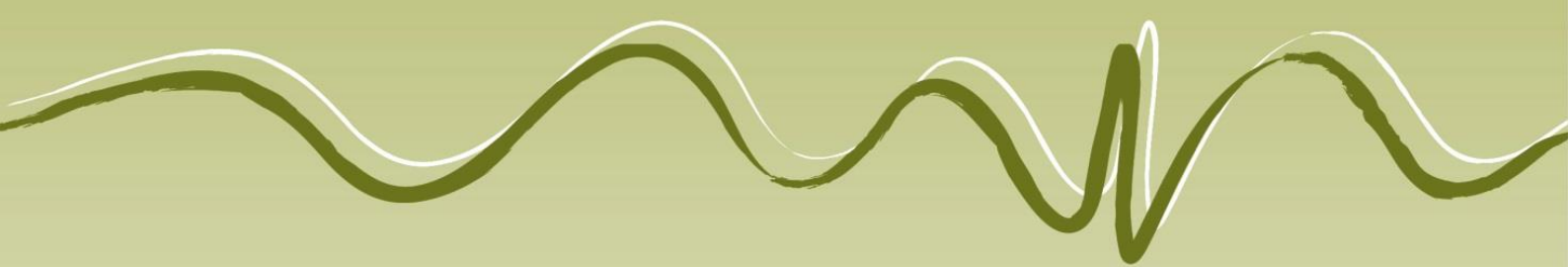


Biodiversity Assessment

Gaudrons Road, Sapphire Beach – Proposed Rezoning



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Executive Summary

GeoLINK has been engaged to prepare a Biodiversity Assessment Report (BAR) to inform a rezoning planning proposal for the following three properties off Gaudrons Road at Sapphire Beach (the site):

- 9-9A Gaudrons Road, Sapphire Beach – Lot 11 DP 1141269
- 148-158 Gaudrons Road, Sapphire Beach – Lot 7 DP 555490
- 189 Gaudrons Road, Sapphire Beach – Lot 2 DP 550362

The proposal is to rezone the subject land from RU2 Rural Landscape to R5 Large Lot Residential. The proposal also seeks to amend the minimum lot size to permit the creation of additional lots with a minimum lot size of 0.5 hectares or less.

No Biodiversity Value mapped areas occur on the sites.

Results of field assessment are as follows:

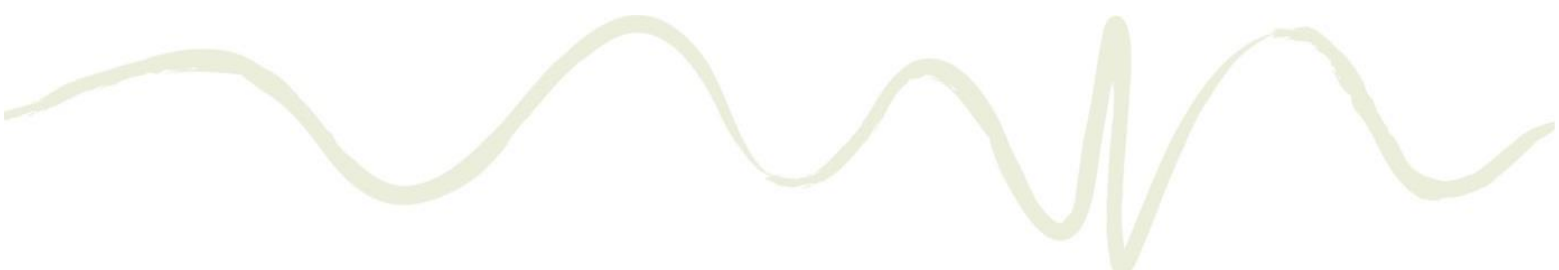
- The three sites have been historically cleared and used for agricultural pursuits. Currently the sites occur as predominantly cleared lands comprising mostly exotic grasses, landscape and horticultural plantings with some peripheral patches of dry and wet sclerophyll forest.
- One threatened flora species, Scrub Turpentine (*Rhodammnia rubescens*) was detected at Lot 11 DP1141269 with two small saplings identified along the western boundary within forested vegetation. This species is listed as Critically Endangered under the BC Act and EPBC Act. Plants recorded were observed to have signs of past myrtle rust infection. The long-term prognosis for these plants is poor.
- No threatened ecological communities (TECs) occur at the sites.
- No significant habitat for threatened fauna occurs at the site although the site provides potential habitat for a number of locally occurring threatened fauna species.

The rezoning (and future development) of the site may result in the following potential biodiversity impacts, which based on the subdivision concept design may include:

- Loss of native vegetation
- Loss of isolated paddock trees
- Minor loss of preferred Koala feed trees
- Minor loss of hollow-bearing trees
- Minor intensification of human occupation with regard to native fauna (e.g. minor increase in traffic movements).
- Introduction of weed species during the construction period.
- Disturbance to fauna during construction and ongoing occupation.
- Fauna roadkill from a minor increase in vehicular traffic.

Review of statutory instruments relevant to the proposed rezoning was completed as follows:

- *State Environmental Planning Policy (SEPP) (Koala Habitat Protection) 2020* applies to all LGAs listed under Schedule 1, which includes the Coffs Harbour LGA. Where an approved Comprehensive Koala Plan of Management (CKPoM) is in place the SEPP defers to this plan. The *Coffs Harbour City Koala Plan of Management (CHCKPoM)* was prepared in accordance with the requirements of the SEPP and introduced in January 1995. Koala Habitat mapping indicates no mapped primary or secondary Koala habitat occurs at the site however areas of tertiary habitat are associated with vegetation on the sites. Compensatory plantings are not required for removal of this habitat.

- 
- *Coffs Harbour Development Control Plan - (DCP - Part E1.2 (1) of the DCP outlines compensatory planting requirements for the removal of high conservation value vegetation. According to Part E1.2 (Compensatory Requirements) of the DCP, some of the vegetation at the subject site is considered high conservation value habitat. Compensatory planting is triggered by the following habitat types on site:*
 - Hollow-bearing trees - 1:20 replacement rate required.
 - *Biodiversity Conservation Act 2016 (BC Act): As part of any future development application the following additional reporting would be required:*
 - For those new lots which require native vegetation clearing of over 0.25 ha the BOS will be triggered and a BDAR will be required. It is noted that this includes impacts associated with APZs and future boundary/ fence lines. The BDAR determines biodiversity credits which are required to be purchased by the proponent to offset impacts of the development.
 - For those lots which don't trigger the BOS (require native vegetation clearing < 0.25 ha) a revised Biodiversity Assessment Report (BAR) will be required to assess impacts of the final subdivision design. This report would be required to include updated statutory assessments including tests of significance (five-part tests) for potentially impacted threatened species.
 - *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act): review of Matters of Environmental Significance (MNES) listed in the Act indicates that rezoning and subsequent development of the site is unlikely to significantly affect threatened species or communities listed in the EPBC Act.*

It has been recommended that:

- Impacts to threatened flora (Scrub Turpentine) should be avoided on Lot 11 DP1141269 with a minimum 10 m buffer of retained vegetation to provide protection for these plants.
- Clearing of native vegetation (mapped as intact forested PCTs communities [695 and 1268 as mapped in **Illustration 3.1**] and hollow bearing trees) should be avoided in the final design of subdivision with building envelopes, and associated infrastructure and bushfire APZs to be located within previously cleared areas. The priority would be to retain intact native forest vegetation at the site with the derived grassland communities considered to be of relatively low conservation value.
- Measures to identify and protect intact native vegetation at the site be implemented by way of:
 - Subdivision design to avoid impacts to these areas
 - Adding mapped intact forest vegetation to the CHLEP Prescribed Vegetation map to trigger the requirements of the Vegetation SEPP and Part E1.2 (1) of DCP 2015 which outlines compensatory planting requirements for the removal of high conservation value vegetation.
 - Utilization of Section 88b under the Conveyancing Act to restrict use of forested areas by the landholder.



1. Introduction

1.1 Background

GeoLINK has been engaged to prepare a Biodiversity Assessment Report (BAR) to inform a rezoning planning proposal for three properties off Gaudrons Road at Sapphire Beach (the sites).

On this basis, this assessment has been prepared to:

- Identify any ecological constraints to the proposed rezoning (e.g. habitat for threatened species or communities listed in the *Biodiversity Conservation Act 2016* (BC Act) or *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- Identify any significant trees or fauna habitat features of biodiversity importance; and
- Examine the proposal against relevant statutory requirements.

1.2 The Sites

Site details are summarised below in **Table 1.1** Site Details

Table 1.1 Site Details

| <i>Lot/ DP</i> | <i>Address</i> | <i>Area (ha)</i> | <i>Land use description</i> |
|-------------------|---------------------------------------|------------------|---|
| Lot 11 DP 1141269 | 9-9A Gaudrons Road, Sapphire Beach | 5.268 | Past and presently used for banana production, the site includes an existing dwelling, sheds and greenhouses. |
| Lot 7 DP 555490 | 148-158 Gaudrons Road, Sapphire Beach | 2.050 | Currently grazed by goats and includes an existing dwelling and sheds. |
| Lot 2 DP 550362 | 189 Gaudrons Road, Sapphire Beach | 4.475 | Currently cleared and occasionally slashed. Includes an existing dwelling. |

The sites are currently zoned RU2 (Rural Landscape) under the Coffs Harbour Local Environmental Plan (CHLEP) 2012 with the exception of a small part of 189 Gaudrons Road which is zoned as Environmental (E2).

The location of the sites is shown in **Illustration 1.1**.

1.3 Biodiversity Values Mapping

No Biodiversity Values (BV) mapped land occurs at the sites (refer to **Illustration 1.2**).

It is noted that any impact on BV mapped lands trigger the Biodiversity Offset Scheme (BOS) and the need for a Biodiversity Development Assessment Report (BDAR).



1.4 The Proposal

The proposal is to rezone the subject land from RU2 Rural Landscape to R5 Large Lot Residential. The proposal also seeks to amend the minimum lot size to permit the creation of additional lots with a minimum lot size of 0.5 ha or less. Concept subdivision layouts for the sites are included in **Appendix A.**



LEGEND

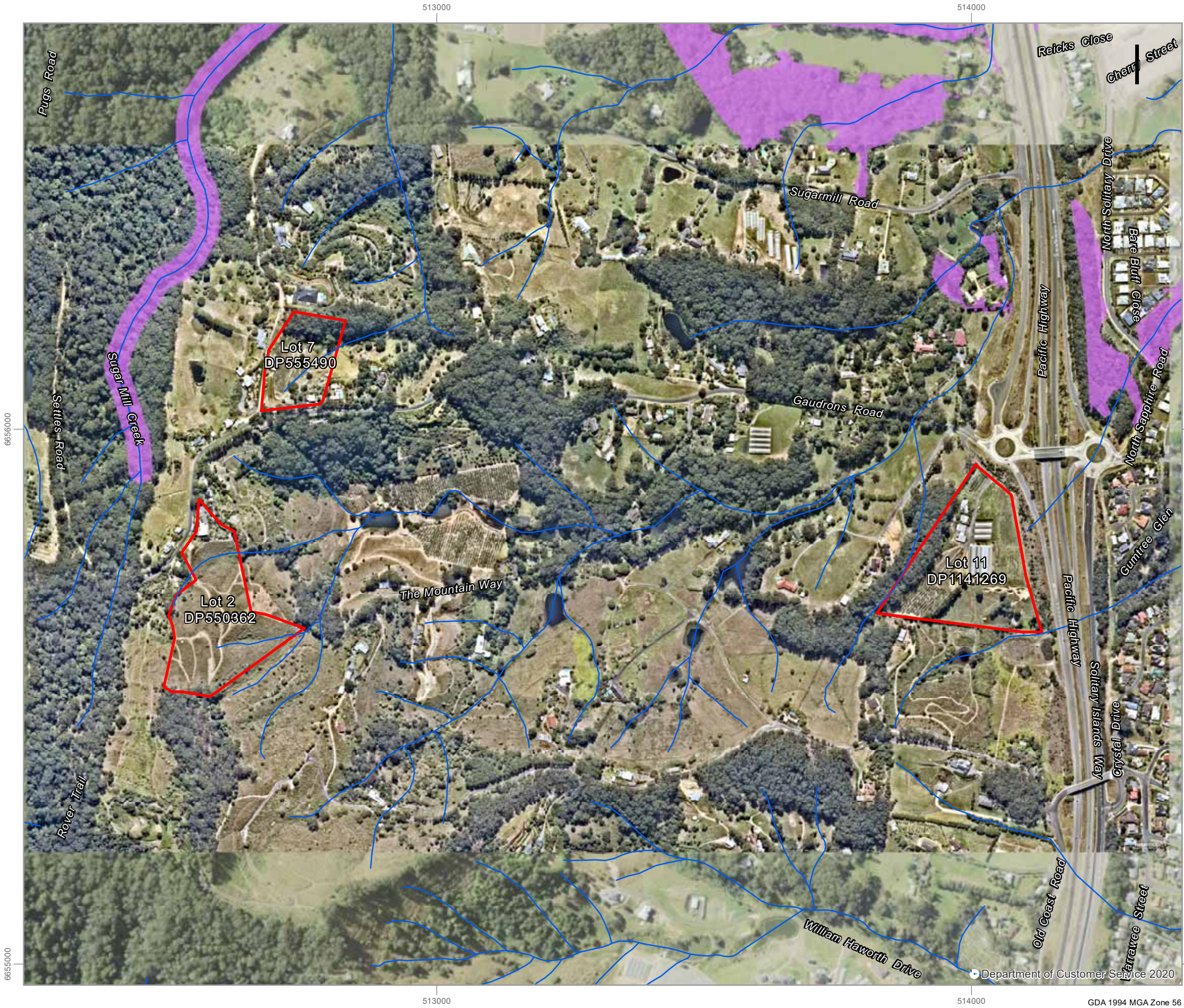
Site boundary

Cadastre



The Site - Illustration 1.1

Information shown is for illustrative purposes only
Drawn by: AB Checked by: RE Reviewed by: DGH
Source of base data: Neimap
Date: 19/01/2021



- LEGEND**
- Site boundary
 - Biodiversity Values mapping
 - Watercourse

0 150 Metres



Biodiversity Assessment - Gaudrons Rd, Sapphire Beach □ Proposed Rezoning
3695-1006

Biodiversity Values Mapping - Illustration 1.2

Information shown is for illustrative purposes only
Drawn by: AB Checked by: RE Reviewed by: DGH
Source of base data: Neimap
Date: 19/01/2021



2. Methodology

2.1 Desktop Review

The following desktop review was completed prior to field assessment:

- A search of the BioNet Wildlife Atlas (10 km x 10 km grid centred on the site); completed February 2021.
- A search of the Protected Matters Search Tool (PMST) for Matters of National Environmental Significance (MNES) within a 5 km radius of the site; completed February 2021.
- Review of Biodiversity Value mapping (as per the OEH Biodiversity Values Map and Threshold Tool).

Details of the methodology used for field assessment are provided in **Section 2.2**. Results of database searches are attached at **Appendix B**.

2.2 Field Assessment

Field assessment was completed on 29 October 2020, using the following methodology:

- Walking survey to identify/ map native vegetation types and identify threatened flora or ecological communities listed in the BC Act or EPBC Act.
- GPS location of isolated paddock trees.
- Searches for Koala scats beneath primary Koala feed trees.
- Identification of hollow-bearing trees (or other significant habitat features) and potential habitat for threatened fauna.
- Opportunistic fauna survey.

Given that the site is relatively disturbed and generally lacking high quality vegetation/ fauna habitat, the scope of assessment is considered adequate.

3. Flora Results

3.1 Desktop Analysis

3.1.1 Database Search Results

BioNet search results identified records of 16 threatened flora species (including seven species also listed in the EPBC Act) and up to 12 threatened ecological communities (seven of which are listed under the EPBC Act) within the locality. PMST results identified habitat for 19 threatened flora species and four threatened ecological communities within the locality. Search results are provided at Error! Reference source not found..

3.2 Site Features

3.2.1 Vegetation

The three sites have been historically cleared and used for agricultural pursuits. Currently the sites occur as predominantly cleared lands comprising mostly exotic grasses, landscape and horticultural plantings with some peripheral patches of dry and wet sclerophyll forest (refer to **Illustration 3.1**). Descriptions of native vegetation at each site are provided in **Table 3.1**. Native vegetation communities are classified in accordance with plant community types (PCTs) in the BioNet Vegetation Classification based on characteristic species and geographical distribution.

Table 3.1 Native Vegetation at the Sites

| 9-9A Gaudrons Road | |
|---|--|
| Community | PCT |
| <p>Open forest (Blackbutt, Turpentine, Tallowwood) An area of open sclerophyll forest occurs along the western boundary of the property. This vegetation is dominated by Blackbutt (<i>Eucalyptus pilularis</i>), Tallowwood (<i>Eucalyptus microcorys</i>) and Small-fruited Grey Gum (<i>Eucalyptus propinqua</i>) with infrequent Grey Ironbark (<i>Eucalyptus siderophloia</i>) and Brush Box (<i>Lophostemon confertus</i>).</p> <p>The midstorey comprises Creek Sandpaper Fig (<i>Ficus coronata</i>), Hairy Psychotria (<i>Psychotria loniceroides</i>), Three-veined Laurel (<i>Cryptocarya triplinervis</i>) and Narrow-leaved Palm Lily (<i>Cordyline stricta</i>).</p> <p>The ground layer is sparse comprising occasional Spiny-headed Mat-rush (<i>Lomandra longifolia</i>), Blue Flax-lily (<i>Dianella caerulea</i>) and Gristle Fern (<i>Blechnum cartilagineum</i>).</p> | <p>PCT 695 - Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central NSW North Coast Bioregion</p> |
| <p>Native Grassland (Blady Grass/ Kangaroo Grass) A cleared area comprising regularly mown/ slashed grassland including mostly Blady Grass (<i>Imperata cylindrica</i>) and Kangaroo Grass (<i>Themeda triandra</i>) with less occasional Kikuyu Grass and Setaria Grass (<i>Setaria sphacelata</i>) occurs in the southern portion of the site.</p> | <p>Derived PCT 695 - Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central NSW North Coast Bioregion</p> |
| <p>Slash Pine and Brush Box/ Swamp Oak regrowth An area of Slash Pine (<i>Pinus elliottii</i>) and regenerating Swamp Oak (<i>Casuarina glauca</i>) and Brush Box (<i>Lophostemon confertus</i>) occurs in the south east corner of the site.</p> | <p>Derived PCT 695 - Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central NSW North Coast Bioregion</p> |

148-158 Gaudrons Road, Sapphire Beach

| Community | PCT |
|---|--|
| <p>Open forest (Blackbutt, Turpentine, Tallowwood) Areas of open sclerophyll forest occur in the northern portion of the site and fringing the site along its southern boundary. This vegetation is dominated by Blackbutt (<i>Eucalyptus pilularis</i>), Tallowwood (<i>Eucalyptus microcorys</i>) and Small-fruited Grey Gum (<i>Eucalyptus propinqua</i>) with infrequent Grey Ironbark (<i>Eucalyptus siderophloia</i>) and Brush Box (<i>Lophostemon confertus</i>).</p> <p>The midstorey comprises Creek Sandpaper Fig (<i>Ficus coronata</i>), Hairy Psychotria (<i>Psychotria loniceroides</i>), Three-veined Laurel (<i>Cryptocarya triplinervis</i>) and Narrow-leaved Palm Lily (<i>Cordyline stricta</i>).</p> <p>The ground layer is sparse comprising occasional Spiny-headed Mat-rush (<i>Lomandra longifolia</i>), Blue Flax-lily (<i>Dianella caerulea</i>) and Gristle Fern (<i>Blechnum cartilagineum</i>).</p> | <p>PCT 695 - Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central NSW North Coast Bioregion</p> |

189 Gaudrons Road, Sapphire Beach

| Community | PCT |
|--|---|
| <p>3 Open forest (Thick-leaved Mahogany, Tallowwood, Pink Bloodwood) Open sclerophyll forest dominated by Thick-leaved Mahogany (<i>Eucalyptus carnea</i>), Pink Bloodwood (<i>Corymbia intermedia</i>) and Tallowwood fringes the site along its southern boundary. The midstorey is sparse and includes Creek Sandpaper Fig and Forest Oak (<i>Allocasuarina torulosa</i>).</p> <p>The ground layer is sparse comprising occasional Spiny-headed Mat-rush (<i>Lomandra longifolia</i>), Blue Flax-lily (<i>Dianella caerulea</i>) and Gristle Fern (<i>Blechnum cartilagineum</i>).</p> | <p>PCT 1268 – Tallowwood open forest of the coastal ranges of the NSW North Coast Bioregion</p> |

3.2.2 Threatened Flora

One threatened flora species, Scrub Turpentine (*Rhodamnia rubescens*) was detected at Lot 11 DP1141269 with two small saplings identified along the western boundary within forested vegetation. This species is listed as Critically Endangered under the BC Act and EPBC Act. Plants recorded were observed to have signs of past myrtle rust infection. The long-term prognosis for these plants is poor.

3.2.3 Threatened Ecological Communities (TECs)

Vegetation on the subject sites is not indicative of any TEC.

3.2.4 Weeds

A number of agricultural and environmental weeds occur as well as the following Priority Weeds as listed in the *Biosecurity Act 2015*:

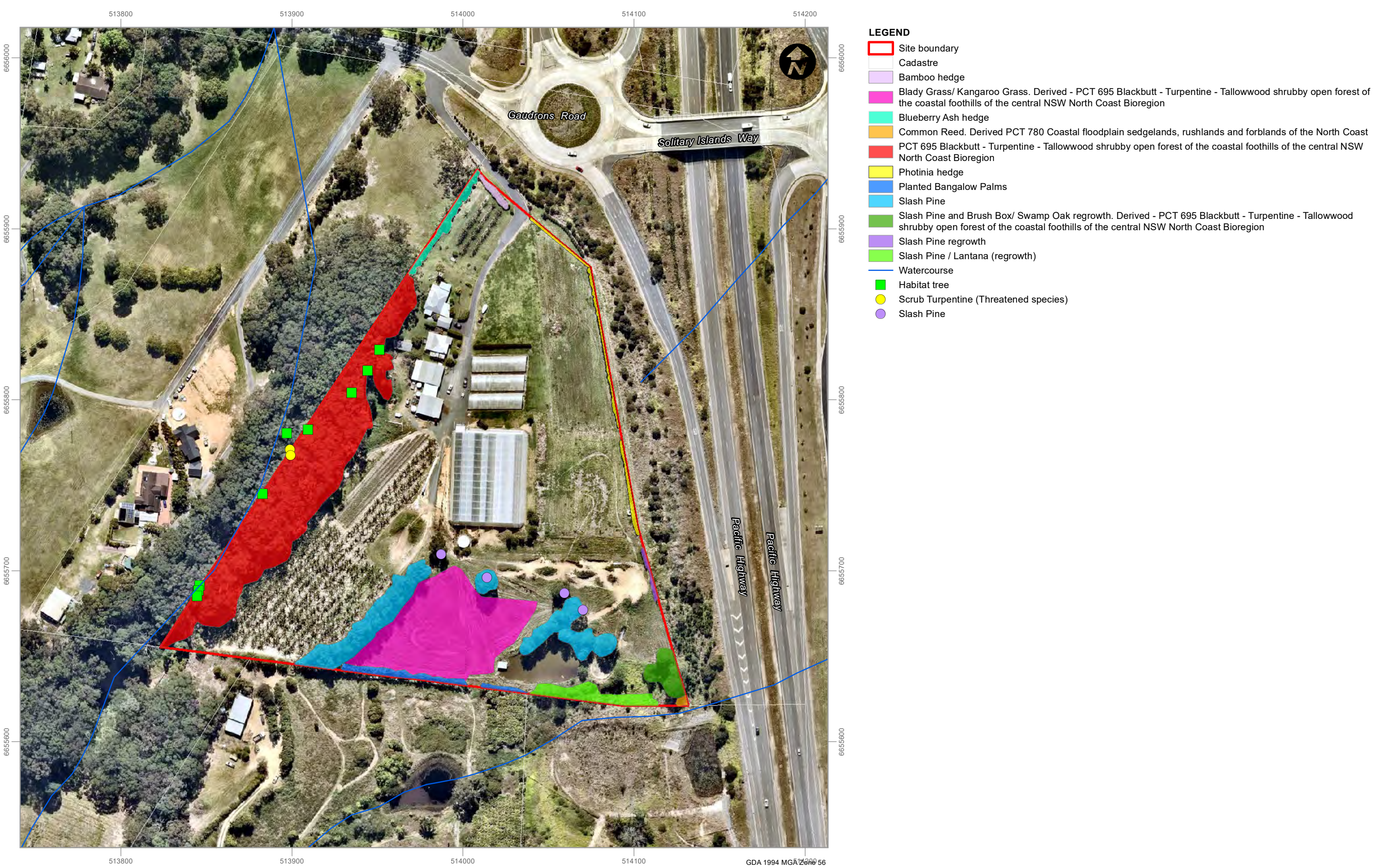
- Lantana (*Lantana camara*).

Relevant biosecurity duties must be enacted by land managers for weeds listed as Priority Weeds under the Biosecurity Act. Lantana is listed in the *Biosecurity Act 2015* as having a biosecurity duty of 'Prohibition of dealings' and "Must not be imported into the State or sold".



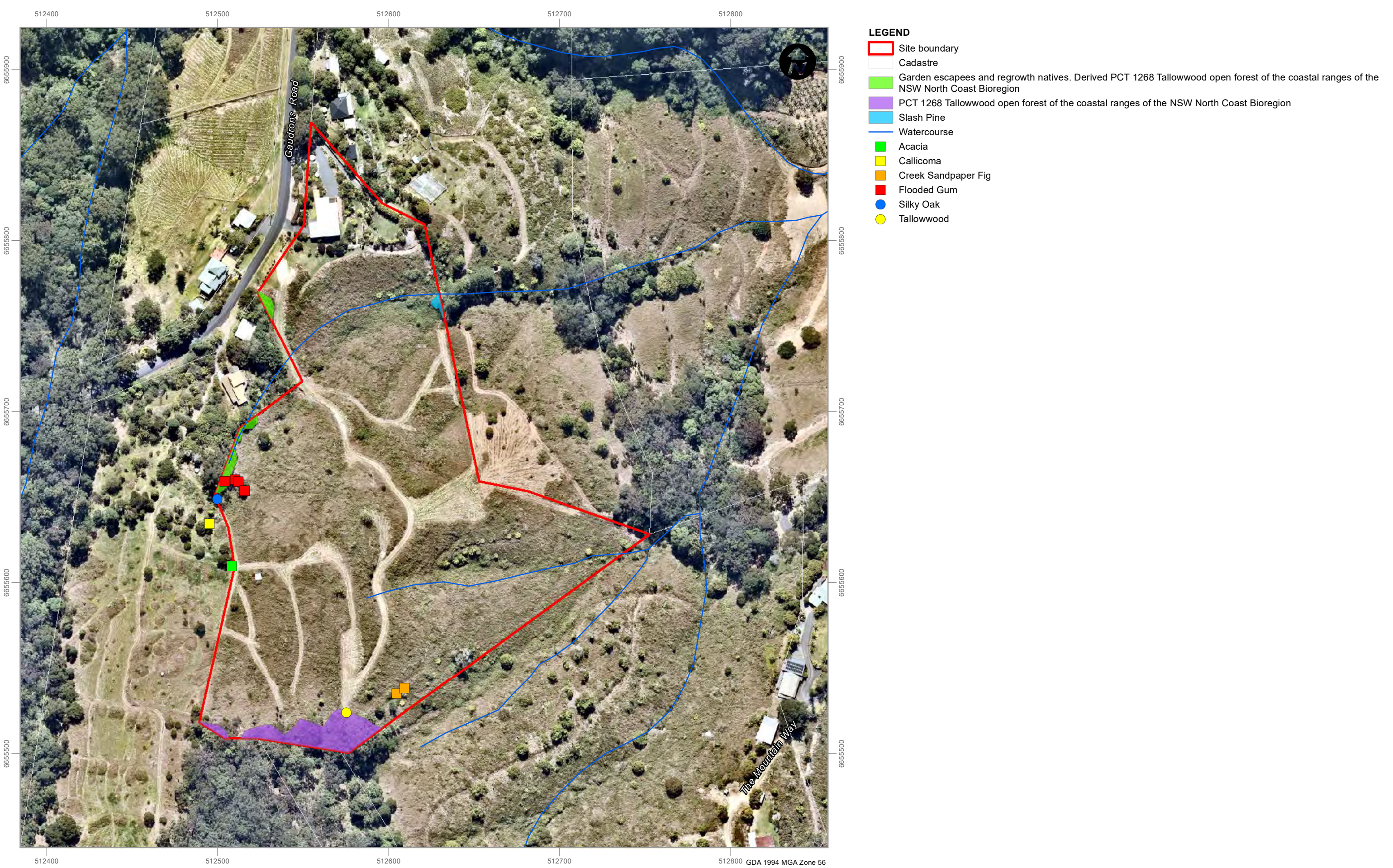
3.2.5 Condition

The sites are highly modified and disturbed from historic clearing and ongoing residential maintenance. Areas of eucalypt forest associated with the sites are in moderate condition with weed incursion present.

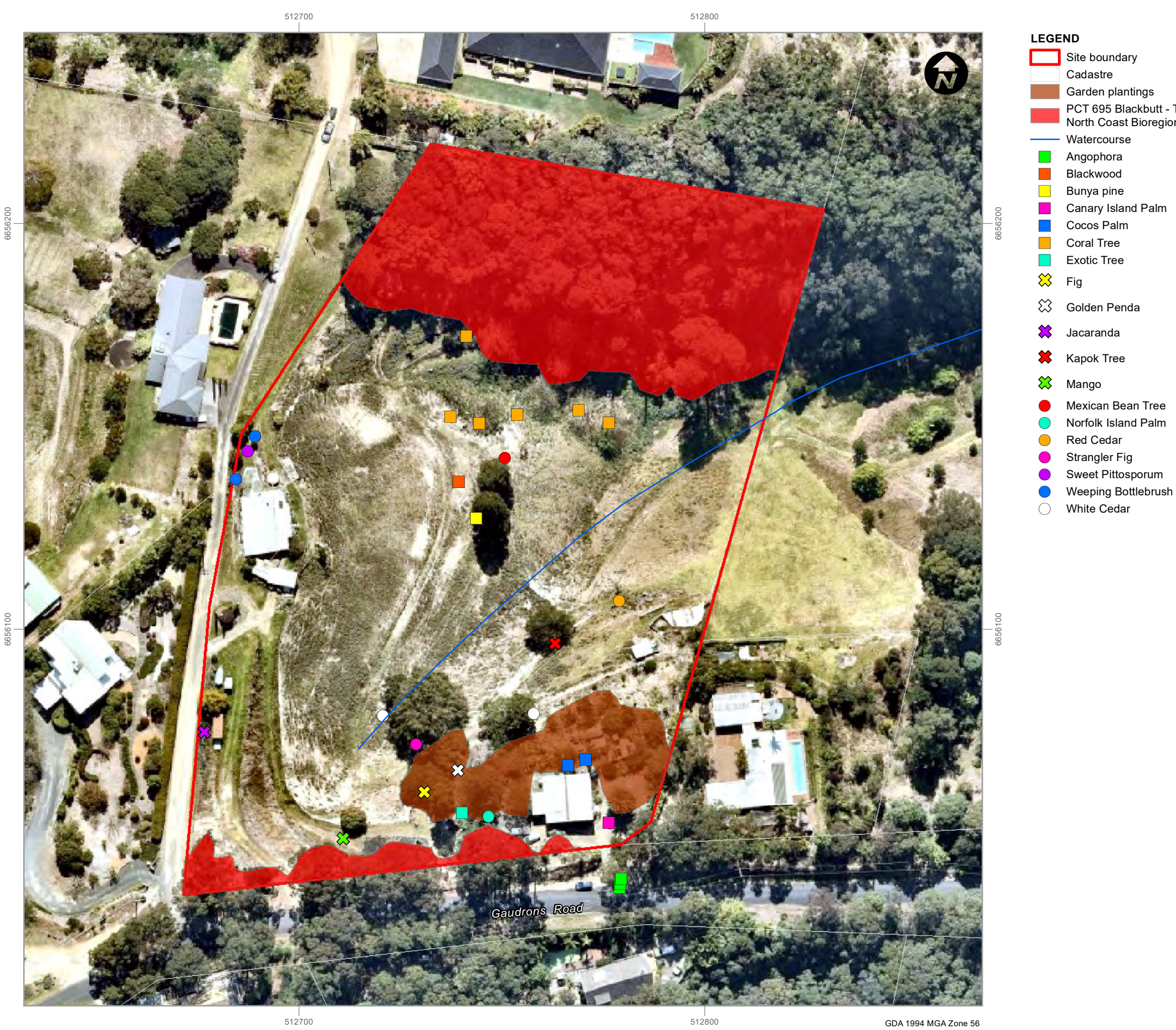


0 40 Metres





Lot 2 / DP550362 - Biodiversity Constraints Mapping
Illustration 3.1 - Sheet 2 of 3



- LEGEND**
- Site boundary
 - Cadastre
 - Garden plantings
 - PCT 695 Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central NSW North Coast Bioregion
 - Watercourse
 - Angophora
 - Blackwood
 - Bunya pine
 - Canary Island Palm
 - Cocos Palm
 - Coral Tree
 - Exotic Tree
 - Fig
 - Golden Penda
 - Jacaranda
 - Kapok Tree
 - Mango
 - Mexican Bean Tree
 - Norfolk Island Palm
 - Red Cedar
 - Strangler Fig
 - Sweet Pittosporum
 - Weeping Bottlebrush
 - White Cedar



4. Fauna Habitat Results

4.1 Desktop Analysis

4.1.1 Database Search Results

BioNet search results identified records of 54 threatened fauna species (including 13 species also listed in the EPBC Act) within the locality. PMST results identified habitat for 63 threatened fauna species and 60 migratory fauna species within the locality (refer to search results at **0**).

4.2 Site Features

4.2.1 Habitat Values

Areas of eucalypt forest and paddock trees associated with the sites provide foraging, roosting and nesting resources for locally occurring native fauna including birds, mammals, megachiropteran bats and micro chiropteran bats associated with seasonally fruiting/ flowering trees.

Hollowing-bearing trees on the sites (refer to **Illustration 3.1**) contain a small number of small to medium sized hollows which provides potential resources for hollow-obligate species such as nesting birds, arboreal mammals and microbats.

Aquatic habitat is largely absent from the sites with the exception of a farm dam on 9-9A Gaudrons Road which has minor potential to provide habitat for aquatic fauna including native fish, eels and turtles.

4.2.2 Threatened and Significant Fauna Habitat

No threatened fauna species were detected at the sites.

Primary Koala feed trees (Tallowwood) are associated with the sites. No Koalas or scats were detected at the sites suggesting a low level of Koala activity at the sites.

Due to the occurrence of several flowering and fruiting trees in the myrtaceae family, potential foraging habitat for the Grey-headed Flying-fox occurs. Several species of microchiropteran bats may forage within the site on an opportunistic or seasonal basis as part of broader areas of similar foraging habitat occurring within the locality.

4.2.3 Potential for Threatened Species Occurrence

Based on the desktop analysis and habitat present, the following threatened fauna species are considered to have a high potential to occur at the site on an opportunistic or seasonal basis (refer to potential occurrence assessment at **0**):

- Little Bentwing-Bat
- Grey-headed Flying-fox.



5. Impacts and Mitigation

5.1 Biodiversity Constraints

Biodiversity constraints at the site include:

- Threatened flora species
- Areas of native vegetation
- Associated areas of fauna habitat
- Hollow-bearing trees.

The rezoning proposal would be designed to avoid and minimise impacts to biodiversity constraints with a focus on retaining mapped intact forested vegetation described as PCT 695 and 1268 (refer to **Illustration 3.1**).

5.2 Potential Impacts of Rezoning and Development

5.2.1 Clearing of Native Vegetation

Based on the current concept subdivision layouts (refer to **Appendix A**) rezoning and future development of the site would incur loss of native vegetation including areas of forested vegetation and isolated paddock trees. Whilst it may be possible to site infrastructure within cleared areas it is likely that some clearing would be required to facilitate new access, Asset Protection Zones (APZs) and new lot boundary (fence lines). Recommendations to avoid or minimise impacts to intact forest vegetation have been provided in **Sections 5.3** and **5.4** of this report and should be incorporated into subsequent subdivision design prior to finalising.

Native vegetation clearing would potentially include:

- Minor loss of preferred Koala feed trees comprising mature Tallowwood
- Minor loss of hollow-bearing trees (n= <10).

Clearing areas would need to be determined at the time of submitting a development application based on final subdivision designs.

5.2.2 Indirect Impacts

Indirect impacts are development related activities not associated with clearing for the development footprint and may include matters such as increased noise, dust, light spill, weeds and pathogens and edge effects that can be reasonably attributed to the development. Based on the construction requirements and nature of the proposed development (residential development), anticipated indirect development may include:

1. Minor short-term disturbance (noise, human activity, machine operations) to locally occurring urban-adapted fauna species during development, construction and operation.
2. Minor potential for reduced water quality and altered hydrology due to works.
3. Minor increased risk of roadkill from increased vehicular movements on surrounding roads. It is noted that this is likely to be very minor given the small number of additional residents likely.

4. Ongoing disturbance to local fauna during occupation of the site from noise, light, human presence.
5. Potential for weeds to be imported to the site and surrounding environments during the construction stage of the proposal.
6. Potential for additional minor impacts on native fauna from additional roaming domestic animals.

5.2.3 Prescribed Impacts

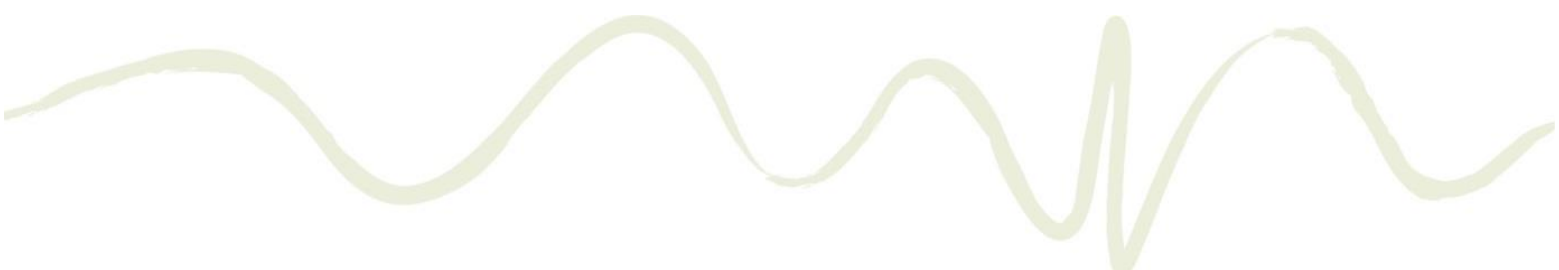
Prescribed impacts are those that may affect biodiversity values in addition to, or instead of, impacts from clearing vegetation, and include (as per cl. 6.1 of the BC Regulation):

- *the impacts of development on the habitat of threatened species or ecological communities associated with:*
 - *karst, caves, crevices, cliffs and other geological features of significance*
 - *rocks*
 - *human made structures*
 - *non-native vegetation*
- *the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range*
- *the impacts of development on movement of threatened species that maintains their life cycle*
- *the impacts of development on water quality, waterbodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development)*
- *the impacts of wind turbine strikes on protected animals*
- *the impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community.*

An analysis of prescribed impacts is detailed in **Table 5.1**

Table 5.1 Prescribed impacts

| Prescribed impact | Response |
|---|---|
| <i>the impacts of development on the habitat of threatened species or ecological communities associated with:</i> <ul style="list-style-type: none"> - <i>karst, caves, crevices, cliffs and other geological features of significance</i> - <i>rocks</i> - <i>human made structures</i> - <i>non-native vegetation</i> | <p>The site does not support karst geology and no rock features are evident. Human-made structures occur on the site but do not represent habitat for threatened species.</p> <p>Non-native vegetation includes landscaping plantings, gardens and lawns associated with existing residences. This vegetation does not represent likely habitat for any threatened species.</p> |
| <i>the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range</i> | <p>The proposed rezoning and future subdivision of the site represents a relatively minor intensification of existing land uses on the site. Additional clearing may be required in parts of the sites. The proposal is considered unlikely to adversely affect connectivity for locally occurring threatened species.</p> |
| <i>the impacts of development on movement of threatened species that maintains their life cycle</i> | <p>Refer above</p> |



| Prescribed impact | Response |
|--|---|
| <i>the impacts of development on water quality, waterbodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development)</i> | No natural waterbodies occur on the subject sites. |
| <i>the impacts of wind turbine strikes on protected animals</i> | The Proposal is not a wind farm development. |
| <i>the impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community</i> | The Proposal may result in a very minor increase in vehicular traffic on surrounding roads however this given the additional small volume of traffic the change in risk of vehicle strike is considered to be negligible. |

5.3 Recommendations

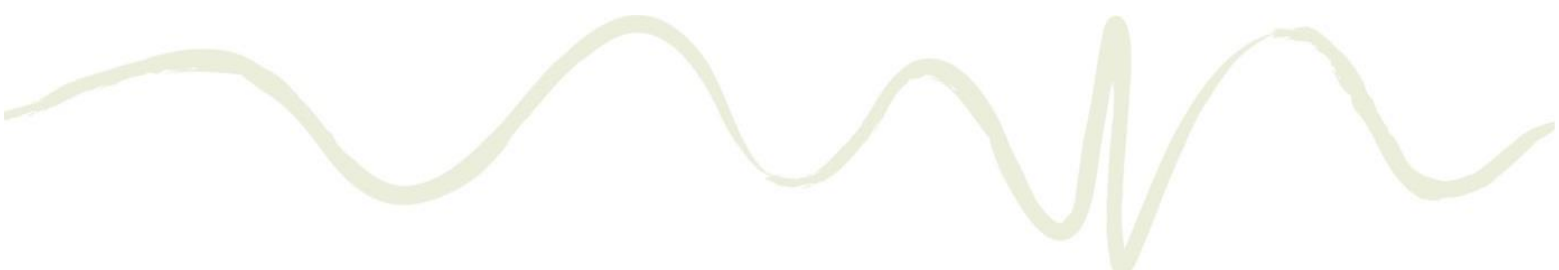
To minimise biodiversity impacts which may result from the proposed rezoning and future development of the site, the following measures should be considered:

- Impacts to threatened flora (Scrub Turpentine) should be avoided on Lot 11 DP1141269 with a minimum 10 m buffer of retained vegetation to provide protection for these plants.
- Clearing of native vegetation (mapped as intact forested PCTs communities [695 and 1268 as mapped in Illustration 3.1] and hollow bearing trees) should be avoided in the final design of subdivision with building envelopes, and associated infrastructure and bushfire APZs to be located within previously cleared areas. The priority would be to retain intact native forest vegetation at the site with the derived grassland communities considered to be of relatively low conservation value.
- Where native vegetation, tree hollows are to be cleared, compensation will be required (refer to **Section 5.2**).

5.4 Future Requirements

Based on the site assessment the proposed rezoning and future redevelopment of the sites would have relatively low impacts on biodiversity, assuming that future development avoids most areas of intact forested vegetation. In the event the rezoning proposal is accepted, the following requirements would need to be addressed for any future proposal to develop the site:

- Incorporate the recommendations in this assessment (**Section 5.3**) as part of future design.
- Based on the Northern Council's E Zone criteria none of the vegetation on the subject sites represents suitable land for E zones. However, it is recommended that the mapped PCTs 695 and 1268 be added to Councils Prescribed Vegetation mapping to trigger the requirements of the Vegetation SEPP and Part E1.2 (1) of DCP 2015 which outlines compensatory planting requirements for the removal of high conservation value vegetation at the following replacement rates:

- 
- Native old growth, hollow-bearing or ecologically/aesthetically significant tree (1:20)
 - Endangered Ecological Community, Over-Cleared Vegetation Types and High Value Arboreal Habitats (1:10)
 - Primary Koala Habitat (1:5)
 - Secondary Koala Habitat (adjacent to primary koala habitat) (1:5)
 - Secondary Koala Habitat (not adjacent to primary koala habitat) (1:3)
 - Riparian Zones (1:10)
 - Steep Land (1:3)
 - Other (1:2)
- Alternatively, forested areas on the land may be protected on title under Section 88b of the Conveyancing Act 'Restriction as to User'. This would serve to exclude intact native vegetation at the site as part of the developable land use area. An example of where this could be implemented is Lot 11 where the new lot boundary (if fenced) would dissect the existing intact vegetation in the north of the proposed lots (and where significant vegetation clearing would likely be required).
 - As part of any future development application the following additional reporting would be required:
 - For those new lots which require clearing of native vegetation over 0.25 ha the BOS will be triggered and a BDAR will be required. It is noted that this includes impacts associated with APZs and future boundary/ fence lines. The BDAR determines biodiversity credits which are required to be purchased by the proponent to offset impacts of the development.
 - For those lots which don't trigger the BOS (require native vegetation clearing < 0.25 ha) a revised Biodiversity Assessment Report (BAR) will be required to assess impacts of the final subdivision design. This report would be required to include updated statutory assessments including tests of significance (five-part tests) for potentially impacted threatened species.
 - Both the BDAR and revised BARs to be prepared for a future development application will need to address Council's DCP and as such will need to determine compensation requirements and/or vegetation management measures to offset the loss of native vegetation where relevant.

6. Statutory Requirements

The following sections examine the findings of the site assessment with regard to relevant statutory requirements which require consideration for the development application.

6.1 State Environmental Planning Policy (SEPP) Koala Habitat Protection 2019

State Environmental Planning Policy (Koala Habitat Protection) 2020 applies to all LGAs listed under Schedule 1, which includes the Coffs Harbour LGA. Where an approved Comprehensive Koala Plan of Management (CKPoM) is in place the SEPP defers to this plan. The *Coffs Harbour City Koala Plan of Management (CHCKPoM)* was prepared in accordance with the requirements of the SEPP and introduced in January 1995.

Koala Habitat mapping for the sites as per the CHCKPoM is shown in **Figure 6.1 – Figure 6.3**. No mapped primary (red) or secondary (blue) Koala habitat occurs at the sites however areas of tertiary (green) habitat occur on the periphery of all sites. Under the Coffs Harbour DCP compensatory offset plantings are not required for impacts to tertiary Koala habitat (**refer to Section 6.2**).



Figure 6.1 CHCKPoM Koala Habitat Mapping for 9-9A Gaudrons Road



Figure 6.2 CHCKPoM Koala Habitat Mapping for 148-158 Gaudrons Road

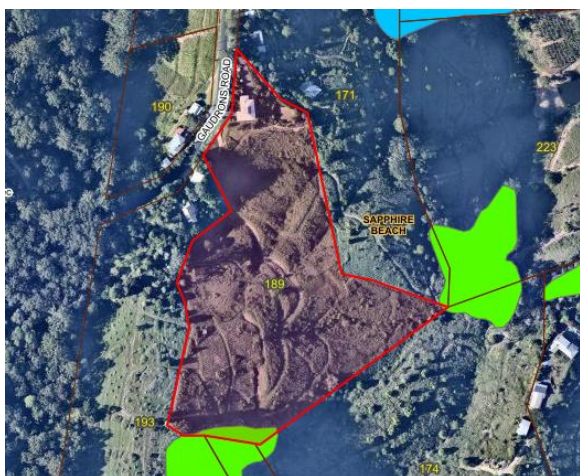


Figure 6.3 CHCKPoM Koala Habitat Mapping for 189 Gaudrons Road

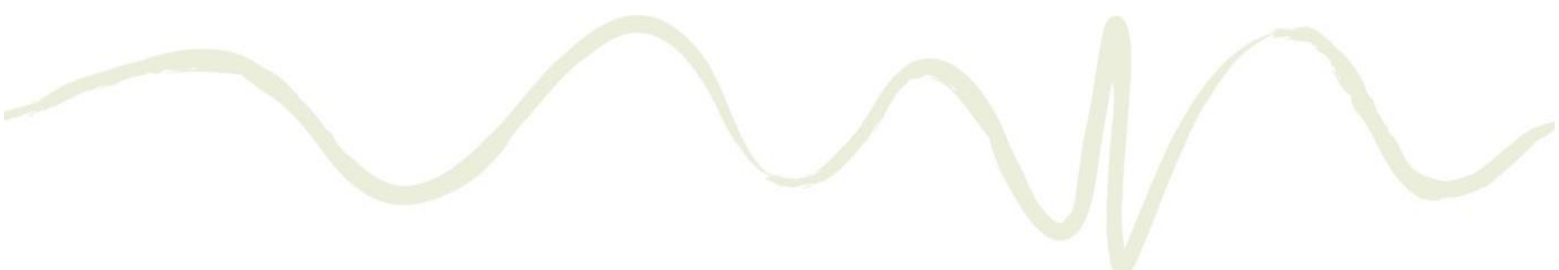
6.2 Coffs Harbour Development Control Plan (DCP) 2015

Part E1.2 (1) of DCP 2015 outlines compensatory planting requirements for the removal of high conservation value vegetation (refer to definitions in **Table 6.1**). According to Part E1.2 (Compensatory Requirements) of the DCP, some vegetation at the subject sites is considered high conservation value habitat. Compensatory planting may be triggered by the following habitat types on the sites:

- Hollow-bearing trees - 1:20 replacement rate required.
- Steep Land - 1:3 replacement rate required.

Table 6.1 High Conservation Value Vegetation Types (as per DCP 2015)

| Description of Habitat Type | Replacement Rate | Does the vegetation to be impacted align with the high conservation value vegetation type description or require compensatory planting? |
|---|-------------------------|---|
| Native old growth, hollow-bearing or ecologically/aesthetically significant tree | 1:20 | Possible – a number of hollow-bearing trees occur at the sites. Clearing of hollow-bearing trees would require compensatory plantings at a ratio of 1:20. Numbers of compensatory plantings will be determined at a later stage. |
| Endangered Ecological Community, Over-Cleared Vegetation Types and High Value Arboreal Habitats | 1:10 | No – the vegetation occurring on the sites does not align with this habitat type description and would not trigger the need for compensatory plantings. |
| Primary Koala Habitat | 1:5 | No – the vegetation occurring on the sites does not align with this habitat type description and would not trigger the need for compensatory plantings. |
| Secondary Koala Habitat (adjacent to primary koala habitat) | 1:5 | No – the vegetation occurring on the sites does not align with this habitat type description and would not trigger the need for compensatory plantings. |
| Secondary Koala Habitat (not adjacent to primary koala habitat) | 1:3 | No – the vegetation occurring on the sites does not align with this habitat type description and |



| <i>Description of Habitat Type</i> | <i>Replacement Rate</i> | <i>Does the vegetation to be impacted align with the high conservation value vegetation type description or require compensatory planting?</i> |
|------------------------------------|-------------------------|--|
| | | would not trigger the need for compensatory plantings. |
| Riparian Zones | 1:10 | No – the sites do not include any riparian zones. |
| Steep Land | 1:3 | Possible – Much of 189 Gaudrons Road is mapped as ‘steep and erodible lands’ under the DCP and as such would require compensatory plantings. Numbers of compensatory plantings will be determined at a later stage. |
| Other | 1:2 | n/a |

6.3 Biodiversity Conservation Act 2016 (BC Act)

As part of any future development application the following additional reporting would be required:

- For those new lots which require native vegetation clearing of over 0.25 ha the BOS will be triggered and a BDAR will be required. It is noted that this includes impacts associated with APZs and future boundary/ fence lines. The BDAR determines biodiversity credits which are required to be purchased by the proponent to offset impacts of the development.
- For those lots which don’t trigger the BOS (require clearing of native vegetation < 0.25 ha) a revised Biodiversity Assessment Report (BAR) will be required to assess impacts of the final subdivision design. This report would be required to include updated statutory assessments including tests of significance (five-part tests) for potentially impacted threatened species/ TECs as required under the BC Act.

6.4 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act protects/ regulates matters of national environmental significance (MNES), including:

- World heritage properties
- National heritage places
- Wetlands of international importance
- Nationally threatened species and ecological communities
- Migratory species
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mining)
- A water resource, in relation to coal seam gas development and large coal mining development.

Based on the search results and site assessment, significant impacts to any MNES would not be likely to result from the proposal (refer to **Table 6.2**).

Table 6.2 Assessment of MNES

| Matter | Potential impact |
|---|-------------------------|
| <i>Any impact on a World Heritage property?</i> | |
| No World Heritage properties occur within a 5 km radius of the site. | Nil |
| <i>Any impact on a National Heritage place?</i> | |
| No National Heritage places occur within a 5 km radius of the site. | Nil |
| <i>Any impact on a Wetland of International Importance?</i> | |
| No wetlands of international importance (Ramsar sites) occur within a 5 km radius of the site. | Nil |
| <i>Any impact on the Great Barrier Reef Marine Park?</i> | |
| The Great Barrier Reef Marine park is distant from the site. | Nil |
| <i>Any impact on a Commonwealth marine area?</i> | |
| No Commonwealth marine areas occur within a 5 km radius of the site. | Nil |
| <i>Any impact on nationally threatened species and ecological communities?</i> | |
| Habitat for four threatened ecological communities and 82 threatened species is identified within a 5 km radius of the site. No EPBC listed ecological communities occur at the site. No listed threatened fauna species were recorded; the Grey-headed Flying-fox may use the sites on an opportunistic or seasonal basis when myrtaceous trees are in flower. Given the relatively fragmented and disturbed habitat within the site, the proposal would be unlikely result in the removal of habitat important to any threatened fauna species in a local context and would not contribute significantly to any listed key threatening processes. | Minor |
| <i>Any impact on Migratory species?</i> | |
| Habitat for 60 migratory species is identified within a 5km radius 10 of the site. Given the relatively fragmented and disturbed habitat present at the sites, migratory species are unlikely to be significantly affected by the proposal. | Minor |



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Appendix A

Concept Subdivision Layouts



PLAN 'D'



BS - BUILDING SITE
ALL DIMENSIONS AND AREAS
ARE SUBJECT TO SURVEY

| SCALE: | | | | | ORIGINAL SHEET SIZE | | PLAN NO. | | SHEET NO. | | NO. OF SHEETS | | REVISIONS | | | |
|------------|--|--|--|--|---------------------|--|----------|--|------------|--|---------------|--|-----------|--|---------|--|
| 1:2000 | | | | | A3 | | D | | 5 | | 5 | | DATE | | DETAILS | |
| DATUM: AHD | | | | | JOB No: 6511 | | | | DRAWN: IGE | | | | | | | |
| ORIGIN: | | | | | DATE: 22-07-2020 | | | | | | | | | | | |
| R.L.: | | | | | | | | | | | | | | | | |

REVISIONS

| DATE | DETAILS |
|-------|---------|
| | |
| | |
| | |
| | |
| | |

IAN G EVISON & PARTNERS

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COFFS HARBOUR NSW 2450

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Email ige@aapt.net.au

PLAN OF PROPOSED SUBDIVISION OF

LOT 2 DP 550362 – 189 GAUDRONS ROAD

SAPPHIRE BEACH

(A) RIGHT OF CARRIAGEWAY 10.06 WIDE (DP249274)
(B) RIGHT OF CARRIAGEWAY 4.025 WIDE (DP249274)
(C) RIGHT OF CARRIAGEWAY 6.035 WIDE (DP539132)

D DENOTES DWELLING

M M



16
DP249274

5
DP249274

218
DP812014

72
1 ha

71
1.05 ha

19
DP249274

2
DP883406



GAUDRONS

ROAD

DEVELOPMENT APPLICATION PLAN

THIS PLAN WAS PREPARED FOR KERRIE HUNTER AS A PROPOSED SUBDIVISION TO ACCOMPANY A DEVELOPMENT APPLICATION TO COFFS HARBOUR CITY COUNCIL AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.

THE DIMENSIONS, AREAS AND TOTAL NUMBER OF LOTS SHOWN HEREON ARE SUBJECT TO FINAL SURVEY AND ALSO TO THE REQUIREMENTS OF COUNCIL AND ANY OTHER AUTHORITY WHICH MAY HAVE REQUIREMENTS UNDER ANY RELEVANT LEGISLATION. IN PARTICULAR NO RELIANCE SHOULD BE PLACED ON THE INFORMATION ON THIS PLAN FOR ANY FINANCIAL DEALINGS INVOLVING THE LAND.

BLAIRLANSKEY RUSSELL SURVEYING

REGISTERED SURVEYORS ABN 66 365 526 230



P. O. Box 2453 COFFS HARBOUR N.S.W. 2450
190 PACIFIC HIGHWAY (NORTH)
COFFS HARBOUR 2450

Tel: (02) 6652 5090
Fax: (02) 6651 1495
Email: bls@blsurvey.com

Client & Project

K HUNTER
LOT 7 DP 555490
148 GAUDRONS ROAD
SAPPHIRE BEACH

Drawing Title

PLAN OF PROPOSED SUBDIVISION OF LOT 7 DP 555490

| | | |
|-------------------------|-------------------|----------------|
| Scale at A3 1 : 1000 | Date JUNE 2016 | Approved |
| Job No. 9194 | Datum | Field Book No. |

| | |
|-------------|--------------|
| Drawing No. | Revision No. |
|-------------|--------------|

01

A



Appendix B

Database Search Results



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.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 19/02/21 13:49:06

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 5.0Km



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](#).

| | |
|---|------|
| World Heritage Properties: | None |
| National Heritage Places: | None |
| Wetlands of International Importance: | None |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | None |
| Listed Threatened Ecological Communities: | 4 |
| Listed Threatened Species: | 82 |
| Listed Migratory Species: | 60 |

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. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

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.

| | |
|--|------|
| Commonwealth Land: | 1 |
| Commonwealth Heritage Places: | None |
| Listed Marine Species: | 90 |
| Whales and Other Cetaceans: | 12 |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Australian Marine Parks: | None |

Extra Information

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

| | |
|--|------|
| State and Territory Reserves: | 6 |
| Regional Forest Agreements: | 1 |
| Invasive Species: | 40 |
| Nationally Important Wetlands: | None |
| Key Ecological Features (Marine) | None |

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [\[Resource Information \]](#)

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.

| Name | Status | Type of Presence |
|---|-----------------------|---------------------------------------|
| Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community | Endangered | Community likely to occur within area |
| Littoral Rainforest and Coastal Vine Thickets of Eastern Australia | Critically Endangered | Community likely to occur within area |
| Lowland Rainforest of Subtropical Australia | Critically Endangered | Community likely to occur within area |
| Subtropical and Temperate Coastal Saltmarsh | Vulnerable | Community likely to occur within area |

Listed Threatened Species [\[Resource Information \]](#)

| Name | Status | Type of Presence |
|---|-----------------------|--|
| Birds | | |
| Anthochaera phrygia Regent Honeyeater [82338] | Critically Endangered | Species or species habitat known to occur within area |
| Atrichornis rufescens Rufous Scrub-bird [655] | Endangered | Species or species habitat may occur within area |
| Botaurus poiciloptilus Australasian Bittern [1001] | Endangered | Species or species habitat known to occur within area |
| Calidris canutus Red Knot, Knot [855] | Endangered | Species or species habitat known to occur within area |
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat likely to occur within area |
| Diomedea antipodensis Antipodean Albatross [64458] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea antipodensis gibsoni Gibson's Albatross [82270] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea epomophora Southern Royal Albatross [89221] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea exulans Wandering Albatross [89223] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |

| Name | Status | Type of Presence |
|--|-----------------------|--|
| Diomedea sanfordi Northern Royal Albatross [64456] | Endangered | Foraging, feeding or related behaviour likely to occur within area |
| Erythroriorchis radiatus Red Goshawk [942] | Vulnerable | Species or species habitat likely to occur within area |
| Falco hypoleucos Grey Falcon [929] | Vulnerable | Species or species habitat may occur within area |
| Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438] | Vulnerable | Species or species habitat likely to occur within area |
| Grantiella picta Painted Honeyeater [470] | Vulnerable | Species or species habitat may occur within area |
| Hirundapus caudacutus White-throated Needletail [682] | Vulnerable | Species or species habitat known to occur within area |
| Lathamus discolor Swift Parrot [744] | Critically Endangered | Species or species habitat known to occur within area |
| Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380] | Vulnerable | Species or species habitat known to occur within area |
| Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060] | Endangered | Species or species habitat may occur within area |
| Macronectes halli Northern Giant Petrel [1061] | Vulnerable | Species or species habitat may occur within area |
| Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area |
| Pachyptila turtur subantarctica Fairy Prion (southern) [64445] | Vulnerable | Species or species habitat known to occur within area |
| Phoebastria fusca Sooty Albatross [1075] | Vulnerable | Species or species habitat may occur within area |
| Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033] | Endangered | Species or species habitat may occur within area |
| Pterodroma neglecta neglecta Kermadec Petrel (western) [64450] | Vulnerable | Foraging, feeding or related behaviour may occur within area |
| Rostratula australis Australian Painted Snipe [77037] | Endangered | Species or species habitat likely to occur within area |
| Sternula nereis nereis Australian Fairy Tern [82950] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460] | Vulnerable | Species or species habitat may occur within area |

| Name | Status | Type of Presence |
|---|-----------------------|--|
| Thalassarche bulleri_platei Northern Buller's Albatross, Pacific Albatross [82273] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche cauta Shy Albatross [89224] | Endangered | Species or species habitat may occur within area |
| Thalassarche eremita Chatham Albatross [64457] | Endangered | Species or species habitat may occur within area |
| Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche melanophris Black-browed Albatross [66472] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche salvini Salvin's Albatross [64463] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Thalassarche steadi White-capped Albatross [64462] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Thinornis cucullatus_cucullatus Hooded Plover (eastern), Eastern Hooded Plover [90381] | Vulnerable | Species or species habitat may occur within area |
| Turnix melanogaster Black-breasted Button-quail [923] | Vulnerable | Species or species habitat may occur within area |
| Fish | | |
| Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449] | Vulnerable | Species or species habitat likely to occur within area |
| Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240] | Endangered | Species or species habitat likely to occur within area |
| Frogs | | |
| Litoria olongburensis Wallum Sedge Frog [1821] | Vulnerable | Species or species habitat may occur within area |
| Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942] | Vulnerable | Species or species habitat likely to occur within area |
| Mixophyes iteratus Giant Barred Frog, Southern Barred Frog [1944] | Endangered | Species or species habitat known to occur within area |
| Insects | | |
| Argynnis hyperbius_inconstans Australian Fritillary [88056] | Critically Endangered | Species or species habitat may occur within area |
| Phyllodes imperialis_smithersi Pink Underwing Moth [86084] | Endangered | Species or species habitat may occur within area |
| Mammals | | |
| Balaenoptera musculus Blue Whale [36] | Endangered | Species or species habitat may occur within area |

| Name | Status | Type of Presence |
|---|------------|---|
| Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183] | Vulnerable | Species or species habitat likely to occur within area |
| Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184] | Endangered | Species or species habitat likely to occur within area |
| Eubalaena australis Southern Right Whale [40] | Endangered | Species or species habitat likely to occur within area |
| Megaptera novaeangliae Humpback Whale [38] | Vulnerable | Species or species habitat known to occur within area |
| Petauroides volans Greater Glider [254] | Vulnerable | Species or species habitat likely to occur within area |
| Petrogale penicillata Brush-tailed Rock-wallaby [225] | Vulnerable | Species or species habitat likely to occur within area |
| Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104] | Vulnerable | Species or species habitat known to occur within area |
| Potorous tridactylus tridactylus Long-nosed Potoroo (SE Mainland) [66645] | Vulnerable | Species or species habitat likely to occur within area |
| Pseudomys novaehollandiae New Holland Mouse, Pookila [96] | Vulnerable | Species or species habitat likely to occur within area |
| Pteropus poliocephalus Grey-headed Flying-fox [186] | Vulnerable | Foraging, feeding or related behaviour known to occur within area |
| Plants | | |
| Acronychia littoralis Scented Acronychia [8582] | Endangered | Species or species habitat likely to occur within area |
| Arthraxon hispidus Hairy-joint Grass [9338] | Vulnerable | Species or species habitat likely to occur within area |
| Cryptostylis hunteriana Leafless Tongue-orchid [19533] | Vulnerable | Species or species habitat may occur within area |
| Cynanchum elegans White-flowered Wax Plant [12533] | Endangered | Species or species habitat likely to occur within area |
| Haloragis exalata subsp. velutina Tall Velvet Sea-berry [16839] | Vulnerable | Species or species habitat may occur within area |
| Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326] | Vulnerable | Species or species habitat known to occur within area |
| Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581] | Vulnerable | Species or species habitat likely to occur within area |
| Marsdenia longiloba Clear Milkvine [2794] | Vulnerable | Species or species habitat known to occur within area |

| Name | Status | Type of Presence |
|---|-----------------------|--|
| Parsonsia dorrigoensis Milky Silkpod [64684] | Endangered | Species or species habitat likely to occur within area |
| Persicaria elatior Knotweed, Tall Knotweed [5831] | Vulnerable | Species or species habitat may occur within area |
| Phaius australis Lesser Swamp-orchid [5872] | Endangered | Species or species habitat likely to occur within area |
| Plectranthus nitidus Nightcap Plectranthus, Silver Plectranthus [55742] | Endangered | Species or species habitat may occur within area |
| Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763] | Critically Endangered | Species or species habitat known to occur within area |
| Rhodomyrtus psidioides Native Guava [19162] | Critically Endangered | Species or species habitat known to occur within area |
| Samadera sp. Moonee Creek (J.King s.n. Nov. 1949) [86885] | Endangered | Species or species habitat known to occur within area |
| Sarcochilus fitzgeraldii Ravine Orchid [19131] | Vulnerable | Species or species habitat may occur within area |
| Thesium australe Austral Toadflax, Toadflax [15202] | Vulnerable | Species or species habitat known to occur within area |
| Tylophora woollsii [20503] | Endangered | Species or species habitat likely to occur within area |
| Zieria prostrata Headland Zieria [56782] | Endangered | Species or species habitat likely to occur within area |
| Reptiles | | |
| Caretta caretta Loggerhead Turtle [1763] | Endangered | Breeding known to occur within area |
| Chelonia mydas Green Turtle [1765] | Vulnerable | Species or species habitat known to occur within area |
| Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628] | Vulnerable | Species or species habitat may occur within area |
| Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Breeding likely to occur within area |
| Eretmochelys imbricata Hawksbill Turtle [1766] | Vulnerable | Species or species habitat known to occur within area |
| Natator depressus Flatback Turtle [59257] | Vulnerable | Breeding likely to occur within area |
| Sharks | | |
| Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751] | Critically Endangered | Species or species habitat likely to occur within area |
| Carcharodon carcharias White Shark, Great White Shark [64470] | Vulnerable | Species or species |

| Name | Status | Type of Presence |
|--|------------|--|
| Rhincodon typus Whale Shark [66680] | Vulnerable | habitat known to occur within area Species or species habitat may occur within area |

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

| Name | Threatened | Type of Presence |
|--|------------|--|
| Migratory Marine Birds | | |
| Anous stolidus Common Noddy [825] | | Species or species habitat likely to occur within area |
| Apus pacificus Fork-tailed Swift [678] | | Species or species habitat likely to occur within area |
| Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404] | | Foraging, feeding or related behaviour likely to occur within area |
| Ardenna grisea Sooty Shearwater [82651] | | Species or species habitat likely to occur within area |
| Ardenna pacifica Wedge-tailed Shearwater [84292] | | Breeding known to occur within area |
| Calonectris leucomelas Streaked Shearwater [1077] | | Species or species habitat may occur within area |
| Diomedea antipodensis Antipodean Albatross [64458] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea epomophora Southern Royal Albatross [89221] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea exulans Wandering Albatross [89223] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea sanfordi Northern Royal Albatross [64456] | Endangered | Foraging, feeding or related behaviour likely to occur within area |
| Fregata ariel Lesser Frigatebird, Least Frigatebird [1012] | | Species or species habitat known to occur within area |
| Fregata minor Great Frigatebird, Greater Frigatebird [1013] | | Species or species habitat likely to occur within area |
| Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060] | Endangered | Species or species habitat may occur within area |
| Macronectes halli Northern Giant Petrel [1061] | Vulnerable | Species or species habitat may occur within area |
| Phoebastria fusca Sooty Albatross [1075] | Vulnerable | Species or species habitat may occur within area |
| Sternula albifrons Little Tern [82849] | | Species or species habitat may occur within |

| Name | Threatened | Type of Presence area |
|--|-------------|--|
| Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche cauta Shy Albatross [89224] | Endangered | Species or species habitat may occur within area |
| Thalassarche eremita Chatham Albatross [64457] | Endangered | Species or species habitat may occur within area |
| Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche melanophris Black-browed Albatross [66472] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche salvini Salvin's Albatross [64463] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Thalassarche steadi White-capped Albatross [64462] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Migratory Marine Species | | |
| Balaena glacialis australis Southern Right Whale [75529] | Endangered* | Species or species habitat likely to occur within area |
| Balaenoptera edeni Bryde's Whale [35] | | Species or species habitat may occur within area |
| Balaenoptera musculus Blue Whale [36] | Endangered | Species or species habitat may occur within area |
| Carcharhinus longimanus Oceanic Whitetip Shark [84108] | | Species or species habitat may occur within area |
| Carcharodon carcharias White Shark, Great White Shark [64470] | Vulnerable | Species or species habitat known to occur within area |
| Caretta caretta Loggerhead Turtle [1763] | Endangered | Breeding known to occur within area |
| Chelonia mydas Green Turtle [1765] | Vulnerable | Species or species habitat known to occur within area |
| Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Breeding likely to occur within area |
| Dugong dugon Dugong [28] | | Species or species habitat may occur within area |
| Eretmochelys imbricata Hawksbill Turtle [1766] | Vulnerable | Species or species habitat known to occur within area |
| Lamna nasus Porbeagle, Mackerel Shark [83288] | | Species or species habitat may occur within area |

| Name | Threatened | Type of Presence |
|--|-----------------------|--|
| Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994] | | Species or species habitat known to occur within area |
| Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995] | | Species or species habitat may occur within area |
| Megaptera novaeangliae Humpback Whale [38] | Vulnerable | Species or species habitat known to occur within area |
| Natator depressus Flatback Turtle [59257] | Vulnerable | Breeding likely to occur within area |
| Orcinus orca Killer Whale, Orca [46] | | Species or species habitat may occur within area |
| Rhincodon typus Whale Shark [66680] | Vulnerable | Species or species habitat may occur within area |
| Sousa chinensis Indo-Pacific Humpback Dolphin [50] | | Species or species habitat likely to occur within area |
| Migratory Terrestrial Species | | |
| Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651] | | Species or species habitat may occur within area |
| Hirundapus caudacutus White-throated Needletail [682] | Vulnerable | Species or species habitat known to occur within area |
| Monarcha melanopsis Black-faced Monarch [609] | | Species or species habitat known to occur within area |
| Monarcha trivirgatus Spectacled Monarch [610] | | Species or species habitat known to occur within area |
| Myiagra cyanoleuca Satin Flycatcher [612] | | Species or species habitat known to occur within area |
| Rhipidura rufifrons Rufous Fantail [592] | | Species or species habitat known to occur within area |
| Migratory Wetlands Species | | |
| Actitis hypoleucos Common Sandpiper [59309] | | Species or species habitat likely to occur within area |
| Calidris acuminata Sharp-tailed Sandpiper [874] | | Species or species habitat may occur within area |
| Calidris canutus Red Knot, Knot [855] | Endangered | Species or species habitat known to occur within area |
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat likely to occur within area |
| Calidris melanotos Pectoral Sandpiper [858] | | Species or species habitat may occur within area |

| Name | Threatened | Type of Presence |
|---|-----------------------|--|
| Gallinago hardwickii Latham's Snipe, Japanese Snipe [863] | | Species or species habitat likely to occur within area |
| Gallinago megala Swinhoe's Snipe [864] | | Foraging, feeding or related behaviour likely to occur within area |
| Gallinago stenura Pin-tailed Snipe [841] | | Foraging, feeding or related behaviour likely to occur within area |
| Limosa lapponica Bar-tailed Godwit [844] | | Species or species habitat known to occur within area |
| Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area |
| Numenius minutus Little Curlew, Little Whimbrel [848] | | Foraging, feeding or related behaviour likely to occur within area |
| Pandion haliaetus Osprey [952] | | Breeding known to occur within area |
| Tringa nebularia Common Greenshank, Greenshank [832] | | Species or species habitat may occur within area |

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

| Name |
|--|
| Commonwealth Land - Australian Telecommunications Commission |

Listed Marine Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

| Name | Threatened | Type of Presence |
|--|------------|--|
| Birds | | |
| Actitis hypoleucos Common Sandpiper [59309] | | Species or species habitat likely to occur within area |
| Anous stolidus Common Noddy [825] | | Species or species habitat likely to occur within area |
| Apus pacificus Fork-tailed Swift [678] | | Species or species habitat likely to occur within area |
| Ardea alba Great Egret, White Egret [59541] | | Breeding known to occur within area |
| Ardea ibis Cattle Egret [59542] | | Species or species habitat may occur within area |
| Calidris acuminata Sharp-tailed Sandpiper [874] | | Species or species habitat may occur within area |

| Name | Threatened | Type of Presence |
|--|-----------------------|--|
| Calidris canutus Red Knot, Knot [855] | Endangered | Species or species habitat known to occur within area |
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat likely to occur within area |
| Calidris melanotos Pectoral Sandpiper [858] | | Species or species habitat may occur within area |
| Calonectris leucomelas Streaked Shearwater [1077] | | Species or species habitat may occur within area |
| Catharacta skua Great Skua [59472] | | Species or species habitat may occur within area |
| Diomedea antipodensis Antipodean Albatross [64458] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea epomophora Southern Royal Albatross [89221] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea exulans Wandering Albatross [89223] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea gibsoni Gibson's Albatross [64466] | Vulnerable* | Foraging, feeding or related behaviour likely to occur within area |
| Diomedea sanfordi Northern Royal Albatross [64456] | Endangered | Foraging, feeding or related behaviour likely to occur within area |
| Fregata ariel Lesser Frigatebird, Least Frigatebird [1012] | | Species or species habitat known to occur within area |
| Fregata minor Great Frigatebird, Greater Frigatebird [1013] | | Species or species habitat likely to occur within area |
| Gallinago hardwickii Latham's Snipe, Japanese Snipe [863] | | Species or species habitat likely to occur within area |
| Gallinago megala Swinhoe's Snipe [864] | | Foraging, feeding or related behaviour likely to occur within area |
| Gallinago stenura Pin-tailed Snipe [841] | | Foraging, feeding or related behaviour likely to occur within area |
| Haliaeetus leucogaster White-bellied Sea-Eagle [943] | | Species or species habitat known to occur within area |
| Hirundapus caudacutus White-throated Needletail [682] | Vulnerable | Species or species habitat known to occur within area |
| Lathamus discolor Swift Parrot [744] | Critically Endangered | Species or species habitat known to occur within area |

| Name | Threatened | Type of Presence |
|--|-----------------------|--|
| Limosa lapponica Bar-tailed Godwit [844] | | Species or species habitat known to occur within area |
| Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060] | Endangered | Species or species habitat may occur within area |
| Macronectes halli Northern Giant Petrel [1061] | Vulnerable | Species or species habitat may occur within area |
| Merops ornatus Rainbow Bee-eater [670] | | Species or species habitat may occur within area |
| Monarcha melanopsis Black-faced Monarch [609] | | Species or species habitat known to occur within area |
| Monarcha trivirgatus Spectacled Monarch [610] | | Species or species habitat known to occur within area |
| Myiagra cyanoleuca Satin Flycatcher [612] | | Species or species habitat known to occur within area |
| Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area |
| Numenius minutus Little Curlew, Little Whimbrel [848] | | Foraging, feeding or related behaviour likely to occur within area |
| Pachyptila turtur Fairy Prion [1066] | | Species or species habitat known to occur within area |
| Pandion haliaetus Osprey [952] | | Breeding known to occur within area |
| Phoebastria fusca Sooty Albatross [1075] | Vulnerable | Species or species habitat may occur within area |
| Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043] | | Foraging, feeding or related behaviour likely to occur within area |
| Puffinus griseus Sooty Shearwater [1024] | | Species or species habitat likely to occur within area |
| Puffinus pacificus Wedge-tailed Shearwater [1027] | | Breeding known to occur within area |
| Rhipidura rufifrons Rufous Fantail [592] | | Species or species habitat known to occur within area |
| Rostratula benghalensis (sensu lato) Painted Snipe [889] | Endangered* | Species or species habitat likely to occur within area |
| Sterna albifrons Little Tern [813] | | Species or species habitat may occur within area |
| Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460] | Vulnerable | Species or species habitat may occur within |

| Name | Threatened | Type of Presence area |
|--|-------------|--|
| Thalassarche cauta Shy Albatross [89224] | Endangered | Species or species habitat may occur within area |
| Thalassarche eremita Chatham Albatross [64457] | Endangered | Species or species habitat may occur within area |
| Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche melanophris Black-browed Albatross [66472] | Vulnerable | Species or species habitat may occur within area |
| Thalassarche salvini Salvin's Albatross [64463] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Thalassarche sp. nov. Pacific Albatross [66511] | Vulnerable* | Species or species habitat may occur within area |
| Thalassarche steadi White-capped Albatross [64462] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726] | Vulnerable* | Species or species habitat may occur within area |
| Tringa nebularia Common Greenshank, Greenshank [832] | | Species or species habitat may occur within area |
| Fish | | |
| Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187] | | Species or species habitat may occur within area |
| Campichthys tryoni Tryon's Pipefish [66193] | | Species or species habitat may occur within area |
| Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199] | | Species or species habitat may occur within area |
| Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203] | | Species or species habitat may occur within area |
| Festucalex cinctus Girdled Pipefish [66214] | | Species or species habitat may occur within area |
| Filicampus tigris Tiger Pipefish [66217] | | Species or species habitat may occur within area |
| Halicampus grayi Mud Pipefish, Gray's Pipefish [66221] | | Species or species habitat may occur within area |
| Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228] | | Species or species habitat may occur within area |
| Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229] | | Species or species habitat may occur within |

| Name | Threatened | Type of Presence area |
|---|------------|--|
| Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231] | | Species or species habitat may occur within area |
| Hippocampus kelloggi Kellogg's Seahorse, Great Seahorse [66723] | | Species or species habitat may occur within area |
| Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237] | | Species or species habitat may occur within area |
| Hippocampus planifrons Flat-face Seahorse [66238] | | Species or species habitat may occur within area |
| Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720] | | Species or species habitat may occur within area |
| Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240] | Endangered | Species or species habitat likely to occur within area |
| Lissocampus runa Javelin Pipefish [66251] | | Species or species habitat may occur within area |
| Maroubra perserrata Sawtooth Pipefish [66252] | | Species or species habitat may occur within area |
| Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253] | | Species or species habitat may occur within area |
| Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254] | | Species or species habitat may occur within area |
| Microphis manadensis Manado Pipefish, Manado River Pipefish [66258] | | Species or species habitat may occur within area |
| Solegnathus dunckeri Duncker's Pipehorse [66271] | | Species or species habitat may occur within area |
| Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272] | | Species or species habitat may occur within area |
| Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275] | | Species or species habitat may occur within area |
| Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183] | | Species or species habitat may occur within area |
| Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184] | | Species or species habitat may occur within area |
| Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277] | | Species or species habitat may occur within area |
| Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279] | | Species or species habitat may occur within area |

| Name | Threatened | Type of Presence |
|---|------------|--|
| Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280] | | Species or species habitat may occur within area |
| Urocampus carinirostris Hairy Pipefish [66282] | | Species or species habitat may occur within area |
| Vanacampus margaritifer Mother-of-pearl Pipefish [66283] | | Species or species habitat may occur within area |

Mammals

| | | |
|---|--|--|
| Dugong dugon Dugong [28] | | Species or species habitat may occur within area |
|---|--|--|

Reptiles

| | | |
|--|------------|---|
| Caretta caretta Loggerhead Turtle [1763] | Endangered | Breeding known to occur within area |
| Chelonia mydas Green Turtle [1765] | Vulnerable | Species or species habitat known to occur within area |
| Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Breeding likely to occur within area |
| Eretmochelys imbricata Hawksbill Turtle [1766] | Vulnerable | Species or species habitat known to occur within area |
| Hydrophis elegans Elegant Seasnake [1104] | | Species or species habitat may occur within area |
| Natator depressus Flatback Turtle [59257] | Vulnerable | Breeding likely to occur within area |
| Pelamis platurus Yellow-bellied Seasnake [1091] | | Species or species habitat may occur within area |

Whales and other Cetaceans

[Resource Information]

| Name | Status | Type of Presence |
|---|------------|--|
| Mammals | | |
| Balaenoptera acutorostrata Minke Whale [33] | | Species or species habitat may occur within area |
| Balaenoptera edeni Bryde's Whale [35] | | Species or species habitat may occur within area |
| Balaenoptera musculus Blue Whale [36] | Endangered | Species or species habitat may occur within area |
| Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60] | | Species or species habitat may occur within area |
| Eubalaena australis Southern Right Whale [40] | Endangered | Species or species habitat likely to occur within area |
| Grampus griseus Risso's Dolphin, Grampus [64] | | Species or species habitat may occur within area |

| Name | Status | Type of Presence |
|---|------------|--|
| Megaptera novaeangliae Humpback Whale [38] | Vulnerable | Species or species habitat known to occur within area |
| Orcinus orca Killer Whale, Orca [46] | | Species or species habitat may occur within area |
| Sousa chinensis Indo-Pacific Humpback Dolphin [50] | | Species or species habitat likely to occur within area |
| Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51] | | Species or species habitat may occur within area |
| Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418] | | Species or species habitat likely to occur within area |
| Tursiops truncatus s. str. Bottlenose Dolphin [68417] | | Species or species habitat may occur within area |

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

| Name | State |
|---------------------------------|-------|
| Bruxner Park | NSW |
| Coffs Coast | NSW |
| Kororo | NSW |
| Moonee Beach | NSW |
| Split Solitary Island | NSW |
| UNE Special Management Zone No1 | NSW |

Regional Forest Agreements [\[Resource Information \]](#)

Note that all areas with completed RFAs have been included.

| Name | State |
|------------------------------------|-----------------|
| North East NSW RFA | New South Wales |

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

| Name | Status | Type of Presence |
|--|--------|--|
| Birds | | |
| Acridotheres tristis Common Myna, Indian Myna [387] | | Species or species habitat likely to occur within area |
| Anas platyrhynchos Mallard [974] | | Species or species habitat likely to occur within area |
| Carduelis carduelis European Goldfinch [403] | | Species or species habitat likely to occur within area |
| Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803] | | Species or species habitat likely to occur |

| Name | Status | Type of Presence within area |
|---|--------|---|
| Lonchura punctulata Nutmeg Mannikin [399] | | Species or species habitat likely to occur within area |
| Passer domesticus House Sparrow [405] | | Species or species habitat likely to occur within area |
| Pycnonotus jocosus Red-whiskered Bulbul [631] | | Species or species habitat likely to occur within area |
| Streptopelia chinensis Spotted Turtle-Dove [780] | | Species or species habitat likely to occur within area |
| Sturnus vulgaris Common Starling [389] | | Species or species habitat likely to occur within area |
| Turdus merula Common Blackbird, Eurasian Blackbird [596] | | Species or species habitat likely to occur within area |
| Frogs | | |
| Rhinella marina Cane Toad [83218] | | Species or species habitat known to occur within area |
| Mammals | | |
| Bos taurus Domestic Cattle [16] | | Species or species habitat likely to occur within area |
| Canis lupus familiaris Domestic Dog [82654] | | Species or species habitat likely to occur within area |
| Felis catus Cat, House Cat, Domestic Cat [19] | | Species or species habitat likely to occur within area |
| Feral deer Feral deer species in Australia [85733] | | Species or species habitat likely to occur within area |
| Lepus capensis Brown Hare [127] | | Species or species habitat likely to occur within area |
| Mus musculus House Mouse [120] | | Species or species habitat likely to occur within area |
| Oryctolagus cuniculus Rabbit, European Rabbit [128] | | Species or species habitat likely to occur within area |
| Rattus norvegicus Brown Rat, Norway Rat [83] | | Species or species habitat likely to occur within area |
| Rattus rattus Black Rat, Ship Rat [84] | | Species or species habitat likely to occur within area |
| Sus scrofa Pig [6] | | Species or species habitat likely to occur within area |
| Vulpes vulpes Red Fox, Fox [18] | | Species or species |

| Name | Status | Type of Presence habitat likely to occur within area |
|--|--------|---|
| Plants | | |
| Alternanthera philoxeroides Alligator Weed [11620] | | Species or species habitat likely to occur within area |
| Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643] | | Species or species habitat likely to occur within area |
| Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425] | | Species or species habitat likely to occur within area |
| Asparagus plumosus Climbing Asparagus-fern [48993] | | Species or species habitat likely to occur within area |
| Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171] | | Species or species habitat likely to occur within area |
| Chrysanthemoides monilifera Bitou Bush, Boneseed [18983] | | Species or species habitat likely to occur within area |
| Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332] | | Species or species habitat likely to occur within area |
| Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934] | | Species or species habitat likely to occur within area |
| Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466] | | Species or species habitat likely to occur within area |
| Genista sp. X Genista monspessulana Broom [67538] | | Species or species habitat may occur within area |
| Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] | | Species or species habitat likely to occur within area |
| Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780] | | Species or species habitat may occur within area |
| Rubus fruticosus aggregate Blackberry, European Blackberry [68406] | | Species or species habitat likely to occur within area |
| Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483] | | Species or species habitat likely to occur within area |
| Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497] | | Species or species habitat likely to occur within area |
| Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665] | | Species or species habitat likely to occur within area |
| Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624] | | Species or species habitat likely to occur within area |
| Reptiles | | |

| Name | Status | Type of Presence |
|--------------------------|--------|--|
| Hemidactylus frenatus | | |
| Asian House Gecko [1708] | | Species or species habitat likely to occur within area |

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 and National Heritage properties, Wetlands of International and National 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.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

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.

Coordinates

-30.22691 153.14159

Acknowledgements

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

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-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, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

















The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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Report generated on 19/02/2021 1:41 PM




| Kingdom | Class | Family | Species Code | Scientific Name | Exotic | Common Name | NSW status | Comm. status | Records | Info |
|-----------|-------|--------|--------------|---|--------|--|------------|--------------|---------|---|
| Community | | | | <i>Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> | | Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions | E3 | V | K |  |
| Community | | | | <i>Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> | | Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions | E3 | | K |  |
| Community | | | | <i>Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> | | Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions | E3 | CE | K |  |
| Community | | | | <i>Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions</i> | | Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions | E3 | CE | K |  |
| Community | | | | <i>Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion</i> | | Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion | E3 | CE | K |  |
| Community | | | | <i>Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions</i> | | Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions | E3 | E | K |  |
| Community | | | | <i>Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion</i> | | Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion | E3 | | K |  |
| Community | | | | <i>Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> | | Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions | E3 | E | K |  |
| Community | | | | <i>Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i> | | Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions | E3 | | K |  |
| Community | | | | <i>Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions</i> | | Themeda grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions | E3 | | K |  |
| Community | | | | <i>White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and</i> | | White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and | E4B | CE | P |  |
| Community | | | | <i>White Gum Moist Forest in the NSW North Coast Bioregion</i> | | White Gum Moist Forest in the NSW North Coast Bioregion | E3 | | K |  |

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) or Commonwealth listed Plants in selected area [North: -30.18 West: 153.09 East: 153.19 South: -30.28] returned a total of 980 records of 16 species.
Report generated on 19/02/2021 1:39 PM

| Kingdom | Class | Family | Species Code | Scientific Name | Exotic | Common Name | NSW status | Comm. status | Records | Info |
|---------|-------|----------------------|--------------|---|--------|--|------------|--------------|---------|---|
| Plantae | Flora | Apocynaceae | 1233 | <i>Marsdenia longiloba</i> | | Slender Marsdenia | E1 | V | 68 |  |
| Plantae | Flora | Apocynaceae | 9505 | <i>Parsonsia dorrigoensis</i> | | Milky Silkpod | V | E | 1 |  |
| Plantae | Flora | Araceae | 10749 | ^^ <i>Typhonium</i> sp. aff. <i>brownii</i> | | Stinky Lily | E1,3 | | 1 |  |
| Plantae | Flora | Fabaceae (Faboideae) | 2897 | <i>Kennedia retrorsa</i> | | | V | V | 2 |  |
| Plantae | Flora | Fabaceae (Faboideae) | 11644 | <i>Pultenaea maritima</i> | | Coast Headland Pea | V | | 9 |  |
| Plantae | Flora | Fabaceae (Faboideae) | 3032 | <i>Sophora tomentosa</i> | | Silverbush | E1 | | 5 |  |
| Plantae | Flora | Lindsaeaceae | 8128 | ^^ <i>Lindsaea incisa</i> | | Slender Screw Fern | E1,3 | | 20 |  |
| Plantae | Flora | Myrtaceae | 4283 | <i>Rhodamnia rubescens</i> | | Scrub Turpentine | E4A | | 31 |  |
| Plantae | Flora | Myrtaceae | 4284 | <i>Rhodomyrtus psidioides</i> | | Native Guava | E4A | | 15 |  |
| Plantae | Flora | Orchidaceae | 9027 | ^ <i>Diuris praecox</i> | | Rough Doubletail | V,P,2 | V | 1 |  |
| Plantae | Flora | Poaceae | 8979 | <i>Alexfloydia repens</i> | | Floyd's Grass | E1 | | 8 |  |
| Plantae | Flora | Rutaceae | 9496 | <i>Zieria prostrata</i> | | Headland Zieria | E1 | E | 3 |  |
| Plantae | Flora | Rutaceae | 5847 | <i>Zieria smithii</i> | | Low growing form of Z. smithii, Diggers Head | E2 | | 2 |  |
| Plantae | Flora | Santalaceae | 5871 | <i>Thesium australe</i> | | Austral Toadflax | V | V | 8 |  |
| Plantae | Flora | Sapotaceae | 11957 | <i>Niemeyera whitei</i> | | Rusty Plum, Plum Boxwood | V | | 221 |  |
| Plantae | Flora | Simaroubaceae | 9497 | <i>Quassia</i> sp. Moonee Creek | | Moonee Quassia | E1 | E | 585 |  |

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) or Commonwealth listed Animals in selected area [North: -30.18 West: 153.09 East: 153.19 South: -30.28] returned a total of 713 records of 54 species.
Report generated on 19/02/2021 1:37 PM

| Kingdom | Class | Family | Species Code | Scientific Name | Exotic | Common Name | NSW status | Comm. status | Records | Info |
|----------|----------|------------------|--------------|--|--------|---|------------|--------------|---------|------|
| Animalia | Amphibia | Myobatrachidae | 3075 | <i>Mixophyes iteratus</i> | | Giant Barred Frog | E1,P,2 | E | 31 | |
| Animalia | Amphibia | Hylidae | 3169 | <i>Litoria brevipalmata</i> | | Green-thighed Frog | V,P | | 3 | |
| Animalia | Reptilia | Cheloniidae | 2004 | <i>Caretta caretta</i> | | Loggerhead Turtle | E1,P | E | 2 | |
| Animalia | Reptilia | Cheloniidae | 2007 | <i>Chelonia mydas</i> | | Green Turtle | V,P | V | 3 | |
| Animalia | Reptilia | Cheloniidae | 2008 | <i>Eretmochelys imbricata</i> | | Hawksbill Turtle | P | V | 3 | |
| Animalia | Reptilia | Elapidae | 2677 | <i>Hoplocephalus stephensii</i> | | Stephens' Banded Snake | V,P | | 9 | |
| Animalia | Aves | Casuariidae | 0001 | <i>Dromaius novaehollandiae</i> | | Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area | E2,P | | 1 | |
| Animalia | Aves | Columbidae | 0025 | <i>Ptilinopus magnificus</i> | | Wompoo Fruit-Dove | V,P | | 64 | |
| Animalia | Aves | Columbidae | 0021 | <i>Ptilinopus regina</i> | | Rose-crowned Fruit-Dove | V,P | | 18 | |
| Animalia | Aves | Apodidae | 0334 | <i>Hirundapus caudacutus</i> | | White-throated Needletail | P | V,C,J,K | 55 | |
| Animalia | Aves | Procellariidae | 0971 | <i>Pterodroma solandri</i> | | Providence Petrel | V,P | | 1 | |
| Animalia | Aves | Ciconiidae | 0183 | <i>Ephippiorhynchus asiaticus</i> | | Black-necked Stork | E1,P | | 6 | |
| Animalia | Aves | Ardeidae | 0196 | <i>Ixobrychus flavicollis</i> | | Black Bittern | V,P | | 6 | |
| Animalia | Aves | Accipitridae | 0226 | <i>Haliaeetus leucogaster</i> | | White-bellied Sea-Eagle | V,P | | 43 | |
| Animalia | Aves | Accipitridae | 0225 | <i>Hieraaetus morphnoides</i> | | Little Eagle | V,P | | 6 | |
| Animalia | Aves | Accipitridae | 0230 | <i>Lophoictinia isura</i> | | Square-tailed Kite | V,P,3 | | 3 | |
| Animalia | Aves | Accipitridae | 8739 | <i>Pandion cristatus</i> | | Eastern Osprey | V,P,3 | | 23 | |
| Animalia | Aves | Gruidae | 0177 | <i>Grus rubicunda</i> | | Brolga | V,P | | 1 | |
| Animalia | Aves | Burhinidae | 0175 | <i>Esacus magnirostris</i> | | Beach Stone-curlew | E4A,P | | 3 | |
| Animalia | Aves | Haematopodidae | 0131 | <i>Haematopus fuliginosus</i> | | Sooty Oystercatcher | V,P | | 21 | |
| Animalia | Aves | Haematopodidae | 0130 | <i>Haematopus longirostris</i> | | Pied Oystercatcher | E1,P | | 10 | |
| Animalia | Aves | Lariidae | 0117 | <i>Sternula albifrons</i> | | Little Tern | E1,P | C,J,K | 2 | |
| Animalia | Aves | Cacatuidae | 0268 | <i>Callocephalon fimbriatum</i> | | Gang-gang Cockatoo | V,P,3 | | 1 | |
| Animalia | Aves | Cacatuidae | 0265 | <i>Calyptorhynchus lathami</i> | | Glossy Black-Cockatoo | V,P,2 | | 63 | |
| Animalia | Aves | Psittacidae | 0260 | <i>Glossopsitta pusilla</i> | | Little Lorikeet | V,P | | 29 | |
| Animalia | Aves | Psittacidae | 0309 | <i>Lathamus discolor</i> | | Swift Parrot | E1,P,3 | CE | 19 | |
| Animalia | Aves | Strigidae | 0246 | <i>Ninox connivens</i> | | Barking Owl | V,P,3 | | 1 | |
| Animalia | Aves | Strigidae | 0248 | <i>Ninox strenua</i> | | Powerful Owl | V,P,3 | | 4 | |
| Animalia | Aves | Tytonidae | 0252 | <i>Tyto longimembris</i> | | Eastern Grass Owl | V,P,3 | | 1 | |
| Animalia | Aves | Tytonidae | 0250 | <i>Tyto novaehollandiae</i> | | Masked Owl | V,P,3 | | 1 | |
| Animalia | Aves | Tytonidae | 9924 | <i>Tyto tenebrosa</i> | | Sooty Owl | V,P,3 | | 10 | |
| Animalia | Aves | Climacteridae | 8127 | <i>Climacteris picumnus victoriae</i> | | Brown Treecreeper (eastern subspecies) | V,P | | 1 | |
| Animalia | Aves | Meliphagidae | 0603 | <i>Anthochaera phrygia</i> | | Regent Honeyeater | E4A,P | CE | 3 | |
| Animalia | Aves | Neosittidae | 0549 | <i>Daphoenositta chrysoptera</i> | | Varied Sittella | V,P | | 11 | |
| Animalia | Aves | Campephagidae | 0428 | <i>Coracina lineata</i> | | Barred Cuckoo-shrike | V,P | | 4 | |
| Animalia | Aves | Artamidae | 8519 | <i>Artamus cyanopterus cyanopterus</i> | | Dusky Woodswallow | V,P | | 4 | |
| Animalia | Aves | Petroicidae | 0380 | <i>Petroica boodang</i> | | Scarlet Robin | V,P | | 2 | |
| Animalia | Mammalia | Dasyuridae | 1008 | <i>Dasyurus maculatus</i> | | Spotted-tailed Quoll | V,P | E | 1 | |
| Animalia | Mammalia | Dasyuridae | 1017 | <i>Phascogale tapoatafa</i> | | Brush-tailed Phascogale | V,P | | 1 | |
| Animalia | Mammalia | Dasyuridae | 1045 | <i>Planigale maculata</i> | | Common Planigale | V,P | | 2 | |
| Animalia | Mammalia | Phascolarctidae | 1162 | <i>Phascolarctos cinereus</i> | | Koala | V,P | V | 104 | |
| Animalia | Mammalia | Petauridae | 1136 | <i>Petaurus australis</i> | | Yellow-bellied Glider | V,P | | 11 | |
| Animalia | Mammalia | Petauridae | 1137 | <i>Petaurus norfolcensis</i> | | Squirrel Glider | V,P | | 8 | |
| Animalia | Mammalia | Pseudocheiridae | 1133 | <i>Petauroides volans</i> | | Greater Glider | P | V | 1 | |
| Animalia | Mammalia | Pteropodidae | 1280 | <i>Pteropus poliocephalus</i> | | Grey-headed Flying-fox | V,P | V | 33 | |
| Animalia | Mammalia | Pteropodidae | 1294 | <i>Syconycteris australis</i> | | Common Blossom-bat | V,P | | 9 | |
| Animalia | Mammalia | Emballonuridae | 1321 | <i>Saccolaimus flaviventris</i> | | Yellow-bellied Sheath-tail-bat | V,P | | 2 | |
| Animalia | Mammalia | Molossidae | 1329 | <i>Micronomus norfolkensis</i> | | Eastern Coastal Free-tailed Bat | V,P | | 3 | |
| Animalia | Mammalia | Vespertilionidae | 1357 | <i>Myotis macropus</i> | | Southern Myotis | V,P | | 7 | |
| Animalia | Mammalia | Vespertilionidae | 1369 | <i>Phoniscus papuensis</i> | | Golden-tipped Bat | V,P | | 4 | |

| | | | | | | | | | |
|----------|----------|-----------------|------|---------------------------------------|----------------------------|-----|---|----|---|
| Animalia | Mammalia | Miniopteridae | 1346 | <i>Miniopterus australis</i> | Little Bent-winged Bat | V,P | | 24 |  |
| Animalia | Mammalia | Miniopteridae | 3330 | <i>Miniopterus orianae oceanensis</i> | Large Bent-winged Bat | V,P | | 4 |  |
| Animalia | Mammalia | Balaenopteridae | 1575 | <i>Megaptera novaeangliae</i> | Humpback Whale | V,P | V | 2 |  |
| Animalia | Insecta | Hesperiidae | 1023 | <i>Ocybadistes knightorum</i> | Black Grass-dart Butterfly | E1 | | 29 |  |



Appendix C

Potential for Threatened Fauna Occurrence

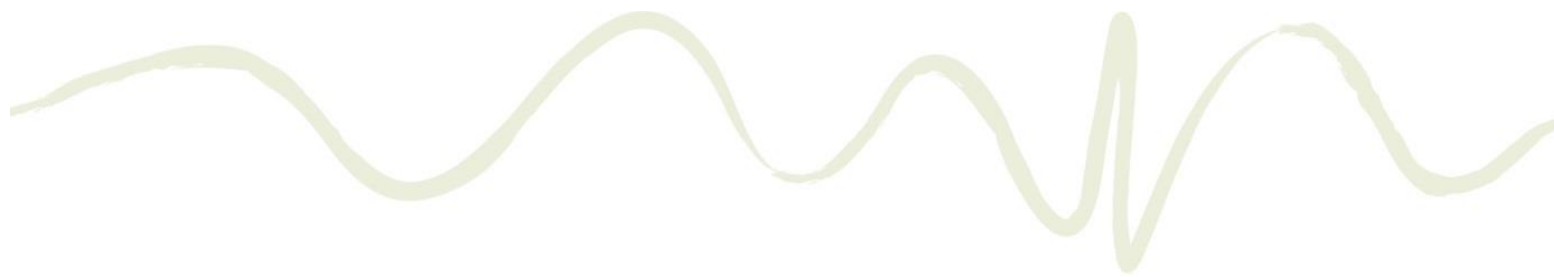
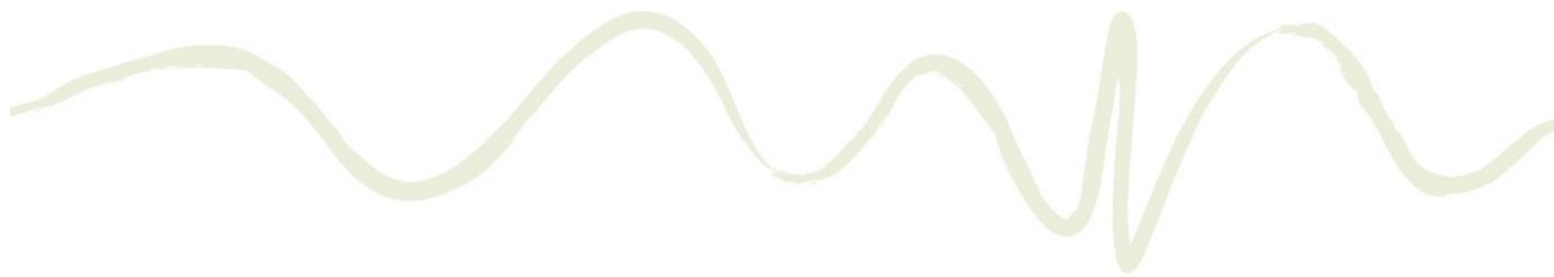


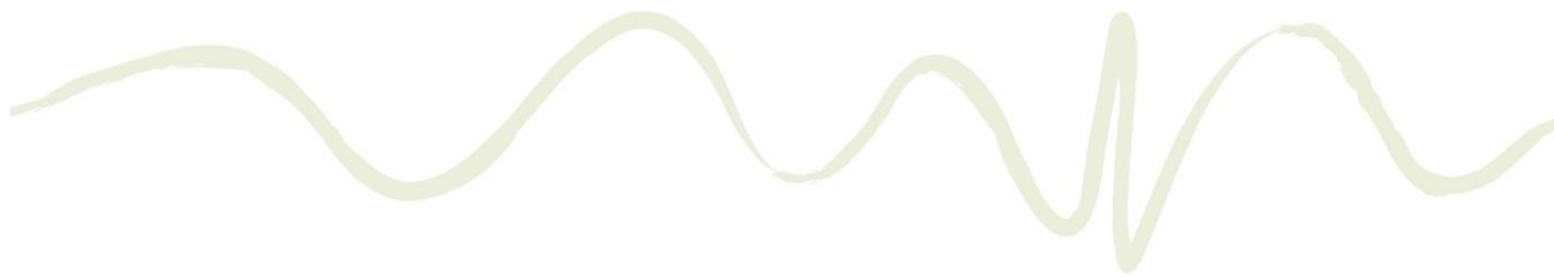
Table C.1 Threatened Fauna Potential Occurrence Assessment*

*Migratory/pelagic marine species identified in the search results are not assessed as no habitat occurs at the site

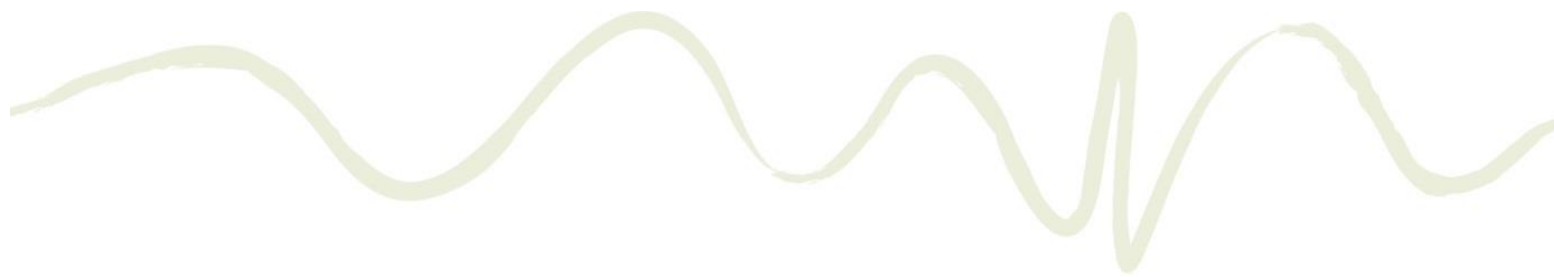
| Scientific name | Common name | BC Act | EPBC Act | Habitat requirement | Suitability of site habitat | Potential occurrence | Need for five-part test |
|--|-----------------------|--------|----------|--|---|---|--------------------------------|
| Amphibians | | | | | | | |
| <i>Litoria brevipalmata</i> | Green-thighed Frog | V | - | Rainforest, moist to dry eucalypt forest and heath, typically where surface water gathers after rain. | Marginal habitat associated with forested parts of the sites. | Low – scarce local records | No |
| <i>Mixophyes iteratus</i> | Giant Barred Frog | E | E | Deep, damp leaf litter in rainforests, moist eucalypt forest and near dry eucalypt forest. | No appropriate riparian habitat at the site. | Low | No |
| Aves | | | | | | | |
| <i>Anthochaera phrygia</i> | Regent Honeyeater | CE | CE | Dry open forest and woodland with an abundance of nectar-producing eucalypts, particularly box-ironbark woodland, swamp mahogany forests, and riverine sheoak woodlands. | Marginal foraging habitat associated with the site. | Low | No |
| <i>Artamus cyanopterus cyanopterus</i> | Dusky Woodswallow | V | - | Woodlands and dry open sclerophyll forests, usually dominated by eucalypts; also recorded in shrublands, heathlands and various modified habitats. | Marginal foraging habitat associated with the site. | Low | No |
| <i>Callocephalon fimbriatum</i> | Gang-gang Cockatoo | V | - | Wetter forests and woodlands, timbered watercourses, coastal scrub. | Low quality habitat at the site. | Low – no local records | No |
| <i>Calyptorhynchus lathami</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. | Foraging habitat associated with occasional Forest Oaks on the site. | Moderate | No – negligible impacts likely |
| <i>Climacteris picumnus</i> | Brown Treecreeper | V | - | Eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range, and less commonly on coastal plains and ranges. | Marginal foraging habitat associated with forested parts of the site. | Low – only one local record not proximate to the site | No |
| <i>Coracina lineata</i> | Barred Cuckoo-shrike | V | - | Rainforest, eucalypt woodlands, swamp woodlands and timber along watercourses. | Suitable foraging habitat associated with forested areas. | Moderate | No – negligible impacts likely |



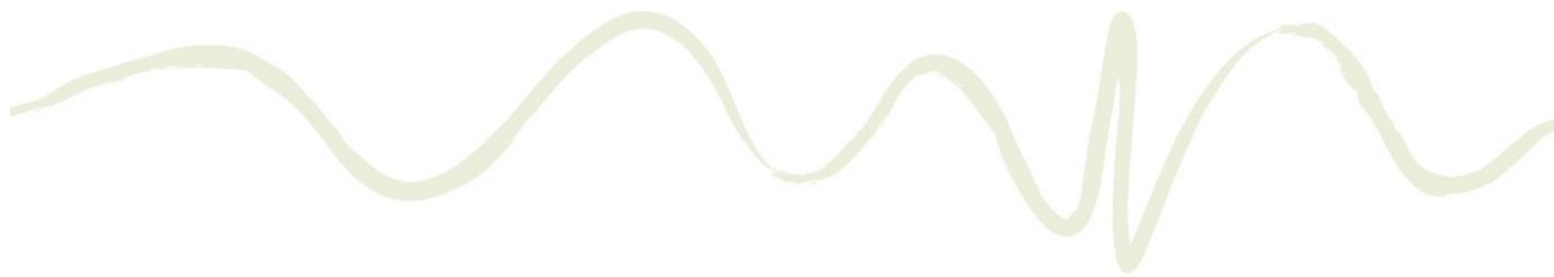
| Scientific name | Common name | BC Act | EPBC Act | Habitat requirement | Suitability of site habitat | Potential occurrence | Need for five-part test |
|-----------------------------------|---|--------|----------|--|---|---|--------------------------------|
| <i>Daphoenositta chrysoptera</i> | Varied Sittella | V | - | Inhabits eucalypt forests and woodlands, especially rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland. | Suitable foraging habitat associated with the site. | Low – no recent local records proximate to the site | No – negligible impacts likely |
| <i>Dromaius novaehollandiae</i> | Emu population in the NSW North Coast Bioregion and Port Stephens LGA | E | - | Open forest, woodland, coastal heath, coastal dunes, wetland areas, tea tree plantations and open farmland, and occasionally in littoral rainforest. | No suitable habitat at the site | Low – no local records | No |
| <i>Ephippiorhynchus asiaticus</i> | Black-necked Stork | E | - | Swamps, mangroves, mudflats, dry floodplains. | No suitable habitat at the site | Low | No |
| <i>Esacus magnirostris</i> | Beach Stone-curlew | CE | - | Tidal flats at the mouth of estuaries or on open beaches. | No suitable habitat at the site | Low | No |
| <i>Glossopsitta pusilla</i> | Little Lorikeet | V | - | Forages in open Eucalyptus forest and woodland; also feeds on Angophora, Melaleuca and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. | Suitable foraging habitat at the site | Moderate | No – negligible impacts likely |
| <i>Grus rubicunda</i> | Brolga | V | - | Shallow swamps, floodplains, grasslands and pastoral lands, usually in pairs or parties. | No suitable habitat at the site | Low | No |
| <i>Haematopus fuliginosus</i> | Sooty Oystercatcher | V | - | Intertidal rocky and coral reefs, mostly ocean shores. | No suitable habitat at the site | Low | No |
| <i>Haematopus longirostris</i> | Pied Oystercatcher | E | - | Open beaches, intertidal flats, sandbanks and occasionally rocky headlands. | No suitable habitat at the site | Low | No |



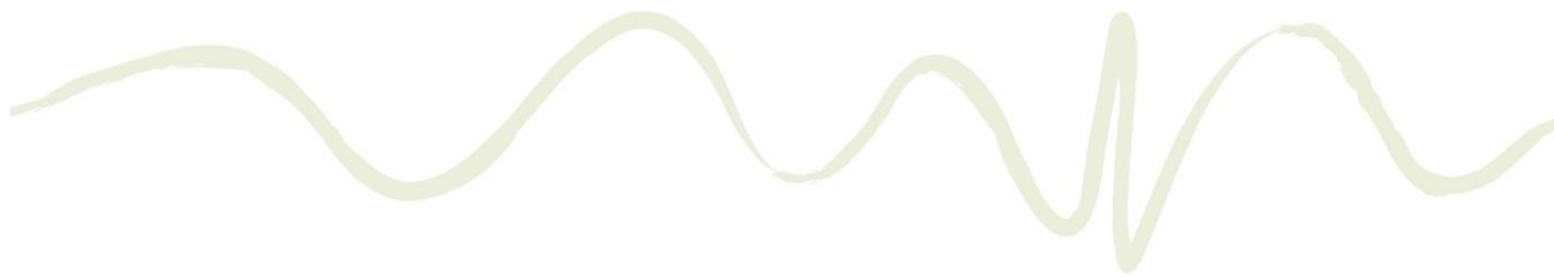
| Scientific name | Common name | BC Act | EPBC Act | Habitat requirement | Suitability of site habitat | Potential occurrence | Need for five-part test |
|-------------------------------|---------------------------|--------|----------|--|--|----------------------|---|
| <i>Haliaeetus leucogaster</i> | White-bellied Sea-eagle | V | - | Coastal habitats and around terrestrial wetlands characterised by the presence of large areas of open water (larger rivers, swamps, lakes, ocean). Habitats may include freshwater swamps, lakes, reservoirs, billabongs, saltmarsh and sewage ponds in addition to bays and inlets, beaches, reefs, lagoons, estuaries and mangroves. | Potential to occur foraging over the site | Moderate | No – unlikely to be impacted as a highly mobile species |
| <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. | Potential to occur foraging over the site | Moderate | No – unlikely to be impacted as a highly mobile species |
| <i>Hirundapus caudacutus</i> | White-throated Needletail | - | V | Most often recorded aerial foraging above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy. Breeding does not occur in Australia. | Potential to occur foraging over the site | Moderate | No – unlikely to be impacted as a highly mobile species |
| <i>Ixobrychus flavicollis</i> | Black Bittern | V | - | Dense vegetation fringing and in streams, swamps, tidal creeks and mudflats, particularly amongst swamp sheoaks and mangroves. | Marginal habitat associated with Sugar Mill Creek. | Low | No |
| <i>Lathamus discolor</i> | Swift Parrot | E | CE | On mainland Australia foraging occurs where eucalypts are flowering profusely or where abundant lerp infestations occur. Favoured feed trees include winter flowering species such as Swamp Mahogany Eucalyptus robusta, Spotted Gum Corymbia maculata, Red Bloodwood C. gummifera, Forest Red Gum E. tereticornis, Mugga Ironbark E. sideroxylon, and White Box E. albens. Commonly used lerp infested trees include Inland Grey Box E. microcarpa, Grey Box E. moluccana, Blackbutt E. pilularis and Yellow Box E. melliodora. | Suitable foraging habitat at the site | Moderate | No – negligible impacts likely |



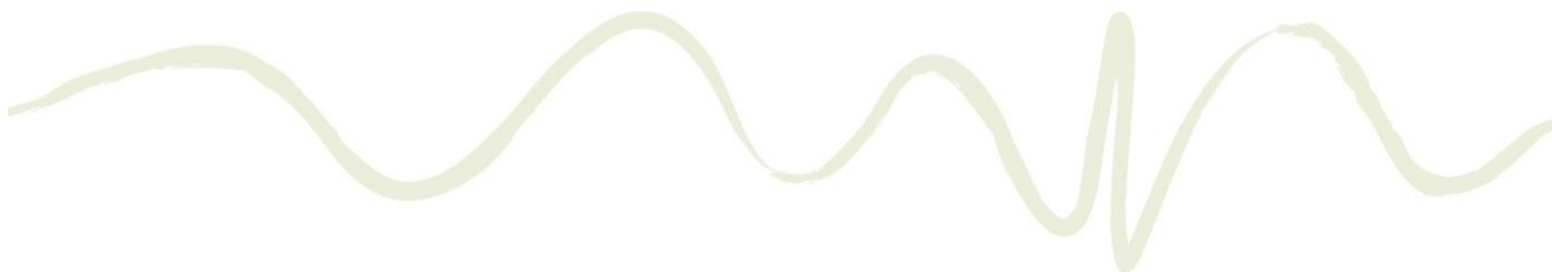
| Scientific name | Common name | BC Act | EPBC Act | Habitat requirement | Suitability of site habitat | Potential occurrence | Need for five-part test |
|------------------------------|-------------------------|--------|----------|--|---|----------------------|------------------------------|
| <i>Lophoictinia 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 ranges can extend over at least 100 km ² . | Potential to occur foraging over the site | Moderate | No – unlikely to be impacted |
| <i>Ninox connivens</i> | Barking Owl | V | - | Eucalypt woodland, open forest, swamp woodlands and timber along watercourses. | No suitable nesting habitat on the site. Suitable foraging habitat present. | Moderate | No |
| <i>Ninox strenua</i> | Powerful Owl | V | - | Woodland and open forest to tall moist forest and rainforest. Requires large tracts of forest or woodland habitat but may also occur in fragmented landscapes. | No suitable nesting habitat on the site. Suitable foraging habitat present. | Moderate | No |
| <i>Pandion cristatus</i> | Eastern Osprey | V | - | Littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. Typically occur in coastal areas but occasionally travel inland along major rivers. Wetland habitats include inshore waters, reefs, bays, coastal cliffs, beaches, estuaries, mangrove swamps, broad rivers, reservoirs and large lakes and waterholes. | The site does not represent permanent habitat for this species. | Low | No |
| <i>Petroica boodang</i> | Scarlet Robin | V | - | Dry eucalypt forests and woodlands with an open and grassy understorey with few scattered shrubs. Both mature and regrowth vegetation are utilised; habitat usually contains abundant logs and fallen timber. | Very marginal habitat at the site | Low | No |
| <i>Ptilinopus magnificus</i> | Wompoo Fruit-dove | V | - | Rainforests, low-elevation moist eucalypt forest, and Brush Box forests. | Marginal foraging habitat associated with the site. | Moderate | No |
| <i>Ptilinopus regina</i> | Rose-crowned Fruit-dove | V | - | Subtropical and dry rainforest, moist eucalypt forest and swamp forest. | Suitable habitat associated with the site | Moderate | No |



| Scientific name | Common name | BC Act | EPBC Act | Habitat requirement | Suitability of site habitat | Potential occurrence | Need for five-part test |
|--------------------------------|---------------------------------|--------|----------|---|---|----------------------|------------------------------------|
| <i>Sternula albifrons</i> | Little Tern | E | - | Coastal waters, bays, shallow inlets, salt or brackish lakes. | No suitable habitat at the site | Low | No |
| <i>Tyto longimembris</i> | Eastern Grass Owl | V | - | Areas of tall grass, including tussocks in swampy areas, grassy plains, swampy heath, cane grass, sedges on flood plains. | No suitable habitat at the site | Low | No |
| <i>Tyto novaehollandiae</i> | Masked Owl | V | - | Dry eucalypt forest and woodlands. | No suitable nesting habitat on the site. Suitable foraging habitat present. | Moderate | No |
| <i>Tyto tenebricosa</i> | Sooty Owl | V | - | Dry, subtropical and warm temperate rainforests and wet eucalypt forests. Nest in large tree hollows. | No suitable nesting habitat on the site. Suitable foraging habitat present. | Moderate | No |
| Mammals | | | | | | | |
| <i>Chalinolobus dwyeri</i> | Large-eared Pied Bat | V | V | Near cave entrances and crevices in cliffs. | No caves/ cliffs near the site | Low | No |
| <i>Dasyurus maculatus</i> | Spotted-tailed Quoll | V | E | Dry and moist eucalypt forests and rainforests, fallen hollow logs, large rocky outcrops. | Small areas of marginal foraging habitat associated with the site | Low | No |
| <i>Micronomus norfolkensis</i> | Eastern Coastal Free-tailed Bat | V | - | Occurs in dry sclerophyll forest and woodland east of the Great Dividing Range. Roosts in tree hollows. | Potential aerial foraging habitat associated with the site | Moderate | No – negligible impact likely |
| <i>Miniopterus australis</i> | Little Bent-winged Bat | V | - | Moist eucalypt forest, rainforest and dense coastal scrub. | Suitable foraging habitat present | High | Yes |
| <i>Myotis macropus</i> | Southern Myotis | V | - | Bodies of water, rainforest streams, large lakes, reservoirs. | Suitable foraging habitat associated with Sugar Mill Creek | Moderate | No – habitat would not be impacted |
| <i>Petauroides volans</i> | Greater Glider | - | V | Ranges and coastal plains of eastern Australia, where it inhabits a variety of eucalypt forests and woodlands. | Marginal habitat - no suitable denning hollows present | Low | No |



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|-------------------------------|-------------------------|--------|----------|---|---|----------------------|------------------------------------|
| <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. | Marginal habitat - no suitable denning hollows present | Low | No |
| <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 forest inland. | Marginal habitat associated with the site. Scarce recent local records. | Low | No |
| <i>Phascogale tapoatafa</i> | Brush-tailed Phascogale | V | - | Drier forests and woodlands with hollow-bearing trees and sparse ground cover. | Marginal habitat associated with the site and no proximal records. | Low | No |
| <i>Phascolarctos cinereus</i> | Koala | V | V | Appropriate food trees in forests and woodlands, and treed urban areas. | Suitable feed trees at the site but scarce recent local records. | Moderate | No – negligible impact likely |
| <i>Phoniscus papuensis</i> | Golden-tipped Bat | V | - | Rainforest and adjacent sclerophyll forest. Roosts in abandoned hanging Yellow-throated Scrubwren and Brown Gerygone nests. | Potential aerial foraging habitat associated with the site | Moderate | No – negligible impact likely |
| <i>Planigale maculata</i> | Common Planigale | V | - | Rainforest, eucalypt forest, heathland, marshland, grassland and rocky areas with surface cover close to water. | Suitable foraging habitat associated with Sugar Mill Creek | Moderate | No – habitat would not be impacted |
| <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. | Suitable foraging habitat present | High | Yes |



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|---------------------------------|-------------------------------|--------|----------|--|--|----------------------|------------------------------------|
| <i>Saccolaimus flaviventris</i> | Yellow-bellied Sheathtail-bat | V | - | Forages in a variety of habitats, roosts in tree hollows and buildings. | Potential aerial foraging habitat associated with the site | Moderate | No – negligible impact likely |
| <i>Syconycteris australis</i> | Common Blossom-bat | V | - | Feeds in heathland and paperbark swamps; roosts in littoral rainforest. Also recorded in subtropical rainforest, wet sclerophyll forest and other coastal forests. | Suitable foraging habitat associated with Sugar Mill Creek | Moderate | No – habitat would not be impacted |
| Reptiles | | | | | | | |
| <i>Hoplocephalus stephensii</i> | Stephens' Banded Snake | V | - | Rainforest and eucalypt forests and rocky areas up to 950 m. | Poor quality habitat at the site and no local records. | Low | No |
| Insects | | | | | | | |
| <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. | Floyds Grass was not detected at the site. | Low | No |