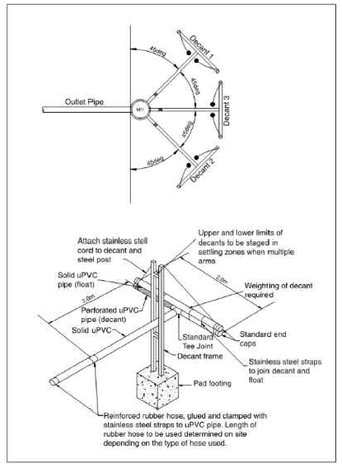


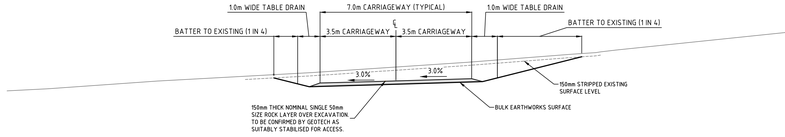
Figure B29 – Auckland-type floating decant system for Type A basins

DECANT SYSTEM TYPICAL DETAIL (EMPTYING FOR HIGH LEVEL)

N.T.S

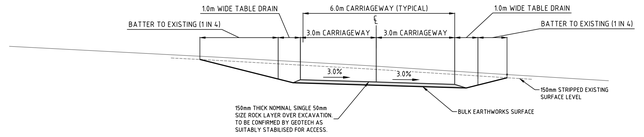
LEGEND

- EXISTING SURFACE CONTOUR
- EARLY WORKS DESIGN CONTOUR
- LOT BOUNDARY
- SEDIMENT BASIN SETTLING AREA
- BATTER
- TEMPORARY SHAKER RAMP FOR ENTRY/EXIT
- OVERLAND FLOW
- HAY BALES
- SEDIMENT FENCE
- SWALE DRAIN
- WORKS EXTENT (TOTAL AREA: 6.5Ha)
- WORKS COMPOUND



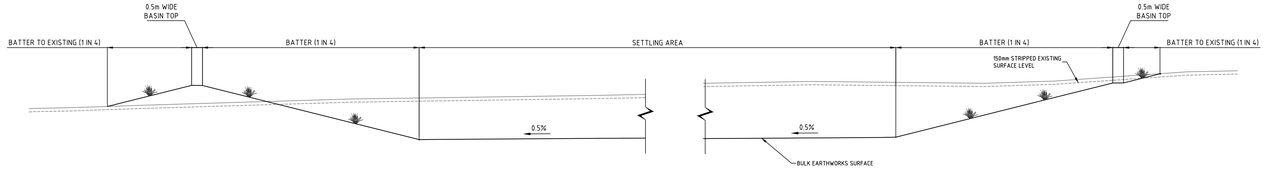
TYPICAL ROAD SECTION 1

N.T.S



TYPICAL ROAD SECTION 2

N.T.S



SEDIMENT BASIN TYPICAL SECTION

N.T.S

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

Rev	Description	Date	By	App
B	ISSUED FOR REF SUBMISSION	06.12.22	DH	SN
A	ISSUED FOR REF SUBMISSION	30.11.22	DH	SN

PRINTING FILE REQUIREMENTS
DESIGN PDF FILES GENERATED FROM THIS DIGITAL FILE HAVE BEEN CONFIGURED FOR PRINTING IN COLOUR ONLY. IT IS THE RESPONSIBILITY OF THE END USER TO HAVE PLANS PRINTED IN COLOUR FORMAT SO THAT THE DESIGN INFORMATION CAN BE INTERPRETED CORRECTLY

NOT FOR CONSTRUCTION

NSW GOVERNMENT Health Infrastructure

MEINHARDT BONACCI
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9009 3088
F: +61 2 9019 7518
email: meinhardt-bonacci.com
web: meinhardt-bonacci.com

Project Name: SOIL CONSERVATION WORKS PRINCES HWY, MORUYA NSW 2537
Drawing Title: SITE WORKS PLAN

REF SUBMISSION

Designed	AM	Approved	North
Drawn	DH	SN	Date NOV. 2022
Scale	1:1000		
Date	NOV. 2022	Project Ref	Drawing No Rev
Sheet	A0		ERH-HI-CV-DWG-DD-01-PW-0530 B

Plotted: 06.12.22 at 4:06 PM By: Dunjay Herrera

Selected Site Photos

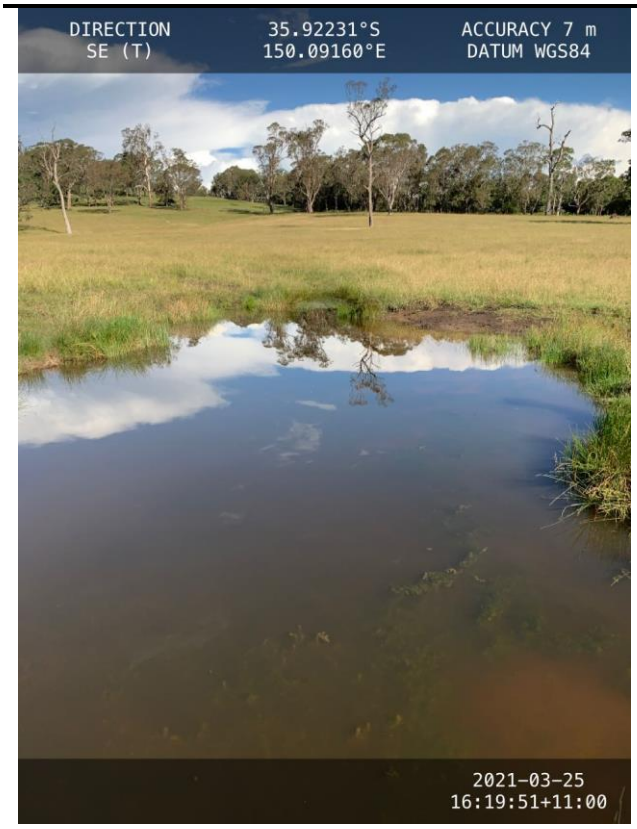
Project Ref: E33942PL
Site Address: Lot 6, DP1212271, Princes Highway, Moruya NSW
Selected Site Photos Dated: 25 March 2021

Photograph 1: Taken from the north-east hill peak, facing south-west. Note slope of the site down towards the distributary of Racecourse Creek.

Photograph 2: Taken showing an example of granite outcropping at the surface, facing east. This outcropping was evident in various locations across the site.

Photograph 3: Taken showing the south-western corner of the site, facing south. Note the steep slope of the hillside which was densely vegetated with extensive granite outcropping was visible in this area.

Photograph 4: Taken showing an example of one of the several dams across the site. Note the soil pushed to form a batter to create the dam.

	**Photograph 5:** Taken showing the one of the several dams across the site. Aquatic vegetation and fish were visible in the majority of these dams.
	**Photograph 6:** Taken showing the northern portion of the site, facing north. Note the residential properties beyond the boundary of the site.

Lotsearch Environmental Risk and Planning Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 30 Mar 2021 09:50:59

Reference: LS019166 EP

Address: Lot 6 Princes Highway, Moruya, NSW 2537

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	19/02/2021	19/02/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	11/03/2021	08/03/2021	Monthly	1000	0	0	1
Contaminated Land Records of Notice	Environment Protection Authority	04/03/2021	04/03/2021	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	09/03/2021	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	11/02/2021	07/03/2017	Quarterly	1000	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000	0	0	3
EPA PFAS Investigation Program	Environment Protection Authority	12/03/2021	23/11/2020	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	30/03/2021	30/03/2021	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	30/03/2021	30/03/2021	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	29/03/2021	29/03/2021	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	12/03/2021	12/03/2021	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	02/02/2021	13/12/2018	Annually	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	08/03/2021	08/03/2021	Monthly	1000	0	0	1
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	08/03/2021	08/03/2021	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	08/03/2021	08/03/2021	Monthly	1000	3	3	4
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	1	1
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150	-	23	23
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	8	8
Points of Interest	NSW Department of Finance, Services & Innovation	18/02/2021	18/02/2021	Quarterly	1000	0	0	15
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	16/02/2021	16/02/2021	Quarterly	1000	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	16/02/2021	16/02/2021	Quarterly	1000	0	0	7
Major Easements	NSW Department of Finance, Services & Innovation	17/02/2021	17/02/2021	Quarterly	1000	1	3	8
State Forest	Forestry Corporation of NSW	25/02/2021	14/02/2021	Annually	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	22/01/2021	11/12/2020	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	Annually	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	44
Geological Units 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000	1	-	3
Geological Structures 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	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	1000	2	2	2
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	18/03/2021	26/02/2021	Monthly	500	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	2
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	0
Dryland Salinity Potential of Western Sydney	NSW Department of Planning, Industry and Environment	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	16/02/2021	16/02/2021	Quarterly	1000	0	0	0
Current Mining Titles	NSW Department of Industry	04/03/2021	04/03/2021	Monthly	1000	0	0	0
Mining Title Applications	NSW Department of Industry	04/03/2021	04/03/2021	Monthly	1000	0	0	0
Historic Mining Titles	NSW Department of Industry	04/03/2021	04/03/2021	Monthly	1000	3	3	3
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	18/03/2021	07/12/2018	Monthly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	18/03/2021	12/03/2021	Monthly	1000	2	5	31
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	23/02/2021	20/11/2019	Quarterly	1000	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	23/02/2021	20/11/2019	Quarterly	1000	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	15/02/2021	30/11/2020	Quarterly	1000	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	18/03/2021	12/03/2021	Monthly	1000	0	0	3
Bush Fire Prone Land	NSW Rural Fire Service	26/03/2021	11/02/2021	Weekly	1000	0	0	2
Vegetation of Southern Forests	NSW Office of Environment & Heritage	09/12/2014	10/10/2011	Unknown	1000	0	0	2
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	24/02/2021	19/03/2020	Annually	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Annually	1000	2	2	5
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	4	4	11
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	29/03/2021	29/03/2021	Weekly	10000	-	-	-

Site Diagram

Lot 6 Princes Highway, Moruya, NSW 2537

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 262256m^2

Total Perimeter: 2555m

Scale: 0 25 50 100 150 200 Meters

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

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

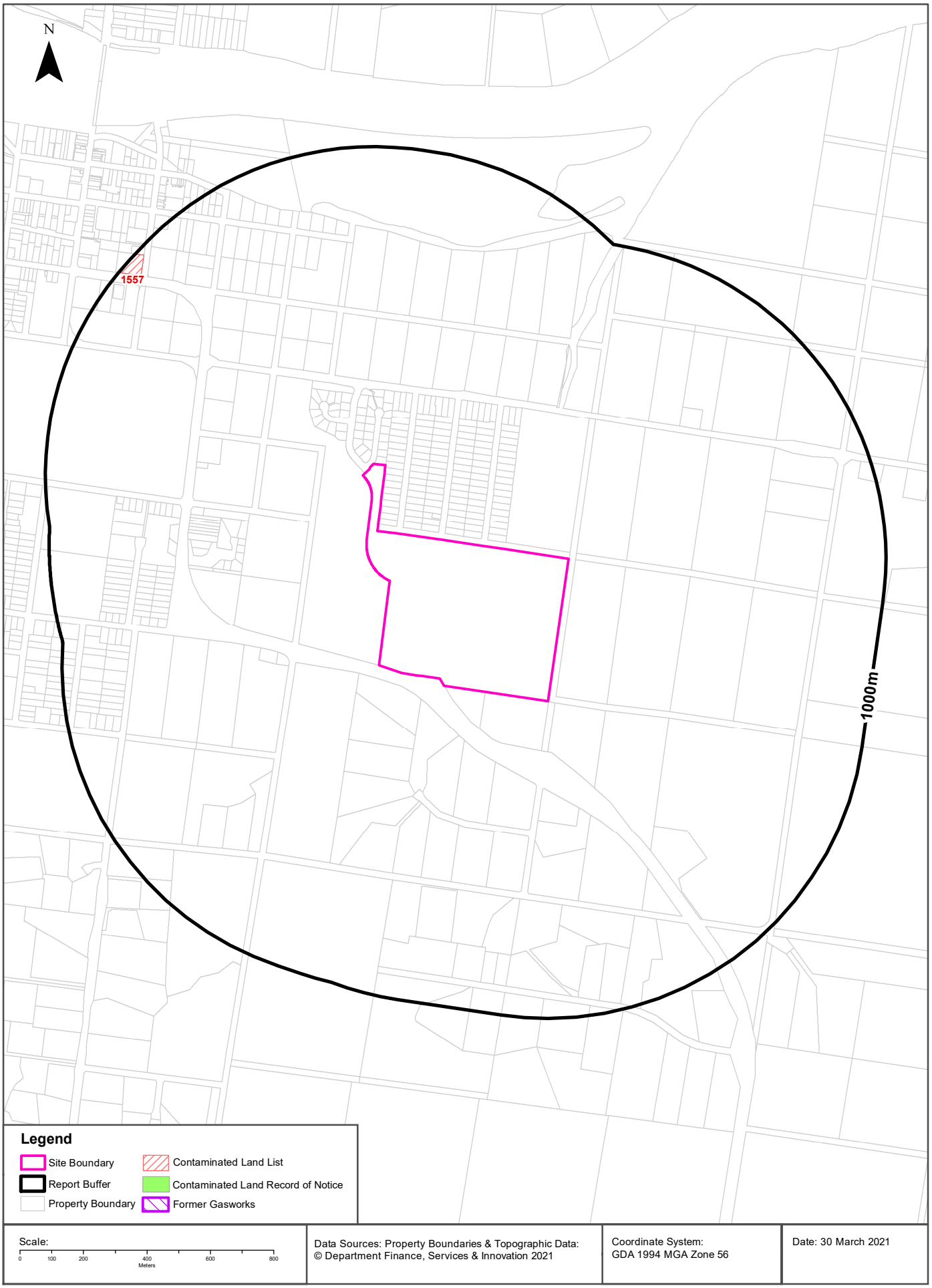
Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Coordinate System: GDA 1994 MGA Zone 56

Date: 30 March 2021

Contaminated Land

Lot 6 Princes Highway, Moruya, NSW 2537



Contaminated Land

Lot 6 Princes Highway, Moruya, NSW 2537

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
1557	Caltex Service Station Moruya	80-84 Campbell Street	Moruya	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	943m	North West

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

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land

Lot 6 Princes Highway, Moruya, NSW 2537

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

Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

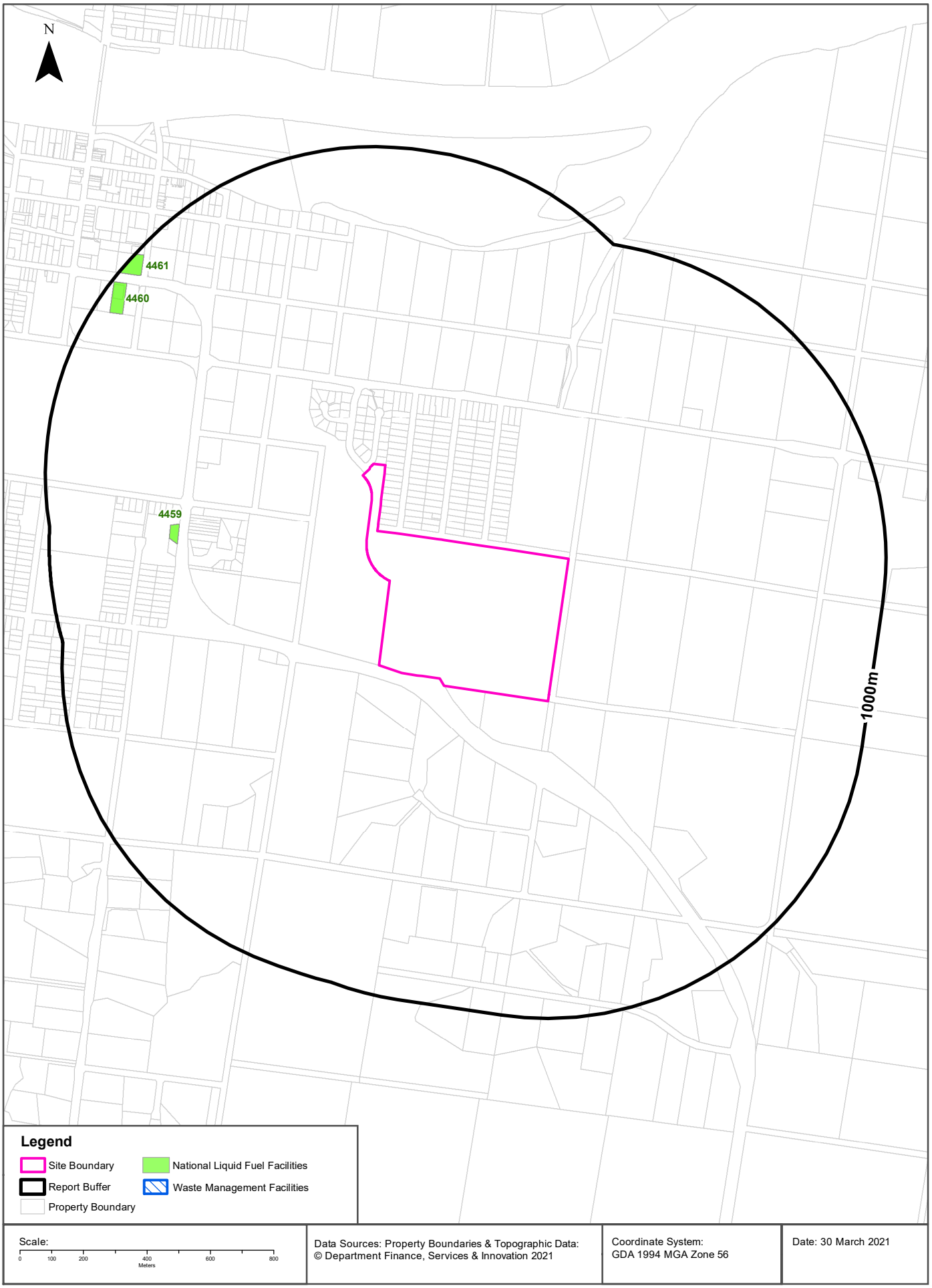
Former Gasworks within the dataset buffer:

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

Former Gasworks Data Source: Environment Protection Authority

Waste Management & Liquid Fuel Facilities

Lot 6 Princes Highway, Moruya, NSW 2537



Waste Management & Liquid Fuel Facilities

Lot 6 Princes Highway, Moruya, NSW 2537

National Waste Management Site Database

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

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

National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist (m)	Direction
4459	Caltex	Woolworths Caltex Moruya	2808 Princes Highway	Moruya	Petrol Station	Operational		25/07/2011	Premise Match	593m	West
4460	Caltex	Caltex Moruya	95A Princes Highway	Moruya	Petrol Station	Operational		25/07/2011	Premise Match	913m	North West
4461	7-Eleven Pty Ltd	Caltex Moruya	80-82 Campbell Street	Moruya	Petrol Station	Operational		13/07/2012	Premise Match	943m	North West

PFAS Investigation & Management Programs

Lot 6 Princes Highway, Moruya, NSW 2537

EPA PFAS Investigation Program

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

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

EPA PFAS Investigation Program: Environment Protection Authority

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

Lot 6 Princes Highway, Moruya, NSW 2537

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

Lot 6 Princes Highway, Moruya, NSW 2537

EPA Other Sites with Contamination Issues

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

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

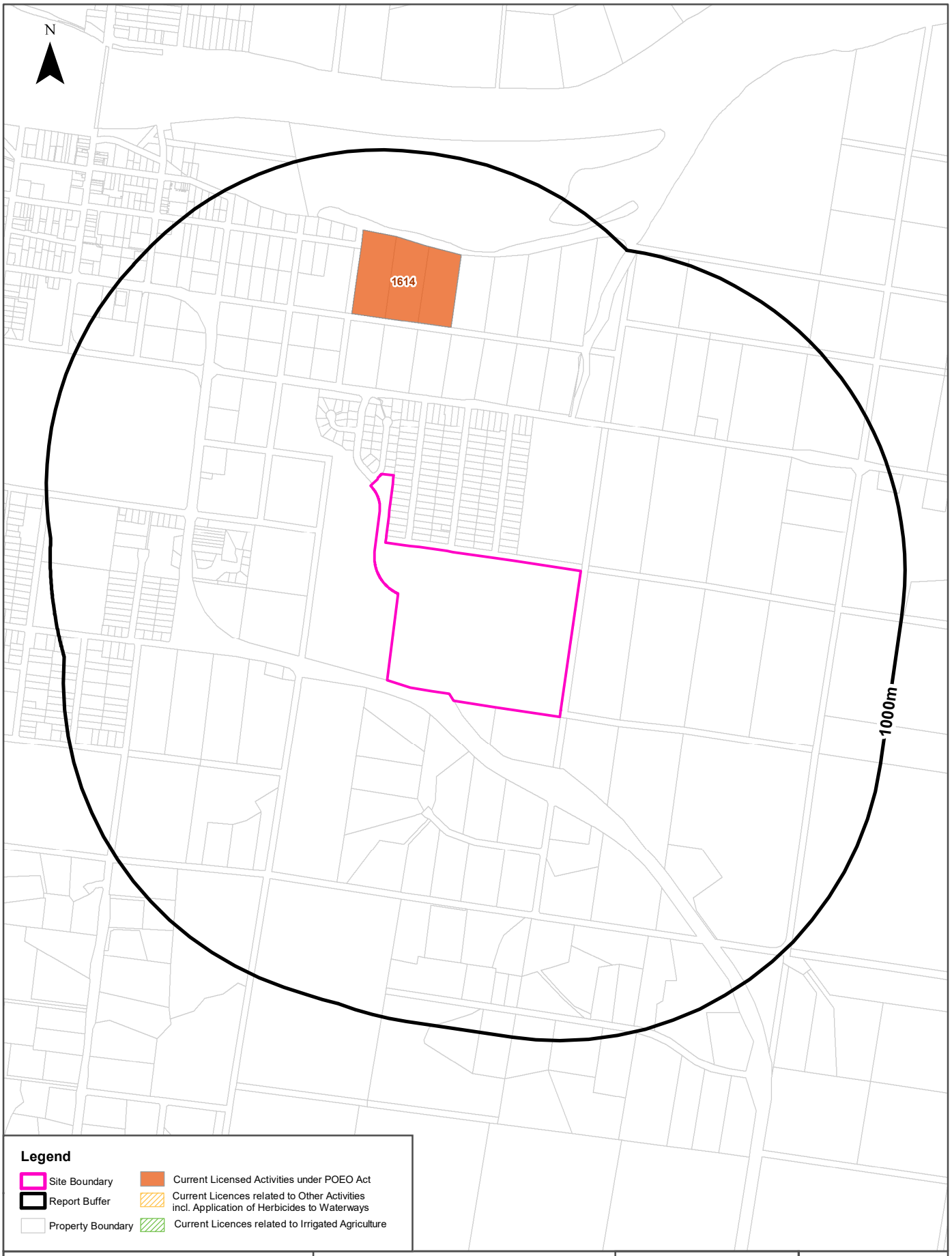
Sites within the dataset buffer:

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

EPA Other Sites with Contamination Issues: Environment Protection Authority

Current EPA Licensed Activities

Lot 6 Princes Highway, Moruya, NSW 2537



EPA Activities

Lot 6 Princes Highway, Moruya, NSW 2537

Licensed Activities under the POEO Act 1997

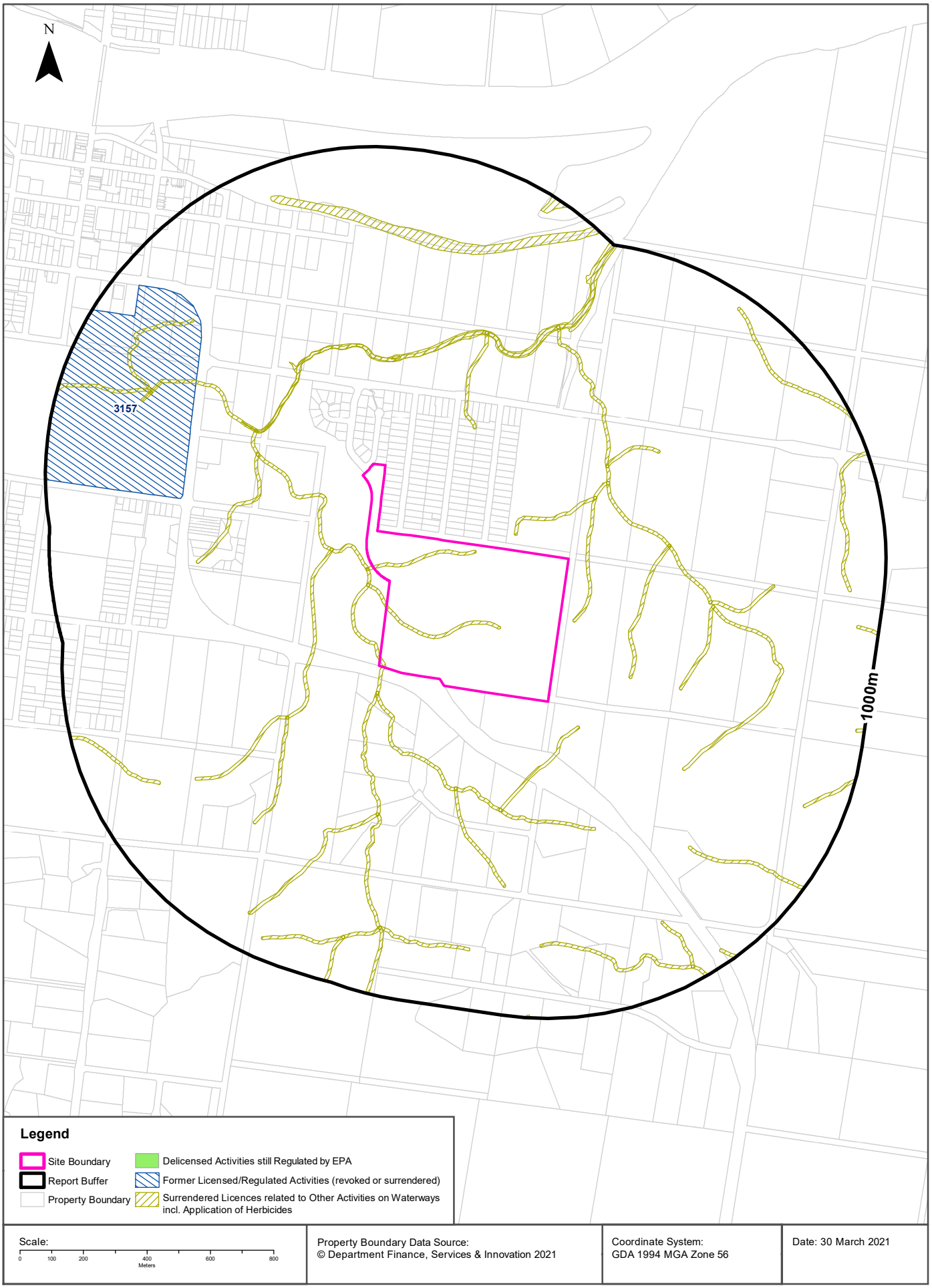
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
1614	EUROBODALLA SHIRE COUNCIL	MORUYA SEWAGE TREATMENT PLANT	QUEEN ST	MORUYA	Sewage treatment processing by small plants	Premise Match	478m	North

POEO Licence Data Source: Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Lot 6 Princes Highway, Moruya, NSW 2537



EPA Activities

Lot 6 Princes Highway, Moruya, NSW 2537

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

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

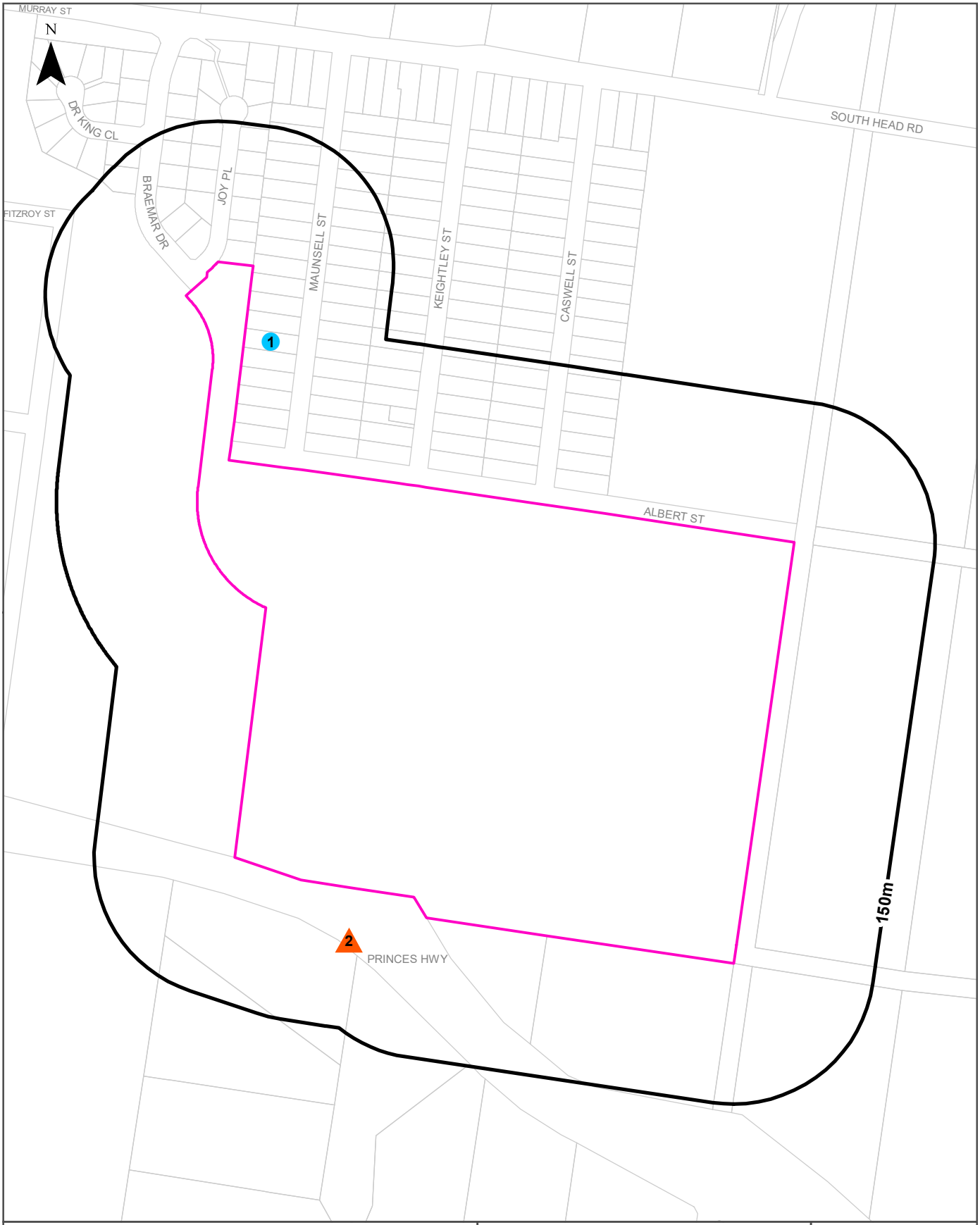
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

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	Onsite
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	Onsite
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	Onsite
3157	MORUYA GOLF CLUB LTD f	EVANS ST, MORUYA, NSW 2537	Surrendered	27/06/2000	Other activities, Sewage treatment processing by small plants	Premise Match	556m	North West

Former Licensed Activities Data Source: Environment Protection Authority

Historical Business Directories

Lot 6 Princes Highway, Moruya, NSW 2537



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: 0 75 150 225 300 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 30 March 2021

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

Historical Business Directories

Lot 6 Princes Highway, Moruya, NSW 2537

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
1	NOT LISTED	Brotherton N.L.& D.L Carrier., 25 Maunsell St, Moruya	148349	1991	Premise Match	0m	North West

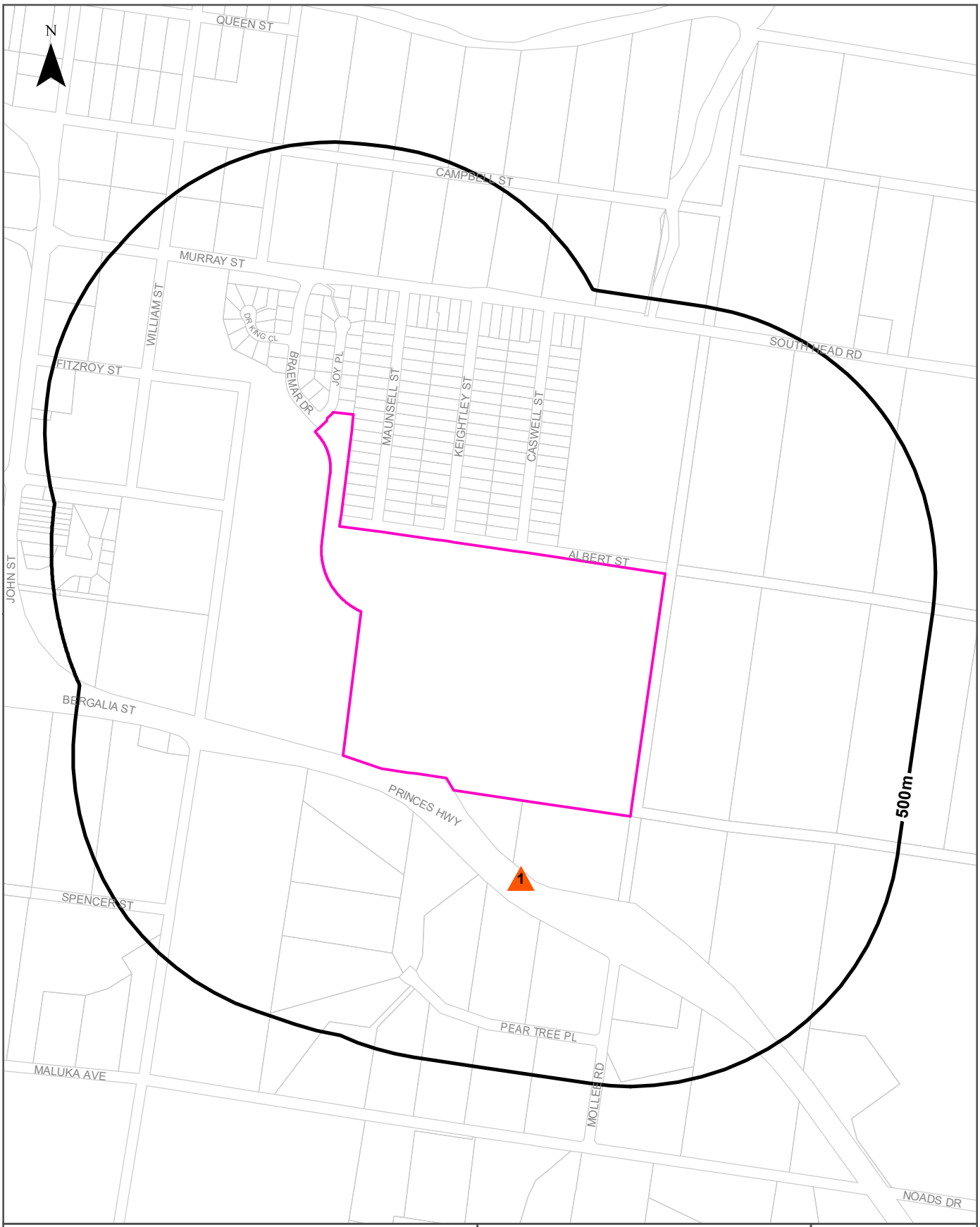
Business Directory Records 1950-1991
Road or Area Matches

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
2	NOT LISTED	B & T Auto Electrics., Princes Hway, Moruya	148343	1991	Road Match	0m
	NOT LISTED	Caltex Oil Aust. Pty. Ltd., Princes Hway, Moruya	148350	1991	Road Match	0m
	NOT LISTED	Gogas Shell B.H.P. Autogas Pty. Ltd., Princes Hway, Moruya	148369	1991	Road Match	0m
	NOT LISTED	Golden Fleece Service Station., Princes Hway, Moruya	148370	1991	Road Match	0m
	NOT LISTED	Mobil Servicentre., Princes Hway, Moruya	148378	1991	Road Match	0m
	NOT LISTED	Moruya Produce & Machinery Pty. Ltd., Princes Hway, Moruya	148396	1991	Road Match	0m
	NOT LISTED	Motel Luhana., Princes Hway, Moruya	148403	1991	Road Match	0m
	NOT LISTED	Motel Moruya., Princes Hway, Moruya	148404	1991	Road Match	0m
	WINDSCREEN REPLACEMENTS &/OR REPAIRS.	Novus Windscreen Repairs., Unit 5 Highway Centre Princes Hway Moruya	148335	1991	Road Match	0m
	NOT LISTED	Pearly Shells Hotel-Motel., Princes Hway, Moruya	148407	1991	Road Match	0m
	NOT LISTED	River Breeze Caravan Park., Princes Hway, Moruya	148412	1991	Road Match	0m
	NOT LISTED	Shell Co. Of Australia., Princes Hway, Moruya	148413	1991	Road Match	0m
	NOT LISTED	Shellgas., Princes Hway, Moruya	148414	1991	Road Match	0m
	NOT LISTED	Specified Concrete Pty. Ltd., Princes Hway, Moruya	148417	1991	Road Match	0m
	NOT LISTED	Stejjbm Pty Ltd. Wndw. Fnme Mir., 21 Princes Hway, Moruya	148418	1991	Road Match	0m
	MOTOR GARAGES & ENGINEERS	BP Moruya Service Station, Princes Hghwy. Moruya	571976	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Esso Servicenter, Princes Hghwy. Moruya	571977	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Golden Fleece Service Station (The), Princes Hghwy. Moruya	571988	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Mobil Service Centre, Princes Hghwy. Moruya	571978	1970	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Moruya Dry Cleaners, Princes Hghwy. Moruya	571915	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Vidgen Motors, Princes Hghwy. Moruya	571980	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Bridge Motors, Princes Highway., Moruya	215231	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Excelsior Garage and Service Station Pty. Ltd., Princes Highway., Moruya	215232	1961	Road Match	0m

Dry Cleaners, Motor Garages & Service Stations

Lot 6 Princes Highway, Moruya, NSW 2537



Legend

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

Scale: 0 130 260 390 520 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 30 March 2021

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

Historical Business Directories

Lot 6 Princes Highway, Moruya, NSW 2537

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

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

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

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
1	MOTOR GARAGES & ENGINEERS	BP Moruya Service Station, Princes Hghwy. Moruya	571976	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Esso Servicenter, Princes Hghwy. Moruya	571977	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Golden Fleece Service Station (The), Princes Hghwy. Moruya	571988	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Mobil Service Centre, Princes Hghwy. Moruya	571978	1970	Road Match	0m
	DRY CLEANERS, PRESSERS & DYERS	Moruya Dry Cleaners, Princes Hghwy. Moruya	571915	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Vidgen Motors, Princes Hghwy. Moruya	571980	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Bridge Motors, Princes Highway., Moruya	215231	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Excelsior Garage and Service Station Pty. Ltd., Princes Highway., Moruya	215232	1961	Road Match	0m

Aerial Imagery 2020

Lot 6 Princes Highway, Moruya, NSW 2537

Scale:
0 60 120 180 240
Meters

Data Source Aerial Imagery: © 2021 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 30 March 2021

Aerial Imagery 2015

Lot 6 Princes Highway, Moruya, NSW 2537

Data Source Aerial Imagery: © 2021 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

Date: 30 March 2021

Aerial Imagery 2012

Lot 6 Princes Highway, Moruya, NSW 2537

Data Source Aerial Imagery: © 2021 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

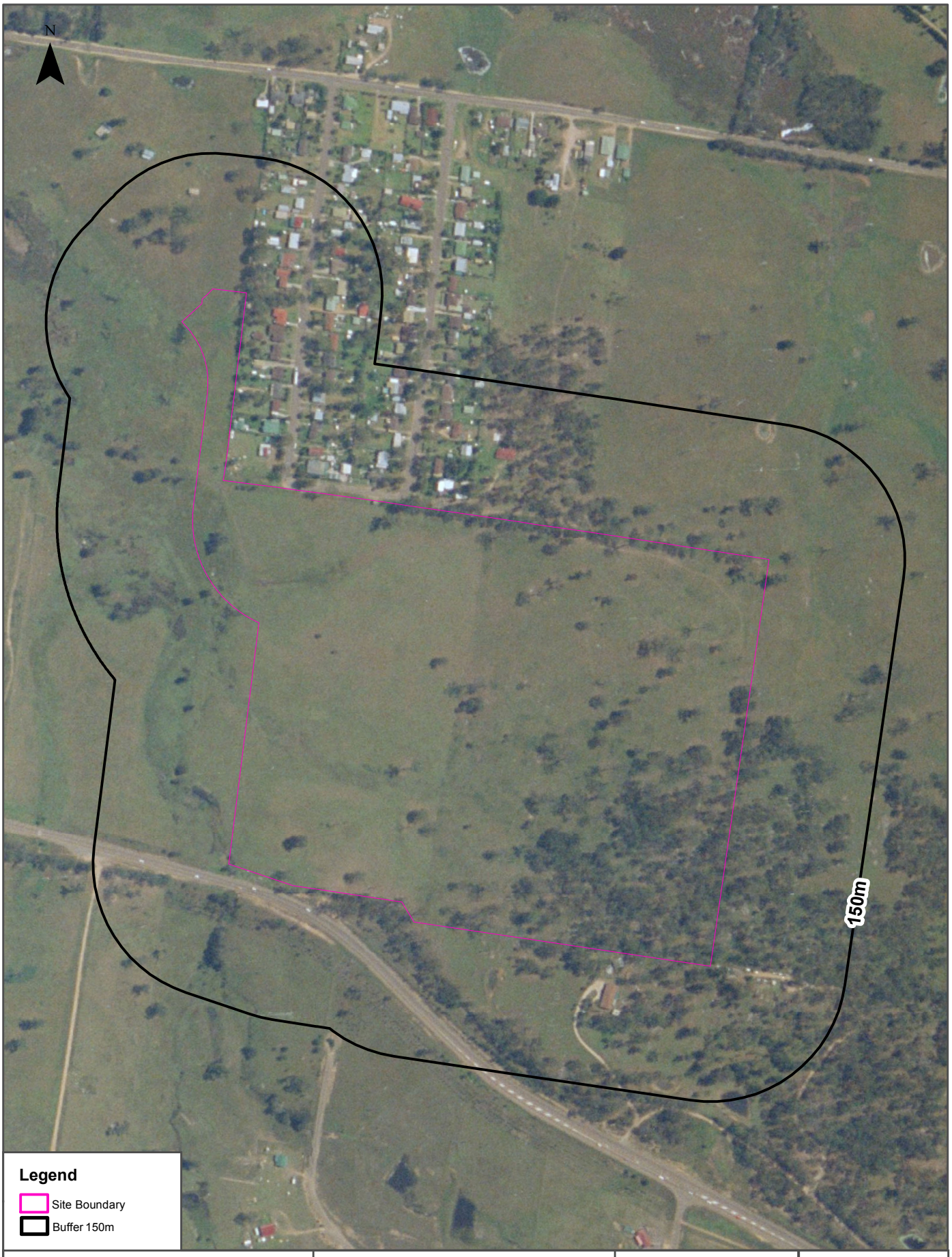
Date: 30 March 2021

Aerial Imagery 2006

Lot 6 Princes Highway, Moruya, NSW 2537

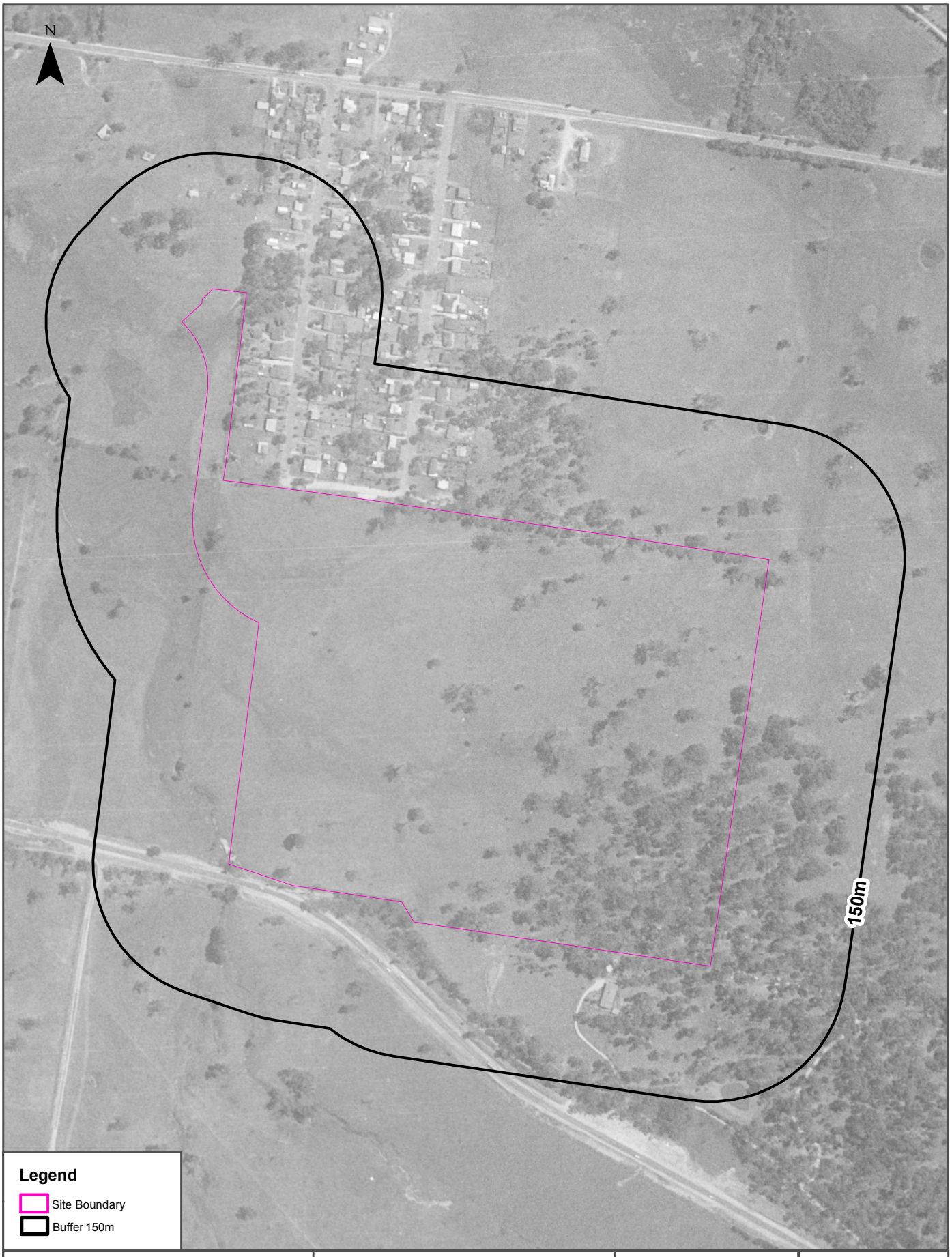
Aerial Imagery 1999

Lot 6 Princes Highway, Moruya, NSW 2537



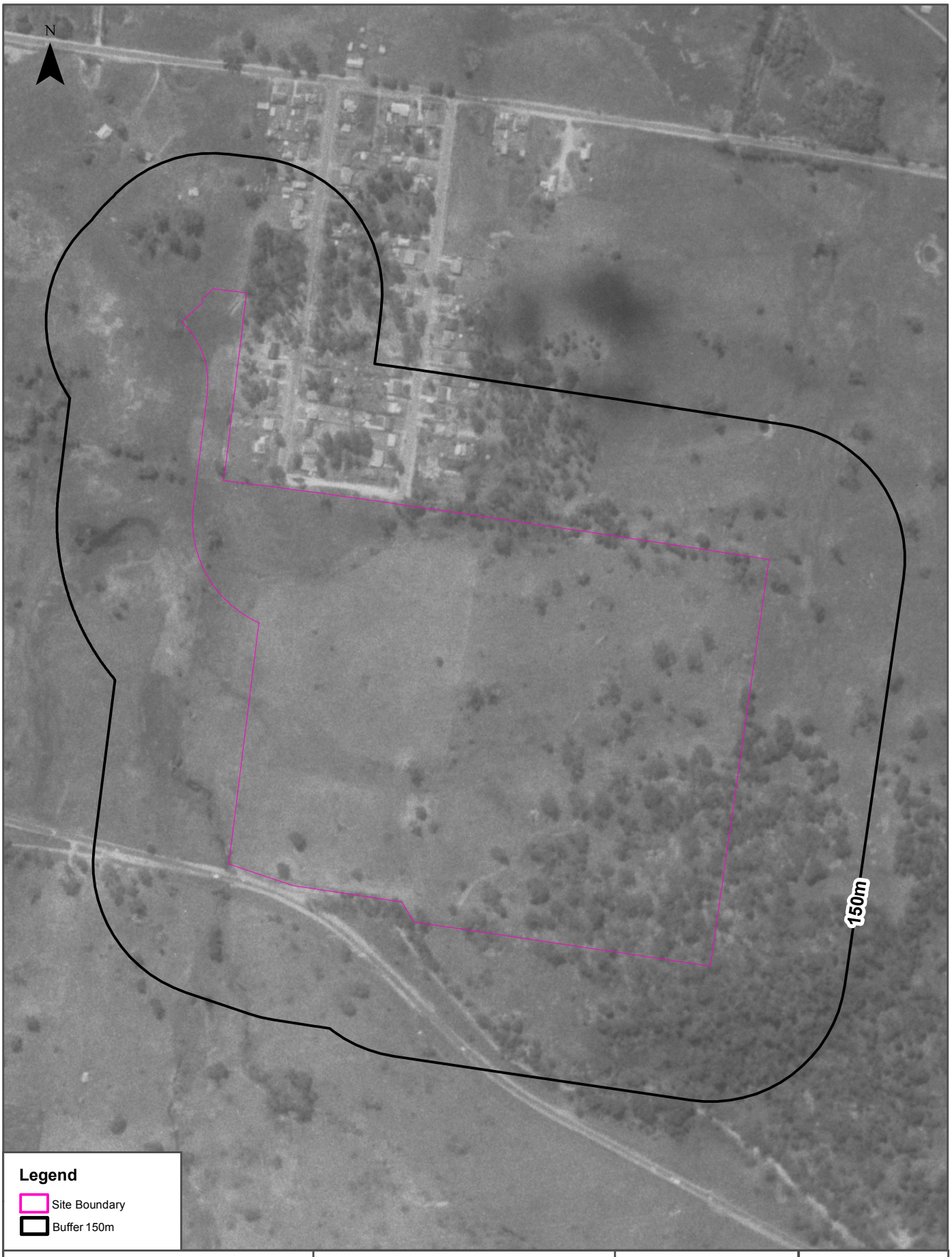
Aerial Imagery 1989

Lot 6 Princes Highway, Moruya, NSW 2537



Aerial Imagery 1981

Lot 6 Princes Highway, Moruya, NSW 2537



Aerial Imagery 1979

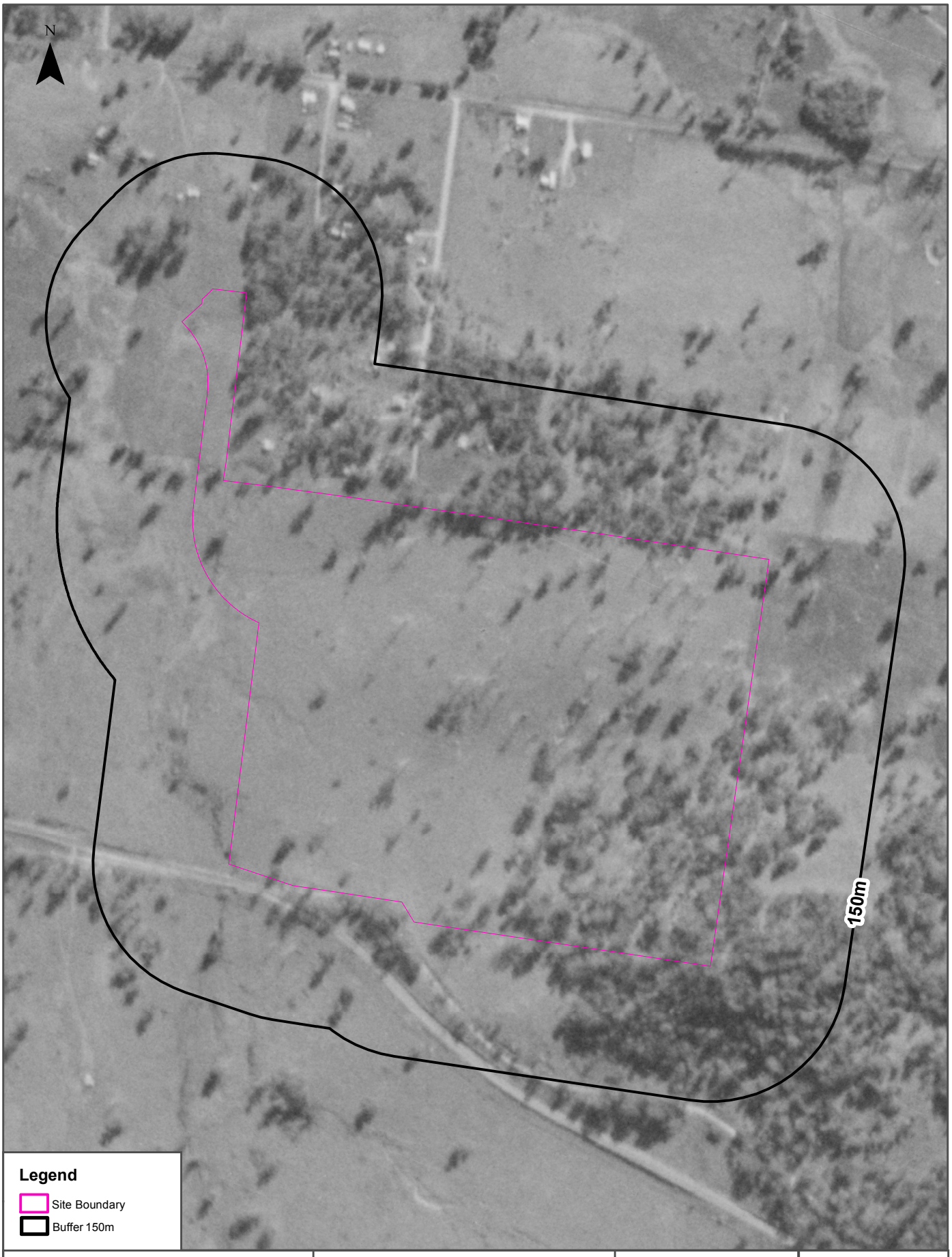
Lot 6 Princes Highway, Moruya, NSW 2537

Aerial Imagery 1970

Lot 6 Princes Highway, Moruya, NSW 2537

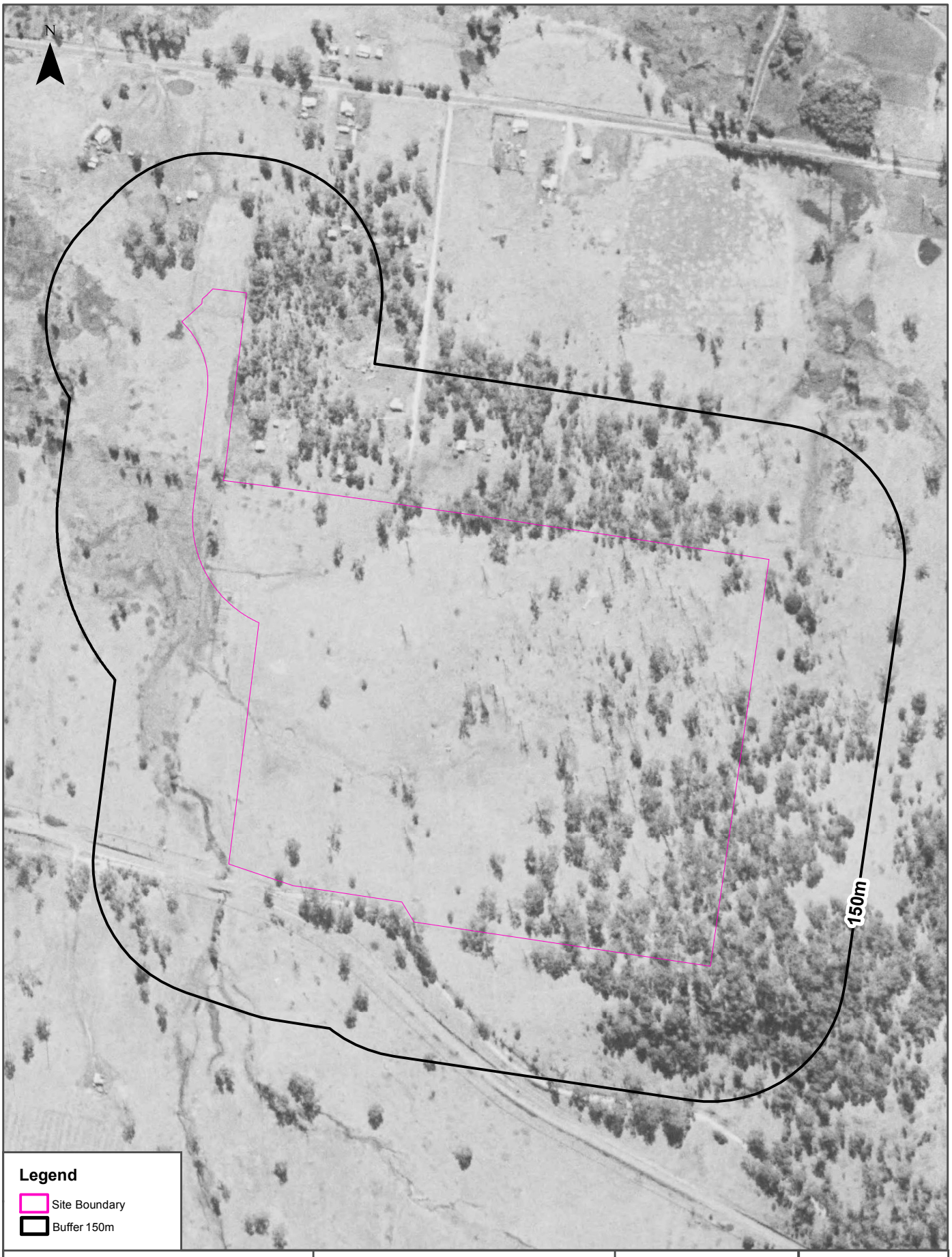
Aerial Imagery 1966

Lot 6 Princes Highway, Moruya, NSW 2537



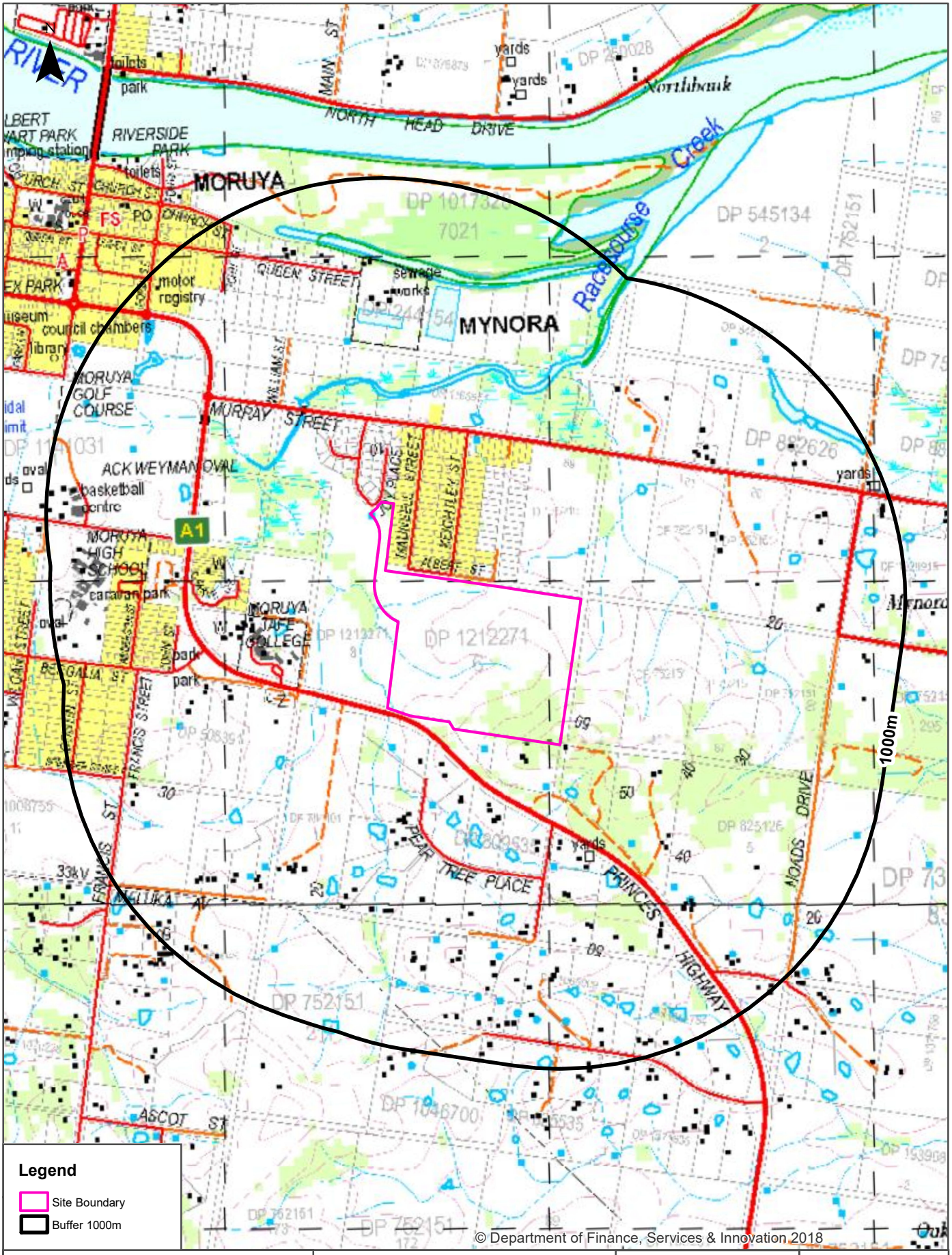
Aerial Imagery 1961

Lot 6 Princes Highway, Moruya, NSW 2537



Topographic Map 2015

Lot 6 Princes Highway, Moruya, NSW 2537



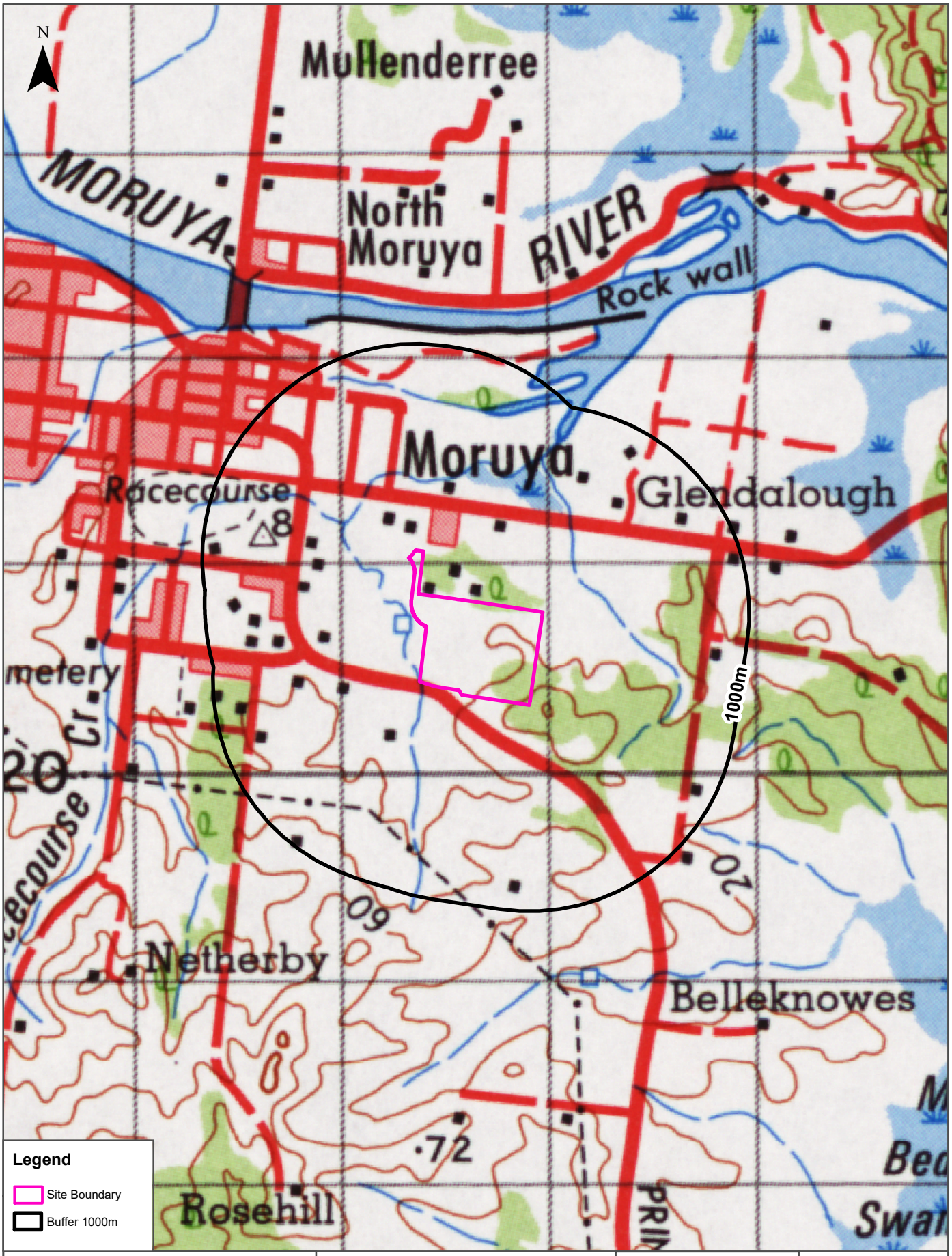
Legend

- Site Boundary
- Buffer 1000m

Scale:	Data Sources: Topographic Map Data © NSW Land and Property Information	Coordinate System: GDA 1994 MGA Zone 56	Date: 30 March 2021

Historical Map 1971

Lot 6 Princes Highway, Moruya, NSW 2537



Scale: 0 200 400 800 1,200 Metres

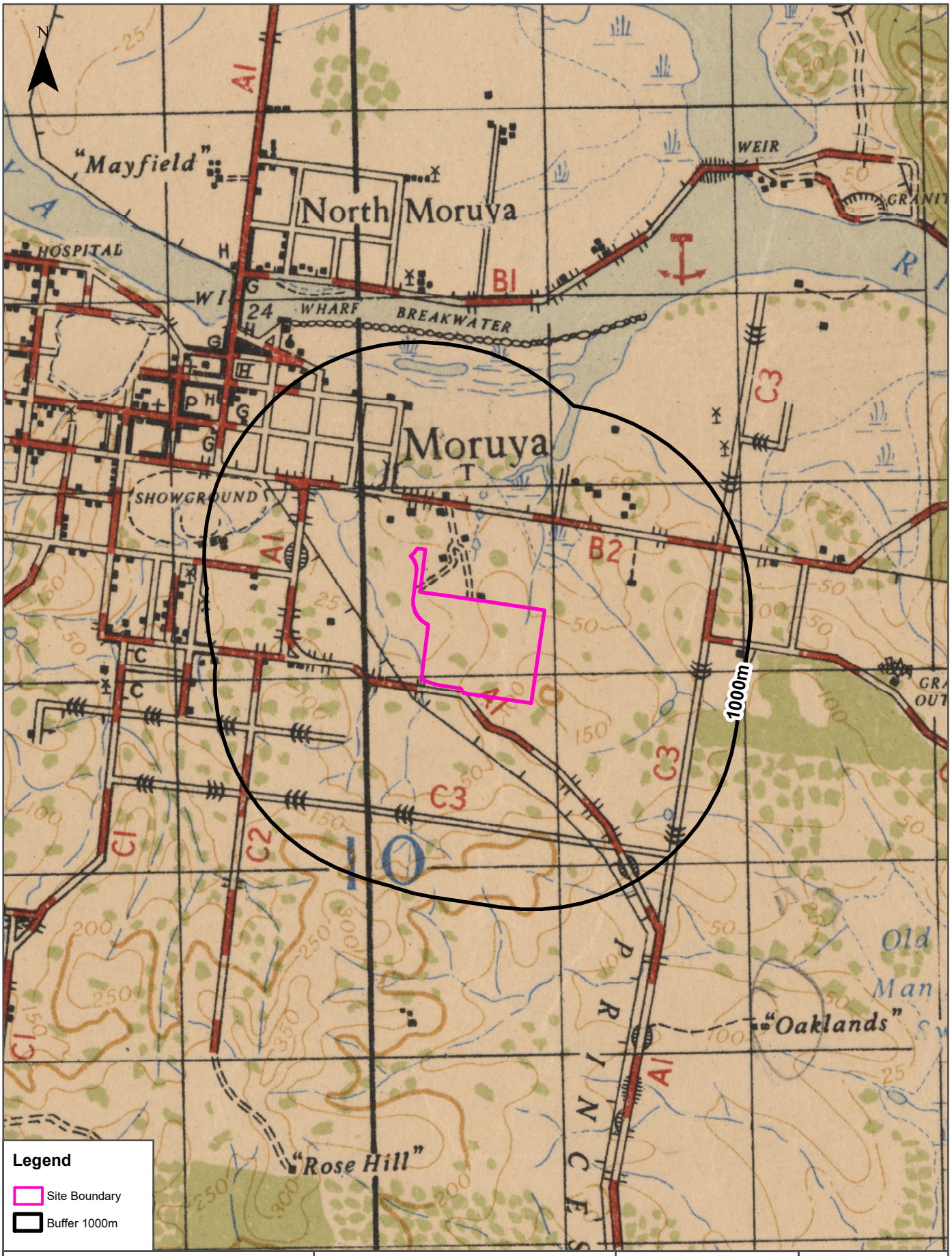
Data Sources: NATMAP 1:100,000
Topographic Maps Geoscience Australia

Coordinate System:
GDA 1994 MGA Zone 56

Date: 30 March 2021

Historical Map c.1943

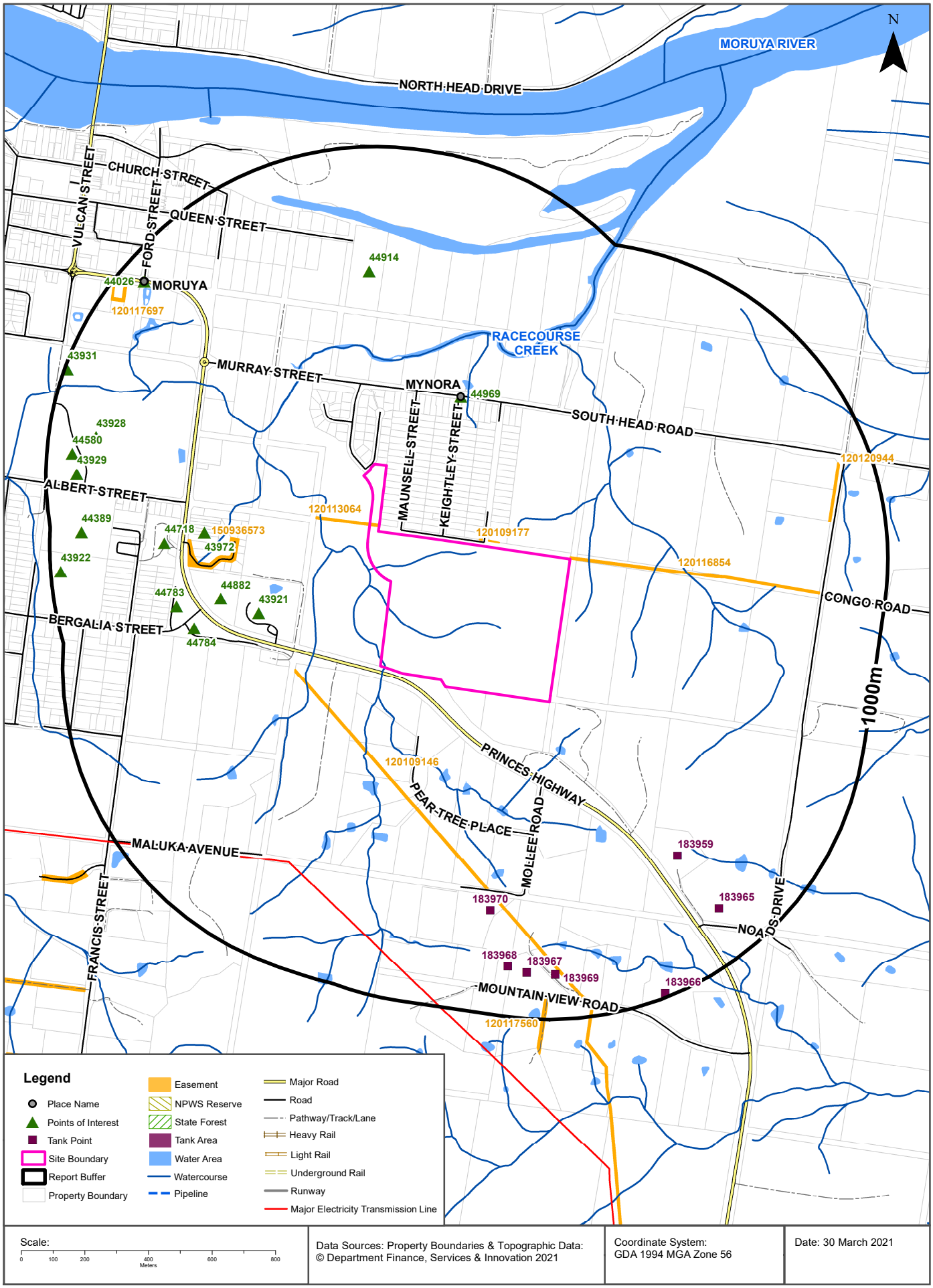
Lot 6 Princes Highway, Moruya, NSW 2537



Scale: 0 200 400 800 Meters	Data Sources: Australia 1:63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 30 March 2021

Topographic Features

Lot 6 Princes Highway, Moruya, NSW 2537



Topographic Features

Lot 6 Princes Highway, Moruya, NSW 2537

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
44969	Urban Place	MYNORA	319m	North
43921	TAFE College	MORUYA TAFE COLLEGE	388m	West
44882	Place Of Worship	Place Of Worship	485m	West
43972	Place Of Worship	BAPTIST CHURCH	514m	West
44784	Park	Park	594m	West
44914	Sewage Works	Sewage Works	608m	North
44783	Park	Park	625m	West
44718	Tourist Park / Home Village	BLUE GUMS CARAVAN PARK	638m	West
43928	Sports Field	ACK WEYMAN OVAL	850m	North West
44389	High School	MORUYA HIGH SCHOOL	900m	West
43929	Sports Centre	BASKETBALL CENTRE	902m	West
44580	Community Facility	MORUYA SHOWGROUND EXHIBITION PAVILION	919m	West
44026	Town	MORUYA	923m	North West
43922	Sports Field	OVAL	967m	West
43931	Golf Course	MORUYA GOLF COURSE	990m	North West

Topographic Features

Lot 6 Princes Highway, Moruya, NSW 2537

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
183959	Water	Operational		01/11/2014	629m	South East
183970	Water	Operational		01/11/2014	676m	South
183965	Water	Operational		01/11/2014	840m	South East
183968	Water	Operational		01/11/2014	843m	South
183967	Water	Operational		01/11/2014	855m	South
183969	Water	Operational		01/11/2014	858m	South
183966	Water	Operational		01/11/2014	987m	South East

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
120113064	Primary	Undefined		0m	Onsite
120116854	Primary	Undefined		2m	East
120109177	Primary	Undefined		20m	North
120109146	Primary	Undefined		207m	South
150936573	Primary	Right of way	15 and variable	405m	West
120120944	Primary	Undefined		822m	East
120117697	Primary	Undefined		931m	North West

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120117560	Primary	Undefined		937m	South

Topographic Features

Lot 6 Princes Highway, Moruya, NSW 2537

State Forest

What State Forest exist within the dataset buffer?

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

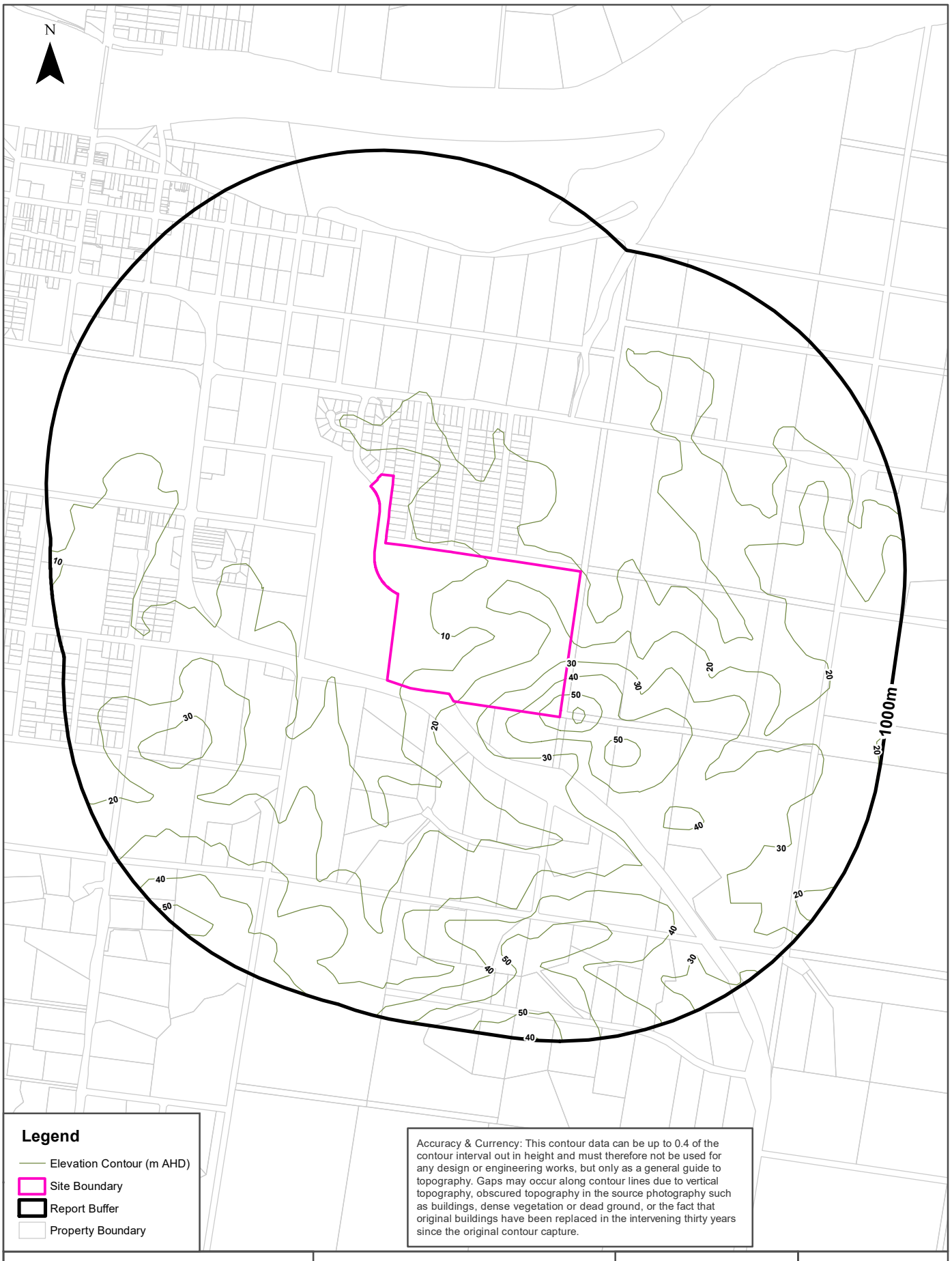
National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

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

Elevation Contours (m AHD)

Lot 6 Princes Highway, Moruya, NSW 2537



Hydrogeology & Groundwater

Lot 6 Princes Highway, Moruya, NSW 2537

Hydrogeology

Description of aquifers on-site:

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

Description of aquifers within the dataset buffer:

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

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

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

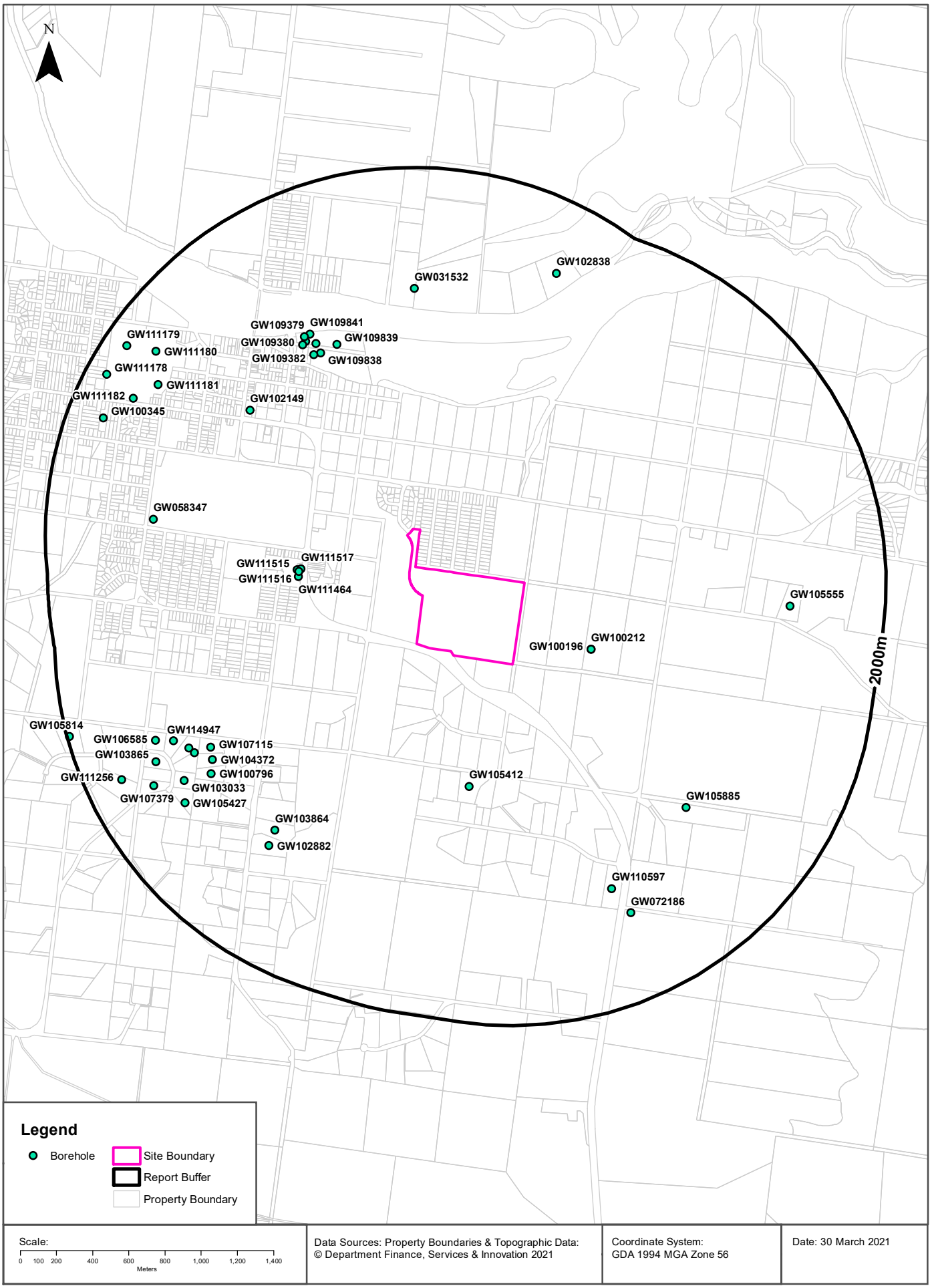
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

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

Lot 6 Princes Highway, Moruya, NSW 2537



Hydrogeology & Groundwater

Lot 6 Princes Highway, Moruya, NSW 2537

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW100212	10BL152225	Bore	Private	Domestic, Stock	Domestic, Stock		12/05/1993	12.00	12.00	Good	2.00	0.600		418m	East
GW100196	10BL145757	Bore		Domestic	Domestic		01/01/1992	24.00			4.00			418m	East
GW111517	10BL603275	Bore	Private	Monitoring Bore	Monitoring Bore		13/12/2010	8.80	8.80					598m	West
GW111516	10BL603275	Bore	Private	Monitoring Bore	Monitoring Bore		13/12/2010	8.70	8.70					609m	West
GW111464	10BL604658	Bore	Private	Monitoring Bore	Monitoring Bore		16/05/2011	7.50	7.50					613m	West
GW111515	10BL603275	Bore	Private	Monitoring Bore	Monitoring Bore		13/12/2010	8.80	8.80					620m	West
GW105412	10BL160723	Bore		Domestic, Stock	Domestic		03/01/2003	86.50	86.50		15.80	0.013		705m	South
GW109838	10BL601366	Bore	Local Govt	Monitoring Bore	Monitoring Bore		18/12/2006	3.20	3.20					1099m	North West
GW109839	10BL601366	Bore	Local Govt	Monitoring Bore	Monitoring Bore		18/12/2006	3.20	3.20					1103m	North West
GW109382	10BL601776	Bore	Local Govt	Test Bore	Test Bore		18/12/2006	3.20	3.20					1108m	North West
GW102149	10BL158263	Piezometer	Private	Monitoring Bore	Monitoring Bore			5.00	5.00		2.25			1109m	North West
GW109381	10BL601776	Bore	Local Govt	Test Bore	Test Bore		18/12/2006	3.20	3.20					1157m	North West
GW109380	10BL601776	Bore	Local Govt	Test Bore	Test Bore		02/10/2008	3.20	3.20					1187m	North West
GW109840	10BL601366	Bore	Local Govt	Monitoring Bore	Monitoring Bore		18/12/2006	3.20	3.20		2.53			1194m	North West
GW109841	10BL601366	Bore	Local Govt	Monitoring Bore	Monitoring Bore		18/12/2006	3.20	3.20		2.17			1219m	North West
GW109379	10BL601776	Bore	Local Govt	Test Bore	Test Bore		02/10/2008	3.20	3.20					1221m	North West
GW105885	10BL160882	Bore		Domestic, Stock			09/05/2005							1245m	South East
GW107115	10BL162509	Bore	Private	Domestic, Stock	Domestic, Stock		04/02/2004	25.60	25.60	Good	1.90	2.000		1272m	South West
GW103864	10BL159407	Bore		Domestic, Stock	Domestic		15/06/2000	36.00	36.00	100	1.50	1.200		1295m	South West
GW104372	10BL159308	Bore	Private	Domestic	Domestic		01/01/1997	40.00	40.00		6.00			1297m	South West
GW031532	10BL023653	Well	Private	Domestic, Stock	Not Known			2.70	2.80	Fair				1330m	North
GW100796	10BL150734	Bore		Domestic, Farming, Stock	Stock		01/01/1993	33.00	33.00		31.00	0.500		1343m	South West
GW110597	10BL165948	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/2006	30.00			24.00	0.080		1359m	South East
GW107975	10BL164970	Bore	Private	Domestic	Domestic		15/04/2005	31.40	31.40		5.00	2.000		1368m	South West
GW102882	10BL158030	Bore		Domestic, Stock	Domestic, Stock		01/01/1997	50.00	50.00		25.00	1.000		1384m	South West
GW105601	10BL160843	Bore	Private	Domestic	Domestic		18/10/2002	31.70	31.70	Good	4.50	0.750		1385m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW058347	10BL127781	Bore	Private	Domestic	Recreation (groundwater)		01/12/1982	83.80	83.80					1404m	West
GW114947	10WA119059	Bore	Private	Domestic, Stock	Domestic, Stock		03/12/2014	25.00	25.00		6.00	0.760		1447m	South West
GW105555	10BL161035, 10BL601999, 10WA118715	Bore	Private	Domestic, Irrigation, Stock	Irrigation		31/07/2003	31.70	31.70	Good	6.10	0.750		1475m	East
GW103033	10BL157964	Bore		Domestic, Stock	Domestic, Stock		01/01/1997	25.00	25.00					1491m	South West
GW072186		Bore open thru rock	Private		Domestic, Stock		01/02/1994	24.00	24.00	Good				1524m	South East
GW106585	10BL163749	Bore	Private	Domestic, Stock	Domestic, Stock		01/09/2004	31.00	31.00	400	3.60	0.375		1538m	West
GW105427	10BL160186	Bore		Domestic, Stock	Domestic, Stock		03/02/2002	31.70	31.70		7.10	1.000		1553m	South West
GW103865	10BL159417	Bore		Domestic, Stock	Domestic		22/12/1999	43.00	43.00	100	3.50	1.500		1581m	South West
GW102838	10BL138501	Bore		Domestic	Domestic		01/01/1988	50.00	50.00					1606m	North
GW111181	10BL604231	Bore	Local Govt	Monitoring Bore	Monitoring Bore		16/08/2010	3.60	3.60					1609m	North West
GW107379	10BL162536	Bore	Private	Domestic	Domestic		30/01/2004	31.00	31.00	Good	5.40	0.680		1651m	South West
GW111182	10BL604231	Bore	Local Govt	Monitoring Bore	Monitoring Bore		16/08/2010	3.60	3.60					1692m	North West
GW111180	10BL604231	Bore	Local Govt	Monitoring Bore	Monitoring Bore		16/08/2010	3.60	3.60					1721m	North West
GW111256	10BL601361	Bore	Private	Domestic, Stock	Domestic, Stock		28/03/2007	37.50	37.50	good	8.20	0.300		1795m	South West
GW100345	10BL143325	Bore	Private	Domestic, Stock	Domestic, Stock		01/05/1991	15.00	15.00	800	1.00	0.700		1799m	North West
GW111179	10BL604231	Bore	Local Govt	Monitoring Bore	Monitoring Bore		16/08/2010	3.60	3.60					1870m	North West
GW111178	10BL604231	Bore	Local Govt	Monitoring Bore	Monitoring Bore		16/08/2010	3.60	3.60					1883m	North West
GW105814	10BL161392	Bore	Private	Domestic	Domestic		18/03/2003	43.90	43.90		5.10	0.390		1986m	West

Hydrogeology & Groundwater

Lot 6 Princes Highway, Moruya, NSW 2537

Driller's Logs

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

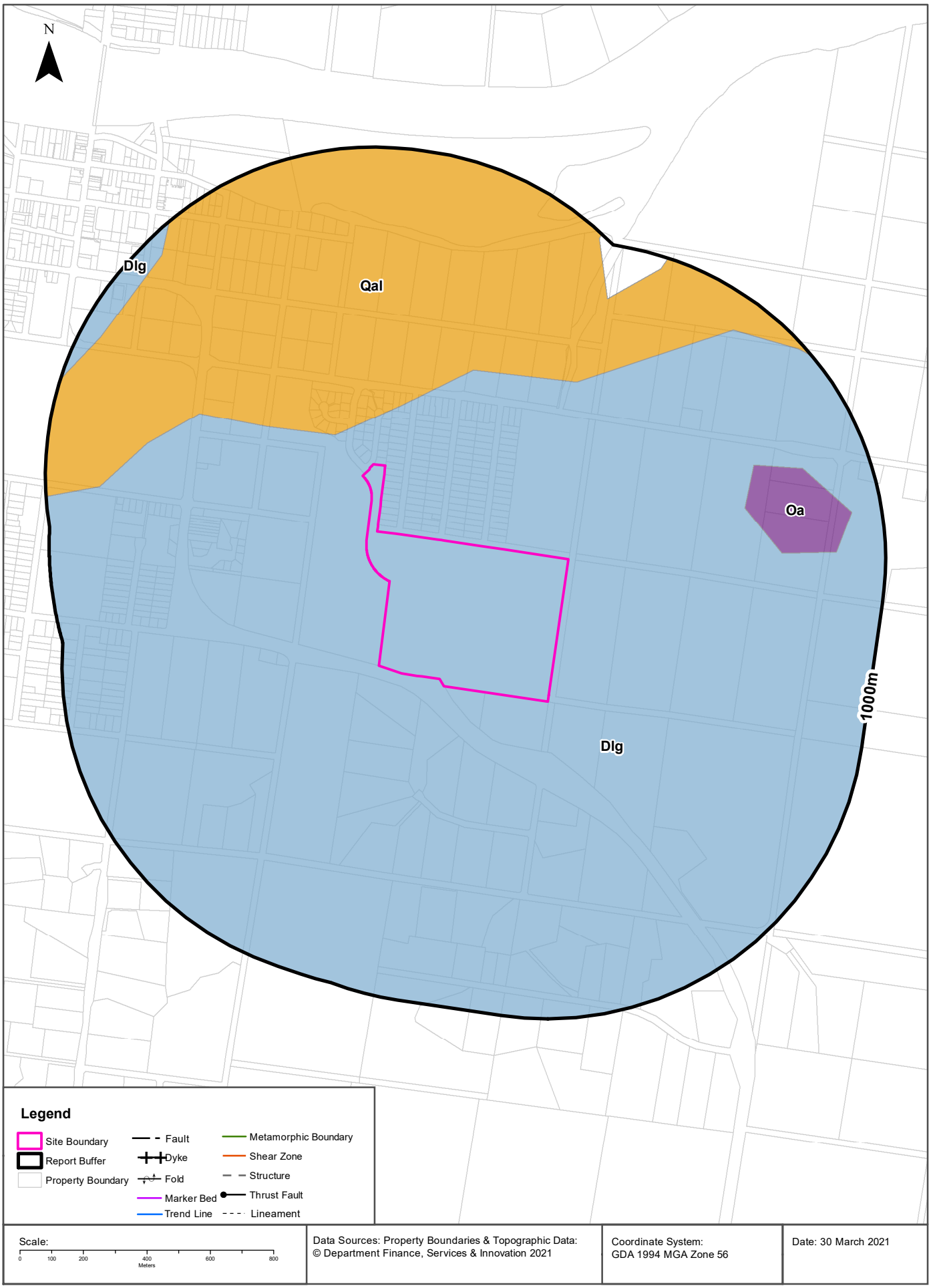
Groundwater No	Drillers Log	Distance	Direction
GW100212	0.00m-1.00m BLACK SOILS 1.00m-6.00m DECOMPOSED GRANITE 6.00m-8.00m SAND 8.00m-12.00m GRANITE	418m	East
GW111517	0.00m-0.20m CONCRETE 0.20m-0.30m GRAVEL, MEDIUM GRAINED 0.30m-3.00m CLAY GRAVELLY SANDY,FINE GRAINED 3.00m-8.80m GRAVELLY SANDY CLAY,FINE GRAINED GRAVEL AND SAND	598m	West
GW111516	0.00m-0.20m CONCRETE 0.20m-0.40m GRAVELLY SANDY CLAY,FINE GRAINED,DRY 0.40m-2.00m CLAY GRAVELLY SANDY,FINE GRAINED SAND AND GRAVEL 2.00m-3.00m GRAVELLY SANDY CLAY ,BROWN 3.00m-5.40m GRAVELLY SANDY CLAY ,MOIST DARK BROWN 5.40m-8.70m GRAVELLY SANDY CLAY,VERY MOIST TO WET	609m	West
GW111464	0.00m-0.20m CONCRETE 0.20m-6.00m GRAVEL SANDY WITH MINOR CLAY 6.00m-7.50m CLAY SANDY WITH MINOR GRAVEL,LOOSE SAND	613m	West
GW111515	0.00m-0.20m CONCRETE 0.20m-0.60m SILTY CLAY,FIRM,DRY,LOW PLASTICITY,YELLOW,BROWN,GREY 0.60m-5.70m GRAVELLY SANDY CLAY,FINE GRAINED SAND AND GRAVEL 5.70m-8.80m CLAY,GRAVELLY,SANDY,DARK BROWN	620m	West
GW105412	0.00m-0.90m TOPSOIL / SAND/CLAY 0.90m-25.90m BLUE GRANITEBANDS OF DECOMP.ROCKS 25.90m-51.00m BLUE GRANITE 51.00m-58.00m GRANITE 58.00m-86.50m HARD BLUE GRANITE	705m	South
GW109838	0.00m-0.30m SILTY SAND,MEDIUM BROWN,LOOSE,SLIGHT MOISTURE 0.30m-3.20m SILTY SAND,LIGHT BROWN,GRAINED,MOSTLY COURSE SAND,SEA SHELLS	1099m	North West
GW109839	0.00m-0.60m SILTY SAND,MEDIUM BROWN,LOOSE,SLIGHT MOISTURE,SOME GRAVEL 0.60m-3.20m SILTY SAND,L/BROWN,GRAINED MOSTLY COURSE SAND,SOME SEA SHELLS	1103m	North West
GW109382	0.00m-0.30m SILTY SAND,MED.BROWN 0.30m-3.20m SILTY SAND,L/BROWN,SOME SEA SHELLS	1108m	North West
GW102149	0.00m-1.30m Clay/Gravel Fill 1.30m-2.50m Sandy Clay 2.50m-3.25m Clay and Sand 3.25m-5.00m Sandy Clay	1109m	North West
GW109381	0.00m-0.60m SILTY SAND,MED BROWN,SOME FINE GRAVEL 0.60m-3.20m SILTY SAND,L/BROWN,LOOSE SOME SEA SHELLS	1157m	North West
GW109380	0.00m-1.00m SILTY SAND,MED.BROWN,SLIGHT MOISTURE 1.00m-3.20m SILTY SAND,L/BROWN, HOMOGENOUS,LOOSE	1187m	North West
GW109840	0.00m-1.00m SILTY SAND,MEDIUM BROWN,LOOSE,SLIGHT MOISTURE 1.00m-3.20m SILTY SAND,L/BROWN,GRAINED,MOSTLY COURSE SAND ,SILT,LOOSE	1194m	North West
GW109841	0.00m-2.00m SILTY SAND,MEDIUM BROWN,LOOSE,SLIGHT MOISTURE,SEA SHELLS 2.00m-3.20m SILTY SAND,L/BROWN,MOSTLY COURSE SAND,SEA SHELLS	1219m	North West
GW109379	0.00m-2.00m SILTY SAND,MEDIUM BROWN,SEA SHELLS 2.00m-3.20m SILTYSAND,L/BROWN,LOOSE TRACE OF SEA SHELLS	1221m	North West
GW107115	0.00m-1.20m Topsoil, dark 1.20m-3.90m Clay, red 3.90m-5.40m Sandy Clay 5.40m-10.60m Granite, decomposed 10.60m-14.30m Granite, hard, decomposed 14.30m-19.20m Granite, blue, some bands of decomposed 19.20m-25.60m Granite, blue	1272m	South West
GW103864	0.00m-1.00m TOPSOIL AND CLAY (GREY) 1.00m-6.00m WEATHERED GRANITE 6.00m-9.00m HARD GRANITE 9.00m-36.00m HARD TO WEATHERED GRANITE	1295m	South West

Groundwater No	Drillers Log	Distance	Direction
GW031532	0.00m-2.44m Loam Sandy 2.44m-2.76m Sand Water Supply	1330m	North
GW107975	0.00m-0.90m topsoil' 0.90m-7.60m granite, soft decompsoed 7.60m-12.10m granite, decomposed 12.10m-31.40m granite, blue some bands of weathered granite	1368m	South West
GW105601	0.00m-0.90m topsoil 0.90m-10.60m granite 10.60m-31.40m granite, blue	1385m	South West
GW058347	0.00m-0.30m Topsoil 0.30m-7.60m Clay Water Supply 7.60m-83.80m Granite	1404m	West
GW114947	0.00m-1.00m TOPSOIL 1.00m-4.00m CLAY 4.00m-11.00m GRANITE DECOMPOSED 11.00m-13.00m GRANITE DECOMPOSED WATER SUPPLY 13.00m-21.00m GRANITE 21.00m-22.00m GRANITE WATER SUPPLY 22.00m-25.00m GRANITE	1447m	South West
GW105555	0.00m-0.90m SANDY TOPSOIL 0.90m-8.50m DECOMPOSED GRANITE 8.50m-27.40m WHITE GRANITE 27.40m-31.70m BLUE GRANITE	1475m	East
GW072186	0.00m-5.00m Decomposed Granite	1524m	South East
GW106585	0.00m-0.90m clay, red 0.90m-4.50m granite, red decomposed 4.50m-31.00m granite, blue with bonds of decomposed	1538m	West
GW105427	0.00m-0.90m DARK BROWN TOPSOIL 0.90m-10.60m DECOMPOSED GRANITE 10.60m-31.70m HARD BLUE GRANITE	1553m	South West
GW103865	0.00m-0.50m TOPSOIL AND CLAY 0.50m-6.00m DECOMPOSED GRANITE 6.00m-10.00m HARD GRANITE 10.00m-43.00m HARD AND FRACTURED GRANITE	1581m	South West
GW111181	0.00m-0.80m FILL,CLAY LOAM,M/BROWN,FIRM,MOIST,FINE GRAVEL AND SAND 0.80m-1.50m CLAY SILT,M/BROWN,GREY,FIRM,MOIST,PLASTIC 1.50m-3.30m SILT,LIGHT/MEDIUM GREY,MUDDY TEXTURE,LOOSE 3.30m-3.60m SILTY CLAY,M/GREY/RED/BROWEN,HARD LAYER	1609m	North West
GW107379	0.00m-0.60m topsoil 0.60m-2.40m clay, light brown 2.40m-4.20m clay, sandy 4.20m-12.80m granite, decomposed 12.80m-23.70m granite, hard with bands of decomposed 23.70m-31.00m granite, blue	1651m	South West
GW111182	0.00m-0.70m FILL,CLAY LOAM,M/BROWN,FIRM,PLASTIC 0.70m-1.00m CLAYEY SANDY SILT,FINE GRAINED 1.00m-1.70m SILT,LIGHT,M/GREY,MUDDY TEXTURE 1.70m-2.00m CLAY,SANDY SILT,L/GREY,FIRM,PLASTIC 2.00m-3.60m SANDY CLAY SILT,L/MED/ GREY,SOFT,FIRM MOIST	1692m	North West
GW111180	0.00m-0.60m FILL,CLAY LOAM,M/BROWN,MOIST 0.60m-1.00m SANDY SILT,FINE GRAINED,L/GREY,FIRM 1.00m-3.60m SANDY SILT,CLAY SILT L/GREY/BROWN	1721m	North West
GW111256	0.00m-3.00m SILTY CLAY 3.00m-6.50m GRANITE DECOMPOSED 6.50m-27.00m GRANITE WEATHERED 27.00m-32.00m GRANITE BLUE,SOME WEATHERED ZONES 32.00m-37.50m GRANITE BLUE	1795m	South West
GW100345	0.00m-0.50m TOPSOIL BLACK-SANDY CLAY 0.50m-5.50m WEARHERED GRANITE & CLAY 5.50m-15.00m HARD GRANITE CAPPING GOING TO FISSURED AND WELL WEATHERED GRANITE	1799m	North West
GW111179	0.00m-0.50m FILL, GRAVELLY CLAY LOAM M/BROWN 0.50m-0.70m CLAY LOAM, GREY/BROWN ,SOME GRAVEL 0.70m-1.20m SANDY CLAY,M/BROWN,SATURATED 1.20m-3.40m SILTY SAND,L/GREY,MUDDY,FINE GRAINED SAND 3.40m-3.60m CLAY,L/GREY / GREEN,DENSE,STIFF,MOIST	1870m	North West

Groundwater No	Drillers Log	Distance	Direction
GW111178	0.00m-0.70m FILL,CLAY LOAM,M/BROWN,FIRM,MOIST 0.70m-1.20m GRAVEL SANDY,L/BROWN,FIRM,COARSE QUARTZ SAND 1.20m-1.50m SANDY CLAY,VERY FIRM,MOIST,PLASTIC 1.50m-2.40m SILTY CLAY,SAND BROWN,SEMI PLASTIC,QUARTZ 2.40m-3.60m SANDY CLAY,COARSE,M/BROWN,VERY HARD,MOIST	1883m	North West
GW105814	0.00m-0.90m clay,black 0.90m-5.10m granite, decomposed 5.10m-12.10m granite, blue with bonds of decomposed 12.10m-28.60m granite, blue 28.60m-40.20m granite, blue some faulted bonds 40.20m-43.90m granite, blue	1986m	West

Geology 1:250,000

Lot 6 Princes Highway, Moruya, NSW 2537



Geology

Lot 6 Princes Highway, Moruya, NSW 2537

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Dlg	Tonalite, granodiorite, biotite granite, adamellite, diorite, gabbro	Moruya Tonalite	Moruya Suite		Palaeozoic			1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Dlg	Tonalite, granodiorite, biotite granite, adamellite, diorite, gabbro	Moruya Tonalite	Moruya Suite		Palaeozoic			1:250,000
Oa	Turbiditic sequence; sandstone, mudstone, shale; quartzite, quartz phyllite, phyllite, slate	Adaminaby Group	Adaminaby Group		Palaeozoic			1:250,000
Qal	Alluvium, gravel, swamp deposits and sand dunes	undifferentiated			Cainozoic			1:250,000

Geological Structures

What are the Geological Structures onsite?

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

What are the Geological Structures within the dataset buffer?

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

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

Naturally Occurring Asbestos Potential

Lot 6 Princes Highway, Moruya, NSW 2537

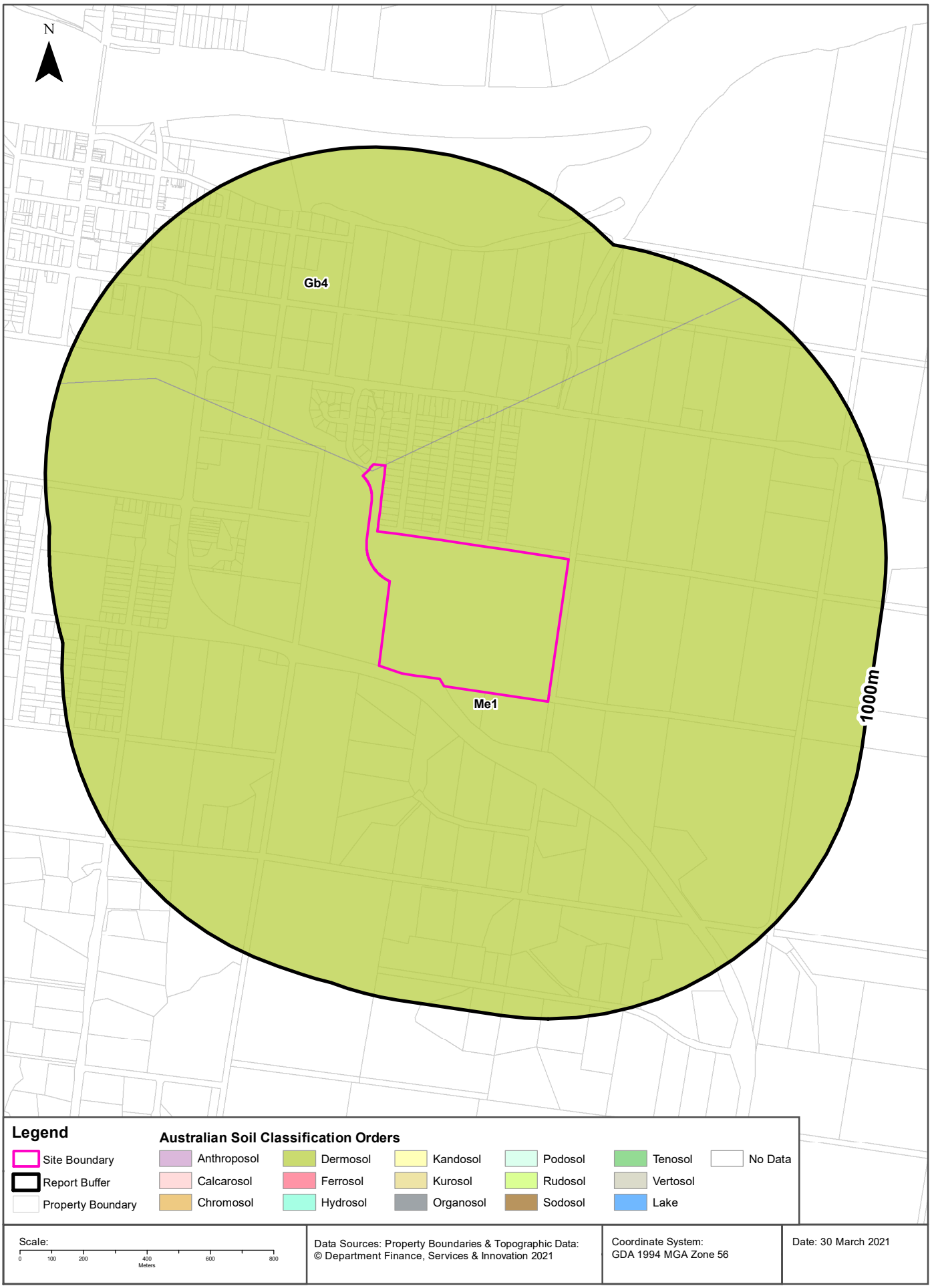
Naturally Occurring Asbestos Potential

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												

Atlas of Australian Soils

Lot 6 Princes Highway, Moruya, NSW 2537



Soils

Lot 6 Princes Highway, Moruya, NSW 2537

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
Gb4	Dermosol	River terraces: (1) lower of dark, porous, loamy soils (Um6.11), (2) middle of (Gn2.2 and Gn2.4),(3) upper of (Dy2.41 or Dy3.41 or Dy5.41), and (4) present floodplains of various (Uc1 and Um1) soils..	0m
Me1	Dermosol	Hilly with some steep slopes and small graded valleys: moderately steep rounded hills of brown and red friable earths (Gn3.21 and Gn3.22 and Gn3.11 and Gn3.12) in association with less rounded hill slopes of hard acidic yellow mottled soils (Dy3.41), hard acidic red soils (Dr2.21), and yellow leached earths (Gn3.54), and also other hill slopes of loamy soils having an A2 horizon (Um4.2) with yellow-brown earths (Gn2.44); stream valleys of various soils including (Dy4.41), (Dy5.41), and (Um6.11).	0m

Acid Sulfate Soils

Lot 6 Princes Highway, Moruya, NSW 2537

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 30 March 2021

Acid Sulfate Soils

Lot 6 Princes Highway, Moruya, NSW 2537

Environmental Planning Instrument - Acid Sulfate Soils

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

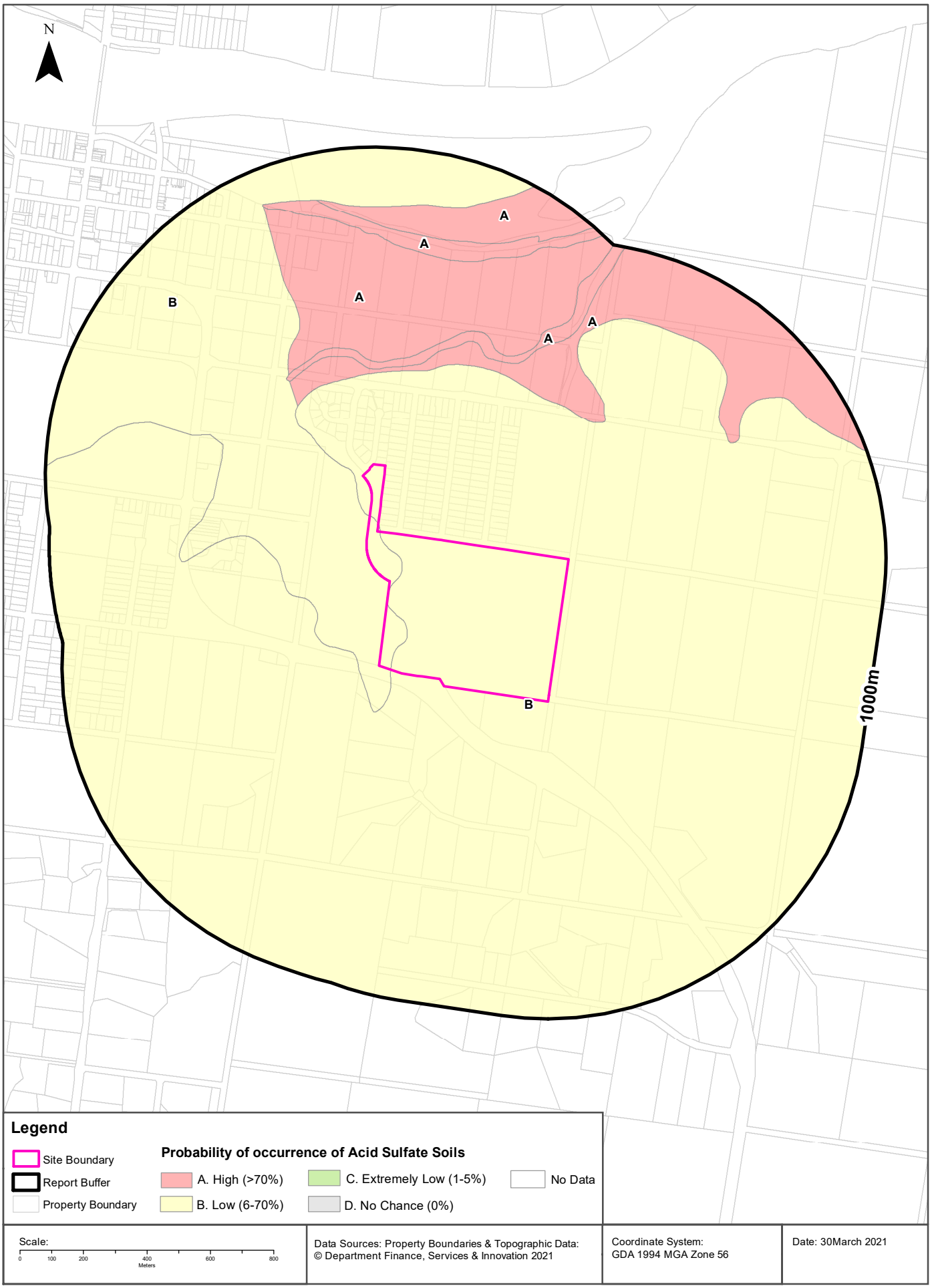
Soil Class	Description	EPI Name
2	Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk	Eurobodalla Local Environmental Plan 2012

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

Atlas of Australian Acid Sulfate Soils

Lot 6 Princes Highway, Moruya, NSW 2537



Acid Sulfate Soils

Lot 6 Princes Highway, Moruya, NSW 2537

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m
A	High Probability of occurrence. >70% chance of occurrence.	283m

Dryland Salinity

Lot 6 Princes Highway, Moruya, NSW 2537

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

No

What Dryland Salinity assessments are given?

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

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

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

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

Mining

Lot 6 Princes Highway, Moruya, NSW 2537

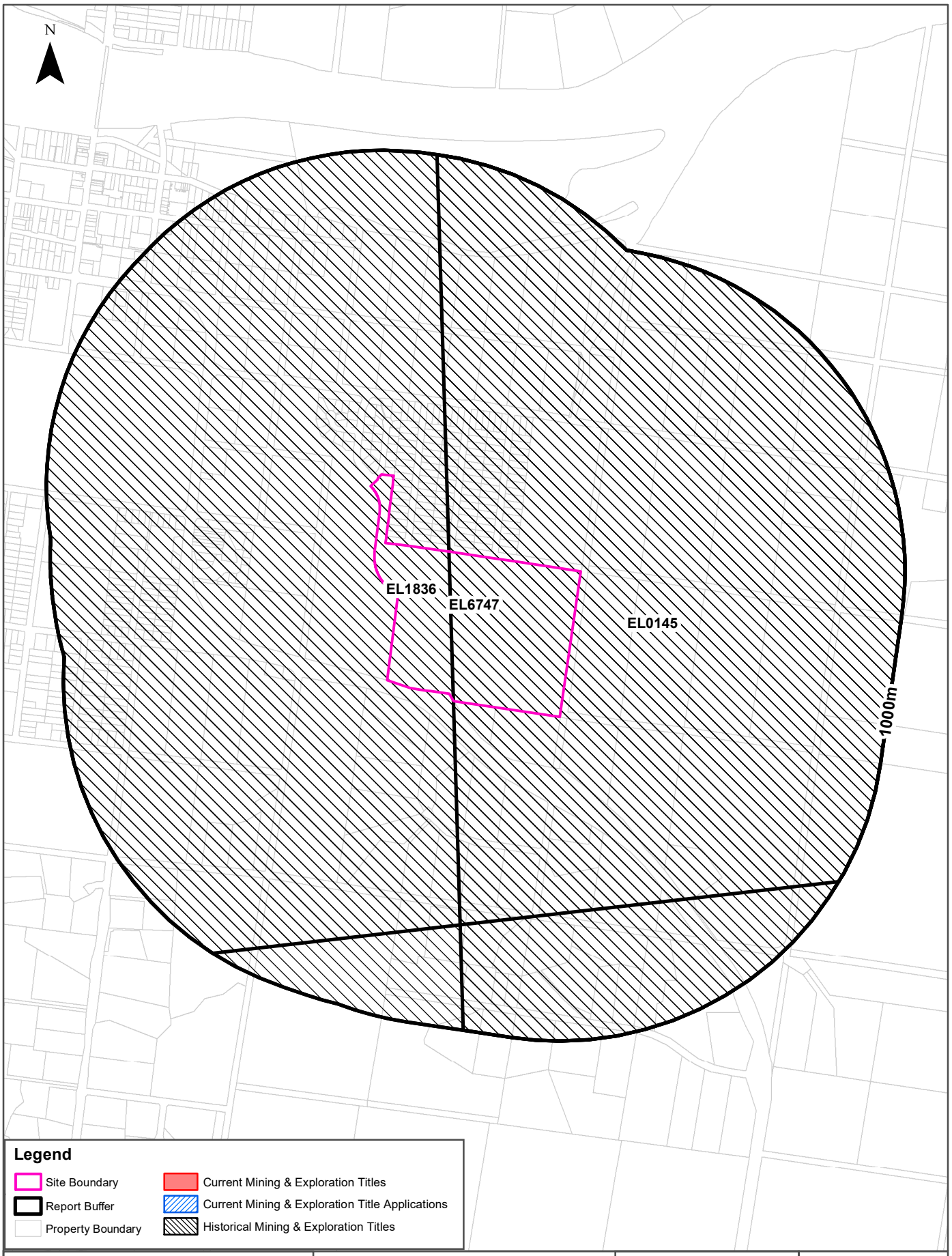
Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining & Exploration Titles

Lot 6 Princes Highway, Moruya, NSW 2537



Mining

Lot 6 Princes Highway, Moruya, NSW 2537

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 (m)	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 (m)	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

Lot 6 Princes Highway, Moruya, NSW 2537

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist (m)	Dir'
EL1836	SELTRUST MINING CORPORATION PTY LIMITED	01 Feb 1982	01 Feb 1983	MINERALS	Au	0m	Onsite
EL6747	OROYA MINING LIMITED	5 Apr 2007	8 Oct 2012	MINERALS	Au	0m	Onsite
EL0145	PLANET GOLD	01 Jul 1969	01 Jul 1970	MINERALS	Au Cu Ni Co	0m	Onsite

State Environmental Planning Policy

Lot 6 Princes Highway, Moruya, NSW 2537

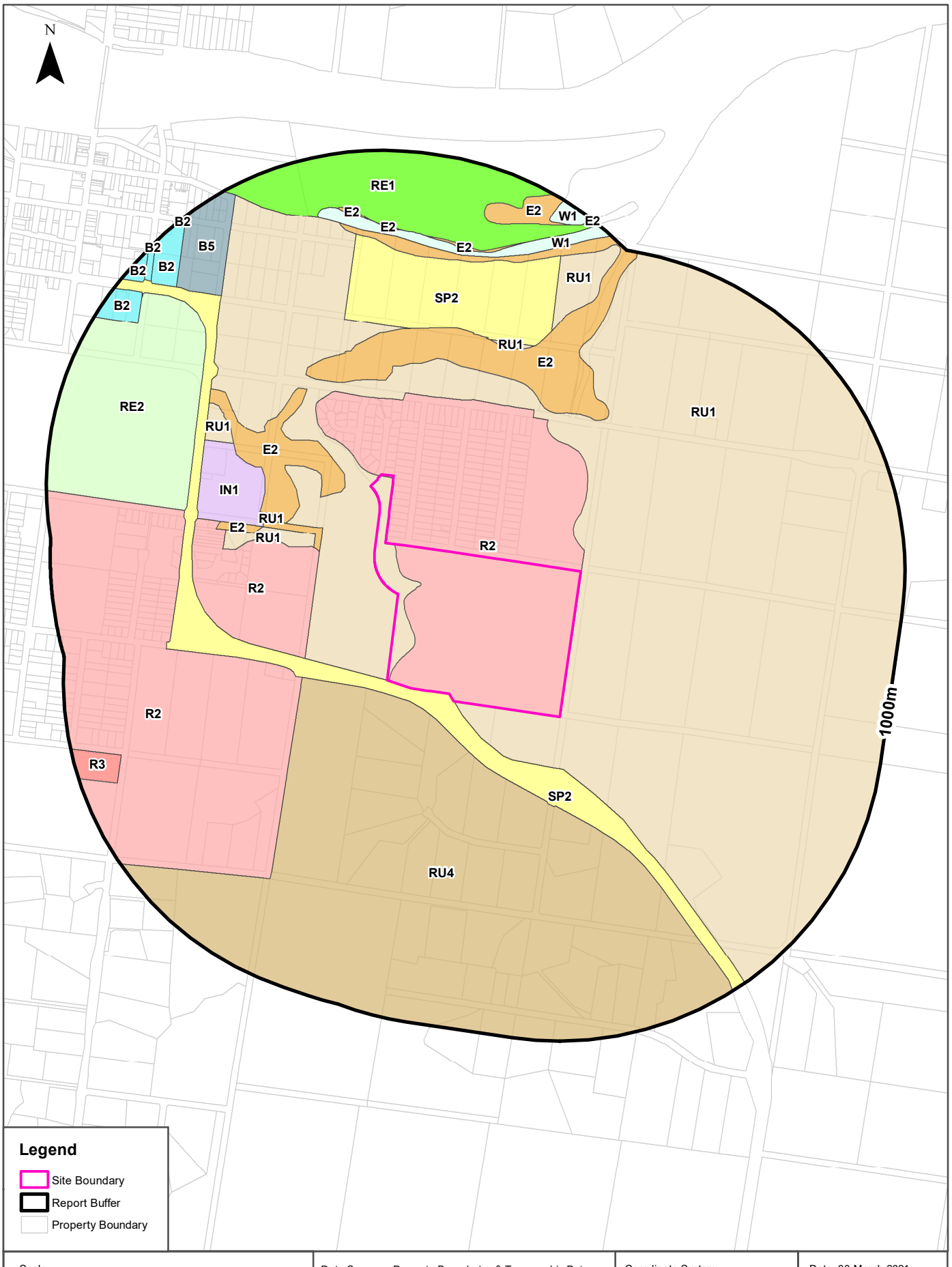
State Significant Precincts

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							

EPI Planning Zones

Lot 6 Princes Highway, Moruya, NSW 2537



Environmental Planning Instrument

Lot 6 Princes Highway, Moruya, NSW 2537

Land Zoning

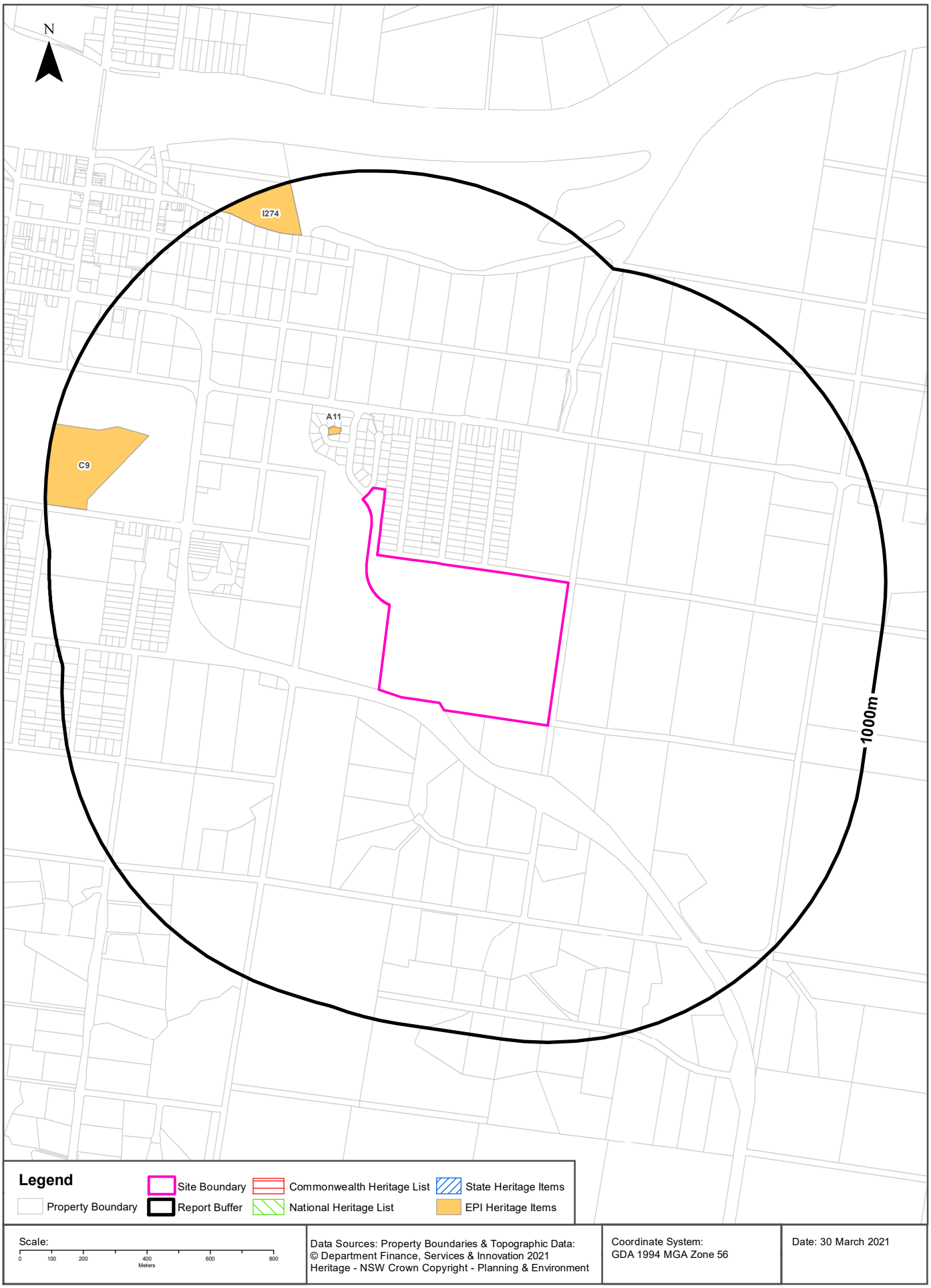
What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R2	Low Density Residential		Eurobodalla Local Environmental Plan 2012	27/11/2015	27/11/2015	18/09/2020	Amendment No 7	0m	Onsite
RU1	Primary Production		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	0m	Onsite
SP2	Infrastructure	Classified Road	Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	0m	North East
RU4	Primary Production Small Lots		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	40m	South West
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	18/09/2020	18/09/2020	18/09/2020	Amendment No 14	79m	North West
R2	Low Density Residential		Eurobodalla Local Environmental Plan 2012	27/11/2015	27/11/2015	18/09/2020	Amendment No 7	171m	West
RU1	Primary Production		Eurobodalla Local Environmental Plan 2012	18/09/2020	18/09/2020	18/09/2020	Amendment No 14	189m	West
R2	Low Density Residential		Eurobodalla Local Environmental Plan 2012	18/09/2020	18/09/2020	18/09/2020	Amendment No 14	264m	West
RU1	Primary Production		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		286m	North West
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		291m	North
IN1	General Industrial		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		326m	North West
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	18/09/2020	18/09/2020	18/09/2020	Amendment No 14	353m	West
RU1	Primary Production		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		444m	North West
SP2	Infrastructure	Sewerage System	Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		457m	North
RU1	Primary Production		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		513m	North
RE2	Private Recreation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		556m	North West
RU1	Primary Production		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		659m	North
W1	Natural Waterways		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	712m	North East
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		732m	North
B5	Business Development		Eurobodalla Local Environmental Plan 2012	18/01/2013	18/01/2013	18/09/2020	Amendment No 2	742m	North West
RE1	Public Recreation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		742m	North
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		754m	North
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		783m	North
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		838m	North
R3	Medium Density Residential		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		853m	West
B2	Local Centre		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	857m	North West
B2	Local Centre		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	876m	North West
B2	Local Centre		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	928m	North West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B2	Local Centre		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	944m	North West
E2	Environmental Conservation		Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	18/09/2020		989m	North
B2	Local Centre		Eurobodalla Local Environmental Plan 2012	11/10/2019	11/10/2019	18/09/2020	Amendment No 11	999m	North West

Heritage Items

Lot 6 Princes Highway, Moruya, NSW 2537



Heritage

Lot 6 Princes Highway, Moruya, NSW 2537

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

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

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
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Environmental Planning Instrument - Heritage

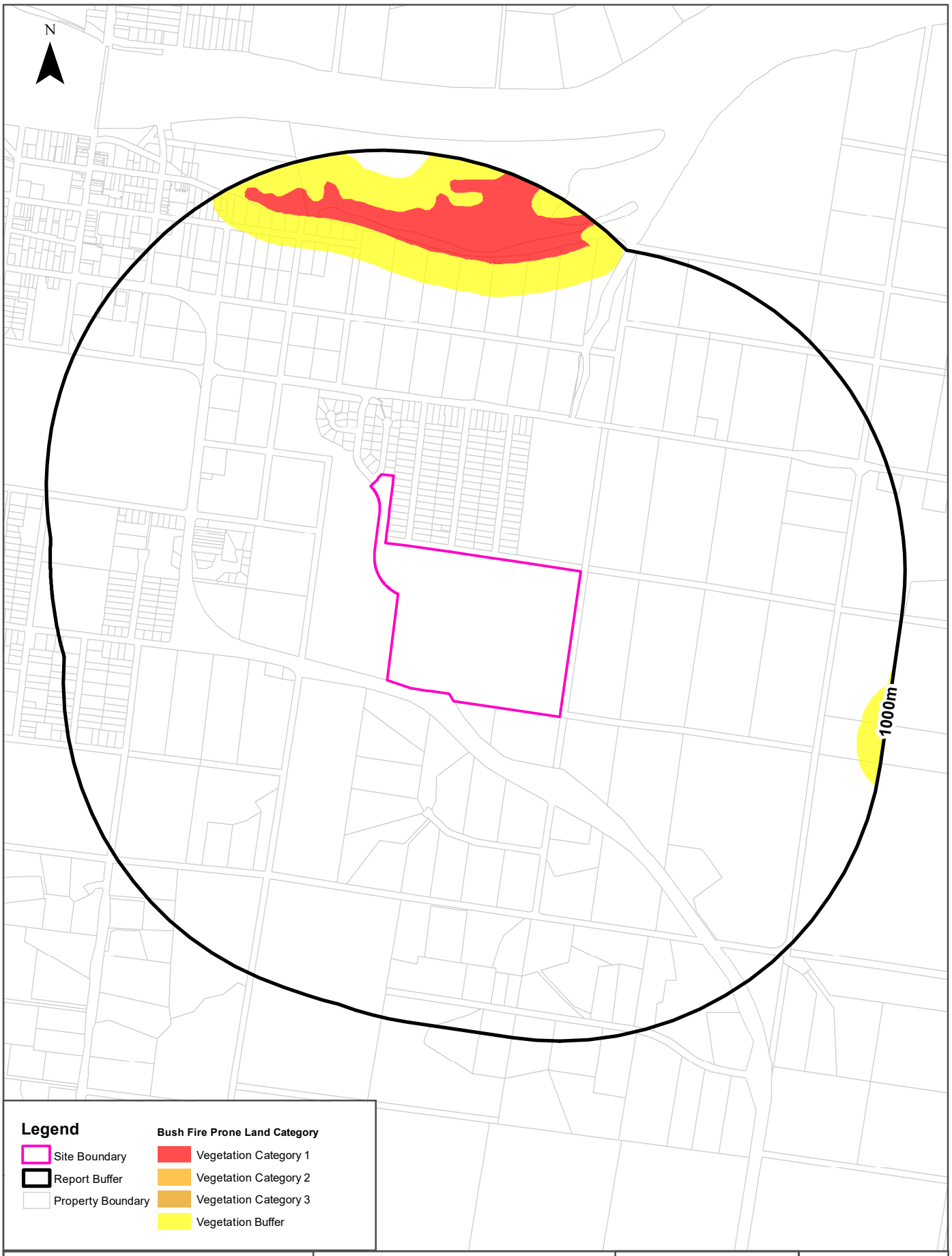
What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
A11	Site of Braemar Farm, formerly comprising farmhouse and outbuildings, and Bunya Pine	Item - Archaeological	Local	Eurobodalla Local Environmental Plan 2012	11/05/2018	11/05/2018	11/10/2019	202m	North West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
C9	Moruya Showground, comprising Grandstand and Exhibits Pavilion	Conservation Area - General	Local	Eurobodalla Local Environmental Plan 2012	20/07/2012	20/07/2012	11/10/2019	703m	North West
I274	Old Tidal Swimming Pool	Item - General	Local	Eurobodalla Local Environmental Plan 2012	07/11/2014	07/11/2014	11/10/2019	827m	North West

Natural Hazards - Bush Fire Prone Land

Lot 6 Princes Highway, Moruya, NSW 2537



Scale: 0 100 200 400 600 800 Meters

Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2021. Property Boundaries: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 30 March 2021

Natural Hazards

Lot 6 Princes Highway, Moruya, NSW 2537

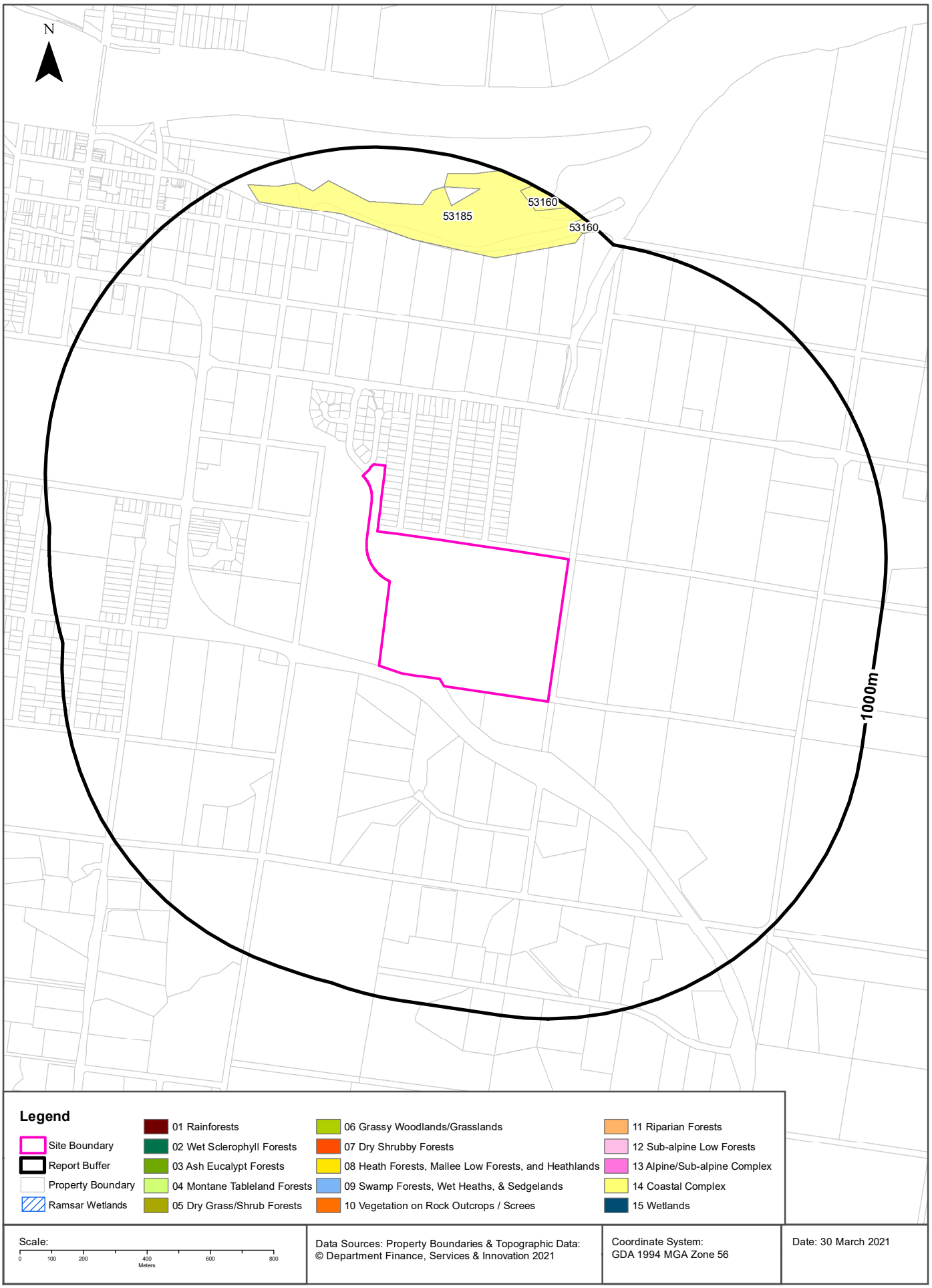
Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	601m	North
Vegetation Category 1	701m	North

Ecological Constraints - Vegetation of the Southern Forests

Lot 6 Princes Highway, Moruya, NSW 2537



Ecological Constraints

Lot 6 Princes Highway, Moruya, NSW 2537

Vegetation of the Southern Forests

What vegetation of the Southern Forests exists within the dataset buffer?

Map Id	Veg Code	Formation	Class	Group	Distance	Direction
53185	25	14 Coastal Complex	14b Coastal Swamp Heath/Forest Complex	South Coast Swamp Forest Complex	714m	North
53160	185	14 Coastal Complex	14c Coastal Estuarine Complex	Mangrove Estuarine Low Forest	932m	North

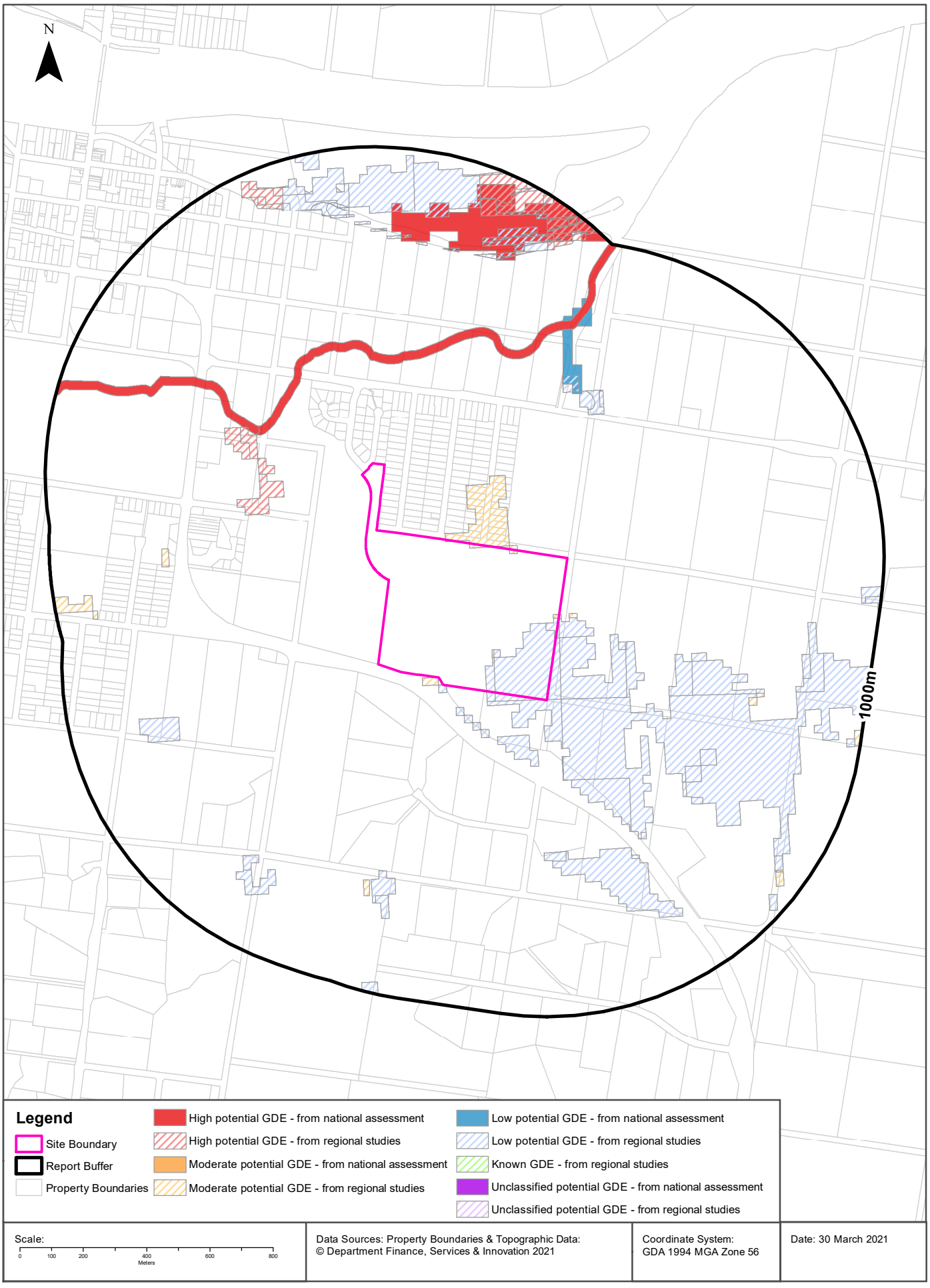
Ramsar Wetlands

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					

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Lot 6 Princes Highway, Moruya, NSW 2537



Ecological Constraints

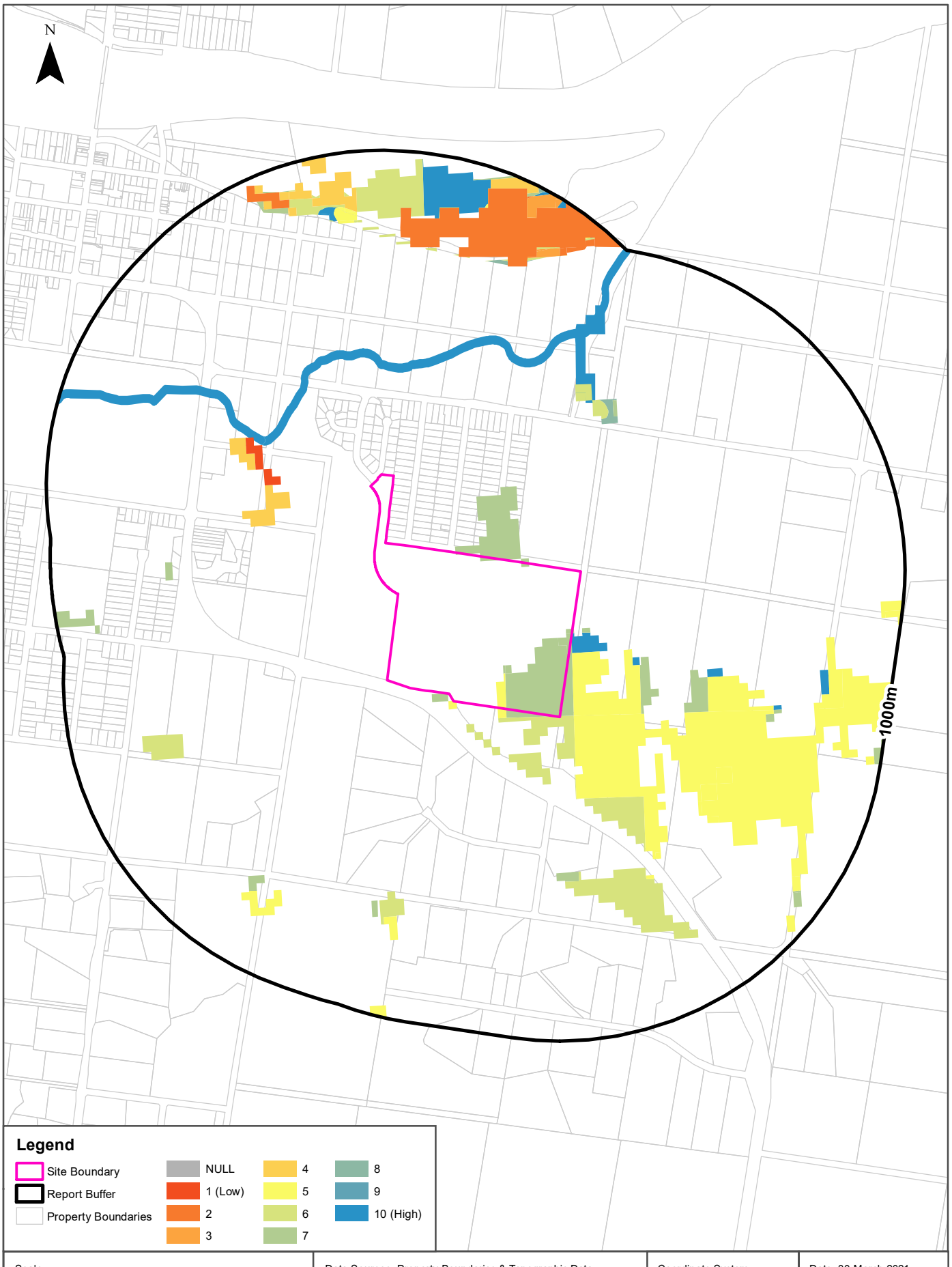
Lot 6 Princes Highway, Moruya, NSW 2537

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	Low potential GDE - from regional studies	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		0m
Terrestrial	Moderate potential GDE - from regional studies	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		0m
Terrestrial	High potential GDE - from regional studies	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		250m
Aquatic	High potential GDE - from national assessment	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	River		317m
Aquatic	Low potential GDE - from national assessment	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Wetland	Unconsolidated sedimentary	515m

Ecological Constraints - Inflow Dependent Ecosystems Likelihood

Lot 6 Princes Highway, Moruya, NSW 2537



Ecological Constraints

Lot 6 Princes Highway, Moruya, NSW 2537

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	5	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		0m
Terrestrial	6	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		0m
Terrestrial	7	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		0m
Terrestrial	10	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		0m
Terrestrial	4	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		250m
Terrestrial	1	Deeply dissected sandstone plateaus.	Vegetation		276m
Aquatic	10	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	River		317m
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation		458m
Aquatic	2	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Wetland	Unconsolidated sedimentary	704m
Terrestrial	3	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		707m
Terrestrial	2	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		850m

Ecological Constraints

Lot 6 Princes Highway, Moruya, NSW 2537

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	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Calamanthus fuliginosus	Striated Fieldwren	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Vulnerable	Not Sensitive	Vulnerable	
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	Pachycephala olivacea	Olive Whistler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Phoebetria fusca	Sooty Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Puffinus assimilis	Little Shearwater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Thalassarche cauta	Shy Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Thinornis cucullatus 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 incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Kerivoula papuensis	Golden-tipped Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Megaptera novaeangliae	Humpback Whale	Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed 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 Population	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascogale tapoatafa	Brush-tailed Phascogale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Potorous tridactylus	Long-nosed Potoroo	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Sminthopsis leucopus	White-footed Dunnart	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Aldrovanda vesiculosa	Waterwheel Plant	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Genoplesium vernale	East Lynne Midge Orchid	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Persicaria elatior	Tall Knotweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pomaderris bodalla	Bodalla Pomaderris	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Thesium australe	Austral Toadflax	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Wilsonia rotundifolia	Round-leafed Wilsonia	Endangered	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

Location Confidences

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

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb match	Georeferenced with the confidence of the general/approximate area
Road match	Georeferenced to the road or rail
Road intersection	Georeferenced to the road intersection
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	Georeferenced to a network of features

USE OF REPORT - APPLICABLE TERMS

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

1. End User acknowledges and agrees that:
   (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
      (i) content provided to Lotsearch by third party content suppliers with whom Lotsearch has contractual arrangements or content which is freely available or methodologies licensed to Lotsearch by third parties with whom Lotsearch has contractual arrangements (**Third Party Content Suppliers**); and
      (ii) content which is derived from content described in paragraph (i);
   (b) Neither Lotsearch nor Third Party Content Suppliers takes any responsibility for or give any warranty in relation to the accuracy or completeness of any Third Party Content included in the Report including any contaminated land assessment or other assessment included as part of a Report;
   (c) the Third Party Content Suppliers do not constitute an exhaustive set of all repositories or sources of information available in relation to the property which is the subject of the Report (**Property**) and accordingly neither Lotsearch nor Third Party Content Suppliers gives any warranty in relation to the accuracy or completeness of the Third Party Content incorporated into the report including any contaminated land assessment or other assessment included as part of a Report;
   (d) Reports are generated at a point in time (as specified by the date/time stamp appearing on the Report) and accordingly the Report is based on the information available at that point in time and Lotsearch is not obliged to undertake any additional reporting to take into consideration any information that may become available between the point in time specified by the date/time stamp and the date on which the Report was provided by Lotsearch to the purchaser of the Report;
   (e) Reports must be used or reproduced in their entirety and End User must not reproduce or make available to other persons only parts of the Report;
   (f) Lotsearch has not undertaken any physical inspection of the property;
   (g) neither Lotsearch nor Third Party Content Suppliers warrants that all land uses or features whether past or current are identified in the Report;
   (h) the Report does not include any information relating to the actual state or condition of the Property;
   (i) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of Land or Property for any particular purpose
   (j) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
   (k) the End User should undertake its own inspections of the Land or Property to satisfy itself that there are no defects or failures
2. The End User may not make the Report or any copies or extracts of the report or any part of it available to any other person. If End User wishes to provide the Report to any other person or make extracts or copies of the Report, it must contact the purchaser of the Report before doing so to ensure the proposed use is consistent with the contract terms between Lotsearch and the purchaser.
3. Neither Lotsearch (nor any of its officers, employees or agents) nor any of its Third Party Content Suppliers will have any liability to End User or any person to whom End User provides the Report and End User must not represent that Lotsearch or any of its Third Party Content Suppliers accepts liability to any such person or make any other representation to any such person on behalf of Lotsearch or any Third Party Content Supplier.
4. The End User hereby to the maximum extent permitted by law:
   (a) acknowledges that the Lotsearch (nor any of its officers, employees or agents), nor any

of its Third Party Content Supplier have any liability to it under or in connection with the Report or these Terms;

(b) waives any right it may have to claim against Third Party Content Supplier in connection with the Report, or the negotiation of, entry into, performance of, or termination of these Terms; and

(c) releases each Third Party Content Supplier from any claim it may have otherwise had in connection with the Report, or the negotiation of, entry into, performance of, or termination of these Terms.

5. The End User acknowledges that any Third Party Supplier shall be entitled to plead the benefits conferred on it under clause 4, despite not being a party to these terms.
6. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
7. End User acknowledges and agrees that Lotsearch and Third Party Content Suppliers retain ownership of all copyright, patent, design right (registered or unregistered), trade marks (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right in any Report or any other item, information or data included in or provided as part of a Report.
8. To the extent permitted by law and subject to paragraph 9, all implied terms, representations and warranties whether statutory or otherwise relating to the subject matter of these Terms other than as expressly set out in these Terms are excluded.
9. Subject to paragraph 6, Lotsearch excludes liability to End User for loss or damage of any kind, however caused, due to Lotsearch's negligence, breach of contract, breach of any law, in equity, under indemnities or otherwise, arising out of all acts, omissions and events whenever occurring.
10. Lotsearch acknowledges that if, under applicable State, Territory or Commonwealth law, End User is a consumer certain rights may be conferred on End User which cannot be excluded, restricted or modified. If so, and if that law applies to Lotsearch, then, Lotsearch's liability is limited to the greater of an amount equal to the cost of resupplying the Report and the maximum extent permitted under applicable laws.
11. Subject to paragraph 9, neither Lotsearch nor the End User is liable to the other for:
    (a) any indirect, incidental, consequential, special or exemplary damages arising out of or in relation to the Report or these Terms; or
    (b) any loss of profit, loss of revenue, loss of interest, loss of data, loss of goodwill or loss of business opportunities, business interruption arising directly or indirectly out of or in relation to the Report or these Terms,

    irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.
12. These Terms are subject to New South Wales law.

Appendix C: Guidelines and Reference Documents

Contaminated Land Management Act 1997 (NSW)

Department of Land and Water Conservation, (1997). 1:25,000 Acid Sulfate Soil Risk Map Series

Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)

NSW EPA, (2015). Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997

NSW EPA, (2017). Guidelines for the NSW Site Auditor Scheme, 3rd Edition

NSW EPA, (2020). Consultants Reporting on Contaminated Land, Contaminated Land Guidelines

National Environment Protection Council (NEPC), (2013) National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)

Protection of the Environment Operations Act 1997 (NSW)

State Environmental Planning Policy (Resilience and Hazards) 2021 (NSW)