

Preliminary  
Environmental  
Investigation  
Waterfall Way Upgrade, Raleigh  
Interchange to Connells Creek



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Investigation  
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Interchange to Connells Creek

Prepared for: RTA Northern Region  
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*Version History*

<i>UPR</i>	<i>Description</i>	<i>Date Issued</i>	<i>Issued By</i>	<i>Reviewed By</i>
1615284	Draft	20/10/2010	TMC	SJW
1615000	Final	7/12/2010	JTS	SJW
1615385	Amended Final	17/02/2011	CVI	SJW



# Table of Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Overview .....	1
1.2	The Need .....	1
1.3	The Project Objectives .....	1
1.4	Background.....	2
1.5	Purpose of this Document .....	2
<b>2</b>	<b>Study Area</b>	<b>4</b>
2.1	Location.....	4
2.2	General Description of Study Area.....	4
<b>3</b>	<b>The Proposal</b>	<b>6</b>
<b>4</b>	<b>Planning Framework</b>	<b>7</b>
4.1	Introduction .....	7
4.2	Environment and Planning Legislation.....	7
4.2.1	Environment Protection and Biodiversity Conservation Act 1999 (Cth).....	7
4.2.2	Threatened Species Conservation Act 1995.....	7
4.2.3	Water Management Act 2000 .....	7
4.2.4	Heritage Act 1977.....	8
4.2.5	National Parks and Wildlife Act 1974.....	8
4.2.6	Fisheries Management Act 1994 .....	8
4.2.7	Protection of the Environment Operations Act 1997 .....	8
4.3	Environmental Planning Instruments .....	9
4.3.1	Bellingen Local Environmental Plan 2010 .....	9
4.3.2	State Environmental Planning Policy (Infrastructure) 2007.....	9
4.3.3	State Environmental Planning Policy 14 Coastal wetlands.....	9
4.3.4	State Environmental Planning Policy 26 Littoral rainforests .....	9
4.3.5	State Environmental Planning Policy 44 Koala habitat protection .....	10
4.3.6	State Environmental Planning Policy 62 Sustainable Aquaculture.....	10
<b>5</b>	<b>Database Searches</b>	<b>11</b>
5.1.2	Australian Heritage Database .....	11
5.1.3	NSW Heritage Office State Heritage Register/Inventory.....	11

5.1.4	RTA Heritage and Conservation Register .....	12
5.1.5	National Native Title Tribunal.....	12
5.1.6	NSW DECCW Aboriginal Heritage Information Management System .....	12
5.1.7	NSW DECCW Atlas of NSW Wildlife – Threatened Flora and Fauna Records .....	12
5.1.8	Commonwealth DEWHA - Protected Matters Database.....	12
5.1.9	NSW DPI Noxious Weeds List.....	13
5.1.10	NSW Department of Primary Industries Bionet.....	13
5.1.11	NSW Department of Environment and Climate Change Contaminated Lands Records .....	13
5.1.12	Commonwealth Department of Energy, Water, Heritage and the Arts National Pollutant Inventory	13
5.1.13	DLWC Potential Acid Sulfate Soils Database Search.....	13
<b>6</b>	<b>Existing Environment</b>	<b>14</b>
6.1	Biodiversity.....	14
6.1.1	Fauna .....	14
6.1.2	Flora.....	14
6.1.3	Survey Methodology .....	14
6.1.4	Survey Limitations.....	15
6.1.5	Plant Communities .....	15
6.1.6	Desktop Assessment (Threatened Species).....	20
6.1.7	Threatened Fauna.....	20
6.1.8	Threatened Flora.....	21
6.2	Non-Aboriginal Heritage .....	21
6.3	Aboriginal Heritage .....	22
6.4	Water Quality and Hydrology .....	22
6.5	General Environmental Aspects.....	23
6.5.1	Landform, Geology and Soils.....	23
6.5.2	Climate .....	23
6.5.3	Noise and Vibration.....	24
6.5.4	Air Quality.....	24
6.5.5	Visual Amenity and Landscape.....	24
6.5.6	Socio-economic.....	24
6.5.7	Contaminated Land.....	24
<b>7</b>	<b>Consultation</b>	<b>25</b>
<b>8</b>	<b>Conclusion</b>	<b>27</b>

## Illustrations

Illustration 1.1	Site Locality .....	3
Illustration 2.1	Study Area .....	5
Illustration 6.1	Vegetation Map .....	19

## Tables

Table 5.1	Bellingen LEP 2010 Heritage Items .....	11
Table 5.2	Summary of EPBC Act Protected Matters for the Proposal .....	12

## Appendices

A	Potential Occurrence Assessment (Fauna)
B	Potential Occurrence Assessment (Flora)
C	Database Searches

# Introduction

## 1.1 Overview

The NSW Roads and Traffic Authority (RTA) propose to realign Waterfall Way (Main Road 76) between Raleigh Interchange at the Pacific Highway and Connells Creek. The realignment (the Proposal) would be approximately 1.4 kilometres in length. Illustration 1.1 shows the Proposal's location.

Waterfall Way is an important arterial route connecting the Coffs Harbour district with the coastal hinterland of the Bellingen area and the tablelands of Dorrigo, Armidale and beyond. The section of road from Raleigh to Bellingen receives a high percentage of commuter and service traffic travelling between Coffs Harbour and Bellingen.

The proposed works are required as this section of the road has poor surface conditions and substandard pavement, exhibits poor horizontal and vertical alignments and is partly subject to flood inundation.

This Preliminary Environmental Investigation has been prepared by GeoLINK Consulting Pty Ltd (GeoLINK) on behalf of RTA Northern Region.

## 1.2 The Need

The Waterfall Way is an important arterial route connecting the seaboard and Coffs Harbour District with the coastal hinterland of the Bellingen area, the tablelands of Dorrigo, Armidale and beyond. The section of road from Raleigh to Bellingen has a high percentage of commuter and service traffic between Coffs Harbour and Bellingen. Parts of this section of the road:

- exhibit poor horizontal and vertical alignment;
- have substandard pavement conditions;
- are flood prone; and
- have a history of road crashes.

## 1.3 The Project Objectives

The project objectives are to:

- Upgrade the road pavement and improve surface conditions
- Improve the road alignment
- Enable a safer 80 kilometres per hour standard and provide a consistent travel speed and level of service
- Provide traffic lanes 3.5 metres wide
- Provide road shoulders two metres wide
- Upgrade the Short Cut Road intersection
- Minimise impacts on the environment, including avoiding construction through the wetland at Camerons Corner
- Reduce the risk of the road being affected by flooding.

## 1.4 Background

Since 1993 Dumaresq (now known as Armidale-Dumaresq), Nymboida (now known as Clarence Valley), Coffs Harbour City, Inverell Shire, and Bellingen Shire Councils lobbied the RTA for improvements to Waterfall Way. The Council's focused on the entire route and the need to improve the standard of road in relation to the commercial, economic and tourist value to their LGA's.

The following three (3) submissions have been received by the RTA from this group of Council's between 1994 and 2003:

1. In August 1994, an initial submission signed by five (5) Councils was presented to the NSW Minister for Roads and Transport for the upgrading of Waterfall Way, highlighting the economic and social benefits of the project and the required road safety considerations. The upgrading of the Proposal (Cameron's Corner road improvements) was included in the Waterfall Way priority list.
2. A second submission was received in 1998 for the upgrading of Waterfall Way. The submission identified that the road usage by private motorists, coaches and freight transport had increased substantially and called for urgent road improvements to be undertaken. The upgrading of the Proposal (Cameron's Corner road improvements) was again included in the Waterfall Way priority list.
3. In March 2003 a third report was submitted to the RTA by the Local Government Council's of Armidale/Dumaresq, Pristine Waters (now known as Clarence Valley), Bellingen Shire and Coffs Harbour City. This report requested RTA provide information and participate in the development of an improvement strategy for Waterfall Way. The upgrading of Cameron's Corner (included as part of the proposal) was included in the list of projects.

In 1998, the State Government developed the Action for Transport 2010, a long term strategy for transport requirements in NSW. In this report, Waterfall Way was identified as an important east-west route in the region, requiring safety improvements by providing a safer and consistent standard of road.

On the basis of the Council's requests, RTA consulted with Bellingen Shire Council in October 1999 requesting a draft alignment plan for Cameron's Corner. In 2001, Bellingen Shire Council responded by providing RTA with three (3) options of which one was the preferred route.

An REF was prepared in 2003 (ERM 2003) for the preferred route however funding was not available to complete the project and the road upgrade works did not proceed. In 2009, funding was made available and an updated REF was prepared for the preferred route. However due to environmental and community considerations the road upgrade did not proceed.

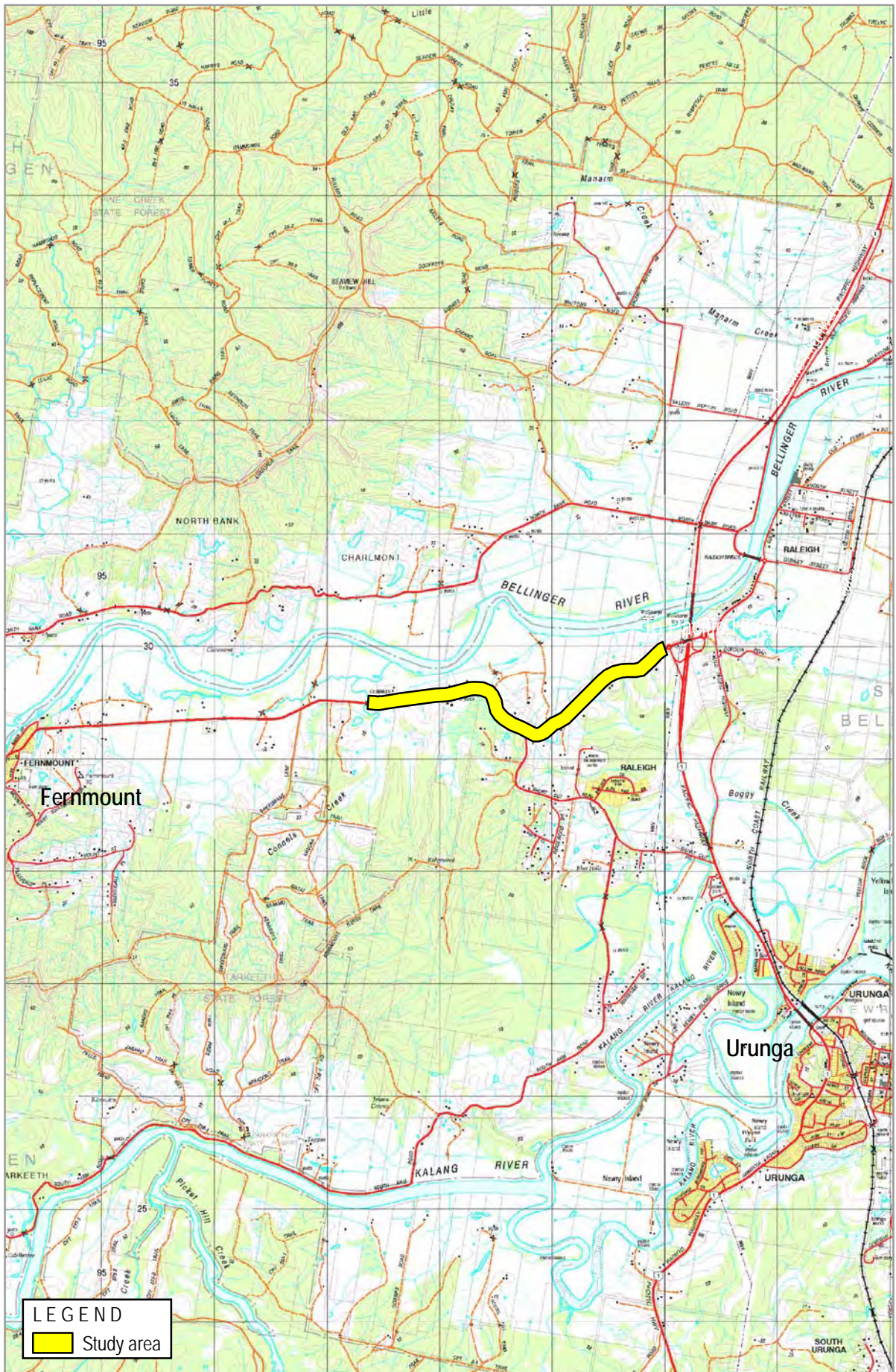
## 1.5 Purpose of this Document

The purpose of this report is to document the likely and potential environmental issues within the study area. This report identifies potential issues and constraints for the whole study area.

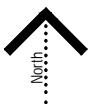
This report will be used during the concept development process to assist in developing options that would avoid or reduce environmental impacts where possible and assist in refining the number of options to be further developed.

Following the selection of the preferred route, an environmental impact assessment would be prepared to detail the likely impacts of the Proposal on the environment and to identify management and mitigation measures to reduce the environmental impact.





0 1 km



## Study Area

### 2.1 Location

The Waterfall Way is located on the NSW mid north coast approximately 20 kilometres south of Coffs Harbour. It is an important arterial route connecting the Coffs Harbour district with the coastal hinterland of the Bellingen area and the tablelands of Dorrigo, Armidale and beyond. The section of road from Raleigh to Bellingen receives a high percentage of commuter and service traffic travelling between Coffs Harbour and Bellingen.

The study area (Main Road 76) is between Raleigh Interchange and Connells Creek. The realignment would be approximately 3.1 kilometres in length. Illustration 2.1 shows the extent of the study area.

### 2.2 General Description of Study Area

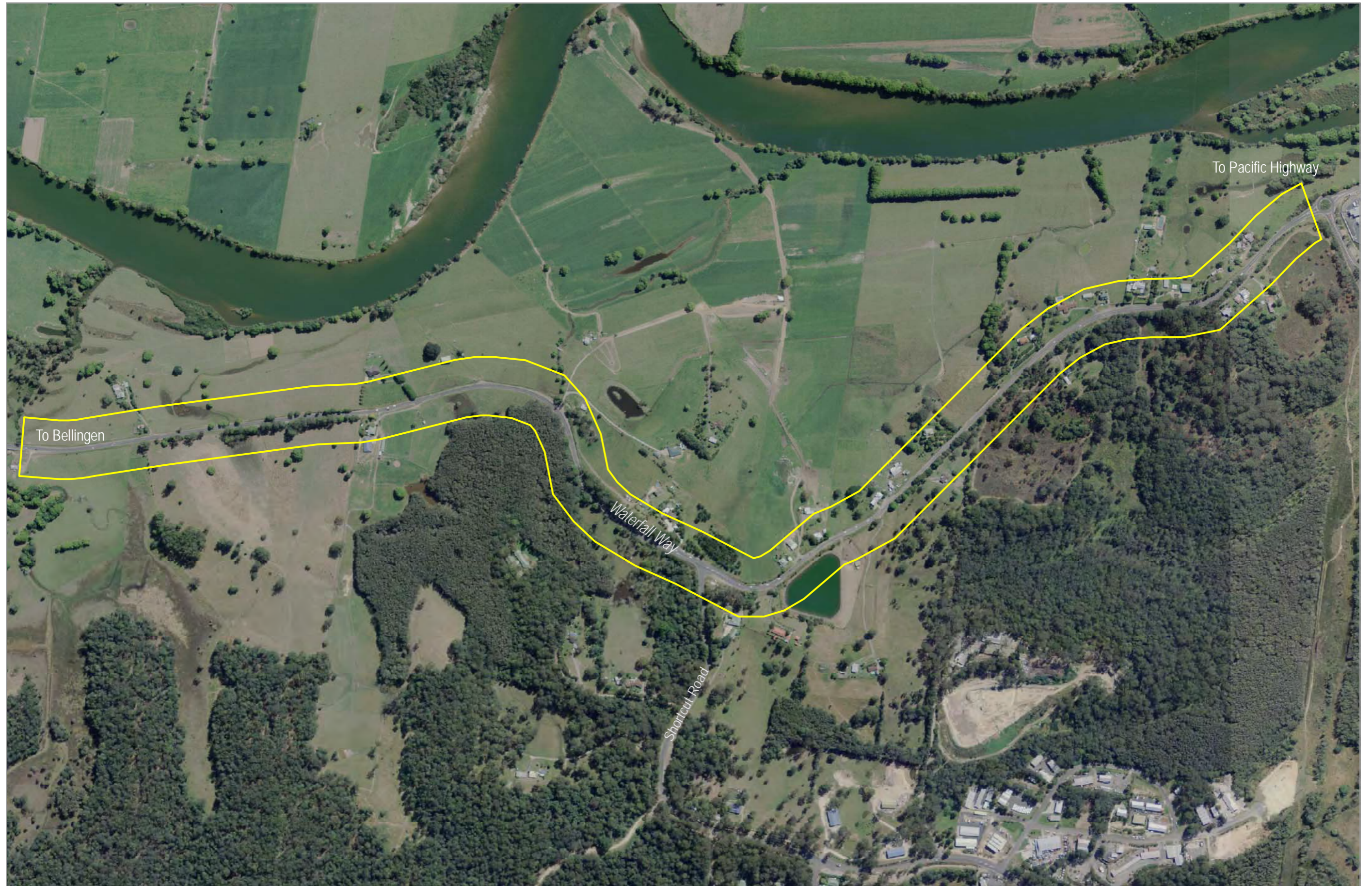
The 'Proposal footprint' is defined as the area encompassing the existing road and related infrastructure, and the area of the proposed realigned road, including all areas impacted by the construction of shoulders, batters and drainage structures, as well as the proposed site of the compound, site office and stockpile site. The 'study area' includes the Proposal footprint as well as the area within approximately 50 m directly adjacent to the Proposal footprint (refer Illustration 2.1). It should be noted that not all of the footprint will be impacted by the eventual upgrade.

The Bellinger River is located approximately 300 metres north of the nearest point of the study area. The surrounding environment is rural in nature with approximately fifteen rural residential dwellings located within the study area. Two Endangered Ecological Communities occur in the western portion of the study area: These are two Freshwater Wetland EECs and one Swamp Sclerophyll Forest EEC. One of the Freshwater Wetland EECs occurs on the northern side of Waterfall Way approximately 400 m east of Connells Creek. The other section of Freshwater Wetland EEC and an extensive stand of Swamp Sclerophyll Forest EEC occurs on the southern side of Waterfall Way approximately 900 m east of Connells Creek.

Vegetation throughout the existing road corridor generally comprises a narrow band of regrowth native vegetation, open grassland/paddocks and maintained garden roadside verge. Two areas of forested vegetation also occur, one on the southern side of Waterfall Way at the eastern end of the site and the other at the western end, generally west and north of the Short Cut Road intersection. In all a total of six plant communities were found within the study area and have been described as follows:

- Tallowwood – Narrow-leaved White Mahogany open forest of the hinterland ranges of the North Coast;
- Paperbark swamp forest of the coastal lowlands of the North Coast;
- coastal freshwater meadows and forblands of lagoons and wetlands (Coastal Freshwater Wetland);
- mixed eucalypt forest;
- scattered trees and shrubs; and
- open grassland/paddocks.

The site is within the Local Government Area (LGA) of Bellingen governed by the Bellingen Shire Council. The site is within the New South Wales (NSW) RTA Northern Region.



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Preliminary Environmental Investigation  
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**Study Area**

Illustration 2.1

## The Proposal

The Proposal is to upgrade sections of the Waterfall Way between Raleigh Interchange and Connells Creek that currently do not meet the RTA's required standard. Works within the study area could include:

- a minor realignment to improve horizontal and vertical alignment;
- improving flood immunity;
- road and shoulder widening;
- culvert extension including dewatering; and
- improvements to pavement.

# Planning Framework

## 4.1 Introduction

The Proposal is for the purpose of a road and road infrastructure facilities (Infrastructure SEPP 2007) and is to be carried out on behalf of the RTA. Clause 94 of State Environmental Planning Policy - Infrastructure 2007 (SEPP Infrastructure) operates to remove the consent obligations from the consent authority and therefore the proposed road upgrade would not require consent from Council.

For the purposes of these works, the RTA would be the proponent and the determining authority under Part 5 of the Environmental Planning and Assessment (EP&A) Act 1979.

## 4.2 Environment and Planning Legislation

The following Commonwealth and NSW environment and planning legislation is applicable to the Proposal. A description of the legislation is provided in this section.

### 4.2.1 Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) administered by the Department of Environment, Water, Heritage and the Arts (DEWHA) is the Australian Government's central piece of environmental legislation. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places (defined in the Act as Matters of National Environmental Significance [NES]) and Commonwealth land. The implications of this Act are further discussed in Section 5.

### 4.2.2 Threatened Species Conservation Act 1995

The Threatened Species Conservation Act 1995 (TSC Act) aims to protect and encourage the recovery of threatened species, populations and communities listed under the Act. Obligations placed on the RTA under the TSC Act in relation to the Proposal includes consideration of threatened species, populations, ecological communities, key threatening processes and recovery plans in fulfilling its statutory responsibilities.

The TSC Act inserts provisions to the approvals process if it is determined under Section 5A of the EP&A Act that there is likely to be a significant effect on a threatened species, population or ecological community. If this is the case the Act requires a Species Impact Statement (SIS) to be prepared. The consent or determining authority must seek the concurrence of the Director-General of National Parks and Wildlife where there is likely to be a significant effect on threatened species, populations or endangered ecological communities, or their habitats or where the Proposal impacts on identified critical habitat or contributes to the operation of a key threatening process.

### 4.2.3 Water Management Act 2000

The Water Management Act 2000 controls the extraction of and use of water, the construction of works such as dams and weirs, and the carrying out of activities in or near water sources in New South Wales. 'Water sources' are defined very broadly and include any river, lake, estuary, place where water occurs naturally on or below the surface of the ground and New South Wales coastal waters.

If a 'controlled activity' is proposed on 'waterfront land', an approval is required under the Water Management Act (s91[2]).

'Controlled activities' include:

- the construction of buildings or carrying out of works;
- the removal of material or vegetation from land by excavation or any other means;
- the deposition of material on land by landfill or otherwise; or
- any activity that affects the quantity or flow of water in a water source.

'Waterfront land' is defined as the bed of any river or lake, and any land lying between the river or lake and a line drawn parallel to and forty metres inland from either the highest bank or shore (in relation to non-tidal waters) or the mean high water mark (in relation to tidal waters). The distance of forty metres can be reduced by the regulations. Depending upon the regulations, land adjoining coastal waters may also be waterfront land.

However, pursuant to Clause 39A (1) of the Water Management (General) Regulation 2004, the RTA is exempt from the need to obtain a Controlled Activity Approval.

#### 4.2.4 Heritage Act 1977

The Heritage Act 1977 provides for the conservation of items of environmental heritage in NSW. The Act defines heritage as items or places that are of state and/or local heritage significance and include: places, buildings, works, relics, moveable objects and precincts. As part of NSW heritage protection and management the Act establishes a register including an inventory and list to protect the listed items.

A search of the State Heritage Register and Inventory Heritage register was undertaken resulting in no items on the State Heritage Register which were within 5 km of the study area. However the full search of various heritage listings indicates that there are two heritage items listed within BLEP 2010 within the study area. These items are discussed in further detail in Section 6.2.

#### 4.2.5 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (NPW Act) provides the basis for the legal protection and management of Aboriginal sites within NSW. Sections 84 and 90 of the NPW Act provide statutory protection for any physical / material evidence of Aboriginal occupation of NSW and places of cultural significance to the Aboriginal community. The key principles of the Act in relation to Aboriginal heritage are the prevention of unnecessary or unwarranted destruction of Aboriginal objects, and the active protection and conservation of objects which are of high cultural significance. It is an offence to knowingly harm or desecrate an Aboriginal object, irrespective of its nature or significance, without the prior consent of the Director-General of the NSW DECCW. It is an offence to harm or desecrate an Aboriginal object and a declared Aboriginal place (strict liability offence).

#### 4.2.6 Fisheries Management Act 1994

The Minister for Fisheries would be notified of any proposed dredging or reclamation works associated with the Proposal (i.e. installation of new culverts) in accordance with s199 of the Fisheries Management Act 1994. A permit would be required from NSW Fisheries to temporarily or permanently block fish passage under s219 of the Act. Such blockages may include placement of erosion and sediment controls across waterways, inappropriately designed drainage structures that block fish passage, and bunding and dewatering works during the construction of culverts and placement of fill in wetlands. However, it is not proposed to block any waterways likely to be used for fish passage.

The Fisheries Management Act 1994 through the Fish Habitat Protection Plan No. 1 requires public authorities, including local government and state authorities, to notify the Minister for Fisheries of any Proposal to remove or relocate woody debris. In addition, modification to wetlands is also detailed within this plan.

#### 4.2.7 Protection of the Environment Operations Act 1997

The Protection of the Environment Operations Act 1997 (POEO Act) includes provisions relating to the protection of the environment. One of the objectives of the Act is to protect, restore and enhance the quality of the

environment in New South Wales, having regard to the need to maintain ecologically sustainable development. There are serious offences under this Act for causing pollution of air, noise, water or land. The RTA and contractor are required to meet the waste licensing obligations of cl.39-42 of Schedule 1 of the POEO Act in relation to the proposed works, except where the RTA road material exemption 2008 applies for application of excavated road material. The RTA also has obligations concerning the stockpiling of material under this Act.

The Contractor and the RTA are obliged to notify DECCW when a "pollution incident" occurs that causes or threatens "material harm" to the environment.

## 4.3 Environmental Planning Instruments

The following environmental planning instruments are applicable to the site.

### 4.3.1 Bellingen Local Environmental Plan 2010

The study area is located within the local government area of the Bellingen Shire Council. The study area is currently zoned RU1 Primary Production, E2 Environmental Conservation, E3 Environmental Management, RU4 Rural Small Holding and R5 Large Lot Residential pursuant to the Bellingen Local Environmental Plan 2010 (Bellingen LEP).

### 4.3.2 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State. Clause 94 of ISEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent. The proposal would be for the purposes of a road and road infrastructure facilities and is to be carried out on behalf of RTA, therefore it would be assessed under Part 5 of the Environmental Planning and Assessment Act 1979. Development consent from Council is not required.

The proposal is not located on land reserved under the National Parks and Wildlife Act 1974 and does not affect land or development regulated by State Environmental Planning Policy No. 14 - Coastal Wetlands, State Environmental Planning Policy No. 26 - Littoral Rainforests or State Environmental Planning Policy (Major Projects) 2005. Part 2 of the ISEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development, including where proposed works will take place on flood liable land.

### 4.3.3 State Environmental Planning Policy 14 Coastal wetlands

State Environmental Planning Policy 14 Coastal Wetlands (SEPP14) is aimed at ensuring coastal wetlands are preserved and protected in the environmental and economic interests of the state. Previous mapping exists which shows the locations of all Coastal Wetlands protected under SEPP14 (ELA 2009).

The nearest SEPP 14 wetland is located approximately 1.5 kilometres to the south east of the Proposal.

### 4.3.4 State Environmental Planning Policy 26 Littoral rainforests

Littoral rainforests are a distinct type of rainforest well suited to harsh salt-laden and drying coastal winds. SEPP 26 Littoral Rainforest requires that the likely effects of proposed development be thoroughly considered when assessing the impact of development. The policy applies to 'core' areas of littoral rainforest as well as a 100 metre wide 'buffer' area surrounding these core areas, except for residential land and areas to which SEPP No. 14 - Coastal Wetlands applies.

The nearest SEPP 26 littoral rainforest is located approximately seven (7) kilometres to the north east, consequently no SEPP 26 littoral rainforest would be impacted upon by the proposed road realignment (ELA 2009)

#### 4.3.5 State Environmental Planning Policy 44 Koala habitat protection

The Bellingen LGA is identified within the Schedules of SEPP 44 Koala Habitat Protection as a LGA in which koalas are known to occur. While the requirements of the SEPP do not technically apply to this Proposal, as it is not subject to Council consent, it is the RTA's practice to consider SEPP 44 criteria in the environmental impact assessment process. These criteria relate to the percentages of feed tree cover, particularly trees listed under Schedule 2 - Known Feed Trees. The assessment criteria consider the percentage cover of known feed trees, and whether these are greater or less than 15% of the total tree canopy.

Known feed trees in the study area include Tallowwood (*Eucalyptus microcorys*), Swamp Mahogany (*Eucalyptus robusta*), Forest Red Gum (*Eucalyptus tereticronis*) and Small-fruited Grey Gum (*Eucalyptus propinqua*).

#### 4.3.6 State Environmental Planning Policy 62 Sustainable Aquaculture

SEPP 62 Sustainable Aquaculture encourages the sustainable expansion of the aquaculture industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identify and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks. Part 3A addresses the need to assess impacts on priority oyster aquaculture areas, including water quality and requires referral to NSW Department of Industry & Investment.

The Proposal is approximately seven (7) kilometres (via the Bellinger River) from a priority aquaculture area (Mylestom) and includes comprehensive mitigation measures to ensure no offsite impacts occur. The Proposal is therefore unlikely to have an adverse effect the Mylestom priority oyster aquaculture area.



## Database Searches

The following results were obtained from desktop database searches conducted for the study area in June and December 2010. The information below provides a summary of the search results. Copies of all searches can be viewed in Appendix C.

### 5.1.1 LEP Heritage Listings

The nearest heritage items registered on the Bellingen LEP 2010 are items I187 and I230. Both heritage items are located on land to the north of the Proposal outside the road reserve and are noted as cultural planting. The registration details are provided in Table 5.1.

Table 5.1 Bellingen LEP 2010 Heritage Items

<i>Item No.</i>	<i>Suburb</i>	<i>Item Name</i>	<i>Address</i>	<i>Property Description</i>	<i>Significance</i>
I187	Fernmount	Cultural Planting	338 Waterfall Way	Lot 1 DP 415749	Local
I230	Raleigh	Cultural Planting	254 Waterfall Way	Lot 1 DP 855011	Local

### 5.1.2 Australian Heritage Database

A search of the Australian Heritage Database was undertaken in December 2010 for sites listed within the Bellingen LGA. The search resulted in 30 items being identified, with one (1) site being in proximity to the Proposal.

Bellinger River (North Arm) Valley is classed as an Indicative Place on the Register of the National Estate. As an indicative place, information of the heritage value of the area has been provided to or obtained by, the Australian Heritage Commission, has been entered into the database and the place is at some stage in the assessment process. The Commission has therefore not made a decision on whether the place should be entered in the Register, and no legislative restrictions related to the Proposal apply as a result of the area being classed as an Indicative Place.

This area encompasses the Proposal study area and is approximately 58,000 hectares, comprising generally the main valley and escarpments of the river from Point Lookout to Raleigh. The main heritage value of this area relates to the aesthetics of the river valley and the diversity of flora associated with the great range in altitude, various and rich soil types and a high annual rainfall.

### 5.1.3 NSW Heritage Office State Heritage Register/Inventory

A search of the State Heritage Register and Inventory was undertaken in December 2010 for sites listed within the Bellingen LGA. A total of eight (8) records were listed in the LGA (two [2] State Heritage Listed and six [6] other government agency). However the nearest item (Osprey Nest Sites) on the State Heritage Register is located at south Bellingen, approximately 5 kilometres from the study area.

#### 5.1.4 RTA Heritage and Conservation Register

A search of the RTA s.170 Heritage Register and Conservation Register was undertaken in December 2010. There were no items identified within the study area.

#### 5.1.5 National Native Title Tribunal

The Tribunal is an independent Australian Commonwealth Government agency set up under the Native Title Act 1993 (Cth). Under the Native Title Act 1993 (Cth), the Registrar has specific functions that may also be carried out by appointed delegates. These functions include, inter alia, the maintenance of the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and provision of public access to these registers.

These registers were searched in June 2010 as part of this investigation to determine the presence of claims over the subject land. Five (5) claims are recorded on the Register of Native Title Claims within Bellingen LGA, none of which are within the study area.

#### 5.1.6 NSW DECCW Aboriginal Heritage Information Management System

A search of the DECCW Aboriginal Heritage Information Management System (AHIMS) comprising a 5km radius around the study area revealed no listed Aboriginal sites or places in or near the study area. The closest registered site is a natural mythological site (DECCW AHIMS #21-3-034), situated on a spur footslope adjacent to the Kalang River floodplain approximately one (1) kilometre to the south-east. Refer to Section 6.3 for further information.

#### 5.1.7 NSW DECCW Atlas of NSW Wildlife – Threatened Flora and Fauna Records

A search of the Atlas of NSW Wildlife (DECCW 2010) for records of threatened flora and fauna within a 20 X 20 kilometre area of the study site was undertaken in June 2010. The search identified 13 threatened flora and 53 threatened fauna, as listed on the TSC Act and/or EPBC Act. Refer to Section 6.1 for further discussion.

#### 5.1.8 Commonwealth DEWHA - Protected Matters Database

A search of the Environment Protection and Biodiversity Conservation Act 1999 Act Database was conducted in June 2010 for records of listed matters of National Environmental Significance (NES) known from within 10 kilometres of the study area. A summary of the results is included below in Table 5.2.

Table 5.2 Summary of EPBC Act Protected Matters for the Proposal

<i>EPBC Act Protected Matters</i>	<i>From within 10 kilometres of the Study Area</i>
World Heritage Properties	None
National Heritage Places	None
Wetland of International Significance (RAMSAR sites)	None
Commonwealth Marine Areas	None
Commonwealth Heritage Places	None
Threatened Ecological Communities	1 potentially occurring
Threatened Species	51 potentially occurring
Migratory Species	47 potentially occurring
Listed Marine Species	59 potentially occurring
Commonwealth Land	None

<i>EPBC Act Protected Matters</i>	<i>From within 10 kilometres of the Study Area</i>
Places on the Register of the National Estate	1 occurring
Critical Habitats	None
State and Territory Reserves	2 occurring
Regional Forest Agreements	2 occurring

#### 5.1.9 NSW DPI Noxious Weeds List

A search of the NSW Department of Primary Industries Noxious Weeds declarations for the Bellingen Shire Council (as declared under the Noxious Weeds Act 1993) was undertaken in June 2010. Over 30 noxious weed species are listed to be controlled within the Bellingen Shire Council area, of which 11 were found in the study area. Refer to Section 6.1.5 for further discussion.

#### 5.1.10 NSW Department of Primary Industries Bionet

A search of the I&I Records Viewer for the Bellingen Local Government Area was undertaken in February 2010 for records of any threatened species (as listed under the Fisheries Management Act 1994) known from within the Bellingen Shire Council area. Fish include sharks and rays, aquatic invertebrate animals, such as worms, snails, mussels, corals, sponges, sea urchins, barnacles, crabs, crayfish, aquatic insects and prawns. The search revealed that no threatened fish species occur within Bellingen LGA. Refer to Section 6.1 for further discussion and to Attachment C for a copy of the search.

#### 5.1.11 NSW Department of Environment and Climate Change Contaminated Lands Records

The DECCW Contaminated Land register search was undertaken in June 2010 for known records of contaminated land within the Bellingen LGA. Only one (1) record was identified within the DECCW Contaminated Land register for the LGA and this site is located within Urunga, less than 10 kilometres from the study area. It is anticipated that the Proposal would not impact on any contaminated sites listed on the DECCW Contaminated Land register.

#### 5.1.12 Commonwealth Department of Energy, Water, Heritage and the Arts National Pollutant Inventory

A search of the National Pollutant Inventory (NPI) was undertaken using an area search (by postcode) in June 2010 for substance emissions from all sources within the area. No results were identified from this search.

#### 5.1.13 DLWC Potential Acid Sulfate Soils Database Search

The potential for the presence of Potential Acid Sulphate Soils (PASS) was investigated via a search of the DLWC PASS database in 2010. Acid sulphate risk maps produced by DLWC have shown the low lying wetland area within the study area as having a high risk occurrence of acid sulphate soils.

## Existing Environment

### 6.1 Biodiversity

This section of the PEI aims to identify broad key ecological assets of the Proposal as well as identify their values in a broader locality context. This has been achieved through:

- reviewing existing background documents (ELA 2009 & ERM 2003);
- database searches on the Environment Protection and Biodiversity Conservation (EPBC) Act and Department of Environment, Climate Change and Water (DECCW) Atlas of NSW Wildlife databases;
- aerial photographic interpretation (API); and
- review and map records of threatened flora and fauna species within the Macksville 1:100,000 map sheet obtained from DECCW under a data licence agreement.

A preliminary site inspection was also undertaken to provide further insight into the ecological values of the Proposal footprint, which was restricted to the existing Waterfall Way road reserve footprint.

It should be noted that this section provides a general overview of the development constraints and opportunities of the study area relating to ecological issues. Further comprehensive ecological investigations are required prior to development.

#### 6.1.1 Fauna

##### Threatened Fauna

Searches were undertaken on the DECCW Atlas of NSW Wildlife covering a 20 km<sup>2</sup> area around the Proposal, and on the EPBC Act Protected Matters databases covering a 10 km<sup>2</sup> radius around the Proposal. Fifty-three threatened fauna species were recorded within this database under Schedules 1, 1a and 2 of the TSC Act. A search of the EPBC Act database listed 51 threatened fauna species or their habitats as potentially occurring within search area. A search of the I&I Records Viewer (refer Attachment C) revealed that no threatened fauna listed under the Fisheries Management Act 1994 occur within the Bellingen LGA.

The suitability of habitat within the area of the Proposal and therefore the potential occurrence of the threatened species are listed in Table A.1 (Appendix A). Marine species are not included due to the lack of suitable habitat on or directly adjacent to the Proposal.

#### 6.1.2 Flora

##### Threatened Flora

Searches were undertaken on the DECCW Atlas of NSW Wildlife covering a 20 km<sup>2</sup> area around the Proposal, and on the EPBC Act Protected Matters databases covering a 10 km<sup>2</sup> radius around the Proposal. In total, 13 threatened flora species listed under Schedules 1, 1a and 2 of the TSC Act were recorded. A search of the EPBC Act database listed 11 threatened flora species or their habitats as potentially occurring within search area. The occurrence potential of these species in the Proposal footprint is assessed in Table B.1 (Appendix B).

#### 6.1.3 Survey Methodology

**Study Area:** The Study area is shown in Illustration 2.1 and includes the Waterfall Way Road Corridor between Raleigh Interchange and Connells Creek and the environs immediately surrounding the corridor. An inspection of the Study Area was undertaken on the 22 June 2010. The survey methodology comprised a 'meandering transect' (DEC 2004a) throughout the site within the existing Waterfall Way road reserve, and also included an

inspection of accessible conspicuous ecological features elsewhere within the study area. Approximately 6.5 hrs was spent undertaking the survey.

The following features were recorded:

- land use;
- vegetation structure;
- dominant plant species;
- level of disturbance;
- presence of scats, tracks, scratches and pock marks, etc;
- tree hollows and spouts;
- connectivity;
- rocky outcrops or caves; and
- availability of water.

#### 6.1.4 Survey Limitations

The purpose of the survey was to undertake a preliminary investigation into the ecological value of the site. Detailed flora and fauna inspections were not undertaken; however observations targeting threatened flora species potentially occurring at the site were made. Winter is not a favourable season for the identification of many flora species. Plants such as Hairy-joint Grass (*Arthraxon hispidus*) die back during the colder months and are generally undetectable during this time. Additionally, while some species may be present, they may have avoided detection due to their rarity or cryptic nature.

Notwithstanding this, given the relatively small area of the site and the disturbed nature of the road side habitats, the survey effort was considered adequate for undertaking a preliminary assessment of the values of the habitat present. In addition, the precautionary principle has been applied in determining those threatened species not detected during the survey, but considered to potentially occur within the site based on the habitat present.

#### 6.1.5 Plant Communities

Vegetation throughout the existing road corridor generally comprises a narrow band of regrowth native vegetation, open grassland/paddocks and maintained garden roadside verge. Two areas of forested vegetation also occur, one on the southern side of Waterfall Way at the eastern end of the site and the other at the western end, generally west and north of the Short Cut Road intersection. Two Biometric Vegetation Types (DEC 2004) were recorded within the study area and two more broadly defined forest types were also recorded. A further two highly disturbed communities occur broadly throughout the study area. The six plant communities have been described as follows:

- tallowwood – narrow-leaved white mahogany open forest;
- paperbark swamp forest of the coastal lowlands of the North Coast;
- coastal freshwater meadows and forblands of lagoons and wetlands (Coastal Freshwater Wetland);
- mixed eucalypt forest;
- scattered trees and shrubs; and
- open grassland/paddocks.

A vegetation map showing the various vegetation communities is shown as **Illustration 6.1**.

#### Tallowwood – Narrow-leaved White Mahogany open forest

##### *Occurrence*

This community occurs in the middle of the study area on the eastern approach to Cameron's Corner on the northern and southern sides of Waterfall Way. The smaller section on the northern side of Waterfall Way which occurs within the Project footprint appears to be an ecotonal community generally representative of a Tallowwood – Narrow-leaved White Mahogany open forest. This community also contains elements of the open

forest that otherwise may have occurred on the cleared open floodplain on the lower topography further to the north and also supports species in the understorey indicative of a reduced fire regime. Most of the mature tree species have an average diameter at breast height (dbh) of less than 500 mm and as a result have not developed many hollows or 'old growth' features. The forest structure is however well developed and contains a number of features considered representative of a mature forest structure including the presence of epiphytes, palms and ferns.

#### *Upper Stratum*

The upper stratum is dominated by Narrow-leaved White Mahogany (*Eucalyptus acmenoides*) with occasional Tallowwood (*E. microcorys*), Ironbark sp. (either Nambucca Ironbark *E. ancophila* or Grey Ironbark *E. siderophloia*) and Small-fruited Grey Gum (*E. propinqua*).

#### *Mid Stratum (understorey)*

The mid stratum (understorey) comprises younger canopy species as well as Pink Bloodwood (*Corymbia intermedia*), Turpentine (*Syncarpia glomulifera*) and occasional Forest Oak (*Allocasuarina torulosa*), Willow Bottlebrush (*Callistemon saligna*) and Camphor Laurel (*Cinnamomum camphora*).

#### *Mid Stratum (shrub-layer)*

The mid stratum (shrub-layer) comprise species generally indicative of moist forest types. The low tree/tall shrub layer is dominated by Lantana (*Lantana camara*), Blackthorn (*Bursaria spinosa*), Cheese Tree (*Glochidion ferdinandii*) and Foambark (*Jagera psuedohorus*). Less commonly occurring species include Hop Bush (*Dodenea triquetra*), Scrub Turpentine (*Rhodamnia rubescens*) and Tree Heath (*Trochocarpa laurina*). A single Bangalow Palm (*Archonophoenix cunninghamiana*) is also present in this stratum.

#### *Lower Stratum*

The lower stratum is dominated grasses such as Blady Grass (*Imperata cylindrica*), *Entolasia stricta*, Paspalum (*Paspalum dilatatum*) and Lomandra (*Lomandra longifolia*). Other conspicuous species in Scentless Rosewood (*Synoum glandulosum*), Elderberry Panax (*Polyscias sambucifolia*) and a variety of fern species such as Bracken (*Pteridium esculentum*), False Bracken Fern (*Calochlaena dubia*) and Pouched Coral Fern (*Gleichenia dicarpa*). A small number of epiphytes are also present including Elk Horn (*Platyserium bifurcatum* ssp. *bifurcatum*) and Felt Fern (*Pyrrosia* sp.).

Disturbance in this community comprises the presence of various weeds, including listed noxious species such as Lantana (*Lantana camara*) and Camphor Laurel (*Cinnamomum camphora*), however vine weeds are not common. Dumped rubbish (i.e. large pieces of metal) is also present.

This community is not recognised formally under any broad vegetation classification scheme and is not assigned a formal conservation status. Nambucca Ironbark (*E. ancophila*) is a ROTAP listed plant and further survey work would be required to determine the extent of its distribution in the Proposal footprint

### Paperbark swamp forest of the coastal lowlands of the North Coast

This community occurs on the eastern side of Cameron's Corner and has previously been the subject of a number of related assessments (ERM, 2003; ELA 2008). The community is dominated by Broad-leaved Paperbark (*Melaleuca quinquinervia*) with occasional Swamp Mahogany (*E. robusta*) and conclusions from previous surveys determined that it is in relatively good condition with minimal weed infestation with ongoing healthy recruitment (ERM 2003 in ELA 2008).

This community is regarded as an Endangered Ecological Community more specifically described as *Swamp Sclerophyll Forest on Coastal Floodplain of the NSW North Coast, Sydney Basin and South East Corner Bioregions (SSF)* (DEC 2004). Section 6.4 refers to the potential hydrological impacts on this EEC.

### Coastal freshwater meadows and forblands of lagoons and wetlands (Coastal Freshwater Wetland)

This community occurs in two locations within the site. The eastern occurrence is located on the northern side of the swamp sclerophyll forest described above and in turn is bound to the north by a section of the Waterfall Way. This area of wetland was the subject of previous assessments (ERM, 2003; ELA 2008) where it has been

described as being in poor condition as a result of previous land uses (ELA 2008). This community also occurs in the western section of the site on the northern side of Waterfall Way, opposite a tall stand of roadside vegetation dominated by very mature eucalypt trees. This portion of wetland vegetation appears to be in poor condition as a result of compaction by cattle and the ongoing threat of infestation of introduced pasture grasses and associated pasture weeds.

This community is regarded as an Endangered Ecological Community more specifically described as *Freshwater Wetlands on Coastal Floodplain of the NSW North Coast, Sydney Basin and South East Corner Bioregions* (Coastal Freshwater Wetlands)(DEC 2004). Section 6.4 refers to the potential hydrological impacts on this EEC.

### Mixed eucalypt forest

This community occurs along a portion of the eastern section of the site on the southern side of the road and extends for some distance to the south as a continuous forest, where it meets the industrial area serviced by Short Cut Road. This broad community has a south facing aspect in the vicinity of the road corridor and hence supports a range of understorey/mid-storey species commonly associated with moist forest types.

Commonly occurring species include Pink Bloodwood (*Corymbia intermedia*), Narrow-leaved White Mahogany (*E. acmenoides*), Tallowwood (*E. microcorys*), Ironbark sp. (either Nambucca Ironbark *E. ancophila* or Grey Ironbark *E. siderophloia*) and Small-fruited Grey Gum (*E. propinqua*). Other trees occurring include Blackbutt (*E. pilularis*), Turpentine (*Syncarpia glomulifera*), Forest Oak (*Allocasuarina torulosa*) and Hard Quandong (*Elaeocarpus obovatus*).

The mid-storey of this community comprises regenerating canopy species and pioneer rainforest species such as Foambark (*Jagera psuedohorhus*) and Brown Kurrajong (*Commersonia bartramia*). Other common species include Guioa (*Guioa semiglauca*) and Forest Oak (*Allocasuarina torulosa*). Where a shrub layer is present Sweet Pittosporum (*Pittosporum undulatum*) is common along with a range of other rainforest associated species including Blackwood (*Acacia melanoxylon*).

A small number of mature eucalypts displaying 'old growth' features such as tree hollows are present in the site. A single large White Mahogany (*E. acmenoides*) and a Blackbutt (*E. pilularis*) measuring approximately 1000mm and 700mm dbh respectively occur on the southern side of Waterfall Way and adjoin this forest community. A further two large eucalypts occur on the northern side of the road in this location, and measuring approximately 1,200mm and 900mm dbh, these trees are noticeably larger and more developed than any of the other trees at the eastern end of the site within the road corridor.

A broad range of weed species are common in this community including Camphor Laurel (*Cinnamomum camphora*), Lantana (*Lantana camara*), Broad-leaved Pepper Tree (*Schinus terebinthifolia*) and Crofton Weed (*Ageratina adenophora*).

This community is not recognised formally under any broad vegetation classification scheme and is not assigned a formal conservation status. Nambucca Ironbark (*E. ancophila*) is a ROTAP listed plant and further survey work would be required to determine the extent of its distribution in the Proposal footprint

### Scattered trees and shrubs

Scattered trees and shrubs occur along the majority of the southern side throughout the site and occasionally on the northern side. This broad community comprises an overstorey of scattered eucalypt trees with varying degrees of development in the lower strata and generally occurs as a linear strip of broken vegetation along the road edge.

Commonly occurring canopy species are similar to those present in the previously described mixed eucalypt forest community and include Pink Bloodwood (*Corymbia intermedia*), Narrow-leaved White Mahogany (*E. acmenoides*), Tallowwood (*E. microcorys*), Ironbark sp. (either Nambucca Ironbark *E. ancophila* or Grey Ironbark *E. siderophloia*) and Small-fruited Grey Gum (*E. propinqua*). Other mature trees that occur include Blackbutt (*E. pilularis*), Turpentine (*Syncarpia glomulifera*) and Forest Oak (*Allocasuarina torulosa*). Mature tree species

throughout the eastern and central portion of the site have an average dbh of less than 500mm and as a result have not developed any hollows or 'old growth' features.

Mature trees in the western portion of the site (comprising approximately 20 individual eucalypts), are more well developed and comprise mostly Tallowwood (*E. microcorys*), Small-fruited Grey Gum (*E. propinqua*) and Forest Red Gum (*E. tereticornis*). These trees are located as a linear strip of roadside vegetation approximately 700m further west of 'Cameron's Corner' on the southern side of Waterfall Way. Most of these trees are very mature specimens (i.e. dbh > 800mm) several of which contain habitat features such as tree hollows.

The mid-storey of this community throughout the site comprises regenerating canopy species and pioneer rainforest species such as Foambark (*Jagera psuedohorhus*) and Brown Kurrajong (*Commersonia bartramia*). Other common species include Guioa (*Guioa semiglauca*) and Forest Oak (*Allocasuarina torulosa*). Where a shrub layer is present Sweet Pittosporum (*Pittosporum undulatum*) is common along with a range of other rainforest associated species including Blackwood (*Acacia melanoxylon*).

Other stands of mature trees that occur in the site and not previously describe include the following:

- mature Blackbutt (*E. pilularis*) trees on the southern side of Waterfall Way at the Short Cut Road intersection;
- a small stand of Turpentine (*Syncarpia glomulifera*) semi-mature mixed rainforest pioneer species (approx. 7) as well as two mature Hoop Pines (*Araucaria cunninghamii*) located at the near the driveways on the apex of Cameron's Corner; and
- an artificial mound with a broad range of ornamentally planted species is located on the northern side of Waterfall Way to the east of the aforementioned driveway on the apex of Cameron's Corner.

A broad range of weed species are common in this community including Camphor Laurel (*Cinnamomum camphora*), Lantana (*Lantana camara*), Broad-leaved Pepper Tree (*Schinus terebinthifolia*) and Crofton Weed (*Ageratina adenophora*).

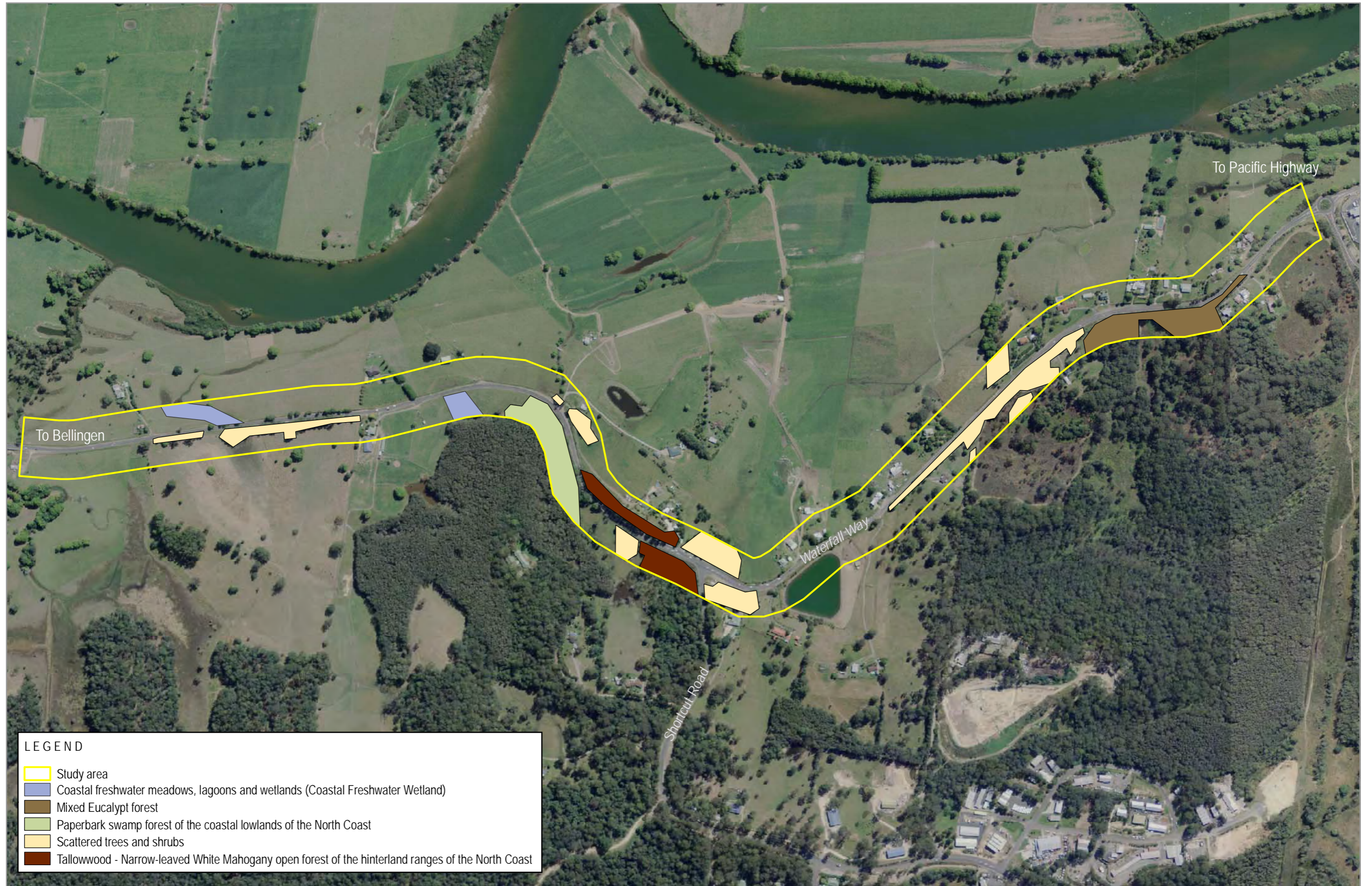
This community is not recognised formally under any broad vegetation classification scheme and is not assigned a formal conservation status. Nambucca Ironbark (*E. ancophila*) is a ROTAP listed plant and further survey work would be required to determine the extent of its distribution in the Proposal footprint

#### Open Grasslands/Paddocks

This community occurs extensively throughout the project site. It comprises common paddock grasses such as Kikuyu, Setaria (*Pennisetum clandestinum*) and Vasey Grass (*Paspalum urvillei*).

This community is generally in poor condition and is not assigned a formal conservation status.





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## 6.1.6 Desktop Assessment (Threatened Species)

### Database Searches

A total of 56 threatened species (listed within the TSC Act and/ or EPBC Act) comprising 13 flora and 43 fauna species were identified by the database searches as known to, or predicted to occur (based on habitats) within the defined search areas. A number of these species, however, are not considered likely to occur based on the habitat requirements of the species and the lack of these habitat features within the site.

Surveys conducted by ERM (2003) recorded five threatened fauna as listed on the TSC and/or EPBC Acts. These species included the Black-necked Stork (*Ephippiorhynchus asiaticus*), Grey-headed Flying Fox (*Pteropus Poliocephalus*), Little Bentwing Bat (*Miniopterus australis*), Large Bentwing Bat (*Miniopterus schreibersii*) and Largefooted Myotis (*Myotis macropus*).

Informal observations of the Black-necked Stork utilising the study area have also been made by amateur and professional ecologists. The Atlas of NSW Wildlife has a single record within the study area.

### 6.1.7 Threatened Fauna

Based on the results of the database searches and habitats present within the study area, potential habitat for a 26 of the locally recorded threatened fauna species is present within the study area. These species are:

- Spotted-tailed Quoll
- Koala
- Brush-tailed Phascogale
- Squirrel Glider
- Grey-headed Flying Fox
- Common Blossom Bat
- Large-eared Pied Bat
- Eastern Free-tailed Bat
- Little Bent-wing Bat
- Eastern Bentwing-bat
- Large-footed Myotis
- Greater Broadnosed Bat
- Eastern Freetail-bat
- Wallum Froglet
- Green-thighed Frog
- Swift Parrot
- Little Lorikeet
- Varied Sittella
- Regent Honeyeater
- Square-tailed Kite
- Glossy Black-Cockatoo
- Black-necked Stork
- Barred Cuckoo-shrike
- Black Bittern
- Eastern Osprey
- Masked Owl

A complete list of species identified in the database searches and assessment of their likelihood of occurrence in the study area is provided in Table A.1 (Appendix A).

#### Threatened Species Habitat

The majority of threatened species with potential to occur in the study area are highly mobile species such as birds, micro-bats, Grey-headed Flying-fox (*Pteropus poliocephalus*) and Spotted-tailed Quoll (*Dasyurus maculatus*). Habitat within the site for these species comprises mostly foraging resources such as mature trees or in the case of some of the microbat species the forest structure provided by these trees. Other species such as the Brush-tailed Phascogale, Squirrel Glider (*Petaurus norfolcensis*) and the Spotted-tailed Quoll are more likely to utilise resources provided by forest systems adjacent to the project site, however utilisation of sections of forest or individual trees within the Site, for the Phascogale and Squirrel Glider in particular, is possible.

The mature Eucalypt trees that occur on the southern side of Waterfall Way at the western end of the Proposed footprint provide suitable denning habitat for any hollow obligate species that may occur in the study area. These trees (Tallowwood, Forest Red Gum and Small-fruited Grey Gum) are all primary Koala food trees under Schedule 2 of State Environmental Planning Policy (SEPP) 44.

Utilisation of the site by the Koala (*Phascolarctos cinereus*) is possible given the species has been recorded in the study area previously (DECC, 2004) and primary and secondary food trees for the species occurs throughout the site. There was no evidence of recent Koala usage (i.e. scats) at the base of Tallowwood trees inspected throughout the Waterfall Way road reserve during the site inspection. cursory inspections were also made under the Tallowwood occurring in the Tallowwood – Narrow-leaved White Mahogany community adjacent to Camerons Corner and no evidence of usage was detected, however more detailed surveys would be required to determine the extent of potential Koala usage in this area.

#### 6.1.8 Threatened Flora

Based on the results of the database searches and habitats present within the study area, potential habitat for 7 of the locally recorded threatened flora species is present within the study area. A complete list of species identified in the database searches and assessment of their likelihood of occurrence in the study area is provided in Table B.2. These species are:

- Rusty Plum (*Niemeyera whitei*);
- Hairy-joint Grass (*Arthraxon hispidus*);
- Clear Milkvine (*Marsdenia longiloba*);
- Red-flowered King of the Fairies (*Oberonia titania*);
- Milky Silkpod (*Parsonisia dorrigoensis*);
- Minute Orchid (*Taeniophyllum muelleri*); and
- *Tylophora woollsii*

No threatened flora species were detected within the road reserve during the field investigations despite specific searches.

## 6.2 Non-Aboriginal Heritage

A number of heritage registers and listings were reviewed during this assessment to identify whether any known heritage items were present within the Proposal site, including:

- Roads and Traffic Authority Section 170 Heritage and Conservation Register;
- NSW Heritage Office State Heritage Register/Inventory;
- Bellingen Local Environmental Plan 2010; and
- Australian Heritage Database Register.

A search of non-Aboriginal heritage registers and inventories found that three (3) items or places were located within the study area. Two of the items are listed as I187 and I230 under the BLEP 2010 (refer to Table 5.1). The other item (Bellinger River (North Arm) Valley) was identified under the Australian Heritage Database as being in proximity to the Proposal. The majority of other heritage items and places that are listed are located within and surrounding the towns of Bellingen and Dorrigo, outside of the study area.

Heritage item I187 under the BLEP 2010 is identified as Cultural Planting. The item comprises a mature Moreton Bay fig tree characteristic of cultural planting around dairy farms in the Shire from c1930. The tree is seen as a prominent landscape feature from the main road (Waterfall Way).

Heritage item I230 under the BLEP 2010 is also identified as Cultural Planting and comprises a mature Port Jackson Fig tree characteristic of cultural planting around dairy farms. This item is situated beside Waterfall Way.

If any part of the proposal, road realignment or works are likely to encroach upon the location of either heritage item (I187 and I230), or if impacts from any works may potentially affect these trees, an appropriate heritage assessment would be required as part of the Review of Environmental Factors.

Bellinger River (North Arm) Valley is classed as an Indicative Place on the Register of the National Estate (RNE) and comprises much of the surrounding area. As an indicative place, information of the heritage value of the area has been provided to or obtained by, the Australian Division. The Australian Heritage Council no longer adds places to the RNE as of 2006. No legislative restrictions related to the Proposal apply as a result of the area being classed as an Indicative Place (refer to Section 5.1.2).

A search of the State Heritage Register and Inventory identified a total of eight records listed in the LGA (two [2] State Heritage Listed and six [6] other government agency). However the nearest registered item is located at south Bellingen, approximately five kilometres from the study area.

## 6.3 Aboriginal Heritage

During the ELA 2009 Review of Environmental Factors an Aboriginal heritage assessment was undertaken by Adise Pty Ltd in 2008 (Adise 2008) in accordance with the RTA PACHI for the western half of the site. The investigation concluded there was no evidence of Aboriginal occupation or uses detected during the survey, nor were any areas of Potential Archaeological Deposit (PADs) identified, either in the field or as a result of consultation with local Aboriginal community members.

The nearest sites/places of known past Aboriginal occupation are located at Fernmount, where a camp continued to be used from the early historic period through to the 1950s. The Swamp Schlerophyll Forest EEC (described as paperbark swamp, Adise 2008) at the western base of the hill slope was assessed to be of general heritage value by virtue of its likely association with the extraction of traditional resources.

A search of the DECCW Aboriginal Heritage Information Management System (AHIMS) comprising a 5km radius around the study area revealed no listed Aboriginal sites or places in or near the study area. The closest registered site is a natural mythological site (DECCW AHIMS #21-3-034), situated on a spur footslope adjacent to the Kalang River floodplain approximately one (1) kilometre to the south-east..

## 6.4 Water Quality and Hydrology

Part of the study area is located on the Bellinger River Floodplain. The area known as Cameron's Corner, located in the middle of the Study Area, and the eastern section of the Study Area, near Connells Creek are subject to flooding. Approximately 450 metres of the Waterfall Way at Cameron's Corner is inundated by flood water during a 1% AEP flood event. The Cameron's Corners section of the study area is low lying and the drainage on existing road pavement flows directly into the adjacent Swamp Sclerophyll Forest and Freshwater Wetland EEC wetlands, and into informal table drains lining the roadside. Cross drainage is provided by three (3) culverts, located at either end of the study area and at the location of the Swamp Sclerophyll Forest EEC.

These flow to the creek line (unnamed), which flows into the Bellinger River to the north of the study area. The Bellinger River then flows into the South Pacific Ocean at Urunga, approximately six (6) kilometres south-east of the study area.

The hydrology of the existing Swamp Sclerophyll Forest and Freshwater Wetland EEC wetland at Cameron's Corner is relatively complex and is a result of natural and anthropogenic processes. The wetland area has formed in a natural depression, caused in part by a small creek line that flows across the study area to join the Bellinger River approximately 600 metres north of the existing road. This creek line is currently drained by a single box culvert beneath the existing road. It would appear from the topography of the area that the wetland existed prior to construction of the road; however it is unclear whether construction of the road has restricted drainage of the wetland and in doing so, modified the hydrology of the area to increase the depth and area of the wetland.

Drainage of the wetland is limited by the level of the invert of the culvert. When water levels in the wetland exceed this level, drainage through the culvert occurs. If water levels upstream of the culvert increase beyond the drainage capacity of the culvert, water backs up on the southern side of the road until inflows to the wetland from the catchment upstream of the culvert are reduced to below the drainage capacity of the culvert or overtopping of the road occurs.

When flooding occurs, the creek line north of the existing culvert would also be expected to back-up from the Bellinger River and the wetland would fill above the height of the existing road culvert, and then either continue to fill until the road surface was overtopped, or eventually drain down via the culvert, to the invert level of the existing culvert. Further drainage would then be limited to sub-surface flow and evapotranspiration.

The water quality in the redundant Raleigh Dam must be assessed under the legislation prior to its use during construction and / or disposal.

## 6.5 General Environmental Aspects

### 6.5.1 Landform, Geology and Soils

The study area is located within an area of low hills, elevated landforms and low lying alluvial floodplains with long, narrow curved fluvial levees, interspersed with flat to gently inclined swampy floodplains at the western end of the study area.

Soils within the study area consist of deep, moderately well-drained to poorly-drained alluvial clays, earthy sands, alluvial loams, yellow podzolic soils, and gleyed podzolic soils. Soils within the wetland (swampy floodplain) are very soft. Limitations of these soils include strong acidity, low wet bearing strength, high aluminium toxicity potential, high localised acid sulphate potential, localised salinity, high localised sodicity and extreme localised subsoil erodibility.

The potential for the presence of Potential Acid Sulphate Soils (PASS) was investigated via a search of the DLWC PASS database in 2010. Acid sulphate risk maps produced by DLWC have shown the low lying wetland area within the study area as having a high risk occurrence of acid sulphate soils.

### 6.5.2 Climate

The climate of the area is warm in summer and cool in winter. The coldest month is typically July with average maximum and minimum temperatures of approximately 20 and 8 degrees C respectively. The warmest month is January with average maximum and minimum temperatures of approximately 27 and 19 degrees C, respectively. Average annual rainfall is between 1,500 millimetres to 1,700 millimetres. The highest average monthly rainfall occurs in March, at approximately 240 millimetres and the lowest average monthly rainfall occurs in September at approximately 65 millimetres.

### 6.5.3 Noise and Vibration

The study area is rural in nature and existing noise sources are limited to traffic noise generated by vehicles using the existing road and farm machinery. The nearest sensitive noise receptors are houses located on the northern and southern side of the Waterfall Way within the study area.

Current ambient noise levels are moderate as a result of moderate traffic volumes using Waterfall Way, particularly during peak times.

### 6.5.4 Air Quality

Air quality in the study area is influenced by vehicle emissions and farming practices. In the study area there are unlikely to be any regional air quality problems associated with vehicle emissions. Other factors, such as bushfires, may contribute more significantly to air pollution in rural areas than motor vehicle emissions. Rural residences along the Waterfall Way could experience occasional localised decreases in air quality from motor vehicles using the Waterfall Way, particularly from heavy vehicles.

### 6.5.5 Visual Amenity and Landscape

The existing road within the study area is within an area of medium to high visual amenity. The section of the study area between Raleigh Interchange and Raleigh Dam offers little opportunity for views except for intermittent views to the north across the Bellinger Valley. The Raleigh Dam is predominantly clear of vegetation. On the western half of the road a narrow band of mature and juvenile native trees are located on the cut batter on the northern side of the road, whilst the southern side of the road is densely vegetated with similar native trees. From the east the road heads directly southeast before curving to the north and slopping to the west into the low lying wetland area, curving back to the south along the northern edge of the wetland. The narrow band of vegetation on the northern side of the road gives way to cleared grazing pasture and provides broad views of the floodplain to the banks of the Bellinger River and beyond. Waterfall way the rises up to a crest with limited viewing opportunities. Once over the crest of the hill broad views exist over cleared grazing pasture, the Bellinger River and up to the mountains to the west. Cameron's Corner in general is considered a landmark in the area and Waterfall Way is a tourist drive.

### 6.5.6 Socio-economic

The surrounding land is predominantly used for agricultural purposes including dairy and grazing land. Residences are generally rural in nature and interspaced with hobby farms and rural small acre lots. There are some houses within the study area that could be impacted upon depending on the adopted preferred alignment.

### 6.5.7 Contaminated Land

No contaminated land or indications of past land uses likely to cause contaminated lands were identified during the site visit. However, contaminants may be present within the Proposal site. Contaminants could include hydrocarbons from roadwork's, fuel/oil leaks and spills from vehicles or agricultural activities. Agricultural activities may also contribute chemicals from irrigation, applications and stock dips.

## Consultation

Consultation was undertaken during the preparation of this Preliminary Environmental Assessment for the Waterfall Way upgrade. This section briefly describes the consultation undertaken and summarises the outcomes.

### 7.1 Bellingen Shire Council

On the 7 July 2010 the RTA project team held an informal meeting with representatives of Bellingen Shire Council including elected members and staff to discuss the Proposal. The key matters raised during the meeting were:

- The Proposal involves identification, consideration and assessment of all constraints.
- A main objective of the RTA is to avoid the Cameron's Corner wetland.
- The project is in the planning phase at present and no funding has been approved or allocated to the project.
- The RTA is hoping to have the planning and design phase completed within 12 to 18 months and will then be submitted for funding.
- The RTA understands that bicycles use Waterfall Way regularly and any upgrade should contain sufficient width to accommodate bicycles.
- There are some infrastructure issues with the dam that will need to be considered. However, Council generally agreed that the dam acquisition is something that it will consider.
- The RTA is going through a comprehensive consultation process to determine the views of the Council, Community and affected property owners. The RTA will consider all feedback from this consultation in determined route options.

### 7.2 Community Meeting and Workshop

During the preparation of this Preliminary Environmental Investigation, RTA undertook a community workshop. The workshop was held on the 4 August 2010 at the Bellingen Showground. The community were invited to attend the workshop where a presentation was given on the proposal, the participants were then broken into smaller groups and asked to provide comments on the Proposal.

Below is a summary of the key issues raised during this workshop.

- Support for and against impacting on Wetland and Swamp Sclerophyll Forest;
- The need for improved safety;
- The need for improved drainage and flood immunity;
- The need for improvements to the Short Cut Road Intersection;
- Improved signage;
- Impact on fauna;
- New road would encourage more traffic movements;
- Noted the importance of the Waterfall Way as a tourist drive;
- Increase scope of study area;
- The upgrade would encourage vehicles to drive faster;
- Realign through Raleigh Dam;
- The need for a passing lane;

- The need for school bus pick up spots;
- Reduce the speed limit; and
- Include a cycleway.

These matters would be taken into consideration during the design phase.

Further consultation would be undertaken through the duration of the Proposal.



## Conclusion

The Proposal would improve the movement of local, tourist, freight and commercial traffic between regional population centres. The provision of a wider carriageway, improved alignment and improved road surface would provide a safer and reliable access along this section of Waterfall Way.

This Preliminary Environmental Investigation has identified a number of constraints that need to be taken into consideration as part of the design of the preferred route for the proposed alignment. These constraints include:

- the Camerons Corner Wetland and associated Ecologically Endangered Vegetation Communities;
- flood and hydrological impacts;
- visual Amenity;
- Non-Aboriginal and Aboriginal Heritage;
- Socio-economic Impacts

These issues will need to be investigated further as part of any future Environmental Assessment of the Proposal.



# Project Team

The project team members included:

Simon Waterworth  
Principal / Senior Planner

Tony Coyle  
Ecologist

Jacob Sickinger  
Planner

Richard Elliott  
Spatial Data Systems



# References

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# Appendix A

## Potential Occurrence Assessment (Fauna)

Table A1 Potential Occurrence Assessment of Threatened Fauna Listed in the DECCW Atlas of NSW Wildlife and EPBC Database Results

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
<i>Aves</i>						
<i>Anthochaera phrygia</i> (formerly <i>Xanthomyza phrygia</i> )	Regent Honeyeater	E	E	Dry open forest and woodland with an abundance of nectar-producing eucalypts, particularly box-ironbark woodland, swamp mahogany forests, and riverine sheoak woodlands.	moderate	possible
<i>Botaurus poiciloptilus</i>	Australasian Bittern	V	-	Permanent freshwater wetlands with tall dense vegetation, particularly bullrushes and spikerushes.	low	unlikely
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	V	-	Sheoaks in coastal forests and woodlands, timbered watercourses, and moist and dry eucalypt forests of the coast and the Great Divide up to 1,000 m.	moderate	possible
<i>Charadrius leschenaultii</i>	Greater Sand Plover	V	-	Wide sandy beaches, mangroves, saltmarsh, mudflats	low	unlikely

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
				and exposed reefs.		
<i>Coracina lineata</i>	Barred Cuckoo-shrike	V	-	Rainforest, eucalypt woodlands, swamp woodlands and timber along watercourses.	moderate	possible
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	-	Inhabits eucalypt forests and woodlands, especially rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland.	moderate	possible
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E	-	warm temperate terrestrial wetlands, mangroves, mudflats, dry floodplains.	high	known (recorded during 2003 surveys)
<i>Esacus neglectus</i>	Beach Stone-curlew	CE	-	Tidal flats at the mouth of estuaries or on open beaches.	low	unlikely
<i>Glossopsitta pusilla</i>	Little Lorikeet	V	-	Distributed in forests and woodlands from the coast to the western slopes of the Great Dividing Range, extending westwards to the vicinity of Albury, Parkes, Dubbo and Narrabri.	moderate	possible
<i>Haematopus</i>	Sooty	V	-	Intertidal rocky and coral reefs, mostly	low	unlikely

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
<i>fuliginosus</i>	Oystercatcher			ocean shores.		
<i>Haematopus longirostris</i>	Pied Oystercatcher	V	-	Open beaches, intertidal flats, sandbanks and occasionally rocky headlands.	low	unlikely
<i>Hieraaetus morphnoides</i>	Little Eagle	V	-	Open eucalypt forest, woodland or open woodland. Sheoak or acacia woodlands and riparian woodlands of interior NSW are also used.	low	unlikely
<i>Irediparra gallinacea</i>	Comb-crested Jacana	V	-	Among vegetation floating on slow-moving rivers and permanent lagoons, swamps, lakes and dams.	low	unlikely
<i>Ixobrychus flavicollis</i>	Black Bittern	V	-	Dense vegetation fringing and in streams, swamps, tidal creeks and mudflats, particularly amongst swamp sheoaks and mangroves.	low	possible
<i>Lathamus discolor</i>	Swift Parrot	E	E	Forests, woodlands, plantations, and banksias.	moderate	possible
<i>Lichenostomus fasciocularis</i>	Mangrove Honeyeater	V	-	Mangrove forest, also near coastal forests and woodlands including casuarina and paperbark swamps.	low	unlikely

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	Dry woodland and open forest, particularly along major rivers and belts of trees in urban or semi-urban areas. Home range can extend over at least 100 km <sup>2</sup> .	moderate	possible
<i>Ninox strenua</i>	Powerful Owl	V	-	Woodland and open forest to tall moist forest and rainforest, common along drainage lines.	low	possible
<i>Oxyura australis</i>	Blue-billed Duck	V	-	Aquatic (large, deep, open fresh-water dams and lakes), sewage ponds, large rivers and saline bodies seldom on land.	low	unlikely
<i>Pandion cristatus</i> (formerly <i>Pandion haliaetus</i> )	Eastern Osprey	V	-	Forage for fish in fresh, brackish or saline waters of rivers, lakes, estuaries with suitable nesting sites nearby.	moderate	possible
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler	V	-	Box-Gum Woodlands on the slopes, and Box-Cypress-pine and open Box Woodlands on alluvial plains.	low	unlikely
<i>Ptilinopus magnificus</i>	Wompoo Fruit-dove	V	-	Rainforests, low-elevation moist eucalypt forest, and	low	unlikely



Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
				Brush Box forests.		
<i>Ptilinopus regina</i>	Rose-crowned Fruit-dove	V	-	Subtropical and dry rainforest, moist eucalypt forest and swamp forest.	low	unlikely
<i>Ptilinopus superbus</i>	Superb Fruit-dove	V	-	Subtropical and dry rainforest, moist eucalypt forest and swamp forest.	low	unlikely
<i>Stagonopleura guttata</i>	Diamond Firetail	V	-	Found in grassy eucalypt woodlands, in open forest, mallee, Natural Temperate Grassland, and Often found in riparian areas (rivers and creeks), and sometimes in lightly wooded farmland.	low	unlikely
<i>Sterna albifrons</i>	Little Tern	E	-	Coastal waters, bays, shallow inlets, salt or brackish lakes.	low	unlikely
<i>Tyto capensis</i>	Eastern Grass Owl	V	-	Areas of tall grass, including tussocks in swampy areas, grassy plains, swampy heath, cane grass, sedges on flood plains.	low	unlikely
<i>Tyto novaehollandiae</i>	Masked Owl	V	-	Dry eucalypt forest and woodlands.	moderate	possible
<i>Tyto tenebricosa</i>	Sooty Owl	V	-	Dry, subtropical and warm temperate rainforests and wet eucalypt forests. Nest in large tree	low	unlikely

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
				hollows.		
<b>Mammalia</b>						
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	V	Near cave entrances and crevices in cliffs.	moderate	possible
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed Quoll	V	E	Dry and moist eucalypt forests and rainforests, fallen hollow logs, large rocky outcrops.	moderate	possible
<i>Kerivoula papuensis</i>	Golden-tipped Bat	V	-	Rainforest and adjacent sclerophyll forest. Roost in abandoned hanging Yellow-throated Scrubwren and Brown Gerygone nests.	low	unlikely
<i>Micronomus norfolkensis</i>	Eastern Freetail-bat	V	-	Occurs in dry sclerophyll forest and woodland east of the Great Dividing Range. Roosts in tree hollows.	moderate	possible
<i>Miniopterus australis</i>	Little Bentwing-bat	V	-	Moist eucalypt forest, rainforest and dense coastal scrub.	moderate	possible
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V	-	Forest or woodland, roost in caves, old mines and stormwater channels.	moderate	possible
<i>Myotis macropus</i>	Large-footed Myotis	V	-	Bodies of water, rainforest streams, large lakes,	moderate	possible

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
				reservoirs.		
<i>Nyctophilus timoriensis</i>	Eastern Long-eared Bat	-	V	Mallee, bulloke and box eucalypt dominated communities, more common in box/ironbark/cypress-pine vegetation, inhabiting tree hollows, crevices, and under loose bark.	low	low
<i>Petaurus australis</i>	Yellow-bellied Glider	V	-	Tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Dens in tree hollows of large trees, often in family groups. Forest type preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south.	low	unlikely
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-	Blackbutt, bloodwood and ironbark eucalypt forest with heath understorey in coastal areas, and box-ironbark woodlands and River Red Gum	moderate	possible

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
				forest inland.		
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	V	-	Drier forests and woodlands with hollow-bearing trees and sparse ground cover.	moderate	possible
<i>Phascolarctos cinereus</i>	Koala	V	-	Appropriate food trees in forests and woodlands, and treed urban areas.	high	known
<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo	V	V	Cool temperate rainforest, moist and dry forests, and wet heathland, inhabiting dense layers of grass, ferns, vines and shrubs.	low	unlikely
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	Subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops.	high	likely
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V		woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest.	moderate	possible
<i>Syconycteris australis</i>	Common Blossom-bat	V	-	Littoral rainforest and feed on flowers in adjacent heathland and	moderate	possible

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
				paperbark swamps.		
<b>Amphibia</b>						
<i>Crinia tinnula</i>	Wallum Froglet	V	-	Acid paperbark and sedge swamps known as 'wallum', this is a banksia-dominated lowland heath ecosystem characterised by acidic waterbodies.	moderate	possible
<i>Litoria aurea</i>	Green and Golden Bell Frog	E	V	Amongst vegetation in and around permanent swamps, lagoons, farm dams and on flood-prone river flats, particularly where there are bullrushes or spikerushes.	moderate	possible
<i>Litoria booroolongensis</i>	Booroolong Frog	E	-	Permanent streams with some fringing vegetation cover such as ferns, sedges or grasses.	low	unlikely
<i>Litoria brevipalmata</i>	Green-thighed Frog	V	-	Rainforest, moist to dry eucalypt forest and heath, typically where surface water gathers after rain.	low	unlikely
<i>Mixophyes balbus</i>	Stuttering Frog	V	V	Cool rainforest, moist eucalypt forest and occasionally along creeks in dry eucalypt forest.	low	unlikely
<i>Mixophyes iteratus</i>	Southern	E	E	Deep, damp leaf litter in rainforests,	low	unlikely

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EPBC Act			
	Barred Frog			moist eucalypt forest and near dry eucalypt forest.		
<b>Reptilia</b>						
<i>Emydura macquarii signata</i>	Bellinger River Emydura	-	V	Long, deep pools in broad reaches of the upper Bellinger River.	low	unlikely
<i>Hoplocephalus stephensii</i>	Stephens' Banded Snake	V	-	Rainforest and eucalypt forests and rocky areas up to 950 m.	low	unlikely
<b>Insecta</b>						
<i>Ocybadistes knightorum</i>	Black Grass-dart Butterfly	E	-	Confined to coastal stands of Swamp Oak and Paperbark where Floyd's Grass grows edging the upper tidal areas of mangroves.	low	unlikely
<i>Phyllodes imperialis (southern sub-species)</i>	Pink Underwing moth	E	E	Found in undisturbed subtropical rainforest below 600 m.	low	unlikely
<i>Petalura litorea</i>	Giant Dragonfly	E	-	Permanent wetlands, swamps and bogs with some free water and open vegetation.	low	unlikely

# Appendix B

## Potential Occurrence Assessment (Flora)

Table B1 Potential Occurrence Assessment of Threatened Flora Listed in the DECCW Atlas of NSW Wildlife and EPBC Database Results

<i>Scientific Name</i>	<i>Common Name</i>	<i>Status</i>		<i>Habitat Requirement</i> <i>Source: DECCW undated</i>	<i>Suitability of Site Habitat</i>	<i>Potential Occurrence</i>
		<i>TSC Act</i>	<i>EP BC Act</i>			
<i>Acacia chrysotricha</i>	Newry Golden wattle	E	-	Restricted to an area south of Bellingen on the NSW north coast. An understorey species on rainforest edges and in wet or dry eucalypt forest in steep narrow gullies on quartzite soils.	low  Restricted to moist gullies on quartzite substrate	unlikely
<i>Acronychia littoralis</i>	Scented Acronychia	E	E	Littoral rainforest on sand.	low	unlikely
<i>Alexfloydia repens</i>	Floyd's Grass	E	-	Understorey of <i>Casuarina glauca</i> forest and along the uppermost fringe of mangroves.	low	unlikely
<i>Allocasuarina defungens</i>	Dwarf Heath Casuarina	E	E	Tall heath on sand, also on clay and sandstone.	low	unlikely
<i>Arthraxon hispidus</i>	Hairy-joint grass	V	V	Moist shady places in or on the edges of rainforest and wet eucalypt forest, often near creeks or swamps.	moderate  Dies off during the winter so is only detectable during the warmer months	possible
<i>Chamaesyce psammogeton</i>	Sand Spurge	E	-	Coastal sand dunes and exposed sites on headlands.	low	unlikely

Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EP BC Act			
<i>Cynanchum elegans</i>	White-flowered Wax Plant	E	E	Dry, littoral or subtropical rainforest, and occasionally in scrub or woodland.	low	unlikely
<i>Dendrobium melaleucaphilum</i>	Spider orchid	E	-	Grows frequently on <i>Melaleuca styphelioides</i> , less commonly on rainforest trees or on rocks in coastal districts.	low	unlikely
<i>Diuris sp. aff. chrysantha</i>	Byron Bay Diuris	E	-	Only known at a single location in Byron Bay, 20 plants recorded.	low	unlikely
<i>Hicksbeachia pinnatifolia</i>	Red Boppel Nut	V	V	Subtropical rainforest, moist eucalypt forest and Brush Box forest.	low	unlikely
<i>Marsdenia longiloba</i>	Clear Milkvine	E	V	Subtropical and warm temperate rainforest, lowland moist eucalypt forest adjoining rainforest and, sometimes, in areas with rock outcrops.	moderate	possible
<i>Niemeyera whitei</i>	Rusty Plum	V	-	Rainforest and the adjacent understorey of moist eucalypt forest.	moderate	possible
<i>Oberonia titania</i>	Red-flowered King of the Fairies	V	-	Occurs in littoral and subtropical rainforest and paperbark swamps, but it can also occur in eucalypt-forested gorges and in mangroves.	moderate	possible
<i>Parsonsia dorrigoensis</i>	Milky Silkpod	V	E	Subtropical and warm temperate rainforest, on rainforest margins, and in moist eucalypt forest up to 800 m, on brown clay soils	moderate	possible



Scientific Name	Common Name	Status		Habitat Requirement Source: DECCW undated	Suitability of Site Habitat	Potential Occurrence
		TSC Act	EP BC Act			
<i>Taeniophyllum muelleri</i>	Minute Orchid	-	V	Grows on outer branches and branchlets of rainforest trees; coast and coastal ranges.	moderate	possible
<i>Thesium australe</i>	Austral Toadflax	V	V	Grassland or grassy eucalypt woodland where <i>Themeda australis</i> is predominant, on grassy headlands.	low	unlikely
<i>Tinospora tinosporoides</i>	Arrow-head Vine	V	V	Wetter subtropical rainforest, including littoral rainforest, on fertile, basalt-derived soils.	low	unlikely
<i>Tylophora woollsii</i>	Cryptic Forest Twiner	E	E	Moist eucalypt forest, moist sites in dry eucalypt forest and rainforest margins.	moderate	possible

# indicates species considered possible occurrences on the site/s that were not identified on any of the subject databases searches



# Appendix C




## Database Searches




**Belling Local  
Environmental Plan  
2010**

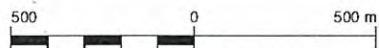
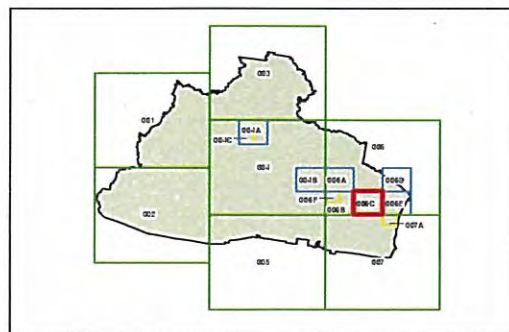
Heritage Map  
Sheet HER\_006C

**Heritage**

-  Conservation Area - General
-  Item - General
-  Item - Archaeological

**Cadastre**

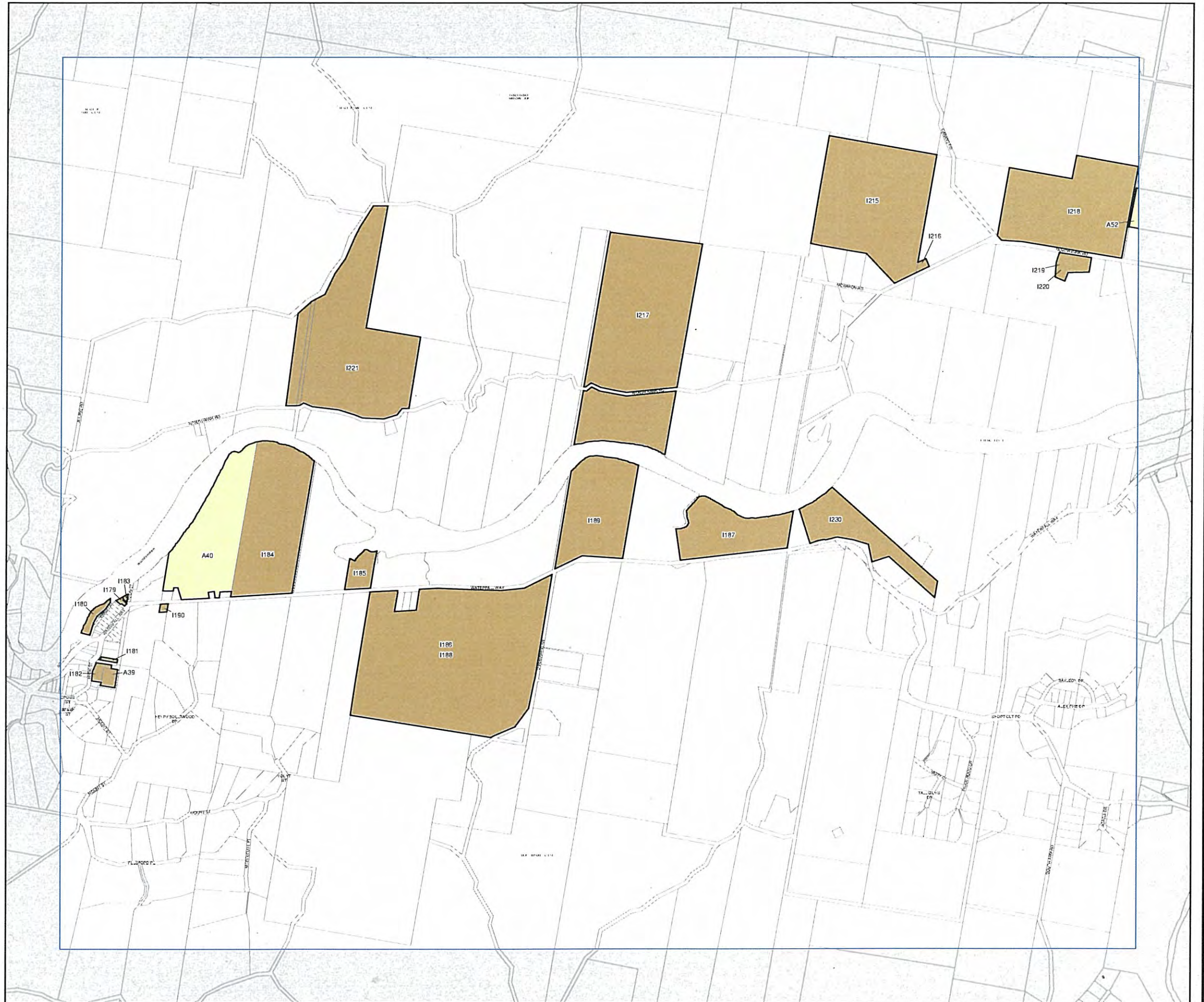
-  Cadastre 23/3/2010 © LPMA & Belling Shire Council



Scale: 1:20,000 @ A3

Projection: GDA 1994  
MGA Zone 56

Map identification number  
0600\_COM\_HER\_006C\_020\_20100622



## Search Results

30 results found.

<a href="#">Bellingen Conservation Area</a>	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Bellingen Courthouse</a> Hyde St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Bellingen Island Reserve</a> Dowle St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Bellingen River (North Arm) Valley</a> Bellingen - Raleigh Rd	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Bielsdown State Forest</a> Prakes Rd	Dorrigo, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Bobo River Area</a> Cascade - Brooklana Rd	Cascade, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Bongil Bongil Area</a>	Sawtell, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Chemist Shop</a> 69-71 Hyde St	Bellingen, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Commercial Emporium</a> 73-77 Hyde St	Bellingen, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Dorrigo National Park (1978 boundary)</a> Dome Rd	Dorrigo, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Dorrigo National Park (1986 boundary)</a> Dome Rd	Dorrigo, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Federal Hotel</a> 79-81 Hyde St	Bellingen, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">George Hewitt Arboretum</a> Watson St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Gondwana Rainforests of Australia</a>	Lismore, NSW, Australia	( <a href="#">Declared property</a> ) World Heritage List
<a href="#">Gondwana Rainforests of Australia</a>	Lismore, NSW, Australia	( <a href="#">Listed place</a> ) National Heritage List

<a href="#">Headmasters Residence (former)</a> Hyde St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Hyde Street Group</a> 69-89 Hyde St	Bellingen, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Ladies Hairdresser Building (former)</a> 87-89 Hyde St	Bellingen, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Muldiva Nature Reserve</a>	Bostobrick, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">New England National Park (1978 boundary)</a> Armidale - Dorrigo Rd	Ebor, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">New England National Park (1989 boundary)</a> Armidale - Dorrigo Rd	Ebor, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Newsagency</a> 83 Hyde St	Bellingen, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate
<a href="#">Police Station</a> Hyde St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Promised Land Escarpment and Never Never Creek</a> Promised Land Rd	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">School (former)</a> Hyde St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">School Buildings Group</a> Hyde St	Bellingen, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Southern Clarence River Tributaries Catchments</a>	Glen Innes, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Upper Bellingen Valley</a> Thora Rd	Dorrigo, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Upper Nymboida River Nature Reserve Proposal</a> Harness Cask Rd	Tyringham, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate
<a href="#">Wenonah Ornithological Area</a> Pacific Hwy	Urunga, NSW, Australia	( <a href="#">Indicative Place</a> ) Register of the National Estate

Report Produced: Wed Jun 16 16:50:27 2010

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Click on the BACK button of your browser to return to the search.

## Statutory Listed Items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into two sections.

- **Section 1.** contains items listed by the **Heritage Council** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Branch.
- **Section 2.** contains items listed by **Local Councils & Shires and State Government Agencies**. This section may also contain additional information on some of the items listed in the first section.

### Section 1. Items listed under the NSW Heritage Act.

Click on an item name to view the full details.

The search results can be re-sorted by clicking on the **(sort)** option at the top of each column.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Listed Under Heritage Act
<a href="#">Gondwana Rainforests of Australia</a>		Various	Upper Hunter	Yes
<a href="#">Hammond and Wheatley Commercial Emporium</a>	69-75 Hyde Street	Bellingen	Bellingen	Yes

There were **2** records in this section matching your search criteria.

### Section 2. Items listed by Local Government and State agencies.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Information Source (sort)
<a href="#">Bellingen Ambulance Station</a>	6 Church Street	Bellingen	Bellingen	SGOV
<a href="#">Bellingen Conservation Area</a>		Bellingen	Bellingen	LGOV
<a href="#">Bellingen Fire Station</a>	22 Hyde Street	Bellingen	Bellingen	SGOV
<a href="#">Bellingen River District Hospital - Original Building</a>	Church Street	Bellingen	Bellingen	SGOV
<a href="#">Federal Hotel</a>	Hyde Street	Bellingen	Bellingen	GAZ
<a href="#">Osprey Nest Sites</a>		South Bellingen	Bellingen	LGOV

There were **6** records in this section matching your search criteria.

There was a total of **8** records matching your search criteria.

**Key:**

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

**Note:** The Heritage Branch seeks to keep the State Heritage Inventory (SHI) up to date, however the latest listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included. Always check with the relevant Local Council or Shire for the most recent listings.

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## Northern region

[Home](#) > [Environment](#) > [Heritage](#) > [Heritage and Conservation Register](#) > Northern region

### Northern region

#### Northern Region

<a href="#">Ashby Dry Dock</a>	<a href="#">4300303</a>
<a href="#">Barraba Creek Bridge</a>	<a href="#">4309531</a>
<a href="#">Bawden Bridge over the Orara River</a>	<a href="#">4300640</a>
<a href="#">Bridge over Five Day Creek, Kempsey</a>	<a href="#">4300008</a>
<a href="#">Bridge over Gwydir River</a>	<a href="#">4301679</a>
<a href="#">Bridge over Gwydir River at Bundarra</a>	<a href="#">4301681</a>
<a href="#">Bridge over Halls Creek at Bingara</a>	<a href="#">4301685</a>
<a href="#">Bridge over Maria River</a>	<a href="#">4311594</a>
<a href="#">Briner Bridge over Upper Coldstream River</a>	<a href="#">4300158</a>
<a href="#">Chimney Swamp Creek Bridge</a>	<a href="#">4309527</a>
<a href="#">Clarence River Road Bridge, Tabulam</a>	<a href="#">4301043</a>
<a href="#">Cohens Bridge over Namoi River at Gunnedah</a>	<a href="#">4301683</a>
<a href="#">Colemans Bridge over Leycester Creek</a>	<a href="#">4301053</a>
<a href="#">Ellenborough RTA Sub-depot</a>	<a href="#">4305644</a>
<a href="#">Fladbury Bridge over the Severn River</a>	<a href="#">4301623</a>
<a href="#">Glebe Bridge over the Richmond River</a>	<a href="#">4300641</a>
<a href="#">Glenreagh Bridge over the Orara River</a>	<a href="#">4301671</a>
<a href="#">Gwydir River Bridge at Bingara</a>	<a href="#">4301686</a>
<a href="#">House - 204 Tuckombil Road, Woodburn</a>	<a href="#">4311595</a>
<a href="#">House - 301 Bruxner Highway, Wollongbar</a>	<a href="#">4305618</a>
<a href="#">Korns Crossing Bridge over Rous River</a>	<a href="#">4300160</a>
<a href="#">Macadamized Road Bruxner Highway</a>	<a href="#">4302674</a>
<a href="#">McFarlane Bridge over the Clarence River South Arm</a>	<a href="#">4300642</a>
<a href="#">Namoi River Bridge at Manilla</a>	<a href="#">4301687</a>
<a href="#">Oak Creek Bridge</a>	<a href="#">4309532</a>
<a href="#">Oyster Channel Bridge</a>	<a href="#">4310591</a>
<a href="#">Pollacks Bridge over the Nymboida River</a>	<a href="#">4300643</a>
<a href="#">RTA Regional Office, Grafton</a>	<a href="#">4305617</a>
<a href="#">Shark Creek Bridge</a>	<a href="#">4309568</a>
<a href="#">Sportsmans Creek Road Bridge</a>	<a href="#">4301024</a>
<a href="#">Surveyors Creek Bridge</a>	<a href="#">4309526</a>

#### In This Section

- ▣ [Hunter region](#)
- ▣ [Northern region](#)
- ▣ [South West region](#)
- ▣ [Southern region](#)
- ▣ [Sydney region](#)
- ▣ [Western region](#)

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Applications and determinations

[Home](#) > [Applications and determinations](#) > [Search applications](#)

Text size [A](#) | [A](#) [Printer friendly](#) 

## Search applications

You Searched for **Applications** using the criteria:-

Local Government is **bellingen** in **New South Wales**

1 to 5 of **5 Result(s)** - Page 1 of 1

Date filed	Application name	Application type	Status	State or Territory	Tribunal file no.
04/03/2005	<a href="#">Anthony Bernard Kelly, MLC., Minister for Lands for the State of New South Wales as the State Minister under the Native Title Act 1993 (Cth)</a>	Non-claimant application	Finalised - Discontinued	New South Wales	NN05/5
03/06/1998	<a href="#">Gumbaynggirr People</a>	Claimant application	Active	New South Wales	NC98/15
03/06/1998	<a href="#">Gumbaynggirr People</a>	Claimant application	Finalised - Discontinued	New South Wales	NC98/16
24/11/1997	<a href="#">Gumbangirri People</a>	Claimant application	Finalised - Struck-out	New South Wales	NC97/34
16/02/1996	<a href="#">NSW Government # 21</a>	Non-claimant application	Finalised - Withdrawn	New South Wales	NN96/4

1 - 5 of 5 Result(s) | Page 1 of 1

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List of Sites ( List - Short )

1615

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 493882, Easting to = 503887, Northing From = 6624200, Northing to = 6634244, Requestor like 8457%, Service ID = 30849, Feature Search Type = AHIMS Features

Site ID	Site Name	Datum	Zone	Easting	Northing	Context	Site Features	Site Types	Recording	Reports	State Arch. Box No
<u>21-3-0034</u>	<u>Raleigh:</u>	AGD	56	499920	6628600	Open Site	ACD : -	(recorded prior to June 2001 Natural Mythological (Ritual)	<b>(Primary)</b> <b>Kelly</b>	<b>(Catalogue Number)</b> 2130	<b>(for office use only)</b> NRS/17798/1/77
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-3-0155</u>	<u>FRT-OS-1</u>	AGD	56	496830	6627040	Open Site	AFT : 1	None	<b>Mills Archaeological &amp; Heritage Services Pty Ltd</b>		
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-3-0156</u>	<u>FRT-OS-2</u>	AGD	56	496840	6627550	Open Site	AFT : 1	None	<b>Mills Archaeological &amp; Heritage Services Pty Ltd</b>		
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-3-0173</u>	<u>WC-U-PAD 5</u>	GDA	56	498146	6626649	Open Site	PAD : -	None	<b>Reid</b>		
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-3-0174</u>	<u>WC-U-PAD 6</u>	GDA	56	498914	6627879	Open Site	PAD : -	None	<b>Reid</b>		
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-3-0175</u>	<u>KRB-1 (Coffs Harbour)</u>	GDA	56	499200	6626400	Open Site	AFT : -	None	<b>Mills</b>	4266	
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-6-0301</u>	<u>south arm road artefact 1</u>	GDA	56	497804	6625526	Open Site	AFT : -	None	<b>Edmonds</b>		
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										
<u>21-6-0321</u>	<u>WC-U-PAD 3</u>	GDA	56	497898	6625880	Open Site	PAD : 1	None	<b>Reid</b>		
							Status Valid		Permit(s)		
	<b>Primary Contact</b>										



List of Sites ( List - Short )

1615

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 493882, Easting to = 503887, Northing From = 6624200, Northing to = 6634244, Requestor like 8457%, Service ID = 30849, Feature Search Type = AHIMS Features

Site ID	Site Name	Datum	Zone	Easting	Northing	Context	Site Features	Site Types	Recording	Reports	State Arch. Box No
<u>21-6-0322</u>	<u>WC-U-PAD 4</u>	GDA	56	497817	6625970	Open Site	PAD : -	(recorded prior to June 2001) None	<b>(Primary)</b> <b>Reid</b>	<b>(Catalogue Number)</b>	<b>(for office use only)</b>
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>21-6-0325</u>	<u>WC-U-PAD 9</u>	GDA	56	497649	6624920	Open Site	PAD : -	None	<b>Reid</b>		
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>21-6-0356</u>	<u>Kalang River Bank 1</u>	GDA	56	497660	6625061	Open Site	AFT : -, PAD : -	None	<b>Brooke</b>		
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>21-6-0357</u>	<u>Kalang Flat 1</u>	GDA	56	497795	6624866	Open Site	AFT : 2, PAD : -	None	<b>Brooke</b>		
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>22-1-0001</u>	<u>Repton;Stingray Site:</u>	AGD	56	502600	6631700	Open Site	ACD : -	Natural Mythological (Ritual)	<b>Kelly, Kelly</b>		NRS/17798/1/84
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>22-1-0006</u>	<u>Yellow Rock Burial Ground</u>	AGD	56	502000	6628400	Open Site	AFT : -, BUR : -, CMR : -, ETM : -, SHL : -	Bora/Ceremonial, Burial/s, Midden	<b>England</b>		NRS/17798/1/84
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>22-1-0007</u>	<u>Myleston</u>	AGD	56	502600	6629000	Open Site	AFT : -, ETM : -, SHL : -	Midden	<b>Starling</b>	100505	NRS/17798/1/84
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		
<u>22-1-0027</u>	<u>Raleigh Bora Ground</u>	AGD	56	501300	6629000	Open Site	CMR : -	Bora/Ceremonial	<b>Starling</b>		NRS/17798/1/84
						Status Valid					
						<b>Primary Contact</b>			Permit(s)		

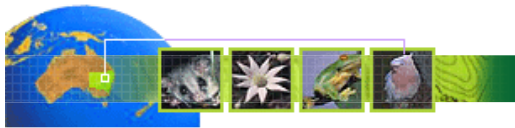


List of Sites ( List - Short )

1615

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 493882, Easting to = 503887, Northing From = 6624200, Northing to = 6634244, Requestor like 8457%, Service ID = 30849, Feature Search Type = AHIMS Features

Site ID	Site Name	Datum	Zone	Easting	Northing	Context	Site Features	Site Types	Recording	Reports	State Arch. Box No
									(Primary)	(Catalogue Number)	(for office use only)
<u>22-1-0031</u>	<u>Bellingen River:Myleston</u>	AGD	56	501600	6630500	Open Site	CMR : -, TRE : -	(recorded prior to June 2001 Bora/Ceremonial, Carved Tree	<b>Bell</b>		NRS/17798/1/672
		Status		Valid		<b>Primary Contact</b>		Permit(s)			
<u>22-1-0048</u>	<u>Yellow Rock Midden:</u>	AGD	56	501120	6627000	Open Site	AFT : -, ETM : -, SHL : -	Midden	<b>O'Neill</b>		NRS/17798/1/85
		Status		Valid		<b>Primary Contact</b>		Permit(s)			
<u>22-1-0134</u>	<u>Bonville Highway 2</u>	AGD	56	502170	6634160	Open Site	AFT : 3	None	<b>Officer</b>		NRS/17798/1/86
		Status		Valid		<b>Primary Contact</b>		Permit(s)			
<u>22-1-0235</u>	<u>BH2, Bonville PH upgrade</u>	AGD	56	502010	6634106	Open Site	PAD : -	None	<b>Coffs Harbour and District LALC</b>		
		Status		Valid		<b>Primary Contact</b>		Permit(s) 2570, 2624			
<u>22-4-0027</u>	<u>Urunga:</u>	AGD	56	501800	6625200	Open Site	AFT : -, ETM : -, SHL : -	Midden	<b>Starling</b>	1626, 100505	NRS/17798/1/87
		Status		Valid		<b>Primary Contact</b>		Permit(s)			
<u>22-4-0128</u>	<u>RL-1</u>	GDA	56	500230	6624832	Open Site	AFT : -	None	<b>Collins</b>		
		Status		Valid		<b>Primary Contact</b>		Coffs Harbour and District LALC		Permit(s) 3145	



## Search Results

**Your selection:** Flora, threatened species, Selected Area - 152.88406,-30.55939,153.09284,-30.37871  
 returned a total of 242 records of 13 species.

Report generated on 21/06/2010 - 10:11 (Data valid to 25/04/2010)

[view map](#)
[view map](#)
[search again](#)
[clear selection](#)
[search again](#)
[clear selection](#)

**Choose up to 3 species to map.**

\* *Exotic (non-native) species*

Plants	Map	Scientific Name	Common Name	<a href="#">Legal Status</a>	Count	Info
Apocynaceae						
	<input type="checkbox"/>	Marsdenia longiloba	Slender Marsdenia	E1	16	
	<input type="checkbox"/>	Parsonsia dorrigoensis	Milky Silkpod	V	20	
	<input type="checkbox"/>	Tylophora woollsii	Cryptic Forest Twiner	E1	2	
Euphorbiaceae						
	<input type="checkbox"/>	Chamaesyce psammogeton	Sand Spurge	E1	1	
Fabaceae (Mimosoideae)						
	<input type="checkbox"/>	Acacia chrysotricha	Newry Golden Wattle	E1	92	
Menispermaceae						
	<input type="checkbox"/>	Tinospora tinosporoides	Arrow-head Vine	V	1	
Orchidaceae						
	<input type="checkbox"/>	Dendrobium melaleucaphilum	Spider orchid	E1	1	
	<input type="checkbox"/>	Diuris sp. aff. chrysantha	Byron Bay Diuris	E1	1	
	<input type="checkbox"/>	Oberonia titania	Red-flowered King of the Fairies	V	1	
Poaceae						
	<input type="checkbox"/>	Alexfloydia repens	Floyd's Grass	E1	16	
Proteaceae						
	<input type="checkbox"/>	Hicksbeachia pinnatifolia	Red Boppel Nut	V	1	
Rutaceae						
	<input type="checkbox"/>	Acronychia littoralis	Scented Acronychia	E1	12	
Sapotaceae						
	<input type="checkbox"/>	Niemeyera whitei	Rusty Plum, Plum Boxwood	V	78	

\* *Exotic (non-native) species*

**Choose up to 3 species to map.**

DISCLAIMER: The Atlas of New South Wales Wildlife contains data from a number of sources including government agencies, non-government organisations and private individuals. These data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Find out [more](#) about the Atlas.

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## Search Results

**Your selection:** Fauna, threatened species, Selected Area - 152.88406,-30.55939,153.09284,-30.37871  
returned a total of 1617 records of 53 species.

Report generated on 21/06/2010 - 10:05 (Data valid to 25/04/2010)

[view map](#)

[search again](#)

[clear selection](#)

[search again](#)

**Choose up to 3 species to map.**

\* *Exotic (non-native) species*

[clear selection](#)

<b>Amphibia</b>	Map	Scientific Name	Common Name	<a href="#">Legal Status</a>	Count	Info	
		Hylidae					
	<input type="checkbox"/>	Litoria aurea	Green and Golden Bell Frog	E1	1		
	<input type="checkbox"/>	Litoria brevipalmata	Green-thighed Frog	V	1		
		Myobatrachidae					
	<input type="checkbox"/>	Crinia tinnula	Wallum Froglet	V	10		
	<input type="checkbox"/>	Mixophyes iteratus	Giant Barred Frog	E1	12		
<b>Aves</b>		Map	Scientific Name	Common Name	<a href="#">Legal Status</a>	Count	Info
		Accipitridae					
	<input type="checkbox"/>	Hieraetus morphnoides	Little Eagle	V	2		
	<input type="checkbox"/>	Lophoictinia isura	Square-tailed Kite	V	19		
	<input type="checkbox"/>	Pandion haliaetus	Osprey	V	48		
		Anatidae					
	<input type="checkbox"/>	Oxyura australis	Blue-billed Duck	V	1		
		Ardeidae					
	<input type="checkbox"/>	Botaurus poiciloptilus	Australasian Bittern	V	1		
	<input type="checkbox"/>	Ixobrychus flavicollis	Black Bittern	V	6		
		Burhinidae					
	<input type="checkbox"/>	Esacus neglectus	Beach Stone-curlew	E4A	3		
		Cacatuidae					
	<input type="checkbox"/>	Calyptorhynchus lathami	Glossy Black-Cockatoo	V	137		
		Campephagidae					
	<input type="checkbox"/>	Coracina lineata	Barred Cuckoo-shrike	V	9		
		Charadriidae					
	<input type="checkbox"/>	Charadrius leschenaultii	Greater Sand-plover	V	1		
		Ciconiidae					
	<input type="checkbox"/>	Ephippiorhynchus asiaticus	Black-necked Stork	E1	75		
		Columbidae					
	<input type="checkbox"/>	Ptilinopus magnificus	Wompoo Fruit-Dove	V	49		
	<input type="checkbox"/>	Ptilinopus regina	Rose-crowned Fruit-Dove	V	31		
	<input type="checkbox"/>	Ptilinopus superbus	Superb Fruit-Dove	V	1		
		Estrildidae					
	<input type="checkbox"/>	Stagonopleura guttata	Diamond Firetail	V	1		
		Haematopodidae					
	<input type="checkbox"/>	Haematopus fuliginosus	Sooty Oystercatcher	V	7		
	<input type="checkbox"/>	Haematopus longirostris	Pied Oystercatcher	E1	11		

Jacaniidae	<input type="checkbox"/>	Irediparra gallinacea	Comb-crested Jacana	V	2	
Laridae	<input type="checkbox"/>	Sterna albifrons	Little Tern	E1	7	
Meliphagidae	<input type="checkbox"/>	Lichenostomus fasciolaris	Mangrove Honeyeater	V	1	
	<input type="checkbox"/>	Xanthomyza phrygia	Regent Honeyeater	E1	2	
Neosittidae	<input type="checkbox"/>	Daphoenositta chrysoptera	Varied Sittella	V	15	
Pomatostomidae	<input type="checkbox"/>	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	2	
Psittacidae	<input type="checkbox"/>	Glossopsitta pusilla	Little Lorikeet	V	20	
Strigidae	<input type="checkbox"/>	Ninox strenua	Powerful Owl	V	21	
Tytonidae	<input type="checkbox"/>	Tyto capensis	Grass Owl	V	1	
	<input type="checkbox"/>	Tyto novaehollandiae	Masked Owl	V	12	
	<input type="checkbox"/>	Tyto tenebricosa	Sooty Owl	V	4	
<b>Insecta</b>		Map Scientific Name	Common Name	<a href="#">Legal Status</a>	Count	Info
Hesperiidae	<input type="checkbox"/>	Ocybadistes knightorum	Black Grass-dart Butterfly	E1	118	
Petaluridae	<input type="checkbox"/>	Petalura litorea	Coastal Petaltail	E1	2	
<b>Mammalia</b>		Map Scientific Name	Common Name	<a href="#">Legal Status</a>	Count	Info
Dasyuridae	<input type="checkbox"/>	Dasyurus maculatus	Spotted-tailed Quoll	V	23	
	<input type="checkbox"/>	Phascogale tapoatafa	Brush-tailed Phascogale	V	17	
Molossidae	<input type="checkbox"/>	Mormopterus norfolkensis	Eastern Freetail-bat	V	8	
Otariidae	<input type="checkbox"/>	Arctocephalus forsteri	New Zealand Fur-seal	V	3	
	<input type="checkbox"/>	Arctocephalus pusillus doriferus	Australian Fur-seal	V	2	
Petauridae	<input type="checkbox"/>	Petaurus australis	Yellow-bellied Glider	V	22	
	<input type="checkbox"/>	Petaurus norfolcensis	Squirrel Glider	V	3	
Phascolarctidae	<input type="checkbox"/>	Phascolarctos cinereus	Koala	V	764	
Pteropodidae	<input type="checkbox"/>	Pteropus poliocephalus	Grey-headed Flying-fox	V	71	
	<input type="checkbox"/>	Syconycteris australis	Common Blossom-bat	V	2	
Vespertilionidae	<input type="checkbox"/>	Kerivoula papuensis	Golden-tipped Bat	V	1	
	<input type="checkbox"/>	Miniopterus australis	Little Bentwing-bat	V	38	
	<input type="checkbox"/>	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	V	16	
	<input type="checkbox"/>	Myotis macropus	Southern Myotis	V	4	
	<input type="checkbox"/>	Nyctophilus bifax	Eastern Long-eared Bat	V	2	

	Map Scientific Name	Common Name	<a href="#">Legal Status</a>	Count	Info
	<input type="checkbox"/> <i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	4	
<b>Reptilia</b>					
	<b>Cheloniidae</b>				
	<input type="checkbox"/> <i>Caretta caretta</i>	Loggerhead Turtle	E1	1	
	<input type="checkbox"/> <i>Chelonia mydas</i>	Green Turtle	V	2	
	<b>Elapidae</b>				
	<input type="checkbox"/> <i>Hoplocephalus stephensii</i>	Stephens' Banded Snake	V	1	

\* *Exotic (non-native) species*

**Choose up to 3 species to map.**

DISCLAIMER: The Atlas of New South Wales Wildlife contains data from a number of sources including government agencies, non-government organisations and private individuals. These data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Find out [more](#) about the Atlas.

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## Protected Matters Search Tool

You are here: [Environment Home](#) > [EPBC Act](#) > [Search](#)

21 June 2010 10:13

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Information on the coverage of this report and qualifications on data supporting this report are contained in the [caveat](#) at the end of the report.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

**Search Type:** Point  
**Buffer:** 10 km  
**Coordinates:** -30.46888,152.9883



**Report Contents:** [Summary](#)  
[Details](#)

- [Matters of NES](#)
- [Other matters protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)  
[Acknowledgments](#)



This map may contain data which are  
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## Summary

### Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

<b>World Heritage Properties:</b>	None
<b>National Heritage Places:</b>	None
<b>Wetlands of International Significance: (Ramsar Sites)</b>	None
<b>Commonwealth Marine Areas:</b>	None
<b><a href="#">Threatened Ecological Communities:</a></b>	1

<a href="#">Threatened Species:</a>	51
<a href="#">Migratory Species:</a>	47

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>.

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at <http://www.environment.gov.au/epbc/permits/index.html>.

<b>Commonwealth Lands:</b>	None
<b>Commonwealth Heritage Places:</b>	None
<a href="#">Places on the RNE:</a>	1
<a href="#">Listed Marine Species:</a>	59
<a href="#">Whales and Other Cetaceans:</a>	13
<b>Critical Habitats:</b>	None
<b>Commonwealth Reserves:</b>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<a href="#">State and Territory Reserves:</a>	2
<b>Other Commonwealth Reserves:</b>	None
<a href="#">Regional Forest Agreements:</a>	2

## Details

### Matters of National Environmental Significance

Threatened Ecological Communities [ <a href="#">Dataset Information</a> ]	Status	Type of Presence
<a href="#">Littoral Rainforest and Coastal Vine Thickets of Eastern Australia</a>	Critically Endangered	Community likely to occur within area
Threatened Species [ <a href="#">Dataset Information</a> ]	Status	Type of Presence
<b>Birds</b>		
<a href="#">Anthochaera phrygia</a> Regent Honeyeater	Endangered	Species or species habitat likely to occur within area
<a href="#">Diomedea exulans (sensu lato)</a> Wandering Albatross	Vulnerable	Species or species habitat may occur within area

<a href="#"><u><i>Diomedea exulans amsterdamensis</i></u></a> Amsterdam Albatross	Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Diomedea exulans antipodensis</i></u></a> Antipodean Albatross	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Diomedea exulans exulans</i></u></a> Tristan Albatross	Endangered	Foraging, feeding or related behaviour may occur within area
<a href="#"><u><i>Diomedea exulans gibsoni</i></u></a> Gibson's Albatross	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Lathamus discolor</i></u></a> Swift Parrot	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Macronectes giganteus</i></u></a> Southern Giant-Petrel	Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Macronectes halli</i></u></a> Northern Giant-Petrel	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Pterodroma leucoptera leucoptera</i></u></a> Gould's Petrel	Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Pterodroma neglecta neglecta</i></u></a> Kermadec Petrel (western)	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Rostratula australis</i></u></a> Australian Painted Snipe	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche bulleri</i></u></a> Buller's Albatross	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche cauta cauta</i></u></a> Shy Albatross, Tasmanian Shy Albatross	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche cauta steadi</i></u></a> White-capped Albatross	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche melanophris</i></u></a> Black-browed Albatross	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche melanophris impavida</i></u></a> Campbell Albatross	Vulnerable	Species or species habitat may occur within area
<b>Frogs</b>		
<a href="#"><u><i>Litoria aurea</i></u></a> Green and Golden Bell Frog	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Litoria booroolongensis</i></u></a> Booroolong Frog	Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Mixophyes balbus</i></u></a> Stuttering Frog, Southern Barred Frog (in Victoria)	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Mixophyes iteratus</i></u></a> Southern Barred Frog, Giant Barred Frog	Endangered	Species or species habitat likely to occur within area
<b>Insects</b>		
<a href="#"><u><i>Phyllodes imperialis (southern subsp. - ANIC 3333)</i></u></a> Pink Underwing Moth	Endangered	Species or species habitat likely to occur within area
<b>Mammals</b>		
<a href="#"><u><i>Balaenoptera musculus</i></u></a> Blue Whale	Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Chalinolobus dwyeri</i></u></a> Large-eared Pied Bat, Large Pied Bat	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Dasyurus maculatus maculatus (SE mainland population)</i></u></a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Eubalaena australis</i></u></a> Southern Right Whale	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Megaptera novaeangliae</i></u></a> Humpback Whale	Vulnerable	Species or species habitat known to occur within area

<a href="#"><u><i>Potorous tridactylus tridactylus</i></u></a> Long-nosed Potoroo (SE mainland)	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Pteropus poliocephalus</i></u></a> Grey-headed Flying-fox	Vulnerable	Roosting known to occur within area
<b>Reptiles</b>		
<a href="#"><u><i>Caretta caretta</i></u></a> Loggerhead Turtle	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Chelonia mydas</i></u></a> Green Turtle	Vulnerable	Species or species habitat known to occur within area
<a href="#"><u><i>Dermochelys coriacea</i></u></a> Leatherback Turtle, Leathery Turtle, Luth	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Emydura macquarii signata (Bellinger River, NSW)</i></u></a> Bellinger River Emydura	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Eretmochelys imbricata</i></u></a> Hawksbill Turtle	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Natator depressus</i></u></a> Flatback Turtle	Vulnerable	Species or species habitat likely to occur within area
<b>Sharks</b>		
<a href="#"><u><i>Carcharias taurus (east coast population)</i></u></a> Grey Nurse Shark (east coast population)	Critically Endangered	Species or species habitat may occur within area
<a href="#"><u><i>Carcharodon carcharias</i></u></a> Great White Shark	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Galeorhinus galeus</i></u></a> School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark	Conservation Dependent	Species or species habitat may occur within area
<a href="#"><u><i>Pristis zijsron</i></u></a> Green Sawfish, Dindagubba, Narrowsnout Sawfish	Vulnerable	Species or species habitat may occur within area
<a href="#"><u><i>Rhincodon typus</i></u></a> Whale Shark	Vulnerable	Species or species habitat may occur within area
<b>Plants</b>		
<a href="#"><u><i>Acronychia littoralis</i></u></a> Scented Acronychia	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Allocasuarina defungens</i></u></a> Dwarf Heath Casuarina	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Arthraxon hispidus</i></u></a> Hairy-joint Grass	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Cynanchum elegans</i></u></a> White-flowered Wax Plant	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Hicksbeachia pinnatifolia</i></u></a> Monkey Nut, Bopple Nut, Red Bopple, Red Bopple Nut, Red Nut, Beef Nut, Red Apple Nut, Red Boppel Nut, Ivory Silky Oak	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Marsdenia longiloba</i></u></a> Clear Milkvine	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Parsonsia dorrigoensis</i></u></a> Milky Silkpod	Endangered	Species or species habitat likely to occur within area
<a href="#"><u><i>Taeniophyllum muelleri</i></u></a> Minute Orchid, Ribbon-root Orchid	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Thesium australe</i></u></a> Austral Toadflax, Toadflax	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Tinospora tinosporoides</i></u></a> Arrow-head Vine	Vulnerable	Species or species habitat likely to occur within area
<a href="#"><u><i>Tylophora woollsi</i></u></a>	Endangered	Species or species habitat likely to occur within area
Migratory Species [ <a href="#">Dataset Information</a> ]	Status	Type of Presence

**Migratory Terrestrial Species**

**Birds**

<a href="#"><i>Haliaeetus leucogaster</i></a> White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area
<a href="#"><i>Hirundapus caudacutus</i></a> White-throated Needletail	Migratory	Species or species habitat may occur within area
<a href="#"><i>Merops ornatus</i></a> Rainbow Bee-eater	Migratory	Species or species habitat may occur within area
<a href="#"><i>Monarcha melanopsis</i></a> Black-faced Monarch	Migratory	Breeding may occur within area
<a href="#"><i>Monarcha trivirgatus</i></a> Spectacled Monarch	Migratory	Breeding likely to occur within area
<a href="#"><i>Myiagra cyanoleuca</i></a> Satin Flycatcher	Migratory	Breeding likely to occur within area
<a href="#"><i>Rhipidura rufifrons</i></a> Rufous Fantail	Migratory	Breeding may occur within area
<a href="#"><i>Xanthomyza phrygia</i></a> Regent Honeyeater	Migratory	Species or species habitat likely to occur within area

**Migratory Wetland Species****Birds**

<a href="#"><i>Ardea alba</i></a> Great Egret, White Egret	Migratory	Breeding likely to occur within area
<a href="#"><i>Ardea ibis</i></a> Cattle Egret	Migratory	Breeding likely to occur within area
<a href="#"><i>Gallinago hardwickii</i></a> Latham's Snipe, Japanese Snipe	Migratory	Foraging, feeding or related behaviour may occur within area
<a href="#"><i>Numenius minutus</i></a> Little Curlew, Little Whimbrel	Migratory	Foraging, feeding or related behaviour likely to occur within area
<a href="#"><i>Rostratula benghalensis s. lat.</i></a> Painted Snipe	Migratory	Species or species habitat may occur within area

**Migratory Marine Birds**

<a href="#"><i>Apus pacificus</i></a> Fork-tailed Swift	Migratory	Species or species habitat may occur within area
<a href="#"><i>Ardea alba</i></a> Great Egret, White Egret	Migratory	Breeding likely to occur within area
<a href="#"><i>Ardea ibis</i></a> Cattle Egret	Migratory	Breeding likely to occur within area
<a href="#"><i>Calonectris leucomelas</i></a> Streaked Shearwater	Migratory	Species or species habitat may occur within area
<a href="#"><i>Diomedea amsterdamensis</i></a> Amsterdam Albatross	Migratory	Species or species habitat may occur within area
<a href="#"><i>Diomedea antipodensis</i></a> Antipodean Albatross	Migratory	Species or species habitat may occur within area
<a href="#"><i>Diomedea dabbenena</i></a> Tristan Albatross	Migratory	Foraging, feeding or related behaviour may occur within area
<a href="#"><i>Diomedea exulans (sensu lato)</i></a> Wandering Albatross	Migratory	Species or species habitat may occur within area
<a href="#"><i>Diomedea gibsoni</i></a> Gibson's Albatross	Migratory	Species or species habitat may occur within area
<a href="#"><i>Macronectes giganteus</i></a> Southern Giant-Petrel	Migratory	Species or species habitat may occur within area
<a href="#"><i>Macronectes halli</i></a> Northern Giant-Petrel	Migratory	Species or species habitat may occur within area
<a href="#"><i>Pterodroma leucoptera leucoptera</i></a> Gould's Petrel	Migratory	Species or species habitat may occur within area

<a href="#">Puffinus leucomelas</a> Streaked Shearwater	Migratory	Species or species habitat may occur within area
<a href="#">Sterna albifrons</a> Little Tern	Migratory	Species or species habitat may occur within area
<a href="#">Thalassarche bulleri</a> Buller's Albatross	Migratory	Species or species habitat may occur within area
<a href="#">Thalassarche cauta (sensu stricto)</a> Shy Albatross, Tasmanian Shy Albatross	Migratory	Species or species habitat may occur within area
<a href="#">Thalassarche chlororhynchos</a> Yellow-nosed Albatross, Atlantic Yellow-nosed Albatross, Indian Yellow-nosed Albatross	Migratory	Species or species habitat may occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross	Migratory	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross	Migratory	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross	Migratory	Species or species habitat may occur within area

**Migratory Marine Species****Mammals**

<a href="#">Balaenoptera edeni</a> Bryde's Whale	Migratory	Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale	Migratory	Species or species habitat may occur within area
<a href="#">Caperea marginata</a> Pygmy Right Whale	Migratory	Species or species habitat may occur within area
<a href="#">Eubalaena australis</a> Southern Right Whale	Migratory	Species or species habitat likely to occur within area
<a href="#">Lagenorhynchus obscurus</a> Dusky Dolphin	Migratory	Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale	Migratory	Species or species habitat known to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca	Migratory	Species or species habitat may occur within area

**Reptiles**

<a href="#">Caretta caretta</a> Loggerhead Turtle	Migratory	Species or species habitat likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle	Migratory	Species or species habitat known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth	Migratory	Species or species habitat likely to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle	Migratory	Species or species habitat likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle	Migratory	Species or species habitat likely to occur within area

**Sharks**

<a href="#">Carcharodon carcharias</a> Great White Shark	Migratory	Species or species habitat may occur within area
<a href="#">Rhincodon typus</a> Whale Shark	Migratory	Species or species habitat may occur within area

**Other Matters Protected by the EPBC Act**

Listed Marine Species [ [Dataset Information](#) ]      Status      Type of Presence

**Birds**

<a href="#">Apus pacificus</a> Fork-tailed Swift	Listed - overfly	Species or species habitat may occur within area
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	marine area	
<a href="#"><i>Ardea alba</i></a> Great Egret, White Egret	Listed - overfly marine area	Breeding likely to occur within area
<a href="#"><i>Ardea ibis</i></a> Cattle Egret	Listed - overfly marine area	Breeding likely to occur within area
<a href="#"><i>Calonectris leucomelas</i></a> Streaked Shearwater	Listed	Species or species habitat may occur within area
<a href="#"><i>Catharacta skua</i></a> Great Skua	Listed	Species or species habitat may occur within area
<a href="#"><i>Diomedea amsterdamensis</i></a> Amsterdam Albatross	Listed	Species or species habitat may occur within area
<a href="#"><i>Diomedea antipodensis</i></a> Antipodean Albatross	Listed	Species or species habitat may occur within area
<a href="#"><i>Diomedea dabbenena</i></a> Tristan Albatross	Listed	Foraging, feeding or related behaviour may occur within area
<a href="#"><i>Diomedea exulans (sensu lato)</i></a> Wandering Albatross	Listed	Species or species habitat may occur within area
<a href="#"><i>Diomedea gibsoni</i></a> Gibson's Albatross	Listed	Species or species habitat may occur within area
<a href="#"><i>Gallinago hardwickii</i></a> Latham's Snipe, Japanese Snipe	Listed - overfly marine area	Foraging, feeding or related behaviour may occur within area
<a href="#"><i>Gallinago megala</i></a> Swinhoe's Snipe	Listed - overfly marine area	Foraging, feeding or related behaviour likely to occur within area
<a href="#"><i>Gallinago stenura</i></a> Pin-tailed Snipe	Listed - overfly marine area	Foraging, feeding or related behaviour likely to occur within area
<a href="#"><i>Haliaeetus leucogaster</i></a> White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
<a href="#"><i>Hirundapus caudacutus</i></a> White-throated Needletail	Listed - overfly marine area	Species or species habitat may occur within area
<a href="#"><i>Lathamus discolor</i></a> Swift Parrot	Listed - overfly marine area	Species or species habitat likely to occur within area
<a href="#"><i>Macronectes giganteus</i></a> Southern Giant-Petrel	Listed	Species or species habitat may occur within area
<a href="#"><i>Macronectes halli</i></a> Northern Giant-Petrel	Listed	Species or species habitat may occur within area
<a href="#"><i>Merops ornatus</i></a> Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area
<a href="#"><i>Monarcha melanopsis</i></a> Black-faced Monarch	Listed - overfly marine area	Breeding may occur within area
<a href="#"><i>Monarcha trivirgatus</i></a> Spectacled Monarch	Listed - overfly	Breeding likely to occur within area

	marine area	
<a href="#"><u><i>Myiagra cyanoleuca</i></u></a> Satin Flycatcher	Listed - overfly marine area	Breeding likely to occur within area
<a href="#"><u><i>Numenius minutus</i></u></a> Little Curlew, Little Whimbrel	Listed - overfly marine area	Foraging, feeding or related behaviour likely to occur within area
<a href="#"><u><i>Rhipidura rufifrons</i></u></a> Rufous Fantail	Listed - overfly marine area	Breeding may occur within area
<a href="#"><u><i>Rostratula benghalensis s. lat.</i></u></a> Painted Snipe	Listed - overfly marine area	Species or species habitat may occur within area
<a href="#"><u><i>Sterna albifrons</i></u></a> Little Tern	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche bulleri</i></u></a> Buller's Albatross	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche cauta (sensu stricto)</i></u></a> Shy Albatross, Tasmanian Shy Albatross	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche chlororhynchos</i></u></a> Yellow-nosed Albatross, Atlantic Yellow-nosed Albatross, Indian Yellow-nosed Albatross	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche impavida</i></u></a> Campbell Albatross	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche melanophris</i></u></a> Black-browed Albatross	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Thalassarche steadi</i></u></a> White-capped Albatross	Listed	Species or species habitat may occur within area
<b>Ray-finned fishes</b>		
<a href="#"><u><i>Acentronura tentaculata</i></u></a> Shortpouch Pygmy Pipehorse	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Festucalex cinctus</i></u></a> Girdled Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Filicampus tigris</i></u></a> Tiger Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Heraldia nocturna</i></u></a> Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Hippichthys heptagonus</i></u></a> Madura Pipefish, Reticulated Freshwater Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Hippichthys penicillus</i></u></a> Beady Pipefish, Steep-nosed Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Hippocampus whitei</i></u></a> White's Seahorse, Crowned Seahorse, Sydney Seahorse	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Histiogamphelus briggsii</i></u></a> Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Lissocampus runa</i></u></a> Javelin Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Maroubra perserrata</i></u></a> Sawtooth Pipefish	Listed	Species or species habitat may occur within area
<a href="#"><u><i>Solegnathus dunckeri</i></u></a> Duncker's Pipehorse	Listed	Species or species habitat may occur within area



<a href="#">Solegnathus spinosissimus</a> Spiny Pipehorse, Australian Spiny Pipehorse	Listed	Species or species habitat may occur within area
<a href="#">Solenostomus cyanopterus</a> Robust Ghostpipefish, Blue-finned Ghost Pipefish,	Listed	Species or species habitat may occur within area
<a href="#">Solenostomus paegnius</a> Rough-snout Ghost Pipefish	Listed	Species or species habitat may occur within area
<a href="#">Solenostomus paradoxus</a> Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish	Listed	Species or species habitat may occur within area
<a href="#">Stigmatopora nigra</a> Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish	Listed	Species or species habitat may occur within area
<a href="#">Synnathoides biaculeatus</a> Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish	Listed	Species or species habitat may occur within area
<a href="#">Trachyrhamphus bicoarctatus</a> Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish	Listed	Species or species habitat may occur within area
<a href="#">Urocampus carinirostris</a> Hairy Pipefish	Listed	Species or species habitat may occur within area
<a href="#">Vanacampus margaritifer</a> Mother-of-pearl Pipefish	Listed	Species or species habitat may occur within area
<b>Reptiles</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle	Listed	Species or species habitat likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle	Listed	Species or species habitat known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth	Listed	Species or species habitat likely to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle	Listed	Species or species habitat likely to occur within area
<a href="#">Hydrophis elegans</a> Elegant Seasnake	Listed	Species or species habitat may occur within area
<a href="#">Natator depressus</a> Flatback Turtle	Listed	Species or species habitat likely to occur within area
<a href="#">Pelamis platurus</a> Yellow-bellied Seasnake	Listed	Species or species habitat may occur within area
Whales and Other Cetaceans [ <a href="#">Dataset Information</a> ]	Status	Type of Presence
<a href="#">Balaenoptera acutorostrata</a> Minke Whale	Cetacean	Species or species habitat may occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale	Cetacean	Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale	Cetacean	Species or species habitat may occur within area
<a href="#">Caperea marginata</a> Pygmy Right Whale	Cetacean	Species or species habitat may occur within area
<a href="#">Delphinus delphis</a> Common Dolphin, Short-beaked Common Dolphin	Cetacean	Species or species habitat may occur within area
<a href="#">Eubalaena australis</a> Southern Right Whale	Cetacean	Species or species habitat likely to occur within area
<a href="#">Grampus griseus</a> Risso's Dolphin, Grampus	Cetacean	Species or species habitat may occur within area
<a href="#">Lagenorhynchus obscurus</a> Dusky Dolphin	Cetacean	Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale	Cetacean	Species or species habitat known to occur within area

<a href="#">Orcinus orca</a> Killer Whale, Orca	Cetacean	Species or species habitat may occur within area
<a href="#">Stenella attenuata</a> Spotted Dolphin, Pantropical Spotted Dolphin	Cetacean	Species or species habitat may occur within area
<a href="#">Tursiops aduncus</a> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin	Cetacean	Species or species habitat likely to occur within area
<a href="#">Tursiops truncatus s. str.</a> Bottlenose Dolphin	Cetacean	Species or species habitat may occur within area

Places on the RNE [ [Dataset Information](#) ]  
Note that not all Indigenous sites may be listed.

#### Natural

#### [Bongil Bongil Area NSW](#)

### Extra Information

State and Territory Reserves [ [Dataset Information](#) ]

Bongil Bongil National Park, NSW

Jaaningga Nature Reserve, NSW

Regional Forest Agreements [ [Dataset Information](#) ]

Note that all RFA areas including those still under consideration have been included.

Lower North East NSW RFA, New South Wales

Upper North East NSW RFA, New South Wales

### Caveat

The information presented in this report has been provided by a range of data sources as [acknowledged](#) at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the *Environment Protection and Biodiversity Conservation Act 1999*. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under "type of presence". For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the [migratory](#) and [marine](#) provisions of the Act have been mapped.

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as [extinct or considered as vagrants](#)
- some species and ecological communities that have only recently been listed
- [some terrestrial species](#) that overfly the Commonwealth marine area
- migratory species that are very [widespread, vagrant, or only occur in small numbers](#).

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites;
- seals which have only been mapped for breeding sites near the Australian continent.

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

## Acknowledgments

This database has been compiled from a range of data sources. The Department acknowledges the following custodians who have contributed valuable data and advice:

- [New South Wales National Parks and Wildlife Service](#)
- [Department of Sustainability and Environment, Victoria](#)
- [Department of Primary Industries, Water and Environment, Tasmania](#)
- [Department of Environment and Heritage, South Australia Planning SA](#)
- [Parks and Wildlife Commission of the Northern Territory](#)
- [Environmental Protection Agency, Queensland](#)
- [Birds Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Atherton and Canberra](#)
- [University of New England](#)
- Other groups and individuals

[ANUcliM Version 1.8, Centre for Resource and Environmental Studies, Australian National University](#) was used extensively for the production of draft maps of species distribution. Environment Australia is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

[Department of the Environment, Water, Heritage and the Arts](#)

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Last updated: Thursday, 20-Nov-2008 14:17:56 EST

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## Noxious weed declarations

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### Noxious weed declarations for Bellingen Shire Council

The following weeds are declared noxious in the control area of Bellingen Shire Council:

Weed	Class	Legal requirements
<a href="#">African feathergrass [Pennisetum macrourum ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">African turnipweed [Sisymbrium runcinatum ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">African turnipweed [Sisymbrium thellungii ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Alligator weed [Alternanthera philoxeroides ]</a>	2	The plant must be eradicated from the land and the land must be kept free of the plant
<a href="#">Anchored water hyacinth [Eichhornia azurea]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Annual ragweed [Ambrosia artemisiifolia ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Arrowhead [Sagittaria montevidensis ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Artichoke thistle [Cynara cardunculus ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Athel pine [Tamarix aphylla ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Bathurst/Noogoora/Hunter/South American/Californian/cockle burr [Xanthium species ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
<a href="#">Bear-skin fescue [Festuca gautieri]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Bitou bush [Chrysanthemoides monilifera subspecies rotundata ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
<a href="#">Black knapweed [Centaurea nigra]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Black willow [Salix nigra ]</a>	3	The plant must be fully and continuously suppressed and destroyed

<a href="#">Blackberry [Rubus fruticosus aggregate species ]</a> except cultivars Black satin, Chehalem, Chester Thornless, Dirksen Thornless, Loch Ness, Murrindindi, Silvan, Smoothstem, Thornfree	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an <a href="#">All of NSW</a> declaration
<a href="#">Boneseed [Chrysanthemoides monilifera subspecies monilifera ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
<a href="#">Bridal creeper [Asparagus asparagoides ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Broad-leaf pepper tree [Schinus terebinthifolius ]</a>	3	The plant must be fully and continuously suppressed and destroyed
<a href="#">Broomrapes [Orobanche species]</a> Includes all Orobanche species except the native O. cernua variety australiana and O. minor	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Burr ragweed [Ambrosia confertiflora ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Cabomba [Cabomba caroliniana ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Camphor laurel [Cinnamomum camphora ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
<a href="#">Cat's claw creeper [Macfadyena unguis-cati ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
<a href="#">Cayenne snakeweed [Stachytarpheta cayennensis ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Chilean needle grass [Nassella neesiana ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
<a href="#">Chinese celtis [Celtis sinensis ]</a>	3	The plant must be fully and continuously suppressed and destroyed
<a href="#">Chinese tallow tree [Triadica sebifera ]</a>	3	The plant must be fully and continuously suppressed and destroyed
<a href="#">Chinese violet [Asystasia gangetica subspecies micrantha]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Clockweed [Gaura parviflora]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Columbus grass [Sorghum x alnum ]</a>	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority

Corn sowthistle [ <a href="#">Sonchus arvensis</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Crofton weed [ <a href="#">Ageratina adenophora</a> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Dodder [ <a href="#">Cuscuta species</a> ] Includes All Cuscuta species except the native species C. australis, C. tasmanica and C. victoriana	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
East Indian hygrophila [ <a href="#">Hygrophila polysperma</a> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
English broom [ <a href="#">Cytisus scoparius</a> ]		See Scotch broom
Espartillo [ <a href="#">Achnatherum brachychaetum</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Eurasian water milfoil [ <a href="#">Myriophyllum spicatum</a> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Fine-bristled burr grass [ <a href="#">Cenchrus brownii</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Fireweed [ <a href="#">Senecio madagascariensis</a> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Fountain grass [ <a href="#">Pennisetum setaceum</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Gallon's curse [ <a href="#">Cenchrus biflorus</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Giant Parramatta grass [ <a href="#">Sporobolus fertilis</a> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Giant rat's tail grass [ <a href="#">Sporobolus pyramidalis</a> ]	3	The plant must be fully and continuously suppressed and destroyed
Glaucous starthistle [ <a href="#">Carthamus glaucus</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Golden thistle [ <a href="#">Scolymus hispanicus</a> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Gorse [ <a href="#">Ulex europaeus</a> ]	3	The plant must be fully and continuously suppressed and destroyed
Green cestrum [ <a href="#">Cestrum parqui</a> ]	3	The plant must be fully and continuously suppressed and destroyed
Groundsel bush [ <a href="#">Baccharis halimifolia</a> ]	3	The plant must be fully and continuously suppressed and destroyed
Hackleberry, Celtis [ <a href="#">Celtis sinensis</a> ]		See Chinese celtis

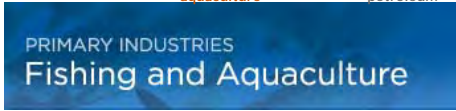
Harrisia cactus [Harrisia species ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an <a href="#">All of NSW</a> declaration
Hawkweed [Hieracium species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Honey locust [Gleditsia triacanthos ]	3	The plant must be fully and continuously suppressed and destroyed
Horsetail [Equisetum species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Hygrophila [Hygrophila costata ]	2	The plant must be eradicated from the land and the land must be kept free of the plant
Hymenachne [Hymenachne amplexicaulis]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Johnson grass [Sorghum halepense ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Karoo thorn [Acacia karroo]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Kochia [Bassia scoparia] except Bassia scoparia subspecies trichophylla	1	except B.scoparia subspecies trichophylla The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Kudzu [Pueraria lobata ]	3	The plant must be fully and continuously suppressed and destroyed
Lagarosiphon [Lagarosiphon major]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Lantana [Lantana species ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Lantana [Lantana species ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Leafy elodea [Egeria densa]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Lippia [Phyla canescens]	4	The plant must not be sold, propagated or knowingly distributed by any person other than a person involved in hay or lucerne production. The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority. This is an <a href="#">All of NSW</a> declaration
Long-leaf willow primrose [Ludwigia longifolia ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration

Mexican feather grass [ <i>Nassella tenuissima</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Mexican poppy [ <i>Argemone mexicana</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Miconia [ <i>Miconia</i> species]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Mimosa [ <i>Mimosa pigra</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Mistflower [ <i>Ageratina riparia</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Mossman River grass [ <i>Cenchrus echinatus</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Mysore thorn [ <i>Caesalpinia decapetala</i> ]	3	The plant must be fully and continuously suppressed and destroyed
Nodding thistle [ <i>Carduus nutans</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Noogoora burr [ <i>Xanthium</i> species ]		See Bathurst/Noogoora/Hunter/South American/Californian/cockle burr
Onion grass [ <i>Romulea</i> species] Includes all <i>Romulea</i> species and varieties except <i>R. rosea</i> var. <i>australis</i>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Oxalis [ <i>Oxalis</i> species and varieties] Includes all <i>Oxalis</i> species and varieties except the native species <i>O. chnoodes</i> , <i>O. exilis</i> , <i>O. perennans</i> , <i>O. radicata</i> , <i>O. rubens</i> , and <i>O. thompsoniae</i>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Pampas grass [ <i>Cortaderia</i> species ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Parthenium weed [ <i>Parthenium hysterophorus</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Pond apple [ <i>Annona glabra</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Prickly acacia [ <i>Acacia nilotica</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Prickly pear [ <i>Cylindropuntia</i> species ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an <a href="#">All of NSW</a> declaration



Prickly pear [ <i>Opuntia</i> species except <i>O. ficus-indica</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed This is an <a href="#">All of NSW</a> declaration
Red rice [ <i>Oryza rufipogon</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Rhus tree [ <i>Toxicodendron succedaneum</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority This is an <a href="#">All of NSW</a> declaration
Rubbervine [ <i>Cryptostegia grandiflora</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Sagittaria [ <i>Sagittaria platyphylla</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Salvinia [ <i>Salvinia molesta</i> ]	3	The plant must be fully and continuously suppressed and destroyed
Sand oat [ <i>Avena strigosa</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Scotch broom [ <i>Cytisus scoparius</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
Senegal tea plant [ <i>Gymnocoronis spilanthoides</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Serrated tussock [ <i>Nassella trichotoma</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Siam weed [ <i>Chromolaena odorata</i> ]	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
Smooth-stemmed turnip [ <i>Brassica barrelieri</i> subspecies <i>oxyrrhina</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Soldier thistle [ <i>Picnomon acarna</i> ]	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
Spiny burrgrass [ <i>Cenchrus incertus</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
Spiny burrgrass [ <i>Cenchrus longispinus</i> ]	4	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed

<a href="#">Spotted knapweed [Centaurea maculosa]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Texas blueweed [Helianthus ciliaris ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Water caltrop [Trapa species]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Water hyacinth [Eichhornia crassipes ]</a>	3	The plant must be fully and continuously suppressed and destroyed
<a href="#">Water lettuce [Pistia stratiotes]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Water soldier [Stratiotes aloides]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Willows [Salix species]</a> Includes all Salix species except S. babylonica, S. x reichardtii, S. x calodendron	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration
<a href="#">Witchweed [Striga species]</a> Includes all Striga species except native species and Striga parviflora	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Yellow bells [Tecoma stans ]</a>	3	The plant must be fully and continuously suppressed and destroyed
<a href="#">Yellow burrhead [Limnocharis flava]</a>	1	The plant must be eradicated from the land and the land must be kept free of the plant This is an <a href="#">All of NSW</a> declaration
<a href="#">Yellow nutgrass [Cyperus esculentus ]</a>	5	The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with This is an <a href="#">All of NSW</a> declaration



# Records viewer

Records for this map are from I&I NSW research surveys, they do not indicate the entire distribution of the species and there may be errors and omissions.  
To view the records using Google Earth you must download and install the Google Earth Plugin.



**Records search**

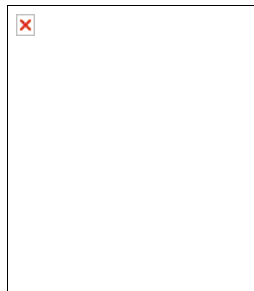
**Step 1**  
Select an area type to search by:  
[Statewide](#)  
[Catchment Management Authority](#)  
[Local Government Area](#)

LGA:

**Step 2**  
Select a species:  
 No records

---

**Step 3**  
Select a time period:  
 pre 1980  
 post 1980  
 all records



NOTE: The map depicts the expected distribution of this species in NSW. The records indicate locations where the species has been found.

[Records](#)



**You are here:** [Home](#) > [Contaminated land](#) > [Record of EPA notices](#)



## Search results

Your search for: LGA: Bellingen Shire Council

Matched 2 notices relating to 1 site.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
Urunga	Hillside Drive	<a href="#">Antimony Treatment Plant</a>	2 current

Page 1 of 1

17 June 2010

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# National Pollutant Inventory

You are here: [NPI Home](#) » [NPI data](#) » [Search NPI data](#) » [Search by Form](#) » View data

- [Summary](#)
- [Sources](#)
- [Emissions](#)
- [Transfers](#)
- [Download](#)
- [Map](#)

## 2008/2009 data within 2454 - All Substances from All Sources

Summary of returned search results with information related to the search criteria. Click on the tabs for a more detailed view of the search results.

### The search results contain the following data

#### Industry data

- |                                    |   |
|------------------------------------|---|
| • <b>Number of facilities</b>      | 0 |
| • Number of substances emitted     | 0 |
| • Number of substances transferred | 0 |

#### Diffuse data

- |                                |   |
|--------------------------------|---|
| • <b>Number of airsheds</b>    | 0 |
| • Number of substances emitted | 0 |
| • <b>Number of catchments</b>  | 1 |
| • Number of substances emitted | 2 |

## Most commonly reported substances for the Location: 2454

### Industry Emissions

### Industry Transfers

### Diffuse Emissions

- Total Nitrogen
- Total Phosphorus

## NPI

- [NPI Home](#)
- [NPI Database Search](#)

## Search Criteria

- Source Type = All
- Include subthreshold facility data = Yes
- Reporting year = 2008/2009
- Postcode = 2454
- State = National
- Substance = All
- Destination type = All

### [Edit Criteria](#)

## Key

Links to an another web site  
Opens a pop-up window

Display time: 0.416s

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