

# CURRUMBIN ECO-PARKLAND ECOLOGICAL STUDY

**TITLE: Ecological Assessment**

**DSDILGP-EDQ-3158-22**

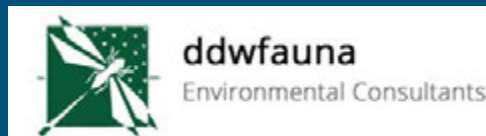
## **CLIENT**

**Economic Development Queensland**

**Prepared February 2023 - Updated May 2025**



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ENVIRONMENTAL  
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ddwfauna	✓	✓	✓	✓	✓



## ***LIMITATIONS***

MRA Environmental, Gold Coast Botany and ddwfauna (The Consortium) has prepared this Ecological Assessment for the sole use of Economic Development Queensland, to inform master planning for the Currumbin Eco-Parkland over Lot 247 RP854934, Lot 1 RP RP854934 and Lot 2 RP168012 on Piggabeen Road and Currumbin Creek Road Currumbin Valley.

The Consortium have performed its services for this project in accordance with the current MRA professional standards. No other warranty expressed or implied is made as to the professional advice included in this document.

Opinions and judgements expressed herein, which are based on The Consortiums understanding and interpretation of current regulatory standards, should not be construed as legal opinions. The report also contains comments and information provided by others. The Consortium cannot take responsibility for advice provided by any third party.

As this document has been prepared for the sole purpose of informing master planning for the Currumbin Eco-Parkland, it may not contain sufficient information for the purposes of other parties, for other uses or at other locations. It does not purport to present final or detailed engineering designs for construction.

This report should not be altered, amended or abbreviated, issued in part or issued incomplete in any way without prior checking and approval by The Consortium. The Consortium accepts no responsibility for any circumstances that arise from the issue of the report, which has been modified in any way as outlined above.



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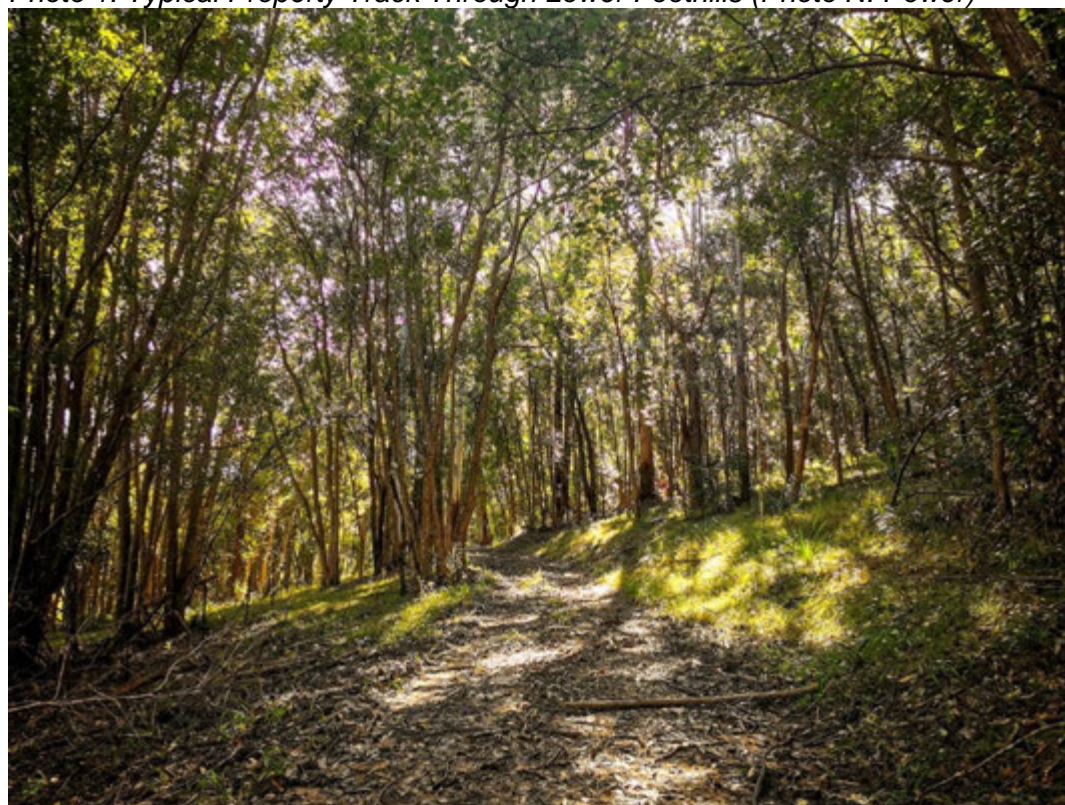
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*Photo 1: Typical Property Track Through Lower Foothills (Photo N. Power)*





## EXECUTIVE SUMMARY

The Queensland Government acquired a 148Ha property in the Currumbin Valley to make the site available for the community to utilise and appreciate. The land is now known as the Currumbin Eco-Parkland. To facilitate the master planning process for the property, an ecological site assessment has been undertaken to determine the flora and fauna species utilising the site and to identify associated species habitat and other environmental values within the site.

Desktop assessment, community consultation and detailed flora and fauna field surveys were undertaken within the site between July 2022 and April 2025. Threatened species and vegetation communities were targeted in the surveys, along with the recording of general ecological site characteristics. The surveys produced an inventory of environmental data, significant ecological areas mapping and the identification of opportunities and recommendations to inform the master planning process of the Currumbin Eco-Parkland.

Landform, vegetation type and structure vary throughout the site, from Mangroves and She-Oak's, to cleared pasture areas, to rainforest and *Eucalyptus* Forest on hillsides, gullies, creeks and ridges. The mix of landform and vegetation type provide for high diversity opportunities for individual flora and fauna species.

The flora survey recorded 418 native species and 187 exotic species occurring throughout the site including 16 species listed as threatened under National and State Government environmental legislation. Threatened species were observed at 619 locations totalling approximately 3,605 individual plants. Potentially two threatened ecological communities protected under the National *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) occur on the site, along with six Regional Ecosystems protected under Queensland Government legislation, three of which are endangered.

Fauna surveys found 197 vertebrate and 113 invertebrate species (of the fauna groups surveyed), including 15 species listed as threatened or significant under National, State and Local Government legislation. In addition to this at least 31 bird species listed as marine under the EPBC Act were recorded. Fauna habitat assessments conducted at eight locations found the site to be rich in many of the important habitat and vegetation variables required for a diverse and species rich faunal assemblage.

Collectively these findings show that the Currumbin Eco-Parkland is considered to have high ecological value and provides important landforms, waterways and vegetative habitat that support numerous threatened or otherwise significant flora and fauna species.



The findings are used to produce a resultant environmental values map to identify current areas of high ecological value recommended for protection/enhancement as part of the master planning process.

Through the ecological survey process, opportunities for restoration and the mitigation of threatening processes were identified. Findings of the field surveys and desktop assessments identified sections of the site that are suitable for ecological restoration. In doing so, this would increase the existing ecological values of the site by increasing connectivity through and external to the site, enhancing threatened species and other species habitat within the site, and potentially restoring threatened ecological communities that have been lost due to significant and historic site modification.

Following initial field surveys in 2022, recommendations were made to undertake additional assessments in patches of identified Nationally threatened ecological community (The Coastal Swamp Oak [*Casuarina glauca*] Forest of New South Wales and Queensland) regrowth. Results of these assessments allowed for guidance on opportunities for restoration and public education.

Overall, the findings of this report have been used to inform an Ecological Restoration Plan for the Currumbin Eco-Parkland to ensure effective and efficient restoration is applied to the site and that desired ecological outcomes are achieved.

*Photo 2: Eastern Grey Kangaroos on Lower Grasslands (Photo N. Power)*





## 1.0 INTRODUCTION

### 1.1 Background

The Queensland Government acquired 148 hectares of land in Currumbin Valley on 30 November 2021 as part of its 2020 election promise to the community. The purpose of the acquisition was to ensure the acquired land is protected from significant development, making it available for future generations to utilise and appreciate.

The land is now known as the Currumbin Eco-Parkland. Economic Development Queensland (EDQ) is responsible for the delivery of the Currumbin Eco-Parkland project on behalf of the Queensland Government.

EDQ has undertaken a community engagement program and contracted technical experts to help guide the preparation of a master plan for the site.

Preliminary concept planning identified the following potential uses for the site:

- Sporting and recreational elements for family and community enjoyment
- Protections for local koala habitats, including fodder plantation
- Nature based recreational trails
- Opportunities for rehabilitation
- Appreciation of the natural environment through eco-tourism.

Following initial community consultation with interested environmental and recreational stakeholders in 2022, a collaborative master planning workshop was held with community representatives and technical experts, which provided attendees with planning and design sessions to explore and test design ideas. A master plan was designed from concepts developed at the workshop and technical assessments conducted at the site.



## 1.2 Purpose of the Report

The Consortium were successful in tendering for the contract to undertake an ecological assessment of the site to inform master plan design with respect to ecological constraints and opportunities.

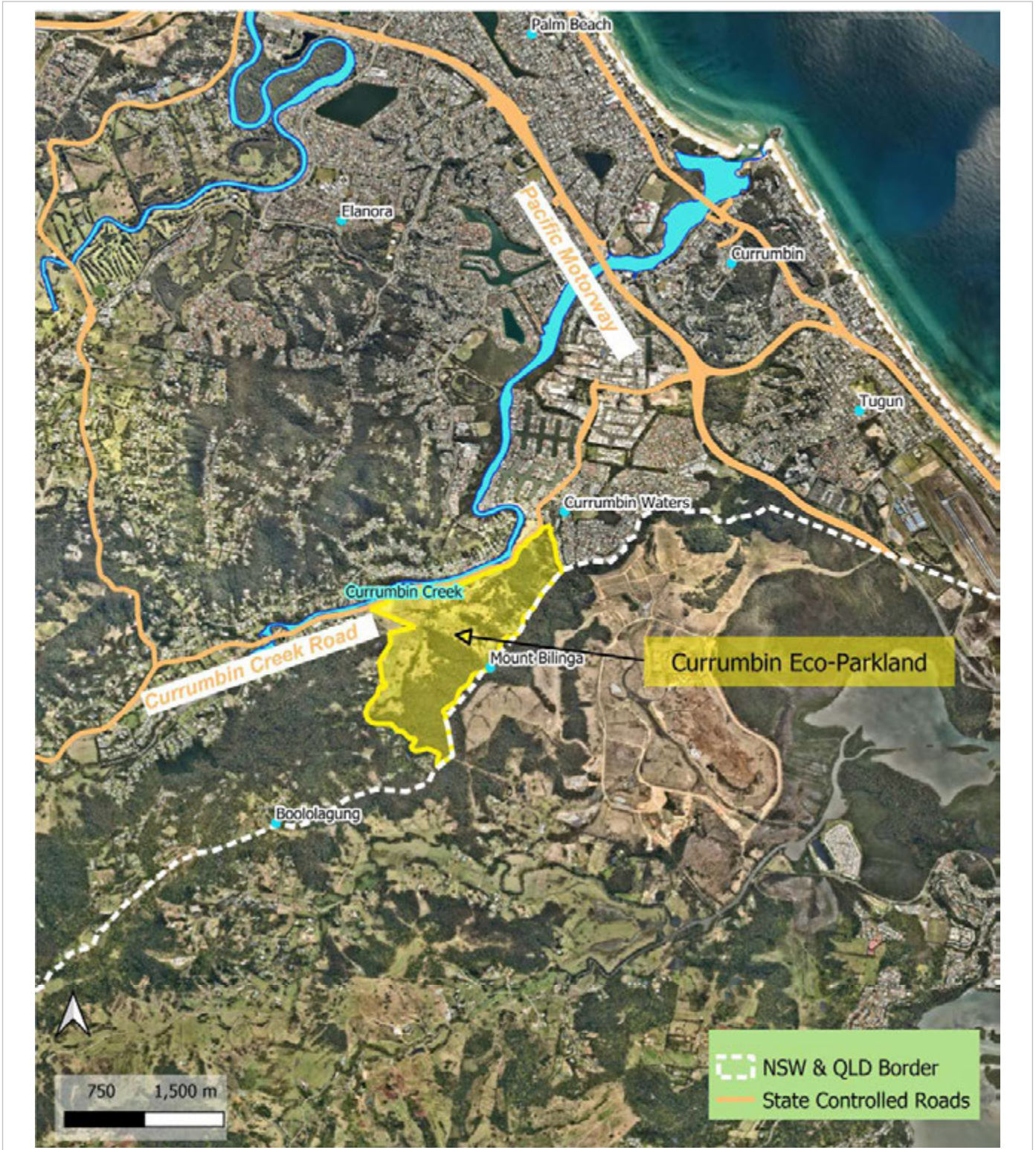
The key purpose of the ecological assessment was to identify and locate on-site:

1. Threatened flora and fauna species
2. Threatened vegetation communities
3. Significant fauna habitat
4. Other species, communities, and ecological characteristics
5. Describe environmental values.

In addition, the Ecological Team took part in the enquiry by design workshop on 10 September 2022 where initial field findings were presented with regards to threatened flora and fauna species, environmentally significant areas, and restoration opportunities. The findings provided an ecological context to the local community and the Eco-Parkland project team to assist in identifying design opportunities and constraints.

## 1.3 Project Area

The project area (Currumbin Eco-Parkland), shown on **Figure 1-1**, is located in the lower catchment area of Currumbin Valley, approximately 5km upstream from the mouth of Currumbin Creek. The site comprises Lot 2 RP168012 and Lots 1 & 247 on RP854934 which join to form a 148-hectare site situated between Currumbin Creek to the north and the Queensland New South Wales border to the south (**Figure 1-2**). The site is largely bounded by Currumbin Creek to the north, Piggabeen Road to the west and Hoffschildt Drive to the east.



		<b>Figure 1-1</b>
<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Site Location
<b>Data Source:</b> Nearmap	<b>Date:</b> 09 02 23	<b>Drawn:</b> NH



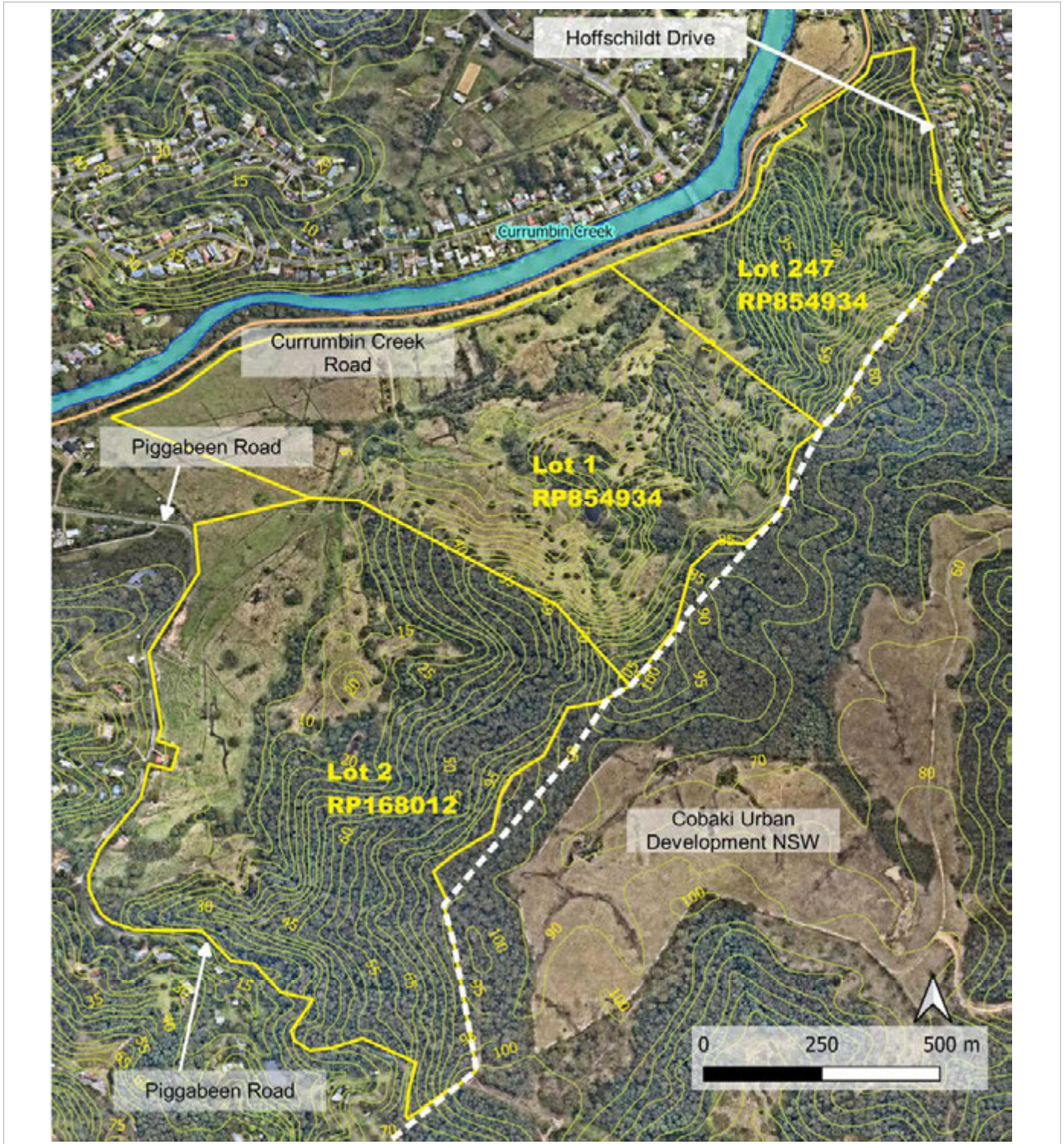
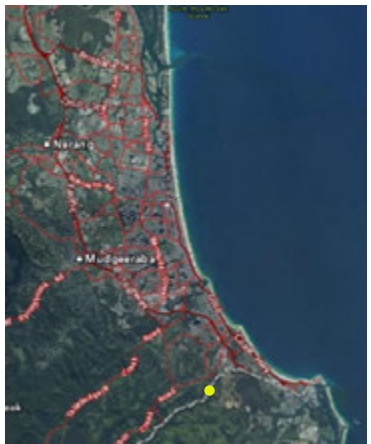


		Figure 1-2
<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Site Extent
<b>Data Source:</b> Nearmap	<b>Date:</b> 9 02 23	<b>Drawn:</b> NH



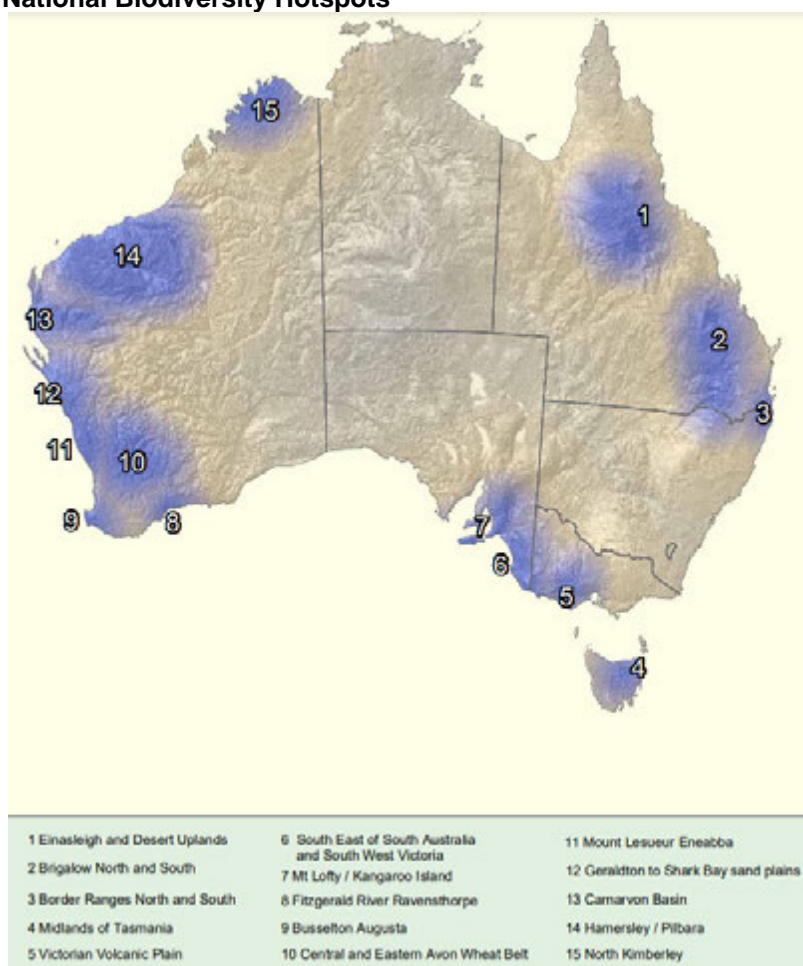
ddwfauna  
Environmental Consultants

### 1.3.1 Site Context

From a national context, the site is located within one of Australia’s 15 Biodiversity Hotspots - #3 Border Ranges North and South (QLD & NSW sub-tropical and temperate hotspot) shown on **Figure 1-3**, and which is one of Australia’s most biologically diverse landscapes and *the* most biodiverse area in New South Wales and Southern Queensland<sup>1</sup>.

This region's high population growth, with associated urban and tourist developments along the coast, is a major cause of habitat loss and fragmentation. This hotspot is also under considerable threat from weeds, fire and recreational use, amongst other threats <sup>2</sup>.

**Figure 1-3: National Biodiversity Hotspots<sup>3</sup>**



<sup>1</sup> Australia’s Sixth National Report to the Convention on Biological Diversity March 2020.

<sup>2</sup> Department of Environment, Climate Change and Water NSW 2010, Border Ranges Rainforest Biodiversity Management Plan - NSW & Queensland, Department of Environment, Climate Change and Water NSW, Sydney

<sup>3</sup> Commonwealth of Australia 2003



Regionally, the site is situated on the eastern end of a Statewide Biodiversity Corridor<sup>4</sup> linking Gondwana Rainforests of Australia World Heritage Area – Springbrook section to Currumbin Creek estuary incorporating protected areas such as Nicoll Scrub National Park and nearby Meralda and Griffiths Nature Refuges (**Figure 1-4**).

Locally, the site provides an open space area between high density residential development to the east, north and rural residential/peri-urban areas along Currumbin Valley to the west. It provides species habitat in an area that is under pressure for ongoing development, including land clearing and habitat fragmentation. A large urban area (520Ha) to the south-east of the site in NSW is currently under urban development, significantly reducing habitat opportunities for local species and increasing the ecological value of retained ecosystems in the Eco-Parkland (**Figure 1-2**).

### **1.3.2 Topography and Drainage**

The site is characterised by a ridgeline that runs the entire eastern property boundary at elevations up to RL105 at the peak of Mount Bilinga (**Figure 1-5**), with steep topography (>20%). These ridges are largely vegetated with Eucalypt forests except for several gullies on the northern side of Mount Bilinga that have been historically cleared for agricultural purposes including cattle grazing and mixed plantations.

From the ridges, the site drops down in elevation to less than 10m AHD towards Currumbin Creek. The low-lying alluvial areas are largely cleared of vegetation with pasture grasses dominant and supporting existing grazing practices. Manmade drainage channels cross through the low-lying areas. A non-functioning weir is shown on **Figure 1-5** and together with the drainage channels would have once assisted with the exclusion of salt water into the site and the subsequent maintenance of grazing pastures.

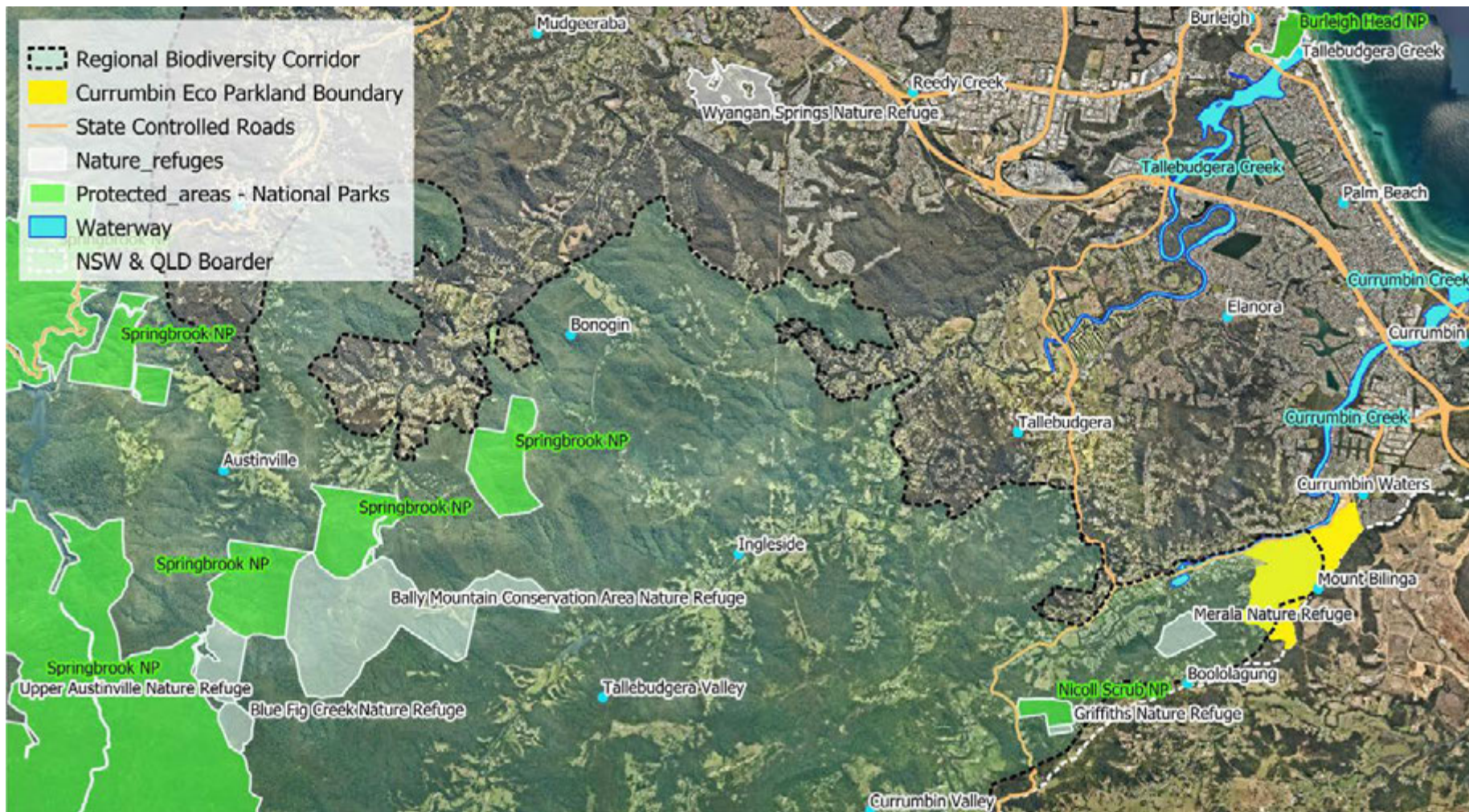
The lowland areas are prone to flooding from both local creek inputs and regional inundation from Currumbin Creek<sup>5</sup>.

The main drainage feature of the site is a centrally located creek running the length of the site from Piggabeen Road in the west to Currumbin Creek in the north. Whilst an official creek name has not been identified in our searches, it was colloquially referred to as Piggabeen Creek by a local resident.

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<sup>4</sup> A Biodiversity Planning Assessment - Southeast Queensland Bioregion – Summary Report Version 4.1 (2016)

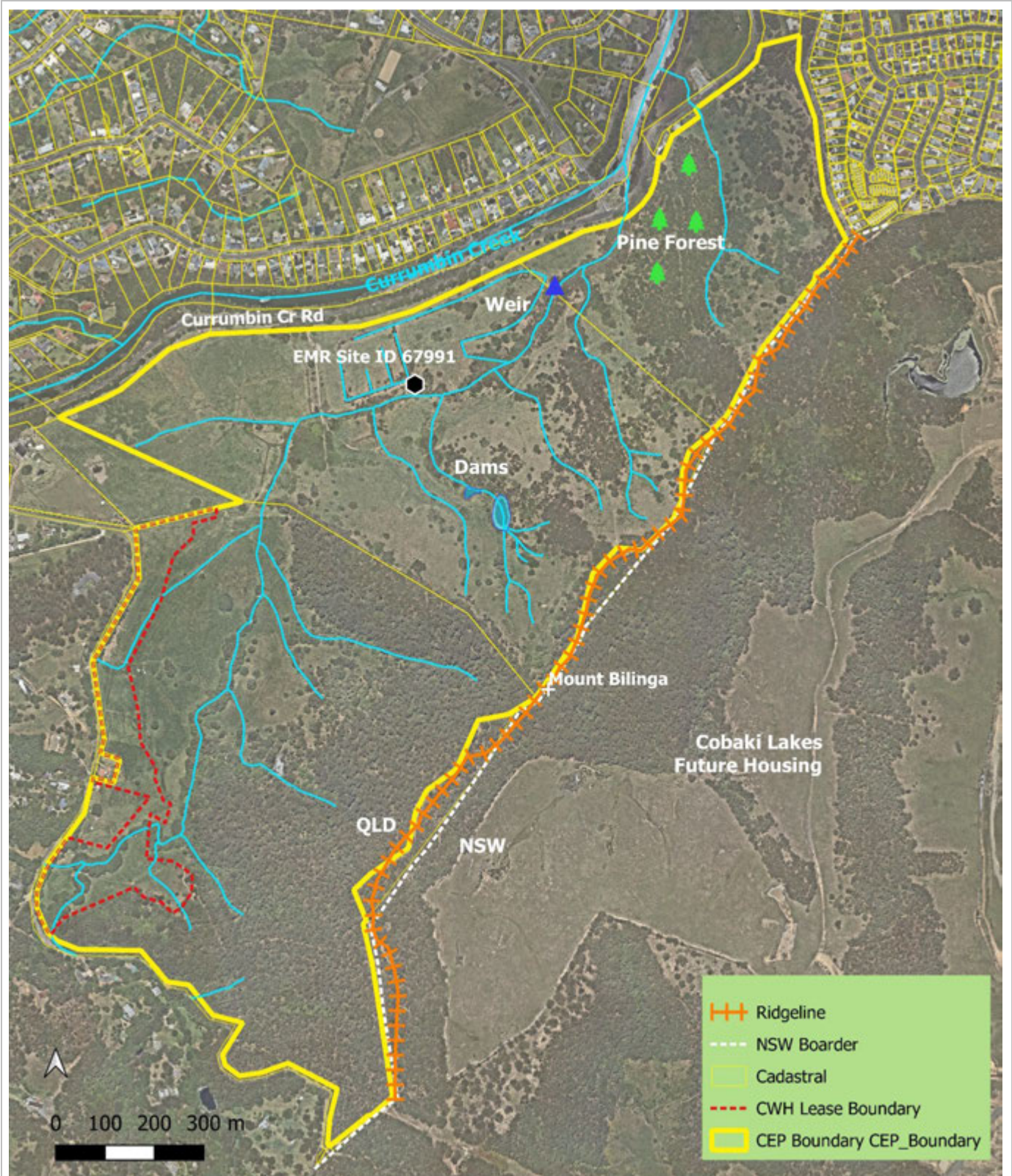
<sup>5</sup> Design Flow (2021) Currumbin Eco Parkland Preliminary Flood Impact Assessment



**Figure 1-4**

<b>Client:</b> Economic Development Queensland	<b>Project:</b> Currumbin Eco-Parkland Ecological Assessment	<b>Title:</b> Regional Context
<b>Data Source:</b> Nearmap	<b>Date:</b> 26.08.24	<b>Drawn:</b> NH





		<b>Figure 1-5</b>
<b>Client:</b> Economic Development Queensland	<b>Project:</b> Currumbin Eco-Parkland Ecological Assessment	<b>Title:</b> Site Features
<b>Data Source:</b> Nearmap	<b>Date:</b> 26.08.24	<b>Drawn:</b> NH



Another Piggabeen Creek has been identified just to the south of the site in New South Wales and so as not to generate confusion we refer to the site creek as unnamed.

### **1.3.3 Current Landuses and Features**

Historically, cattle grazing occurred through large portions of the site (**Photo 3**), managed in part by internal fencing.

The property was also a popular recreational site, which is not surprising given its proximity to a large urban population and its natural features that provide opportunities for recreationalists. Activities observed on site during the 2022 ecological field work were mountain bike riding (**Photo 7**), horse riding, hiking, and birdwatching. The site is now fenced while works occur, and in the short term, recreational activities are being discouraged.

Horse agistment was carried out in the lower western sections and site trails were used for recreational horse riding. This ceased in 2023.

There are no buildings or structures on the site, except for the non-functioning weir discussed in **Section 1.3.2**.

The site is essentially 100% vegetated, with approximately sixty percent treed with canopy cover, and the remainder dominated by species associated with open pasture grass and wetland/mangrove communities (**Photo 4**). The upper elevations of the site contain several vegetation communities dominated by *Eucalyptus* trees with numerous understorey rainforest species (**Photo 5**).

An exotic pine forest comprising the exotic *Pinus elliottii*, is located in the northern portion of the site (**Photo 6**). It is believed to have been planted in the early 1980's and covers approximately 6.8Ha.

Several property maintenance trails have been located on site, many currently unserviceable, and occur as a mix of vehicular and walking trails.

Ecological searches of the site identified that it supports high ecological values including the presence of threatened flora and fauna and threatened vegetation communities. These values are further discussed in **Sections 4.0, 5.0** and **6.0** of the report in relation to on-ground surveys and results.

*Photos 3-6 (Photos N Power)*



Photo 3: Cattle Grazing on site



Photo 4: Mangrove Community



Photo 5: Eucalypt Forest



Photo 6: Exotic Pine Forest

*Photo 7: Mountain Bike Riding (Photo D. Jinks)*



#### **1.4 Site History**

Site vegetation has been changed significantly in many areas as the result of various land use activities, including vegetation clearing for pasture in lower areas and mid-slopes, clearing for tracks, fences and dams, and clearing for domestic and agricultural infrastructure. Particularly in lower sections, landform has also been changed, including numerous cut drainage lines. In combination with a weir (now disused) placed in the lower estuary, this has caused hydrological changes to vegetation.

Other historical uses have included logging, grazing, plantations including for softwood timber & fruit trees, and amenity planting associated with the previous farm residence.

Significant areas of remnant vegetation remain in southern parts on ridges and hillsides, however, these have been modified in part by selective logging and grazing. Where grazing activities have reduced over time, there is a clear trend to a higher species biodiversity including for threatened plant species.

This is particularly evident in steeper gully areas, and, for example, in the small valley accessed from Piggabeen Road. While initially cleared, this area has now recovered with older regrowth and represents a diverse section of Lowland Rainforest on the site.



While upper gully areas remain generally intact, gullies and streams in lower sections have been historically cleared with only a few remnant trees remaining along streams plus some areas of young regrowth.

Where the stream enters the site from Piggabeen Road (in 2 places), vegetation is dominated by the invasive weed *Cinnamomum camphora* (Camphor Laurel) which is currently lining the creek bank and protecting it from further erosion. This section is one of the more challenging parts of the site with regard to converting the vegetation back to original (rainforest) vegetation communities.

Lower elevations between the foothills and Currumbin Creek Road represent the most highly modified sections of the site. Except for only a few older trees, this area has been kept clear of vegetation other than pasture species and has been used for grazing over an extended period.

These areas represent a delicate mix of landforms with regard to the pre-clear vegetation type and the effect of inundation from both tidal areas (salt-water ingress) and to alluvial inundation from flood events (freshwater and sediment deposition). While there is currently some scattered regrowth, particularly in northern portions, the extent of clearing, combined with modification to the landform, makes it difficult to determine the specific areas of the various types of pre-clear vegetation.

Notwithstanding the extent of historical modification, however, and the work required for future ecological restoration, the site contains a very high plant species diversity, significant areas of endangered forest and a large number of threatened species which, together with adjoining natural areas, provides a substantial local seed source for site resilience and restoration.



## 2.0 METHODOLOGY

The methodology adopted for the Currumbin Eco-Parkland Ecological Site Assessment included both desktop and field survey assessments. **Sections 2.1** and **2.2** outline the project methodology respectively.

### 2.1 Desktop Assessment

Desktop assessment was undertaken by the Consortium to review all publicly available datasets, technical reports, community knowledge and other relevant ecological information relating to the site. A key focus of the desktop assessment was to identify information that indicates the potential for, or known presence of, matters of environmental significance.

Environmental desktop assessments of the site have been undertaken by S5 Environmental (2021)<sup>6</sup> and Saunders Havill group (2022)<sup>7</sup>. The current desktop assessment reviewed the S5 Environmental 2021 findings and updated/added to these findings. Additionally, the site has been subject to historic development applications resulting in the availability of historical technical assessments.

Specifically, desktop searches were undertaken initially in 2022 for the following sources and reviewed in 2024 for any updates:

#### International Agreements

- Australian Government Department of Climatic Change, Energy, the Environment and Water (2022) sets out Australia's role in conserving biodiversity and describes Australia's participation in international agreements dealing with environmental and biodiversity conservation.

#### Federal Government Searches – Matters of National Environmental Significance (MNES)

- Department of Agriculture, Water and the Environment (2022). EPBC Act Protected Matters Report, which indicates the likely or potential presence of threatened ecological communities, species, migratory species, wetlands and marine parks listed under the EPBC Act - (Search 5km radius from the site boundary)

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<sup>6</sup> S5 Environmental (2021) Currumbin-Eco Parkland Preliminary Ecological Assessment Currumbin Creek Road Currumbin Waters.

<sup>7</sup> Saunders Havill Group (2022) Land Condition Report Currumbin Eco-Parkland (11104)



## State Government Searches – Matters of State Environmental Significance (MSES)

- QLD Department of Resources (DoR) Vegetation Management Report (Sept 2022) which includes information on regional ecosystems, regulated vegetation, vegetation management watercourses and wetlands, essential habitat, high risk areas on the protected plant flora survey trigger map (threatened species under the *Nature Conservation Act 1992*), koala priority areas and koala habitat types and marine plants – Searched on Lot 2 RP168012 and Lots 1 & 247 on RP854934.
- QLD Department of Environment and Science (2022) Matters of State Environmental Significance defined under the QLD State Planning Policy (SPP) for selected area of interest Longitude: 153.46075 latitude: -28.167 with 2-kilometre radius.
- QLD Department of State Development, Infrastructure, Local Government and Planning (2022) Development Assessment mapping System (DAMS) which identifies Matters of State Interest.
- QLD Government (2022) WildNet Species List for selected area of interest Lot 2 RP168012 and Lots 1 & 247 on RP854934 with 5-kilometre radius. Conservation Significant Species List and all species searches.
- The State of QLD (2022) Wetland Protection Areas which are defined under the *Environmental Protection Regulation 2008*.
- Biodiversity Assessment and Mapping Methodology (BAMM) (2020) which is a scientific methodology that provides a consistent approach for assessing biodiversity values at the landscape scale in Queensland. This was used to identify other areas of importance that may not have been captured in the above searches.

## Local Government Searches – Matters of Local Environmental Significance (MLES)

- City of Gold Coast City Plan V.8 (2022) & V.11 (2024) Interactive mapping which combines City Plan maps and aerial photography (search date 24 October 2022 and September 2024).
- City of Gold Coast Flora and Fauna Database.

## Local Knowledge

- Ecology Team knowledge of the local area and specialist knowledge of individual species and their likely occurrence.
- Local community – Environmental Site Inspection with the Community on 05 August 2022; Enquiry by Design Workshop on 10 September 2022.



## Other

- NCRIS, CSIRO, GBIF (2022) Atlas of Living Australia <https://www.ala.org.au/>
- Council of Heads of Australasian Herbaria (2022) <https://avh.chah.org.au/>
- PD Online City of Gold Coast - selected area of interest Lot 2 RP168012 and Lots 1 & 247 on RP854934 which provided access to historic ecological technical assessments associated with development applications.

## 2.2 Field Assessment Methodology

### 2.2.1 Flora Survey Methods

#### 2022 Flora Survey

Initial flora survey was conducted by two (2) persons on foot between July and October 2022 totalling forty (40) survey days in-field. It comprised a comprehensive non-targeted survey aiming to record as many species as possible, and to identify (and map) the location of all individual threatened species, within the limitations of the survey. All areas were walked in a lineal grid pattern running two parallel lines (where feasible) to enable the maximum possible visual coverage of the site. Binoculars were occasionally used to assist with identification, and a small amount of vegetative material was collected where necessary to assist with desktop identification. Vegetative material was also collected from numerous species (including all threatened species) for preparation and submission to the Queensland Herbarium for verification and to contribute to distributional information.

Plant types recorded were all vascular plants and ferns, while lower order plants were not recorded. All species were recorded as observed.

Initial methods when locating a threatened species were:

- a) label with pink flagging tape and scribe a unique number
- b) record the height and diameter breast height (DBH) (where applicable)
- c) photograph the plant showing the unique number
- d) record specific details on a spreadsheet (e.g. stem groupings, number of saplings, location identifier, health where relevant etc.)
- e) record the location as a GPS point for mapping purposes

However, given the unanticipated high number of individual threatened plants being observed after several days, a change of method was approved by EDQ to exclude the above a) and b), except where near or on an existing track.

Other features were also recorded in-situ to assist with compilation of the report.



## 2023 Surveys

To confirm or otherwise the existence of specific REs across the site and develop a reference ecosystem for the Ecological Restoration Plan, additional field surveys were undertaken which ground-truthed the existing RE mapping.

Surveys consisted of modified Secondary and Quaternary Sites defined by the Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland<sup>8</sup>. Additionally, Secondary sites were revisited to include BioCondition assessments<sup>9</sup> enabling long-term monitoring opportunities.

### Secondary Plot Surveys

Secondary sites are used for classification and detailed descriptions of REs and vegetation communities. These were carried out in several locations across the range of RE's (locations shown as Plot# on **Figure 2-1**) and were undertaken generally in 'best-on-offer' sites to gain an indication of the target reference condition state for each RE.

These plots were revisited to provide BioCondition assessments and results of the BioCondition Surveys are provided in **Attachment 6**.

### Quaternary Plot Surveys

Quaternary site data was gathered in numerous locations (shown as Q# on **Figure 2-1**). These plots served several purposes including to record data of field traverses, to verify RE mapping, and to provide information on weed occurrence and dominance. The locations were chosen to provide an indicative 'snapshot' of both native and exotic species diversity and importantly, to gain a representative measure of weed dominance throughout the site.

Weed dominance was recorded as a subjective measure using a condensed list of site weed species based on the most dominant/most likely species to require ongoing control (e.g. does not include soft or annual weeds).

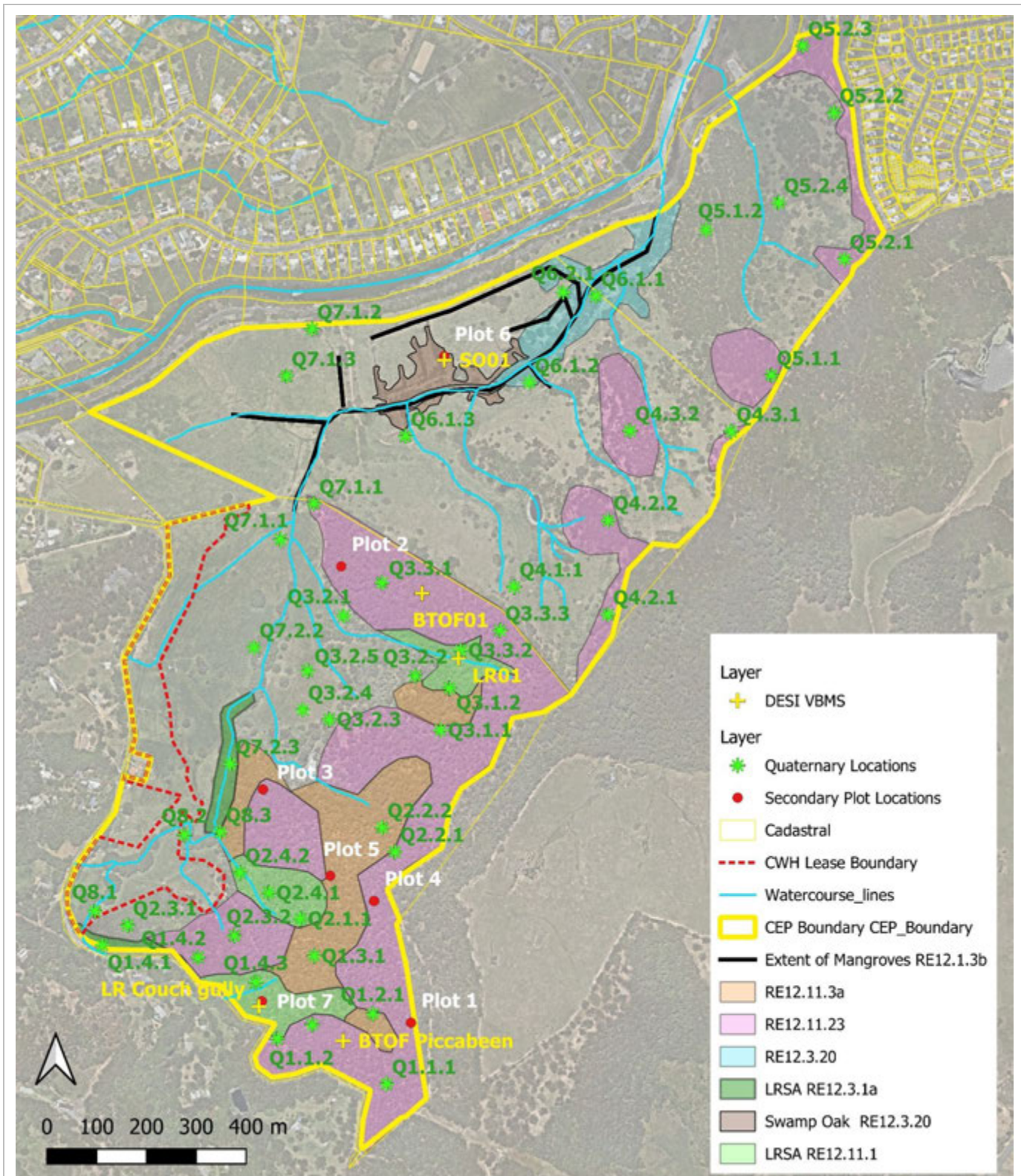
The dominance measure ranged from zero (0) to five (5) where, within and adjacent to the plot, zero equated to none of the species sighted and five equated to the species currently being dominant.

These quaternary sites will be used for long-term monitoring where the measure of weed dominance will be regularly assessed as one of the means of measuring change over time. Selected quaternary sites will also be used for photo point monitoring.

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<sup>8</sup> Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter, D., Addicott, E.P. and Appelman, C.N. (2023) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 7.0. Updated December 2023. Queensland Herbarium, Queensland Department of Environment, Science and Innovation, Brisbane.

<sup>9</sup> BioCondition Assessment Manual (February 2015) Queensland Herbarium Version 2.2



**Figure 2-1**

<b>Client:</b> Economic Development Queensland	<b>Project:</b> Currumbin Eco-Parkland Ecological Assessment	<b>Title:</b> Monitoring Locations – Flora Plots and DESI VBMS
<b>Data Source:</b> Nearmap	<b>Date:</b> 09/07/24	<b>Drawn:</b> NH

Each plot includes 4 photos taken at the time of the survey, facing North, East, South and West (in that order).

Quaternary and Secondary (including BioCondition) survey plots are identified by coordinates (see **Table 1**).

**Table 1: Survey Plot Co-ordinates**

Quaternary Plot	Eastings*	Northings	Quaternary Plot	Eastings	Northings
Q1.1.1	544990	6883005	Q4.1.1	545246	6884003
Q1.1.2	544770	6883095	Q4.2.1	545435	6883948
Q1.2.1	544963	6883146	Q4.2.2	545435	6884137
Q1.2.2	544841	6883124	Q4.3.1	545683	6884315
Q1.3.1	544845	6883262	Q4.3.2	545479	6884317
Q1.4.1	544418	6883283	Q5.1.1	545764	6884429
Q1.4.2	544611	6883259	Q5.1.2	545632	6884720
Q1.4.3	544727	6883209	Q5.2.1	545910	6884662
Q2.1.1	544817	6883337	Q5.2.2	545889	6884956
Q2.2.1	545007	6883471	Q5.2.3	545827	6885090
Q2.2.2	544981	6883520	Q5.2.4	545778	6884775
Q2.3.1	544470	6883323	Q6.1.1	545410	6884588
Q2.3.2	544684	6883302	Q6.1.2	545277	6884414
Q2.4.1	544754	6883389	Q6.1.3	545028	6884306
Q2.4.2	544695	6883429	Q6.2.1	545345	6884595
Q3.1.1	545098	6883716	Q7.1.1	544844	6884170
Q3.1.2	545116	6883800	Q7.1.2	544840	6884521
Q3.2.1	544904	6883945	Q7.1.3	544789	6884427
Q3.2.2	545048	6883824	Q7.2.1	544777	6884098
Q3.2.3	544875	6883737	Q7.2.2	544724	6883881
Q3.2.4	544822	6883756	Q7.2.3	544676	6883648
Q3.2.5	544831	6883835	Q8.1	544404	6883352
Q3.3.1	544981	6884012	Q8.2	544584	6883505
Q3.3.2	545139	6883876	Q8.3	544656	6883511
Q3.3.3	545218	6883916			
Secondary Plots/BioCondition	Eastings*	Northings	Secondary Plots/BioCondition	Eastings*	Northings
Plot 1	545039	6883128	Plot 5	544877	6883423
Plot 2	544899	6884044	Plot 6	545106	6884467
Plot 3	544741	6883596	Plot 7	544739	6883171
Plot 4	544965	6883372			

\*MGA Zone 56

## 2.2.2 Fauna Survey Methods

The field survey techniques utilised were those commonly adopted in vertebrate and invertebrate fauna surveys in south-eastern Queensland<sup>10</sup>.

### 2022 Field Survey

The subject site was surveyed systematically for mammals, birds, reptiles, frogs, fishes and select invertebrates. A comprehensive range of fauna survey techniques were employed to target both specific faunal groups and individual species of conservation significance. To achieve this, the *Terrestrial Vertebrate Fauna Survey Guidelines for Queensland*<sup>11</sup> guideline for conducting fauna surveys was consulted.

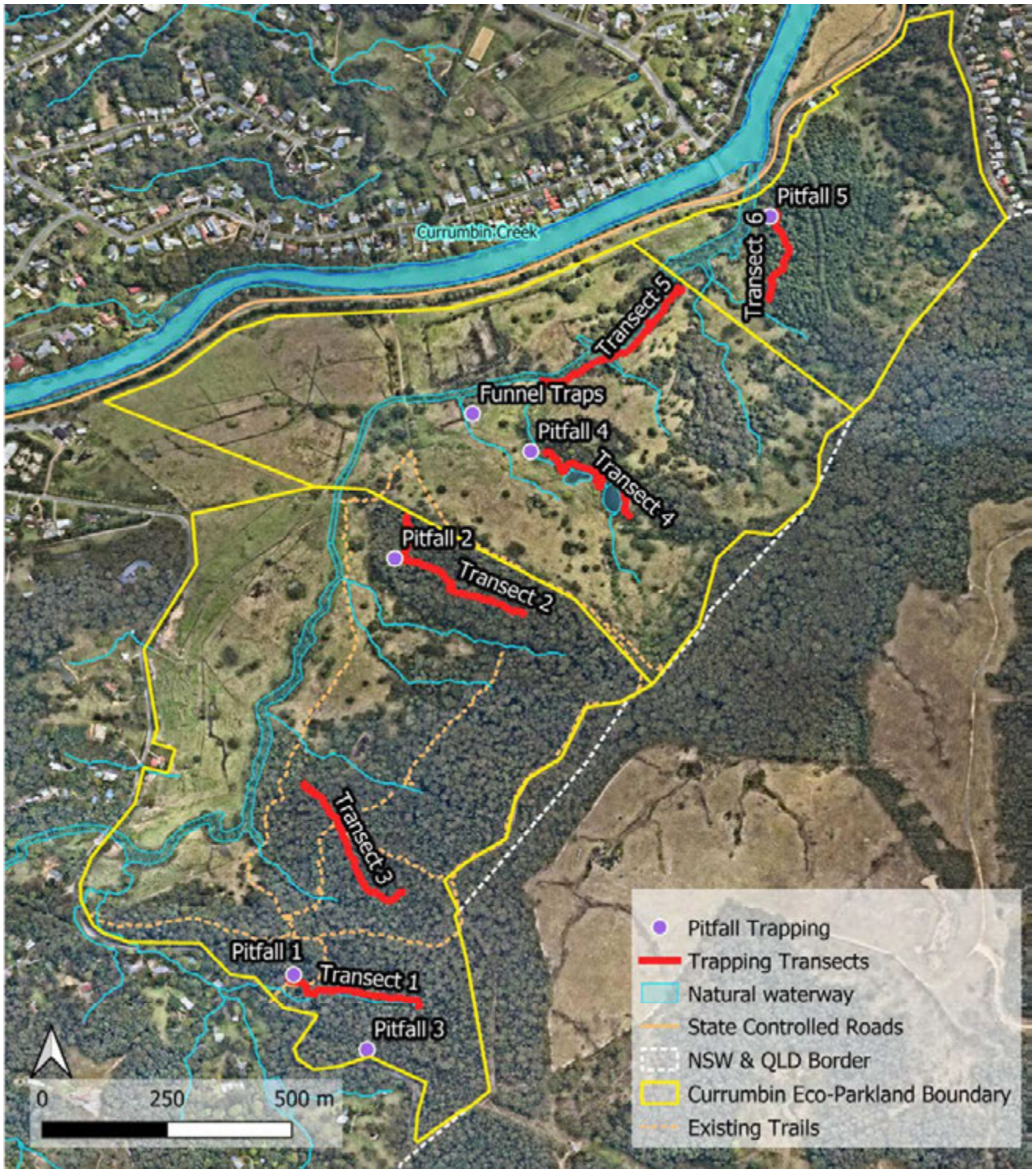
An initial investigation was undertaken over two days prior to the primary investigation to determine suitable locations for survey traplines. The primary fauna investigation was conducted over two five-day periods between the 16<sup>th</sup> and 27<sup>th</sup> of August 2022. In total six primary survey sites (standard traplines) were deployed during the initial survey in August (**Figure 2-2**). Traplines were deployed to be both spatially separated and to adequately sample the various vegetation/habitat types present (**Table 2**).

**Table 2: Habitat Description of Each of the Six Standard Trapline Locations**

Transect Number	RE Mapping	Habitat description
1	12.11.23/12.11.3a	Rocky gully with closed canopy and dense wet forest and rainforest understorey
2	12.11.23/12.11.3a	Eucalypt forest with open herbaceous and grassy understorey
3	12.11.23/12.11.3a	Eucalypt forest with largely open grassy understorey
4	12.11.23/12.11.3a	Disturbed forest/open grassland adjacent to permanent dams
5	12.11.3a/12.3.1	Mangrove/Casuarina/Eucalyptus lined tidal creek
6	No RE	Pine forest with open understorey

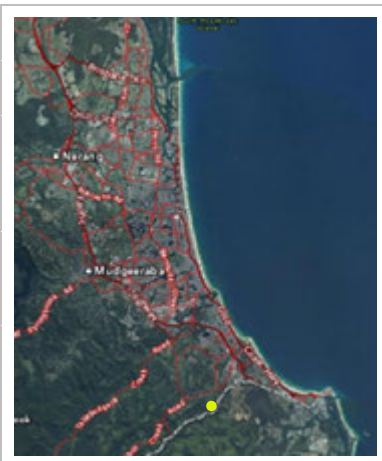
<sup>10</sup> Surveys were carried out under Ethics Permit CA 2018/08/1217 and Research Permit WA0026562

<sup>11</sup> Eyre TJ, Ferguson DJ, Smith GC, Mathieson MT, Venz MF, Hogan, LD, Hourigan CL, Kelly, AL & Rowland, J. 2022. *Terrestrial Vertebrate Fauna Survey Assessment Guidelines for Queensland*, Version 4.0. Brisbane: Department of Environment and Science, Queensland Government.



**Figure 2-2**

<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Fauna Survey Transects and Pitfall Traps
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH





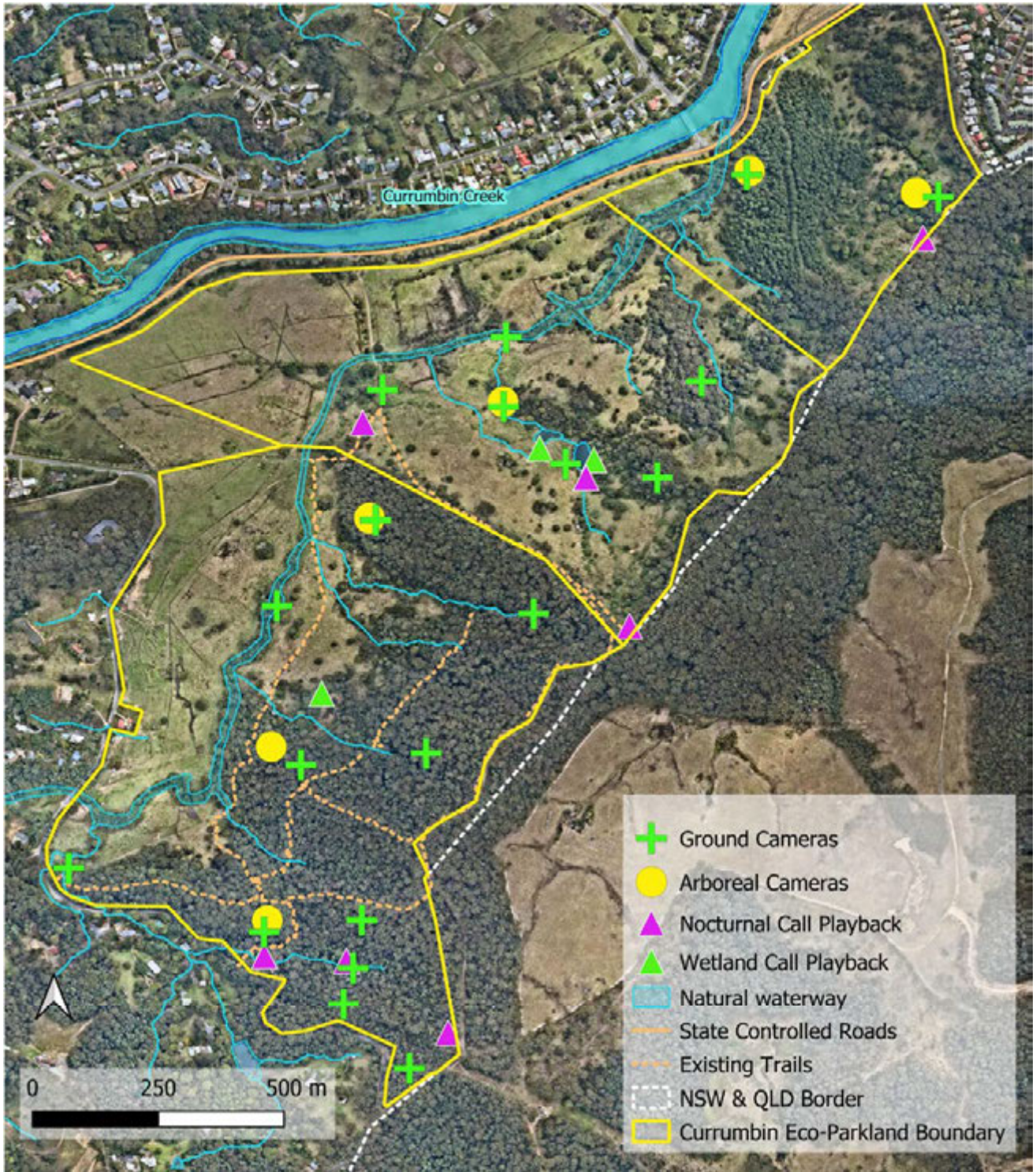
An additional survey for those species groups which are less active during the cooler months and to further target some of the conservation significant fauna potentially present (**Table 3**), was undertaken over eight days/nights between the 7<sup>th</sup> and 18<sup>th</sup> of October 2022 and over a single day on the 21<sup>st</sup> of November. These visits utilised fewer survey methods than the initial August survey, but did include - diurnal and nocturnal investigations, spotlighting, terrestrial baited camera trapping, call playback, acoustic recorders, fish trapping and targeted crayfish searches.

Each standard trap line was between 250 and 400 metres in length and consisted of – 25 Elliott ‘A’ aluminium box traps, two Elliott ‘B’ aluminium box traps (one at the start and one at the end of each transect), a pitfall trap line (10-metre-long drift fence) consisting of three buckets and two funnel traps, one arboreal camera trap set approximately two metres off the ground and one terrestrial camera trap. There was one exception to this in that no pitfall traps were placed in association with primary survey site 5, as the water table was too high, however funnel traps were deployed. Traplines were cleared daily before 7.00am and pitfall traps twice daily (early morning and afternoon) with any captured animals released at the capture site following identification.

In addition to the standard traplines, numerous other survey techniques were also undertaken including - additional baited terrestrial camera trapping, nocturnal call playback, wetland bird call playback (**Figure 2-3**), spotlighting, bird surveys, microbat ultrasonic call detection, acoustic meter recording, frog surveys, fish and aquatic decapod surveys, diurnal search for vertebrates and invertebrates, scat searches and habitat assessments (**Figure 2-4**).

*Photo 8: Nocturnal Spotlighting (N. Power)*



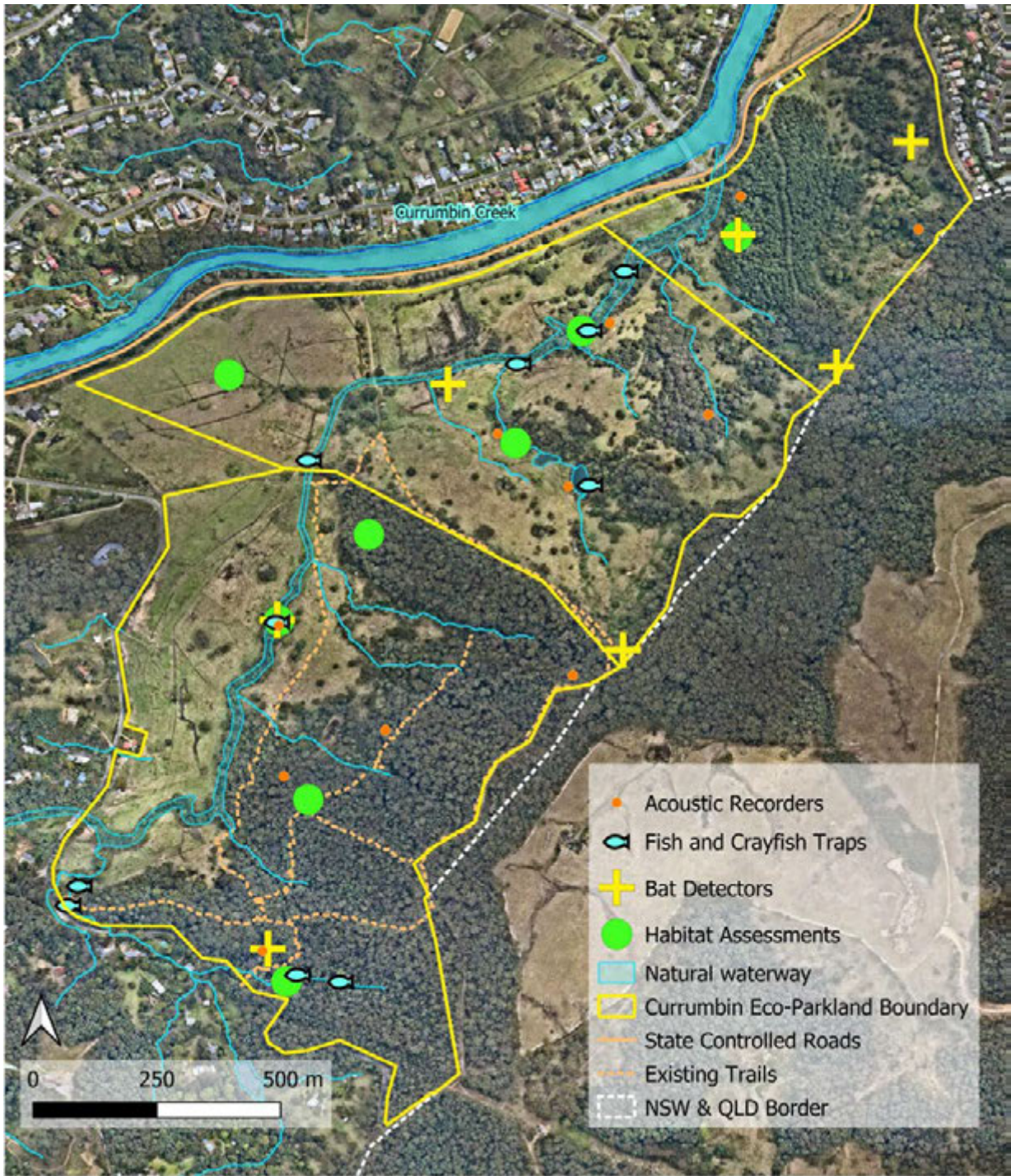


**Figure 2-3**

<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Fauna Survey Cameras and Call Playback
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH



ddwfauna  
Environmental Consultants



**Figure 2-4**

<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Fauna Survey Acoustic Recorders, Fish Traps, Bat Detectors & Habitat Assessments
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH





**Table 3: Threatened Fauna Species Targeted During the 2022 Investigation**

- [As listed in the Queensland Nature Conservation \(Animals\) Regulation 2020 \(Nature Conservation Act 1992\).](#)

CR = Critically Endangered, E = Endangered, V = Vulnerable, LC = Least Concern

- [As listed in the Environmental Protection and Biodiversity Conservation Act 1999 \(EPBC Act\).](#)

E\*= Endangered, V\*= Vulnerable, CD\*= Conservation dependent

Class	Family	Genus	Species	Common Name	Status
Decapoda	PARASTACIDAE	<i>Euastacus</i>	<i>maidae</i>	Hinterland Crayfish	CR
Insecta	NOCTUIDAE	Phyllodes	<i>imperialis smithersi</i>	Southern Pink Underwing Moth	E*
Insecta	PAPILIONIDAE	<i>Ornithoptera</i>	<i>richmondia</i>	Richmond Birdwing Butterfly	V
Insecta	LYCAENIDAE	<i>Acrodipsas</i>	<i>illidgei</i>	Illidge's Ant Blue	V
Amphibia	LIMNODYNASTIDAE	<i>Adelotus</i>	<i>brevis</i>	Tusked Frog	V
Aves	PODARGIDAE	<i>Podargus</i>	<i>ocellatus plumiferus</i>	Plumed Frogmouth	V
Aves	APODIDAE	<i>Hirundapus</i>	<i>caudacutus</i>	White-throated Needletail	V,V*
Aves	TURNICIDAE	<i>Turnix</i>	<i>melanogaster</i>	Black-breasted Button-quail	V,V*
Aves	STRIGIDAE	<i>Ninox</i>	<i>strenua</i>	Powerful Owl	V
Aves	ACCIPITRIDAE	<i>Erythrotriorchis</i>	<i>radiatus</i>	Red Goshawk	E,V*
Aves	CACATUIDAE	<i>Calyptorhynchus</i>	<i>lathami</i>	Glossy Black-Cockatoo	V,V*
Mammalia	PSEUDOCHEIRIDAE	<i>Petauroides</i>	<i>armillatus/volans</i>	Greater Glider	E,E*
Mammalia	PETAURIDAE	<i>Petaurus</i>	<i>australis</i>	Yellow-bellied Glider	V,V*
Mammalia	PHASCOLARCTIDAE	<i>Phascolarctos</i>	<i>cinereus</i>	Koala	E,E*
Mammalia	POTOROIDAE	<i>Potorous</i>	<i>tridactylus</i>	Long-nosed Potoroo	V,V*
Mammalia	PTEROPODIDAE	<i>Pteropus</i>	<i>poliocephalus</i>	Grey-headed Flying-fox	LC,V*
Mammalia	VESPERTILIONIDAE	<i>Chalinolobus</i>	<i>dwyeri</i>	Large-eared Pied Bat	V,V*



## 2023/2024 Field Survey

Following on from Detailed Baseline Fauna Surveys undertaken in 2022, additional surveys targeting threatened or otherwise significant species were carried out during 2023/24. These targeted surveys were designed to gain a greater understanding of the significant species present or potentially present and use this knowledge where appropriated to provide input into an overall Ecological Restoration Plan.

The species or species groups targeted are outlined in **Table 4**. The species or groups targeted are either listed as threatened under either State and/or Commonwealth legislation or have the potential to be impacted by the proposed development of the CEP. This was not an exhaustive survey of all potential or known conservation significant species, but rather targeted to those species potentially impacted by the proposed development of the CEP.

**Table 4: Targeted Fauna Species 2024 Survey**

Species or species group	Status
Hinterland crayfish ( <i>Euastacus madae</i> )	Critically endangered (NCA and EPBC)
Pink Underwing Moth (southern) ( <i>Phyllodes imperialis smithersi</i> )	Endangered (EPBC)
Richmond birdwing butterfly ( <i>Ornithoptera richmondia</i> )	Vulnerable (NCA)
Tuskedfrog ( <i>Adelotus brevis</i> )	Vulnerable (NCA)
Powerful owl ( <i>Ninox strenua</i> )	Vulnerable (NCA)
Wetland birds (various species)	Various
Southern greater glider ( <i>Petauroides</i> sp)	Endangered (NCA and EPBC)
Koala ( <i>Phascolarctos cinereus</i> )	Endangered (NCA and EPBC)

A description of fauna and habitat survey methods for targeted 2024 surveys are provided in **Table 5**.



**Table 5: 2024 Fauna Survey Methods**

Species or Species Group	Survey Method	Additional Information
Hinterland crayfish ( <i>Euastacus maida</i> )	A total of 80 person hours over several days was spent undertaking intensive diurnal and nocturnal surveys for this species in potential habitat areas. As it is a burrowing species, this largely consisted of looking under rocks within the drainage lines present in the higher altitude well vegetated southern portion of the CEP.	Although not recorded during previous investigations, it has the potential to occur in permanent/ephemeral drainage lines and gullies. The protection of these areas is crucial for their survival and may be impacted by both restoration activities, proposed trail access (Forest Loop) and fire management which could negatively impact areas of suitable habitat particularly within RE12.11.23/12.11.3a.
Pink Underwing Moth (southern) ( <i>Phyllodes imperialis smithersi</i> )	A total of 5 person hours was spent inspecting the known location of the caterpillar host plant ( <i>Carronia multisepalea</i> ), to determine if the moth was utilising the plant for breeding purposes.	Although not recorded during 2022 investigations the larval host plant <i>Carronia multisepalea</i> was initially located adjacent to the road reserve in the south-west corner of the property and was more recently observed in a gully within the mid region of the site.
Richmond birdwing butterfly ( <i>Ornithoptera richmondia</i> )	A total of five person hours was spent examining the known location of the caterpillar host plant ( <i>Pararistolochia praevenosa</i> ), to determine if any larvae were present on the vine and if any butterflies were seen in the vicinity of the host plant or other parts of the CEP.	Present, recorded during surveys in 2022. May potentially be negatively impacted by track development or planned fires in suitable upland habitat. <i>Pararistolochia praevenosa</i> was observed as numerous mature stems reaching the canopy in one mid property gully.
Tuskedfrog ( <i>Adelotus brevis</i> )	A total of five person hours was spent undertaking diurnal and nocturnal acoustic and call playback surveys for this species in and around suitable habitat including dams and freshwater sections of creek lines, to gain a greater understanding of its distribution and abundance.	Present, recorded during surveys in 2022/23. May potentially be negatively impacted by any proposed changes/draining/development to suitable waterbodies (i.e. dams).
Powerful owl ( <i>Ninox strenua</i> )	A total of 24 person hours was spent undertaking nocturnal spotlighting and call playback surveys. Addition diurnal inspections of large hollow bearing trees was also undertaken to help to determine if this species was using any of the hollows on the CEP for breeding purposes.	Recorded during the previous investigation in 2022. Further studies required to determine possible breeding location and ensure that proposed access trails (Forest Loop) and planned burns do not negatively impact hollow bearing habitat trees or adversely impact the various prey species present, including possums and gliders.
Wetland birds (various species)	A total of 30 person hours was spent undertaking diurnal surveys of dams, lowland creeks and	Numerous wetland bird species occur on the property which may be impacted by on-ground works, particularly in and around

Species or Species Group	Survey Method	Additional Information
	grassland which becomes inundated following significant rainfall.	dams and the lowland areas which are likely to be most heavily impacted by the proposed development.
Southern greater glider ( <i>Petauroides</i> sp)	A total of 24 person hours was spent undertaking nocturnal spotlighting, in addition to diurnal surveys of apparently suitable large hollow bearing trees.	Not recorded during previous investigation (2022), but previously recorded in early 2000's. If present, they may be impacted any proposed trail access (Forest Loop) and fire management activities i.e. wildfire or planned burns which, if too intense or frequent have been shown to negatively impact greater glider populations.
Koala ( <i>Phascolarctos cinereus</i> )	A total of 20 person hours was spent undertaking diurnal and nocturnal surveys for both the characteristic scats at the base of feed trees and individuals in trees, throughout the CEP.	Recorded in relatively high numbers during the previous investigation, 2022. The population could be impacted by any changes to access/movement corridors through the site (i.e. roads and fences), planned burns, pest management strategies and restoration activities in preferred or more marginal habitat.
Eastern-grey kangaroo ( <i>Macropus giganteus</i> )	A total of 12 person hours was spent undertaking an eastern grey kangaroo census, at dawn and dusk to determine a baseline population for the CEP. Counts were conducted by two individuals at a distance using binoculars on a number of occasions and the population number then estimated using the average of these counts.	Present in large numbers across the site. The population will need to be managed to ensure they continue to successfully utilise the lowland habitat, i.e. possible fencing issues, ensure sufficient grazing habitat is retained, movement corridors are retained and safety issues with adjacent roads addressed.

**Attachment 1** contains further details on fauna survey methods.

### 2.2.3 Aquatic Survey Methods

Blue Earth Environmental conducted an aquatic ecological assessment of the lower portions of Currumbin Eco-Parkland in 2023, which consisted of both desktop and field assessments<sup>12</sup>. The objectives of the assessments were to:

- Validate the type, extent and condition of aquatic habitats occurring within the study area.
- Assess locations for proposed ephemeral wetlands.
- Conduct in-situ water quality sampling to assess wetland function, and
- Undertake sampling of fish communities within estuarine and freshwater reaches.

Species of conservation significance identified within the desktop assessment were assigned a likelihood of occurrence and targeted in the field assessments.

A site inspection was undertaken on the 11th and 12th of December 2023 during a tidal cycle approaching spring tides (tidal range on the 12th of December ranging 0.17 to 1.68m, HAT 2.0m). A total of thirteen sites were assessed for habitat and water quality (where surface water was present). Of these, fish communities were sampled at three sites within a representative estuarine, riverine and lacustrine wetland. Sample sites are provided on **Figure 2-5**.

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<sup>12</sup> Currumbin Eco Parkland Aquatic Ecological Assessment –2024. Blue Earth Environmental BE1132-RE.001

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- Currumbin Eco Parkland Boundary
- Local Government Area Boundary
- Sampling Site
- Observation
- Roads
- Lacustrine Wetland - Non Floodplain, Modified
- Riverine Main Channel
- Riverine
- - - Riverine - Modified Canal
- Intertidal - Channel and Mangrove
- - - Intertidal - Modified Canal
- Palustrine Wetland? Undetermined
- Drainage Canal - Undetermined



**FIGURE 5**  
Updated wetland mapping

		<b>Figure 2-5</b>
<b>Client:</b> Economic Development Queensland	<b>Project:</b> Currumbin Eco-Parkland Ecological Restoration Plan	<b>Title:</b> Aquatic Habitat Wetlands, Waterways and sample sites
<b>Data Source:</b> Nearmap	<b>Date:</b> 22/08/24	<b>Drawn:</b> NH





## 2.3 Limitations 2022

### Flora

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Whilst all effort was made to observe all site species and locate all individual threatened plants, a small number may have been overlooked due to practical limitations of terrain and observance. Conditions at the time of the survey were ideal regarding weather cycles i.e. extended wet periods had allowed for significant growth of most species. It is likely, therefore, that certain species difficult to observe in drier times were observed. Seasonal differences did allow for some orchids to be in flower (therefore easier to identify); however, a small number of species may be present at other times of the year (e.g. *Caladenia* spp.). Having said that, there were no seasonally cryptic threatened species that required additional survey at other times of the year. Survey was carried out only during daylight hours and not during inclement weather.

### Fauna

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The fauna surveys and techniques utilised were considered comprehensive. Conditions during the August 2022 survey were largely dry with average late Autumn temperatures. Conditions during the additional surveys undertaken in October 2022 were, as expected, warmer than the August surveys, with periods of rainfall just prior and during the survey. It should be noted however that due to the cloudy and relatively wet conditions during October, temperatures were generally cool and below average for mid-spring. This may have limited, probably only to a small extent, the activity of some faunal groups particularly that of insects and reptiles, making detection more difficult. This means that the species richness recorded was lower than it may have been had temperatures been closer or above average or if the survey had been undertaken in warmer conditions later in summer.



### 3.0 DESKTOP ASSESSMENT RESULTS

#### 3.1 Preliminary Ecological Assessment (2021)

S5 Environmental prepared a Preliminary Ecological Assessment document<sup>13</sup> to investigate the constraints and potential opportunities for the Currumbin Eco-Parkland site, with an emphasis on future master planning for eco-based tourism activities and facilities.

According to the Preliminary Ecological Assessment, the review included desktop assessment of Federal, State and Local Government Overlays, allowing for investigation into the ecological values, features and functionality of the site. Further the assessment investigated the presence and or absence of *Nature Conservation Act 1992* (NCA) and *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) listed species and ecological corridor connectivity across the site and regional surrounds. No field assessments were undertaken.

The report provided a comprehensive legislative and planning overview which described the regulatory framework applicable to the project and which confirmed that legislative overlays identified will constrain the development of some areas of the site but conversely will provide opportunities for the design and development of the Currumbin Eco-Parkland.

An Ecological Masterplan was developed which mapped constraints and sensitive areas and areas requiring further investigation (Ecological Investigation Areas). The Plan outlined future potential uses, improved connectivity and strengthening corridors between areas of high Importance. Further, the Ecological Masterplan recommended restoration, revegetation and weed control for medium ecologically important areas, and higher impact activity opportunities in the low ecological value areas.

This 2025 Consortium Report provides additional information on City of Gold Coast *City Wide Significant Species* and *Priority Species* (Matters of Local Environmental Significance). The Consortium study ground truths desktop assessment results and provides mapping updates regularised since the finalisation of the S5 Environmental Report.

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<sup>13</sup> S5 Environmental (May 2021) Currumbin-Eco Parkland Preliminary Ecological Assessment (S521052ER001v1.1)

### 3.2 International Agreements

Relevant international conventions and agreements reviewed and assessed as part of the Currumbin Eco-Parkland project are provided in **Table 6**.

**Table 6: International Agreements and Findings**

Agreement	Relevance to CEP*
<p><b>Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)</b></p> <p>A United Nations treaty providing a global platform for the conservation and sustainable use of migratory animals and their habitats.</p>	<p>Birds listed under this convention are also listed under the EPBC Act. Relevance to CEP is considered under the EPBC Act.</p> <p><i>Note: The Monarch Butterfly is listed in this Convention and Australia listed as a country of occurrence. The Monarch Butterfly is not a listed threatened species under Federal, State or Local legislation.</i></p>
<p><b>Ramsar Convention on Wetlands</b></p> <p>The broad aims of the Ramsar Convention are to halt the worldwide loss of wetlands and to conserve, through wise use and management, those that remain.</p>	<p>The closest wetland to CEP of International Importance is Moreton Bay<sup>14</sup> approximately 30km to the north.</p>
<p><b>Bilateral migratory bird agreements:</b></p> <ul style="list-style-type: none"> <li>• JAMBA</li> <li>• CAMBA</li> <li>• ROKAMBA</li> </ul> <p>Each of these agreements provides for the protection and conservation of migratory birds and their important habitats, protection from take or trade except under limited circumstances, the exchange of information, and building cooperative relationships.</p>	<p>Birds listed under this convention are also listed under the EPBC Act.</p>

\*Currumbin Eco-Parkland

<sup>14</sup> Australian Government Department of Environment Australia's Ramsar Sites



### 3.3 Matters of National Environmental Significance (MNES)

#### 3.3.1 *Environment Protection and Biodiversity Conservation Act 1999*

An EPBC Act Protected Matters Report was generated on 18 October 2022 which provided information on Matters of National Environmental Significance (MNES) and other matters protected by the EPBC Act, that may occur in or may relate to the lots making up the Currumbin Eco-Parkland and a 5km radius around the site (buffer Area). An updated Report was generated on 19th November 2024.

#### Summary of Findings:

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Wetlands of International Importance – Ramsar	0
Listed Threatened Ecological Communities	7
Listed Threatened Species	123
Listed Migratory Species	75

**Table 7** lists the seven (7) Threatened Ecological Communities returned in the 5km radius protected matters search and their likelihood of occurring on the site (Feature Area) based on the EPBC Act data.

Threatened species and migratory species identified in the protected matters search are listed in **Tables A & B** in **Attachment 2**. These tables provide an assessment of the likelihood of the species occurring on the Currumbin Eco-Parkland site<sup>15</sup>, as well as identifying any species that have been recorded within the Feature Area from the desktop assessment. Due to the proximity of the site to the Pacific Ocean, the buffer area included marine and marine migratory species i.e. pelagic birds, open-water fishes and marine reptiles and mammals. As there is no habitat present within the Currumbin Eco-Parkland for these species they were not reviewed and are not included in **Attachment 2**.

A copy of the protected matters report is also provided in full in **Attachment 3**.

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<sup>15</sup> Based on Local and Expert Knowledge

**Table 7: EPBC Act Desktop Search for Threatened Ecological Communities**

Community Name	Threatened Category	EPBC Presence Text	EPBC Buffer Status
1. Coastal Swamp Oak ( <i>Casuarina glauca</i> ) Forest of New South Wales and Southeast Queensland ecological community	Endangered	Community likely to occur within area	In feature area
2. Coastal Swamp Sclerophyll Forest of New South Wales and Southeast Queensland	Endangered	Community likely to occur within area	In feature area
3. Dunn's white gum ( <i>Eucalyptus dunnii</i> ) moist forest in north-east New South Wales and south-east Queensland	Endangered	Community may occur within area	In buffer area only
4. Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	Community may occur within area	In buffer area only
5. Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area	In feature area
6. Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In feature area
7. Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and Southeast Queensland bioregions	Endangered	Community likely to occur within area	In feature area

Consideration to potential development assessment or referral triggers under the *EPBC Act 1999*, may be required when any of the above Threatened Ecological Communities are confirmed as occurring on site, and proposed works are likely to occur adjacent to or within these communities.

### 3.4 Matters of State Environmental Significance (MSES)

Matters of State Environmental Significance (MSES) are a component of the biodiversity state interest that is defined under the Queensland State Planning Policy (SPP) and the *Environmental Offsets Regulation 2014* (Offset Regulation). MSES includes certain environmental values that are protected under Queensland legislation. The following MSES have been reviewed with respect to the Currumbin Eco-Parkland site.

#### 3.4.1 Regulated Vegetation

Regulated Vegetation is a MSES. Under the *Vegetation Management Act 1999*, The Regulated Vegetation Management Map provides categories of vegetation when determining vegetation clearing requirements and The Regulated Vegetation Supporting Map defines regional ecosystems, wetlands, watercourses and essential habitat across the landscape. For the Currumbin Eco-Parkland site, the Regulated Vegetation Management Map is provided in **Attachment 4** and the Supporting Map is provided as **Figure 3-1**.

The Vegetation Categories mapped (28/05/24) for the site are summarised in **Table 8**.

Category B = Remnant Vegetation Areas  
 Category C = High-Value Regrowth Areas  
 Category X = Non-Remnant Vegetation Areas

**Table 8: Desktop Vegetation Categories**

Lot Description	Category B	Category C	Category X
1 RP854934	3.1	1.4	49.5
2 RP168012	35.2	4.3	30.8
247 RP854934	1.7	2.9	19.8
<b>Total (ha)</b>	<b>40</b>	<b>8.6</b>	<b>100.1</b>

Within Category B and Category C areas are Regional Ecosystems which are shown on the Vegetation Management Supporting Map (**Figure 3-1**). The Regional Ecosystems mapped for all three lots across the site are summarised in **Table 9**.

# Vegetation management supporting map

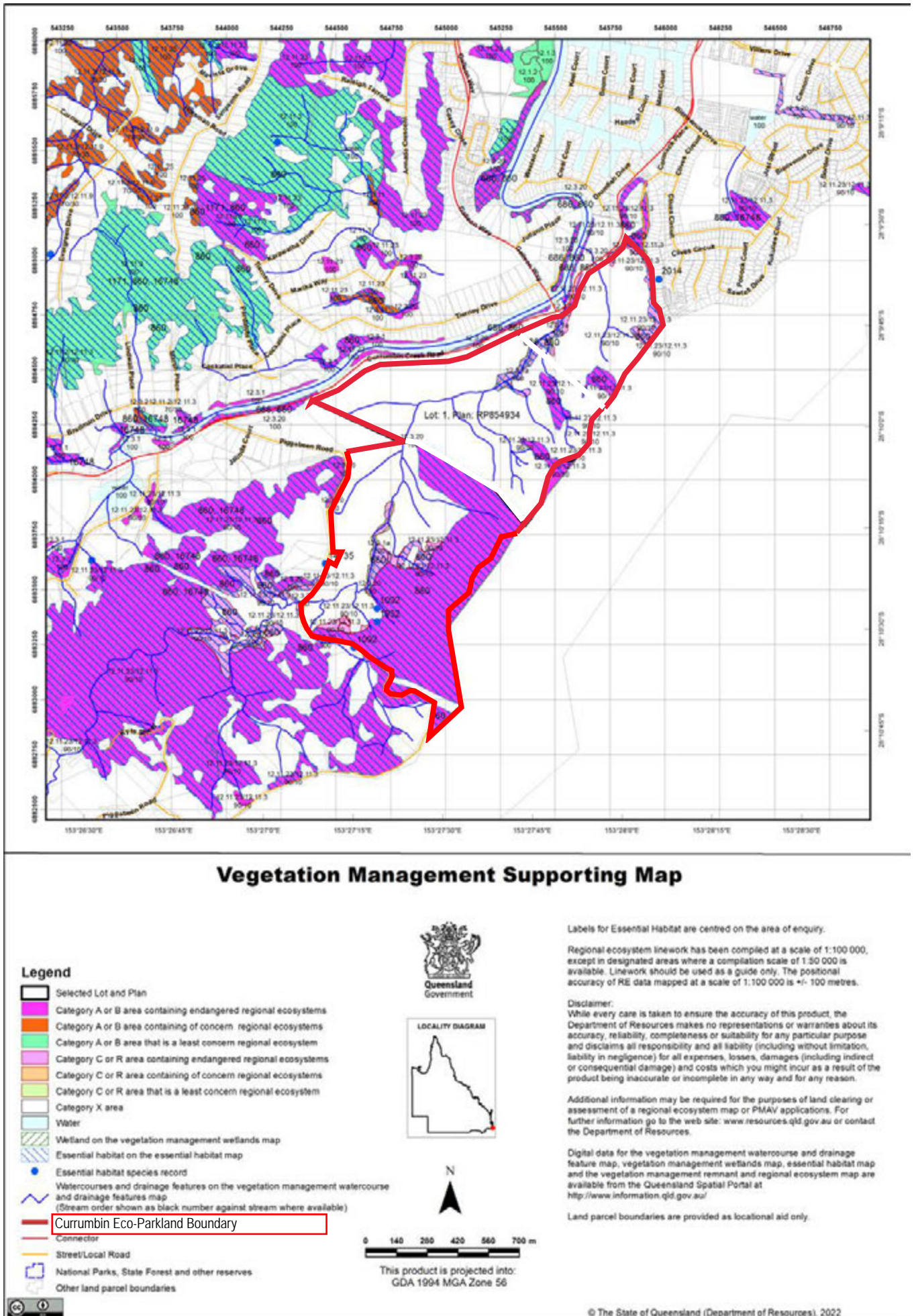


Figure 3-1  
Vegetation Management Map

**Table 9: Desktop Extent of Regional Ecosystems**

Regional Ecosystems	VMA Status	Category	Area (ha)	Description
12.11.23	Endangered	B	35.84	<i>Eucalyptus pilularis</i> open forest on coastal metamorphics and interbedded volcanics
	Endangered	C	3.69	
12.11.3	Least Concern	B	3.99	<i>Eucalyptus siderophloia</i> , <i>E. propinqua</i> +/- <i>E. microcorys</i> , <i>Lophostemon confertus</i> , <i>Corymbia intermedia</i> , <i>E. acmenoides</i> open forest on metamorphics +/- interbedded volcanics
	Least Concern	C	0.41	
12.3.1a	Endangered	C	4.53	Gallery rainforest (notophyll vine forest) on alluvial plains
12.3.20	Endangered	C	<0.12	<i>Melaleuca quinquenervia</i> , <i>Casuarina glauca</i> +/- <i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>M. styphelioides</i> open forest on low coastal alluvial plains
Non-Remnant	None	X	100.1	-

Any proposed vegetation clearing or works in proximity to vegetation on the Currumbin Eco-Parkland site may trigger assessable development under Federal, State or Local Government regulations and should be considered before works are undertaken.

For example, the site contains environmental significance overlays under the City of Gold Coast's City Plan that could trigger assessable development - Operational Works Tree Clearing if impacts occur to vegetation within these overlay areas and the clearing is not exempt or accepted development. The site also contains vegetation regulated by the Queensland State Government such as Category B & C vegetation shown on **Figure 3-1**. Impacts to regulated vegetation that are not defined as exempt clearing work by the *Planning Regulation 2017*, or other relevant legislation, may trigger assessable development. Similarly, there is the potential for matters of National Environmental Significance (protected matters) to be located on the site. If development of the Currumbin Eco-Parkland could have an impact on a protected matter, it may need to be referred to the Australian Government for assessment.

### 3.4.2 Wetlands and Watercourses

Vegetation Management Wetlands and Watercourses located on the Currumbin Eco-Parkland site are shown on the Vegetation Management Supporting Map (**Figure 3-1 & Attachment 4**) and regulated under the *Vegetation Management Act 1999*.

Minor drainage features flow from the elevated ridges down to the lowland areas of the site converging in a primary watercourse flowing west to east, discharging into Currumbin Creek at the northern end of the site.

Watercourses on-site are also regulated under the *Water Act 2000*, and a riverine protection permit is required for works within a waterway which results in filling or excavation unless subject to an exemption.

Wetlands are mapped along the lower sections of the on-site unnamed waterway. Currumbin Creek is mapped as 'Declared high ecological value waters (wetlands)' on the MSES Wetlands and Waterways map, and Map of Queensland Wetland Environmental Values under the *Environment Protection (Wetland and Water Biodiversity) Policy 2019*. Wetlands of general ecological significance are also located on site. Wetland and waterways mapping is provided in **Attachment 4**.

### 3.4.3 Protected Wildlife Habitat

Protected wildlife habitat is habitat for an animal that is critically endangered, endangered, vulnerable or special least concern under the *Nature Conservation Act 1992* and mapped as essential habitat on the Vegetation Management Supporting Map – blue hatching (**Figure 3-1 & Attachment 4**). Further protected wildlife habitat includes high risk areas on the flora survey trigger map (**Attachment 4**), which identifies large areas of the Currumbin Eco-Parkland mapped as high risk.

Protected wildlife generating essential habitat on the site is listed in **Table 10**.

**Table 10: Protected Wildlife**

Scientific Name	Common Name	NCA Status
<i>Phascolarctos cinereus</i>	Koala	Endangered
<i>Crinia tinnula</i>	Wallum Froglet	Vulnerable
<i>Turnix melanogaster</i>	Black-breasted Button-quail	Vulnerable
<i>Podargus ocellatus plumiferus</i>	Plumed Frogmouth	Vulnerable
<i>Ornithoptera richmondia</i>	Richmond birdwing	Vulnerable
<i>Cassia marksiana</i>	Brush Cassia	Vulnerable
<i>Macadamia tetraphylla</i>	Queensland Nut	Vulnerable
<i>Randia moorei</i>	Spiny gardenia	Endangered
<i>Rhodomyrtus psidioides</i>	Native guava	Critically Endangered
<i>Parsonsia largiflorens</i>		Endangered
<i>Leichhardtia longiloba</i>	Milk Vine	Vulnerable



Koala habitat is defined and protected under regulatory mechanisms in the *Planning Regulation 2017*. Koala habitat mapping within the Currumbin Eco-Parkland site is provided in **Attachment 4** and included in **Figure 3-2**. Two koala habitat types are mapped over the site:

- **Koala priority area** - *The main purpose of determining that an area is a koala priority area is to strategically focus long-term management and monitoring effort on areas that have the highest likelihood of achieving conservation outcomes for koalas.*
- **Koala habitat (core)** - *The main purpose of determining that an area is a koala habitat area is to avoid impacts on koala habitat to ensure the long-term persistence of koala populations in the wild.*

Schedule 10 Part 10 of the *Planning Regulation 2017* defines prohibited and assessable development in relation to koala habitat and development. Any proposed works on the Currumbin Eco-Parkland site will need to first determine approval requirements under this legislation.

#### **3.4.4 Threatened Species**

Threatened species (critically endangered, endangered, vulnerable) under the *Nature Conservation Act 1992* and habitat for special least concern animals under the *Nature Conservation Act 1992* are MSES.

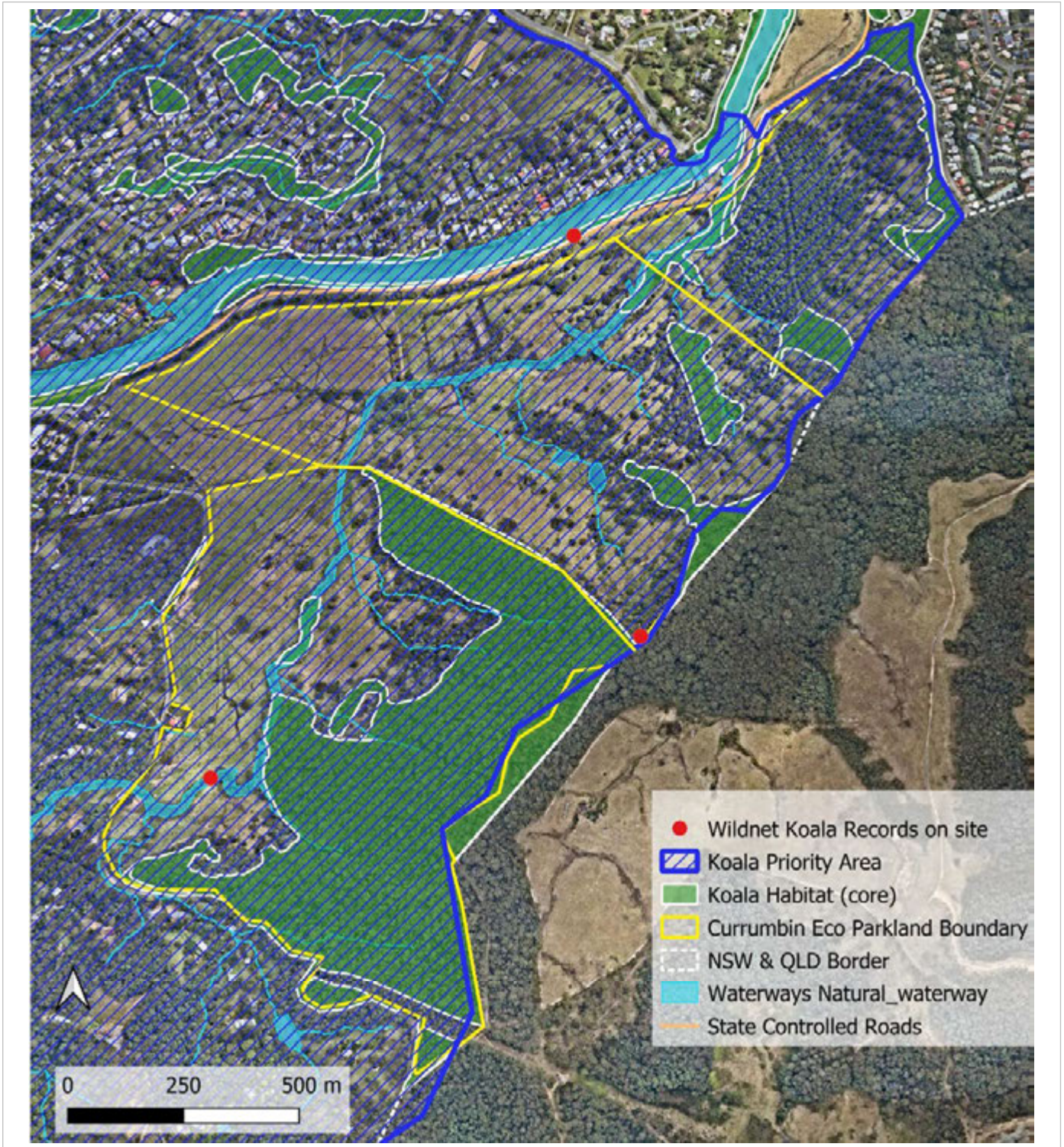
A database search of threatened species under the NCA, within a 5km radius of the Currumbin Eco-Parkland site boundary, has been undertaken and results are presented in **Tables A (Flora) & B (Fauna)** in **Attachment 2**. These tables provide an assessment of the likelihood of the listed species occurring on the Currumbin Eco-Parkland site<sup>16</sup>, as well as identifying flora species that have been recorded within the site from the results of the desktop assessment.

#### **3.4.5 Fish Habitat Areas**

No fish habitat areas declared under the *Fisheries Act 1994* are mapped on the Currumbin Eco-Parkland site. The closest habitat area is 3.5km downstream on Currumbin Creek.

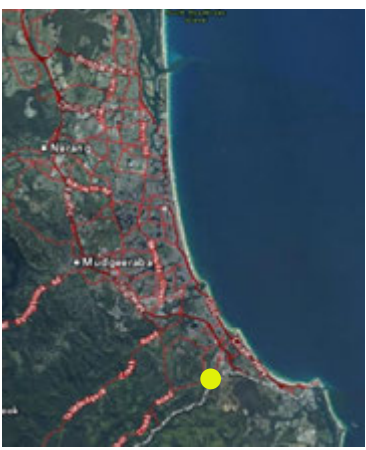
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<sup>16</sup> Based on Local and Expert Knowledge



**Figure 3-2**

<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Desktop Koala Habitat
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH





### 3.4.6 *Waterway Providing for Fish Passage.*

Any part of a waterway providing passage for fish is a MSES, only if the construction, installation or modification of waterway barrier works carried out under an authority will limit the passage of fish along the waterway.

A Moderate waterway for waterway barrier works is mapped through the central part of the Currumbin Eco-Parkland site (**Attachment 4**). Works within or adjacent to the mapped waterway should be considered with respect to potential development assessment triggers under the *Fisheries Act 1994*.

### 3.4.7 *Marine Plants*

A marine plant within the meaning of the *Fisheries Act 1994* is a MSES. Marine plants have not been specifically identified by the desktop assessment as being located within the site, however field assessment identified marine plants within the Currumbin Eco-Parkland site (refer section 4.0). Works within or adjacent to areas identified as containing marine plants should be considered with respect to potential development assessment triggers under the *Fisheries Act 1994*.

### 3.4.8 *Strategic Environmental Area*

The SPP defines protected areas under the NCA as MSES. Mapping results do not identify strategic environmental areas within the Currumbin Eco-Parkland.

## 3.5 **Matters of Local Environmental Significance (MLES)**

A matter of local environmental significance (MLES) is a locally significant matter that is prescribed under a local planning instrument and in the case of the Currumbin Eco-Parkland, prescribed under the City of Gold Coast's City Plan. A MLES cannot be a prescribed environmental matter if it is the same or substantially the same as a MNES or MSES. MLES prescribed under City Plan are listed in Schedule 6.7 City Plan Policy – Ecological Site Assessments. Those MLES which are mapped on the Currumbin Eco-Parkland site are listed below and identified in **Attachment 5**:

- Hinterland core habitat systems.
- Hinterland to coast critical corridors.
- Local significant species and their habitat.
- Vegetation Management
- Natural waterways and wetlands and associated buffers.

Hinterland core habitat systems are extensive tracts of intact habitat within the hinterland that support a variety of vegetation associations and provide habitat for diverse fauna populations.



Hinterland to coast critical corridors are bioregional corridors that connect large intact remnant vegetation in the city's west to coastal areas in the east.

Local significant species mapping identifies recorded locations of species of city-wide significance (CWS) and priority species (PS) for conservation. Data is sourced from the Gold Coast Flora and Fauna Database for species listed as significant species. Species in 2022 triggering the significant species overlay over Lots 1 & 247 RP854934 are listed in **Table 11**:

**Table 11: City of Gold Coast Local Significant Species**

Genus	Species	Common name	QLD status	EPBC status
<i>Calyptorhynchus</i>	<i>lathamii</i>	Glossy Black-cockatoo	Vulnerable	Vulnerable
<i>Endiandra</i>	<i>globosa</i>	Black Walnut	Near Threatened	
<i>Ozimops</i>	<i>lumsdenae</i>	Northern Free-tailed Bat		
<i>Ninox</i>	<i>strenua</i>	Powerful Owl	Vulnerable	
<i>Ornithoptera</i>	<i>richmondia</i>	Richmond Birdwing	Vulnerable	
<i>Phascolarctos</i>	<i>cinereus</i>	Koala	Endangered	Endangered
<i>Pteropus</i>	<i>poliocephalus</i>	Grey-headed Flying-fox		Vulnerable
<i>Vespadelus</i>	<i>darlingtoni</i>	Large Forest Bat		

Vegetation Management identifies areas of:

Regulated vegetation (MSES), high priority vegetation and medium priority vegetation<sup>17</sup>

Natural waterways and wetlands mapping identifies local wetlands mapped according to the Queensland Wetland Mapping and Classification Methodology and areas within water channels that have been classified as riverine wetlands. Minor waterways as identified on site are waterways that are fourth order streams and below. **Note:** Currumbin Creek is located adjacent to the site and is a Major Waterway.

<sup>17</sup> City Plan: v11 SC6.7 City Plan Policy – Ecological Site Assessment



### 3.6 Local Knowledge and Other

- The Ecology Team's technical knowledge of the local area and of individual species likely occur on the site was used alongside Government databases to inform the field assessment and targeted species surveys.
- Just as important, local community knowledge was invaluable in understanding the site and assisting with field assessment and targeted species surveys.
- The Consortium attended several meetings/events where interaction with the local community occurred i.e. Environmental Site Inspection with the Community on 05 August 2022 and the Enquiry By Design Workshop on 10 September 2022.
- NCRIS, CSIRO, GBIF (2022) Atlas of Living Australia <https://www.ala.org.au/> and the Council of Heads of Australasian Herbaria (2022) <https://avh.chah.org.au/> were searched for species location and distribution information. This information contributed to the desktop research.
- City of Gold Coast PD Online search of historic technical assessments lodged with Council since 2006 as part of development application lodgements. Documents reviewed included:
  - Flora, fauna and rehabilitation assessments conducted by GHD for the period 2007 and 2018.
  - References to an Ecological Assessment conducted by Planit in 2005.



## 4.0 FLORA ASSESSMENT RESULTS

### 4.1 General Description

Vegetation on the site covers a relatively complex range across various geologies, elevations, aspects, and modification levels. Lower portions contain a marine estuary which connects to a freshwater creek. Adjoining vegetation includes several types of riparian and alluvial communities in various condition states. A small number of exotic and plantation trees remain from previous use.

The vegetated foothills, hillsides and ridgetops are predominantly *Eucalyptus* forests which vary considerably in understorey diversity and composition depending largely on aspect, shelter, and grazing impacts. The understorey on many lower hillsides and moist gullies contains a diverse range of rainforest species, and pre-clear, it is likely these gullies linked directly with the long-since-cleared lowland subtropical rainforest, of which only fragments remain.

Regarding the condition of vegetation, many areas of remnant vegetation have had minimal disturbance other than historical selective logging and occasional (with few exceptions) historical grazing.

In some areas, natural regrowth has been allowed to occur over different time periods. For example, old regrowth in a small valley off Piggabeen Road strongly indicates pre-clear rainforest, yet *Eucalyptus* species which have opportunistically encroached when the area was cleared are currently the dominant canopy.

Regarding plant species diversity, a total of 418 native plants and 187 exotic plants (total 605 species) were observed during field surveys between 2022 and 2025. This represents a very high diversity of native plants given the relatively small size of the site and represents approximately 24.2% of the entire native flora of the City of Gold Coast<sup>18</sup>.

Regarding threatened plant species, a total of sixteen (16) threatened species were observed in 619 locations with a total of approximately 3,605 individual plants. This is also a large number of individual threatened species for the area and surpassed our expectations.

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<sup>18</sup> <https://www.goldcoast.qld.gov.au/Council-region/About-our-city/Environment-sustainability/About-our-environment/Native-plants#>

## 4.2 Vegetation Communities

The vegetation type and structure vary throughout the site, from Mangroves and She-Oak's to cleared pasture areas, to rainforest and *Eucalyptus* Forest on hillsides, gullies and ridges. Where different vegetation types meet, or change, they often blend gradually in an ecotonal zone, and there is rarely a distinct 'line' between them. Additionally, while some individual species are predictable to a particular location and vegetation community e.g. Mangroves, many site species occur across all site vegetation types.

**Figure 4-1** shows the approximate location of individual vegetation communities on the site and these communities are described below. Areas not nominated as a vegetation community represent scatter regrowth vegetation.

### 4.2.1 Threatened Ecological Communities (TEC's) under the EPBC Act

**Table 12** indicates the TEC's that may occur on the site as per Section 3.3.1 and the comparison results to the EPBC Act criterion for listing<sup>19</sup>. Assessment results against the criterion for TEC's were based on field assessments.

**Table 12: EPBC Act Threatened Ecological Communities Assessment**

Community Name	Threatened Category	Does the site meet the Criterion?
1. Coastal Swamp Oak ( <i>Casuarina glauca</i> ) Forest of New South Wales and Southeast Queensland ecological community	Endangered	<b>Yes</b>
2. Coastal Swamp Sclerophyll Forest of New South Wales and Southeast Queensland	Endangered	No
3. Dunn's white gum ( <i>Eucalyptus dunnii</i> ) moist forest in north-east New South Wales and south-east Queensland	Endangered	No
4. Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	No
5. Lowland Rainforest of Subtropical Australia	Critically Endangered	<b>Yes</b>
6. Subtropical and Temperate Coastal Saltmarsh	Vulnerable	No
7. Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and Southeast Queensland bioregions	Endangered	No

<sup>19</sup> <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>



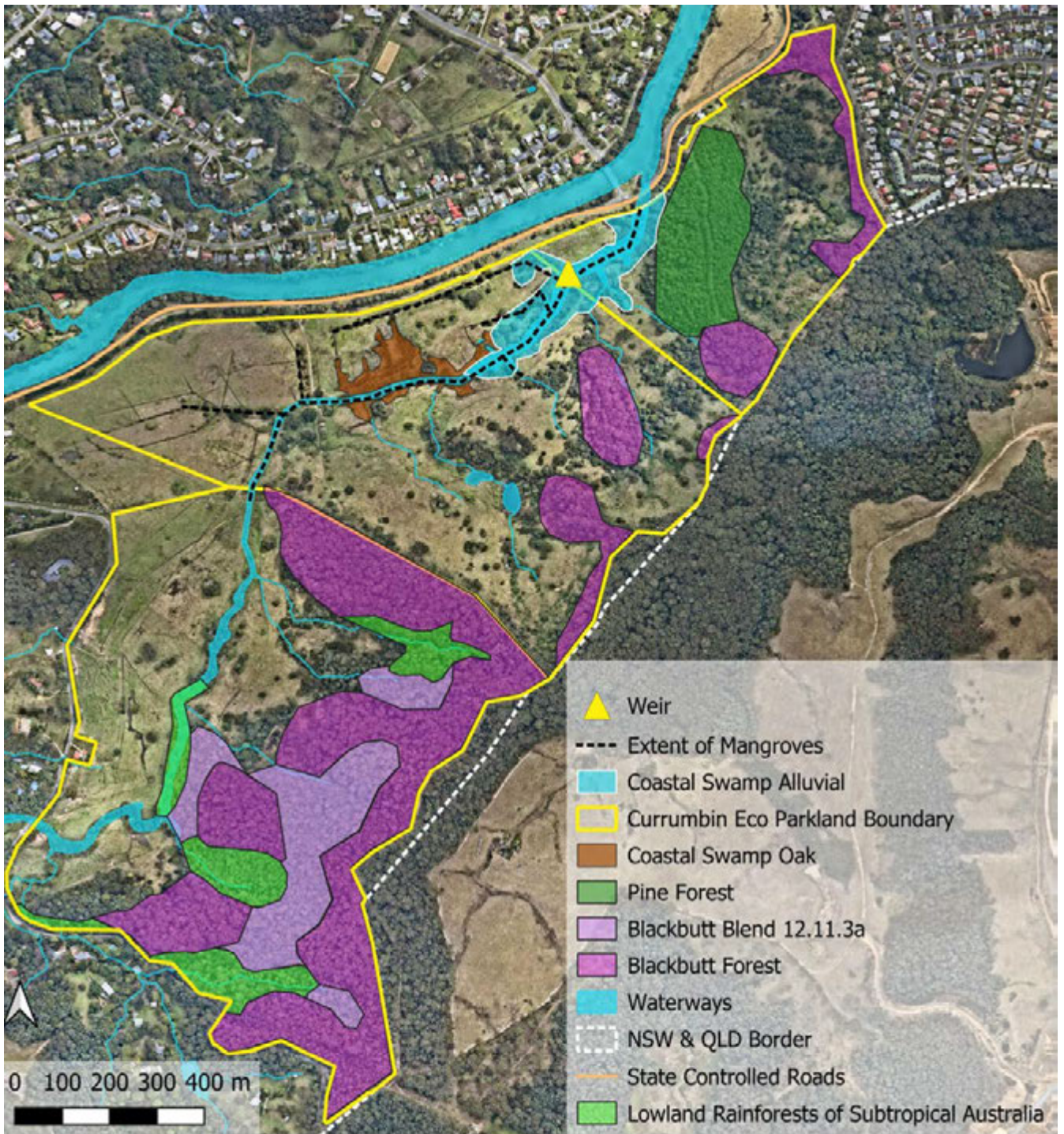
Desktop research identified that up to seven (7) TEC's may be found on the site. Following site investigations and comparisons to the required criterion, it was determined that two (2) of these TEC's occur, namely:

- Endangered Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and Southeast Queensland; and
- Critically Endangered Lowland Rainforest of Subtropical Australia

Of importance, both TEC's would have occurred more widely pre-clear; however, they occur on parts of the site that are mostly cleared and only small elements of remnant and/or regrowth remain.

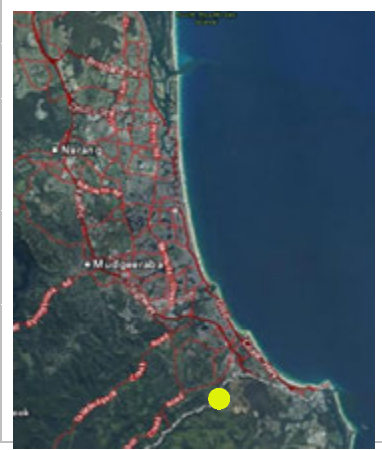
Photo 12: Stand of Coastal She-oak (Photo D. Jinks)





**Figure 4-1**

Client:	Project:	Title:
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Flora Survey Vegetation Communities
Data Source: Nearmap	Date: 02 11 24	Drawn: NH





#### 4.2.2 Queensland Regional Ecosystems Located On-Site

Extensive field work has determined that Regional Ecosystems identified on the Currumbin Eco-Parkland site are generally consistent with those described and mapped by the Queensland Herbarium (**Figure 4-2**), albeit with a few anomalies. The edges of RE's as shown on the state maps are approximate only and require detailed ground-truthing (if required) to determine more precise edges and extents.

1. RE 12.1.3b Mangrove shrubland: *Avicennia marina* ssp. *australasica* dominated shrubland to low closed forest (Least Concern)

This RE is not mapped by the Queensland Herbarium but does occur on the site where it enters from northern parts and continues about halfway down the site.

2. RE12.3.1a Gallery rainforest on alluvial plains (Endangered) and RE12.11.1 Simple notophyll vine forest (Least concern)

Prior to clearing, these REs were most likely widespread in upper alluvial parts and adjoining valleys but are now limited to narrow strips along the upper creek parts and into the lower gullies. The regrowth mapping of RE12.3.1a shown in northern parts is incorrect; this regrowth is more consistent with RE12.3.20.

3. RE12.3.20 *Melaleuca quinquenervia*, *Casuarina glauca* +/- *Eucalyptus tereticornis*, *E. siderophloia* open forest on low coastal alluvial plains (Endangered)

As above, prior to clearing, this RE was most likely widespread, though in lower alluvial parts. It is now limited to just a few scattered trees with young regrowth (interspersed with the weed species Camphor Laurel) where it abuts either side of the Mangrove community.

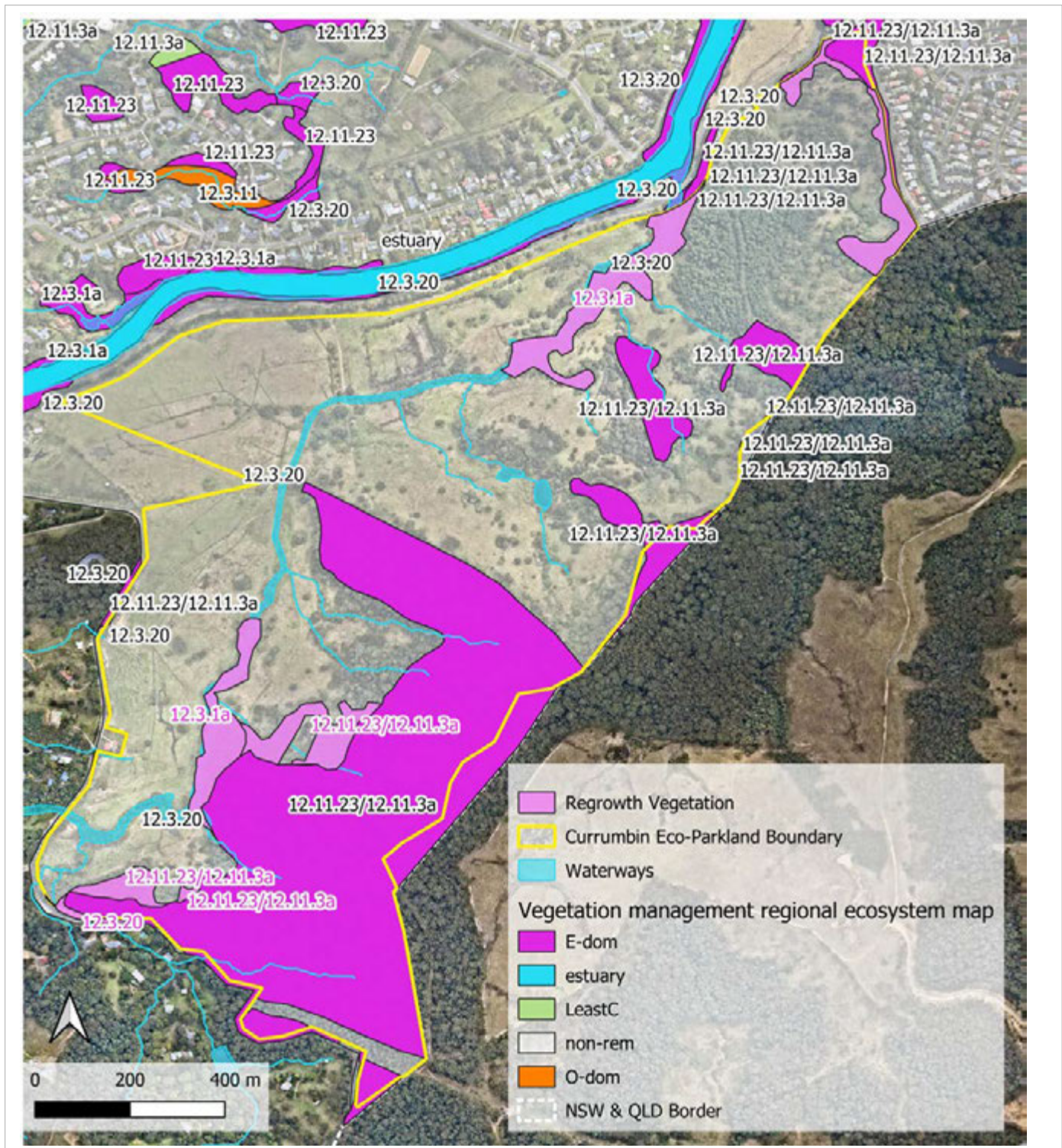
4. RE12.11.23 *Eucalyptus pilularis* open forest on coastal metamorphics and interbedded volcanics (Endangered)

This RE is by far the predominant vegetation type over most of the forested areas of the site. In parts there were stands of large remnant *E. pilularis* (Blackbutt) trees which in many areas dominated the canopy.

5. RE12.11.3a *Lophostemon confertus* +/- *Eucalyptus microcorys*, *E. carnea*, *E. propinqua*, *E. siderophloia* woodland (Least Concern)

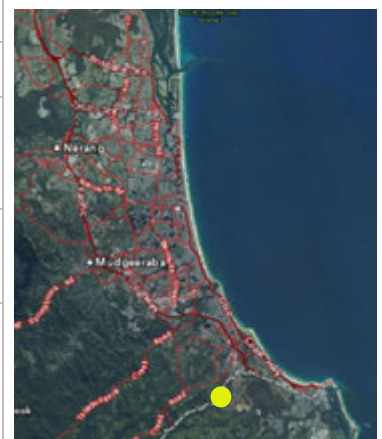
This RE has many similarities and intergrades with RE12.11.23 but was more evident on lower foothills where canopy dominance gradually changed.

**Note:** species that do not occur in this part of the bioregion were omitted from the short descriptions above.



**Figure 4-2**

Client:	Project:	Title:
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Mapped Regional Ecosystems
Data Source: Nearmap	Date: 23 11 22	Drawn: NH



ddwfauna  
Environmental Consultants



### 4.2.3 Vegetation Community Descriptions

The following descriptions are based on a combination of the EPBC list TEC's and state mapped Regional Ecosystems combined with an analysis from field survey.

#### 1. Lowland Subtropical Rainforest

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##### **Predominant Corresponding RE: 12.3.1, 12.11.1**

This vegetation community is described under the EPBC Act as Lowland Rainforest of Subtropical Australia and is listed as Critically Endangered. Of the required minimum 30 woody rainforest species required to meet one of the criterion, 70 were present albeit in scattered populations with only a few large remnant trees remaining. The current extent and location of this vegetation community is shown on **Figure 4-1**.

#### 2. Alluvial Forest and Coastal Swamp Oak Forest

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##### **Predominant Corresponding RE: 12.3.20**

This vegetation community (RE12.3.20) which is open forest on low coastal alluvial plains incorporates a community subset described as Coastal Swamp Oak (*Casuarina glauca*) Forest of NSW and Southeast QLD ecological community. The latter is listed as Endangered federally. The current extent and location of this vegetation community is shown on **Figure 4-1**.

##### **Notes regarding the two TEC's:**

*With regard to the potential for any impact to these communities, it is unlikely that the proposed master plan will facilitate any significant impact to the Critically Endangered Lowland Rainforests on the Currumbin Eco-Parkland site. Other than proposed walking tracks (locations to be confirmed), the location of proposed site disturbance is away from this vegetation community.*

*With respect to the Endangered Coastal Swamp Oak community, significant alteration to site topography and hydraulic conditions, and historic vegetation clearing, makes a final determination of this vegetation community extent on the site difficult.*

*In part this is because there are no remnant trees, and the key species (Coastal She-Oak) has regrown only where there has been a change to ground level and hydrology caused by human intervention.*

*Notwithstanding this, sensitive design must be considered to ensure any impact from development works such as altered surface water drainage patterns and construction impacts from roadways and crossings, is mitigated.*



### 3. Blackbutt Forest

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#### **Predominant Corresponding RE: 12.11.23/12.11.3a (90/10)**

While most parts of the remnant forest are dominated by the endangered Blackbutt Forest (RE12.11.23), depending on aspect and local conditions, while retaining the same Blackbutt dominated canopy, the understorey can change dramatically from a grassy, open understorey with scattered shrubs, through to a dense mid-canopy and understorey of rainforest species. While these still both meet the criteria for RE12.11.23, elements of this RE also blend into RE12.11.3a, which can also contain similar species including Blackbutt. Accordingly, every endeavour has been made to separate these (and other RE's) as different communities (**Figure 4-1**).

Tree sizes and types vary throughout the Blackbutt Forest, with the older large trees (those that had survived selective logging) generally occurring on ridges and midslopes.

#### **Mangrove and Estuarine Community**

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#### **Predominant Corresponding RE: 12.1.3b**

Initial desktop analyses indicated there was no Mangrove community on the site. However, there is a small tidal estuary that enters the site from Currumbin Creek to the north and narrows as it travels south through the near-middle section of cleared pasture areas. Many parts of the northern estuary are lined with continuous and older mangroves, while southern parts were historically cleared and re-cleared and now support only young regrowth mangroves.

The regrowth associated with the narrowing estuary extends almost halfway onto the property, while the numerous drainage cuts that are deep enough for and still connected to tidal influence also contain regrowth mangrove communities.



## Remnant Tree Copses

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There are dozens of large remnant trees scattered across the site, some as individuals but many in copses of several trees. For example, this includes a row of large *Araucaria cunninghamii* (Hoop Pine) with occasional large *Eucalyptus grandis* (Flooded Gum) along both sides of middle creek parts; there are several very large Hoop Pine in pasture areas; there is a copse of remnant *E. robusta* (Swamp Mahogany), the only location of this species on the site, currently being used by horses for shade; there are several large Figs and other rainforest trees that occur in isolation to other vegetation etc.

Where possible, these areas should be restored to allow for continuous vegetation corridors and/or larger patches of vegetation to accommodate and ensure the longevity of these trees.

*Photo 13: Araucaria cunninghamii (Hoop Pine) Photo: D Jinks*





## Exotic Pine Forest

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A rise in the northern part of the site covering approximately 6Ha has been historically cleared and several decades ago was planted as a timber plantation using *Pinus elliottii* (Slash Pine). This forest appears not to have been managed for forestry with regard to trimming and sizing, nor has there been any recent understorey management. Slash Pine is recognised locally as an environmental weed and some young germinations from this plantation are evident in nearby forest and pasture areas.

The understorey is dominated by weed species such as *Lantana camara*, *Triumfetta rhomboidea* (Chinese Burr), *Solanum chrysotrichum* (Giant Devil's Fig) and various exotic vine species. The few native species evident were limited largely to pioneer species such as *Alphitonia excelsa* (Red Ash), *Glochidion ferdinandi* (Cheese Tree), *Polyscias elegans* (Celerywood) and *Trema tomentosa* (Native Peach).

Photo 14: Pine Forest (N. Power)





### 4.3 Threatened Species

**Table 13** and **Figure 4-3** present the location and details for threatened flora species observed on-site during the 2022-2025 field work.

Threatened species were relatively abundant in areas where there was minimal to no recent impact from hooved animals and grazing. Conversely, areas with higher use had minimal to no threatened species in remnant or regrowth areas.

**Table 13: Threatened Flora Species Recorded on Site During the 2022 and 2023 Survey**

- [As listed in the Queensland Nature Conservation \(Plants\) Regulation 2020 \(Nature Conservation Act 1992\).](#)  
CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near threatened
- [As listed in the Environmental Protection & Biodiversity Conservation Act 1999 \(EPBC\)](#)  
CE = Endangered, E = Endangered, V = Vulnerable

Botanical Name:	Common Name:	Status EPBC	NCA*	Total stems
<i>Cassia marksiana</i>	Brush Cassia	-	V	88
<i>Cupaniopsis newmanii</i>	Long-leaved Tuckeroo	-	NT	719
<i>Endiandra globosa</i>	Black Walnut	-	NT	619
<i>Endiandra hayesii</i>	Rusty Rose Walnut	V	V	5
<i>Gossia hillii</i>	Scaly Myrtle	CE	CE	15
<i>Leichhardtia coronata</i>	Slender Milk Vine	-	V	60
<i>Leichhardtia longiloba</i>	Clear Milk Vine	V	V	120
<i>Lepiderema pulchella</i>	Fine-leaved Tuckeroo	-	V	98
<i>Macadamia integrifolia</i>	Macadamia Nut	V	V	50
<i>Macadamia tetraphylla</i>	Queensland Nut	V	V	1
<i>Pararistolochia praevenosa</i>	Richmond Birdwing Vine	-	NT	40
<i>Randia moorei</i>	Spiny Gardenia	E	E	10
<i>Rhodamnia maideniana</i>	Smooth Scrub Turpentine	-	CR	182
<i>Rhodamnia rubescens</i>	Scrub Turpentine	CE	CR	968
<i>Rhodomyrtus psidioides</i>	Native Guava	CE	CR	605
<i>Syzygium moorei</i>	Coolamon	V	V	41

\* Does not include Special Least Concern Species

Forty-two (42) Special Least Concern species were identified which are not included in Table 12. For details, refer to **Attachment 7** Flora Species List.

Additionally, twenty (20) species recognised as City of Gold Coast Priority Species<sup>20</sup> were observed on-site and included in **Attachment 7**.

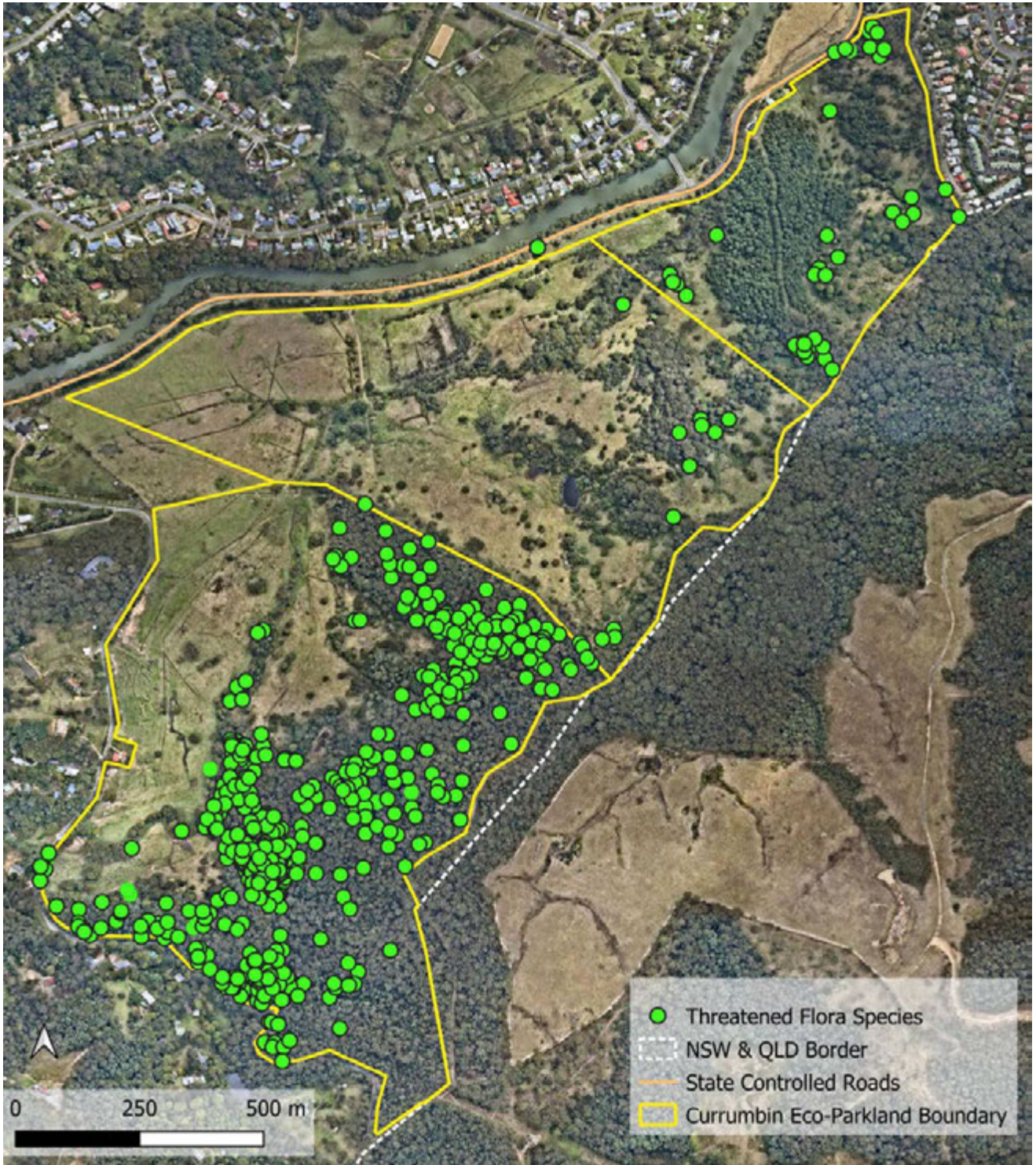
<sup>20</sup> <https://www.goldcoast.qld.gov.au/Council-region/About-our-city/Environment-sustainability/Protecting-our-environment/Species-conservation/Priority-species>



Mapping Notes:

**Dots** on **Figure 4-3** and other flora mapping can represent just one single plant, or where numerous plants of the same species are in close proximity, one dot can represent in excess of 50 individual stems. In the case of vines, one dot can represent a larger area of the vine in that proximity.

**Stems** are defined as stems or trunks (not branches) that are single or are joined at the base as a multiple trunk of the same tree. A stem can range in size/maturity from a sapling to a mature plant.



<b>Figure 4-3</b>		
<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Flora Survey Significant Flora Species Observed On-Site
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH
   		





#### 4.3.1 Listed Threatened Species Profiles

## **Cassia marksiana (Brush Cassia)**

### Conservation Status:

Environment Protection and Biodiversity Conservation Act 1999: **not listed**

Nature Conservation (Plants) Regulation 2020: **Vulnerable**



### **Distribution Extent:**

Grows in scattered populations from Brunswick Heads north to an outlier near Beenleigh and to the west of Canungra. Occurs in dry and lowland subtropical rainforest ecotone.

Less than 50 records within its range and only a few in Currumbin Valley.

### **Occurrence on-site:**

Occurs in moist lower slopes and gullies in rainforest and ecotone *Eucalyptus* forest in good shade. Several larger/older trees were observed but most occurred in clusters of smaller trees.

**Total Stems on-site: 88**

### **Plant Description:**

Deciduous tree to 25m with compound, glossy leaves, and yellow, perfumed flowers in racemes up to 20cm, followed by brown cylindrical seed pods to 35cm long.



Photo: Burringbar Nursery



## ***Cupaniopsis newmanii* (Long-leaved Tuckeroo)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**not listed**

*Nature Conservation (Plants) Regulation 2020:*

**Near Threatened**



### **Distribution Extent:**

Ranges from Mullumbimby, N.S.W., north to the Beenleigh district (also at Kin Kin), Qld and occurs in subtropical and warm temperate rainforest and on forest margins including wet sclerophyll forest.

It is relatively common in some localised areas, but the Gold Coast hinterland and northern NSW are the only places where this species occurs.

### **Occurrence on-site:**

Occurs in clusters in south facing moist hillsides and gullies in rainforest but also on sheltered *Eucalyptus* hillsides with occasional solo outliers.

**Total Stems on-site: 719**

### **Plant Description:**

Small tree to 8m with compound leathery leaves with toothed leaflets. New growth is red. Flowers are small and pink in panicles followed by large orange seed capsules with shiny black seeds.





## ***Endiandra globosa* (Black Walnut)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**not listed**

*Nature Conservation (Plants) Regulation 2020:*

**Near Threatened**



### **Distribution Extent:**

From Mullumbimby north to Tallebudgera Creek with a disjunct population in FNQ near Innisfail.

Only a few records in Currumbin Valley.

### **Occurrence on-site:**

Relatively abundant in copses in rainforest and gullies and on sheltered lower and mid-hillside in moist *Eucalyptus* forest. Several isolated outliers.

**Total Stems on-site: 619**

### **Plant Description:**

Tree to 25m with cream coloured bark and large glossy green leaves that have a distinctive white mid-vein. Small cream flowers followed by a large black fruit to 5cm with one large seed.





## ***Endiandra hayesii* (Rusty Rose Walnut)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**Vulnerable**

*Nature Conservation (Plants) Regulation 2020:*

**Vulnerable**



### **Distribution Extent:**

Isolated populations from Suffolk Park near Byron Bay NSW north to Burleigh Headland and in the McPherson Range,

Only two other records in Currumbin Valley.

### **Occurrence on-site:**

Only one location recorded on-site.

**Total Stems on-site: 5**



Photo: Black Diamond Images

### **Plant Description:**

Tree to 20m, very similar to *E. muelleri* ssp. *bracteata*, leaves hairy below, petiole rusty hairy. Small cream-green flowers in panicles followed by an ovoid drupe to 3.5cm.





## ***Leichhardtia coronata* (Milk Vine)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**not listed**

*Nature Conservation (Plants) Regulation 2020:*

**Vulnerable**



### **Distribution Extent:**

From Barrington Tops NSW to Mt Glorious north of Brisbane Qld. It occurs in subtropical and littoral rainforest and *Eucalyptus* forest in disjunct populations with only a few records on the Gold Coast including Springbrook, Bonogin, Mudgeeraba and Guanaba.

Only 2 records in Currumbin Valley.

### **Occurrence on-site:**

Limited to two proximate locations on a hillside under *Eucalyptus* canopy, close to a rocky gully.

**Total Stems on-site:** several dozen over 2 locations

### **Plant Description:**

A slender vine with delicate light green leaves. This is a cryptic species i.e. it seasonally dies back to a tuber, so can go unrecorded when not in foliage.





## ***Leichhardtia longiloba* (Slender Milk Vine)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**Vulnerable**

*Nature Conservation (Plants) Regulation 2020:*

**Vulnerable**



### **Distribution Extent:**

This species grows from Barrington Tops NSW to Mt Glorious north of Brisbane Qld. It occurs in subtropical and littoral rainforest in disjunct populations with only a few records on the Gold Coast including Springbrook, Bonogin, Mudgeeraba and Guanaba.

### **Occurrence on-site:**

Found in several locations on mid-slopes in moist *Eucalyptus* forest

**Total Stems on-site:** >120 including climbing vines and root suckers over several locations

### **Plant Description:**

A slender vine with delicate light green leaves and clear sap. This is a cryptic species i.e. it seasonally dies back to a tuber, can go unrecorded when not in foliage.





## ***Lepiderema pulchella* (Fine-leaved Tuckeroo)**

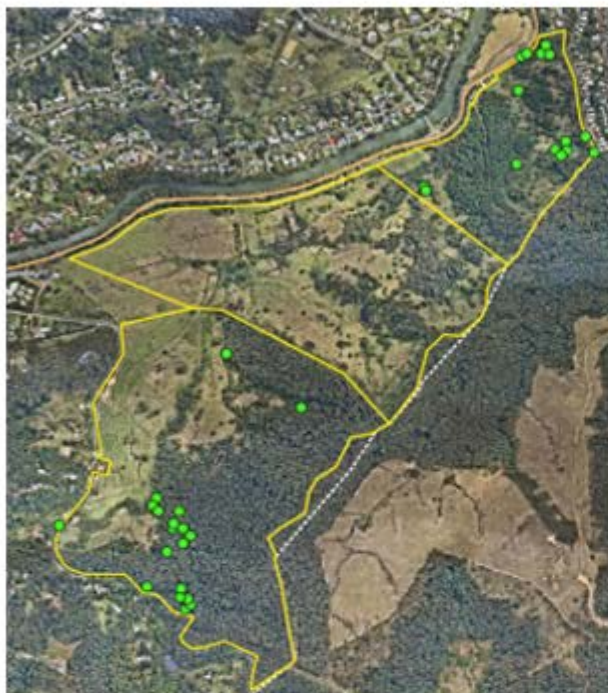
### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**not listed**

*Nature Conservation (Plants) Regulation 2020:*

**Vulnerable**



### **Distribution Extent:**

This species grows in subtropical rainforest and the wet sclerophyll forest ecotone from the Tweed River Valley in NSW to near Neranwood, Qld, with a small disjunct population in the Sunshine Coast Hinterland. It can be locally prevalent in some locations.

### **Occurrence on-site:**

Occurs in only a few scattered locations with suitable perch sites in upper gullies, on creek lines and on lower slopes.

**Total Stems on-site:** 98 stems

### **Plant**

#### **Description:**

A small tree to 15m high with dense compound foliage. New growth is very colourful, ranging through red, bronze, yellow and light green until maturing to dark green.





## ***Macadamia integrifolia* (Queensland Nut)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**Vulnerable**

*Nature Conservation (Plants) Regulation 2020:*

**Vulnerable**



### **Distribution Extent:**

This species grows from Currumbin Valley north to Mt Bauple near Gympie in rainforest and rainforest edges.

### **Occurrence on-site:**

Only a few scattered locations in various vegetation types. Several planted specimens in the middle portions of the site that could be parent plants. Most observations were of seedlings.

**Total Stems on-site:** 10 scattered trees and dozens of nearby seedlings

### **Plant Description:**

A medium tree to 20m high (though much less in cultivation) with compound foliage and a dense crown with stiff leathery leaves. Panicles of pink flowers followed by edible nuts.





## ***Pararistolochia praevenosa* (Birdwing Butterfly Vine)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**not listed**

*Nature Conservation (Plants) Regulation 2020:*

**Near Threatened**



### **Distribution Extent:**

This species grows in limited locations in subtropical rainforest from north of Wardell NSW to near Kin Kin Qld.

### **Occurrence on-site:**

This vine was observed in just one portion of a lower gully and included dozens of stems reaching 20m into the sub-canopy. Both male and female Richmond Birdwing Butterflies were observed on the vines.

**Total Stems on-site:** Several dozen stems

### **Plant Description:**

A large woody climber with stiff leathery leaves. Young eaves are the food source for pupae of the threatened Richmond Birdwing Butterfly.





## ***Randia moorei* (Spiny Gardenia)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:*

**Endangered**

*Nature Conservation (Plants) Regulation 2020:*

**Endangered**



### **Distribution Extent:**

This species grows in limited locations in subtropical and littoral rainforest from near Lismore NSW to Beenleigh Qld.

### **Occurrence on-site:**

Restricted to only a few locations, most of which were seedlings. However, one location comprised a more mature copse of 6 stems to 8m. Small amounts of healthy near-ripe fruit were observed at this copse.

**Total Stems on-site: <10 stems**

### **Plant Description:**

Shrub or small tree to 10m high with opposing spines on young branchlets and small, white, fragrant flowers.





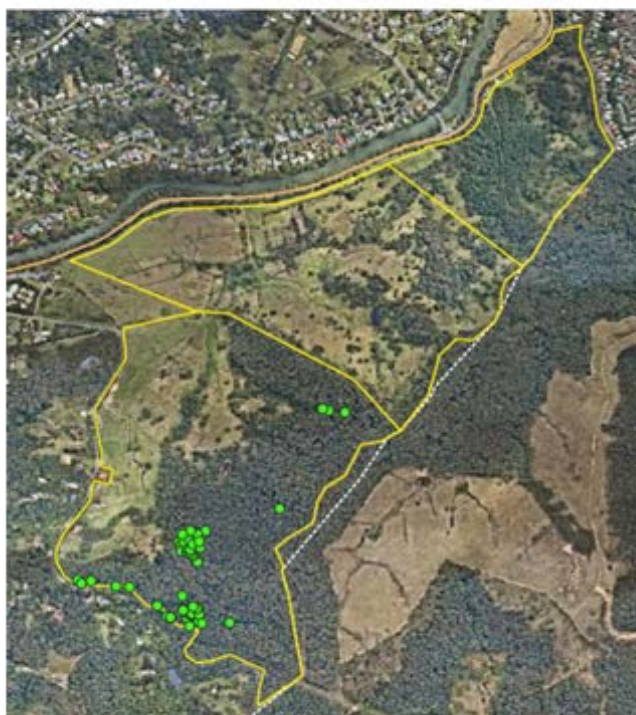
## ***Rhodamnia maideniana* (Smooth Scrub-turpentine)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:* **not listed**

*Nature Conservation (Plants) Regulation 2020:*

**Critically Endangered**



### **Distribution Extent:**

This species grows in subtropical rainforest from the Richmond River NSW to the Little Nerang River north of Springbrook Qld.

### **Occurrence on-site:**

Restricted to mostly southern portions in moist lower and rainforest gullies and near stream banks.

**Total Stems on-site:** Approx. 182 stems

### **Plant**

#### **Description:**

Shrub or small tree to 5m with pink to red new growth maturing to glossy green leaves.





## ***Rhodamnia rubescens* (Scrub Turpentine)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:* **Critically Endangered**

*Nature Conservation (Plants) Regulation 2020:*

**Critically Endangered**



### **Distribution Extent:**

Wide distribution from Durras Mtn near Bateman's Bay NSW north to Mt Bauple near Maryborough Qld.

### **Occurrence on-site:**

Widely distributed in mid- to lower slopes under *Eucalyptus* canopy, more pronounced on lower moist slopes.

**Total Stems on-site:** Approx. 968 stems counted

### **Plant Description:**

Medium tree to 25m, typically growing in copses of several to several dozen stems within close proximity.





## ***Rhodomirtus psidioides* (Native Guava)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:* **Critically Endangered**

*Nature Conservation (Plants) Regulation 2020:*

**Critically Endangered**



### **Distribution Extent:**

Once widely distributed from Gosford NSW north to Tinana Creek near Maryborough Qld.

### **Occurrence on-site:**

Occurred in mid-to lower moist slopes under canopy. Without exception, all plants are root suckers less than 50cm high with most no higher than 20cm. All mature plants are dead.

**Total Stems on-site:** Approx. 605 root suckers counted

### **Plant Description:**

Shrub or small tree to 12m, often occurring in copses of several dozen stems. However, this is now historical information.





## ***Syzygium moorei* (Coolamon; Durobby)**

### **Conservation Status:**

*Environment Protection and Biodiversity Conservation Act 1999:* **Vulnerable**

*Nature Conservation (Plants) Regulation 2020:* **Vulnerable**



### **Distribution Extent:**

Occurs in lowland subtropical rainforest from Richmond River NSW north to Mudgeeraba Qld.

### **Occurrence on-site:**

Occurred in only a few locations as a few large old remnant trees but also as numerous juvenile plants ready for the next generation.

**Total Stems on-site:** 6 larger trees and 35 younger specimens

### **Plant Description:**

Medium, to large tree to 40m, large glossy green leaves, flanged to sometimes buttressed base in large trees. Has a distinctive pink colouration to the outer bark.





*Gossia hillii* and *Macadamia tetraphylla* have been observed on-site since the 2022 survey and are not included in the 2022 Species Profiles.

#### 4.3.2 Threatened Species Affected by Myrtle Rust

Special Note on the following threatened species affected by Myrtle Rust (MR):

- *Rhodamnia maideniana* (Smooth Scrub Turpentine)
- *Rhodamnia rubescens* (Scrub Turpentine)
- *Rhodomyrtus psidioides* (Native Guava)

The above species have been subject to a severe decline because of the introduced pathogen Myrtle Rust (*Austropuccinia psidii*) which has become widespread on the eastern seaboard since its introduction to Australia in circa 2010.

MR only affects plants of the Myrtaceae family and, while some species are not affected at all, other species such as the three listed above are fast declining and now face extinction. Accordingly, the conservation status of numerous plants of the Myrtaceae family (including these 3 listed above) has been changed from 'least concern' to 'critically endangered'.

Of the 104 plant families that occur on site, 29 species are in the Myrtaceae family, but only 4 of these are listed as affected by MR. Some other Myrtle species onsite, however, have been affected to a lesser but still serious degree including (for example) *Archirhodomyrtus beckleri*, however this and other affected species have not (yet) been listed as threatened.

Other than damaging new growth, MR also affects flower and fruit formation to the extent that it cannot form, this being a primary reason for the species demise.

The evidence of MR impacts on site varies for each of the above 4 species, as follows:

***Gossia hillii*** - significant damage has occurred to this species. It was observed as a copse of approximately 15 individual stems in 2024 of varying maturity in just one location on site. The majority of plants were impacted to some degree by MR with some dead stems most likely *G. hillii* impacted by MR. There was no evidence of any fertile material (flowers or fruit).

***Rhodamnia maideniana*** – severe damage has occurred to this species. On-site it was observed in occasional copses of up to 25 stems but also as individual small plants. Of the 182 stems recorded, most were in poor health with obvious signs of active MR and damaged foliage. Only a small number had a high health score. Surprisingly, 2 near-mature fruits were observed on one plant, this now being a very rare occurrence.

While listed as critically endangered under state legislation (NCA), this species is not listed under the federal EPBC Act.

***Rhodamnia rubescens*** – significant damage has occurred to this species. Previously relatively common in its range, this species has seen a rapid decline. Of the over 968 stems observed on-site, the greater percentage were in poor health, and many still-standing dead trees were apparent.

There was the occasional tree in good health; however, even these had evidence of active MR. There was no evidence of any fertile material (flowers or fruit).

***Rhodomyrtus psidioides*** – *extreme* damage has occurred to this species. Similarly, this species was previously relatively common but is possibly one of the hardest hit of all the local Myrtaceae species. Previously occurring in copses in mid-to lower moist slopes under canopy, without exception, all plants were observed as root suckers less than 50cm high with most no higher than 20cm. A total of 605 root suckers were observed, however, there is no evidence of any mature trees surviving. All suckers were affected by MR and it is unlikely any would reach the necessary maturity to produce flowers or fruit. It is highly likely this species will be extinct in the wild in our lifetime.

While there are often positive actions that can be taken to lessen human impact on threatened species including habitat protection and tree planting, in the case of the species being affected by MR, the risks associated with the spread of MR are very difficult to control.

#### 4.4 Weed Species

A weed is considered to be a plant that requires some form of action to reduce its negative effects on the economy, the environment and human health or amenity<sup>21</sup>. For the purpose of this report, weed species are both exotic species from overseas, and alien native species from other parts of Australia. Many weeds are recognised as Restricted Plants under the *Biosecurity Act 2014* (Qld), or as environmental weeds in accordance with the SEQ Environmental Weeds Strategy (2001). Some are also recognised as Weeds of National Significance (WONS).

While weed control methods and priorities will form part of an ecological site restoration plan, a few site species require particular mention with regard to their current and potential impact on, and risk to, local biodiversity, therefore the priority needed for their control.

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<sup>21</sup> Australian Weeds Strategy 2017 – 2027, p6



These are:

*Dolichandra unguis-cati* (Cat's Claw Creeper) – this vine has infiltrated one of the southern gullies and is locally dominant over a large area throughout the vegetation structure including a blanket coverage of seedlings on the ground, vines climbing most trunks, and mature vines that are already pulling trees out of the canopy. This gully also contains one of the highest concentrations of threatened species on the site. Several outliers of lesser, younger infestations were also observed which will rapidly colonize the area if left unchecked. This weed should be controlled as a high priority as it will likely take several years for complete eradication.

*Cinnamomum camphora* (Camphor Laurel) – this species is dominant along the unnamed creek after it enters the site from Piggabeen Road and to a lesser degree along the whole creek system on the site. It also occurs in regrowth vegetation on lower foothills where it is both dominant in the canopy and subcanopy and is found throughout the site as individual trees and/or copses of trees, or as seedlings. The many maturing trees that currently line the creek bank are in parts the main vegetation stopping the creek from further erosion, requiring carefully planned methods for their eradication. Camphor Laurel is one of the most problematic weeds in parts of the Gold Coast and has the potential over time to dramatically alter local biodiversity. While seedlings from outside the site will occur in perpetuity, efforts should be prioritised to control seeding trees at the earliest opportunity.

*Anredera cordifolia* (Madeira Vine) – this species was observed in only one location (near a pond in open pasture areas) as a small infestation but it has the potential for rapid colonisation. It is readily spread in floodwaters, which is possibly the source of this patch. Eradication of this vine in the early stages is highly recommended, before it can be spread by floods.

Refer to **Attachment 6** for a list of weed species identified for monitoring in the Quaternary Survey Plots.

## 5.0 FAUNA ASSESSMENT RESULTS

### 5.1 General

During the field surveys, 197 vertebrate and 113 invertebrate species (of the groups surveyed) were recorded (total 310 species), including - 36 mammal, 124 bird, 11 reptile, nine frog, 17 fish, 49 butterfly, seven lacewing, 17 cicada, 31 dragonfly, four aquatic decapod and five land snail species (**Attachment 8**). When considering previous surveys undertaken on site<sup>22</sup>, records now show 40 mammal, 135 bird, 16 reptile, 13 frog, 49 butterfly, seven lacewing, 17 cicada, 31 dragonfly, 11 aquatic decapod (including marine species), five land snail and five marine snail species recorded on the site. Fifteen (15) species were listed as threatened or significant under National, State and Local Government legislation.

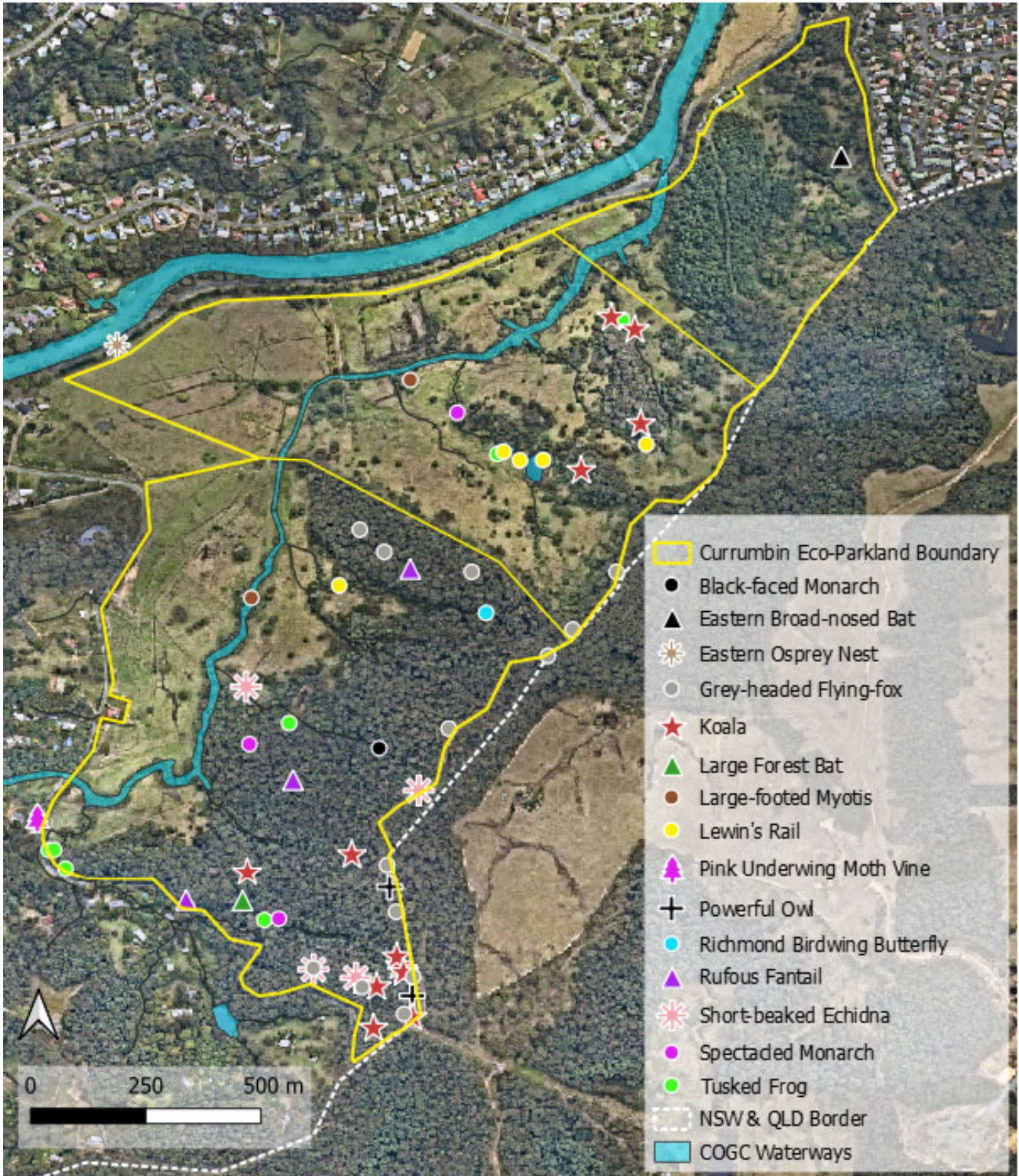
The subject site was found to be highly diverse with a number of different Regional Ecosystems/Vegetation types and regions of disturbed habitat. The relatively large overall size and the connection with adjoining bushland, habitat diversity, vegetation complexity and water bodies all contribute to the high vertebrate and invertebrate diversity of the area.

### 5.2 Significant Species

**Tables 14 and 15** and **Figure 5-1** present the location and details for significant fauna species observed on-site during the current survey. **Attachment 9** contains species profiles for some of the significant species.

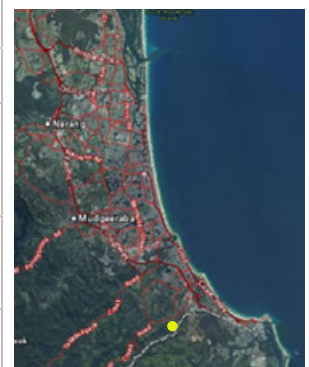
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<sup>22</sup> GHD (2018) Martha's Vineyard Fauna Management Plan – Stage1 incorporating Planit Consulting (2005) Amended Ecological Assessment Hideaway@Currumbin Devine Limited.



**Figure 5-1**

Client:	Project:	Title:
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Conservation Significant Fauna Observed on Site
Data Source: Nearmap	Date: 26 10 22	Drawn: NH



ddwfauna  
Environmental Consultants

**Table 14: Conservation Significant Fauna Species Recorded on Site During Field Surveys**

- [As listed in the Queensland Nature Conservation \(Animals\) Regulation 2020 \(Nature Conservation Act 1992\).](#)  
 E = Endangered, V = Vulnerable, LC = Least Concern, SLC = Special Least Concern,
- [As listed in the Environmental Protection and Biodiversity Conservation Act 1999 \(EPBC Act\).](#)  
 E\*= Endangered, V\*= Vulnerable
- Mi = Migratory listed species
- CWS = City-wide significant species (CoGC)
- PS = Priority species for conservation (CoGC)

Class	Family	Genus	Species	Common Name	Status
Insecta	PAPILIONIDAE	<i>Ornithoptera</i>	<i>richmondia</i>	Richmond Birdwing Butterfly	PS,V
Insecta	NOCTUIDAE	<i>Phyllodes</i>	<i>Imperialis smithersi</i>	Pink Underwing Moth	E*
Amphibia	LIMNODYNASTIDAE	<i>Adelotus</i>	<i>brevis</i>	Tusked Frog	CWS,V
Aves	RALLIDAE	<i>Lewinia</i>	<i>pectoralis</i>	Lewin's Rail	CWS,LC
Aves	STRIGIDAE	<i>Ninox</i>	<i>strenua</i>	Powerful Owl	CWS,V
Aves	PANDIONODAE	<i>Pandion</i>	<i>haliaetus</i>	Eastern Osprey	Mi - SLC
Aves	RHIPIDURIDAE	<i>Rhipidura</i>	<i>rufifrons</i>	Rufous Fantail	Mi - SLC
Aves	MONARCHIDAE	<i>Symposiachus</i>	<i>trivirgatus</i>	Spectacled Monarch	Mi - SLC
Aves	MONARCHIDAE	<i>Monarcha</i>	<i>melanopsis</i>	Black-faced Monarch	Mi - SLC
Aves	CACATUIDAE	<i>Calyptorhynchus</i>	<i>lathamii</i>	Glossy Black-cockatoo	CWS, PS, V, V*
Mammalia	TACHYGLOSSIDAE	<i>Tachyglossus</i>	<i>aculeatus</i>	Short-beaked Echidna	SLC
Mammalia	PHASCOLARCTIDAE	<i>Phascolarctos</i>	<i>cinereus</i>	Koala	CWS,PS,E,E*
Mammalia	PTEROPODIDAE	<i>Pteropus</i>	<i>poliocephalus</i>	Grey-headed Flying-fox	CWS,PS,LC,V*
Mammalia	VESPERTILIONIDAE	<i>Myotis</i>	<i>macropus</i>	Large-footed Myotis	CWS,LC
Mammalia	VESPERTILIONIDAE	<i>Scotorepens</i>	<i>orion</i>	Eastern Broad-nosed Bat	CWS,LC
Mammalia	VESPERTILIONIDAE	<i>Vespadelus</i>	<i>darlingtoni</i>	Large Forest Bat	CWS,LC

**Table 15: Bird Species Listed as marine under the EPBC Act Recorded on Site During the Current Surveys**

Family	Genus	Species	Common Name	Status
ANATIDAE	<i>Dendrocygna</i>	<i>eytoni</i>	Plumed Whistling-Duck	LC
CUCULIDAE	<i>Eudynamys</i>	<i>orientalis</i>	Pacific Koel	LC
CUCULIDAE	<i>Scythrops</i>	<i>novaehollandiae</i>	Channel-billed Cuckoo	LC
CUCULIDAE	<i>Chalcites</i>	<i>lucidus</i>	Shining Bronze-Cuckoo	LC
CUCULIDAE	<i>Cacomantis</i>	<i>flabelliformis</i>	Fan-tailed Cuckoo	LC
THRESKIORNITHIDAE	<i>Threskiornis</i>	<i>molucca</i>	Australian White Ibis	LC
THRESKIORNITHIDAE	<i>Threskiornis</i>	<i>spinicollis</i>	Straw-necked Ibis	LC
ARDEIDAE	<i>Ardea</i>	<i>modesta</i>	Eastern Great Egret	LC
ARDEIDAE	<i>Ardea</i>	<i>intermedia</i>	Intermediate Egret	LC
ARDEIDAE	<i>Ardea</i>	<i>ibis</i>	Cattle Egret	LC
ARDEIDAE	<i>Nycticorax</i>	<i>caledonicus</i>	Nankeen Night Heron	LC
PELECANIDAE	<i>Pelecanus</i>	<i>conspicillatus</i>	Australian Pelican	LC
STRIGIDAE	<i>Ninox</i>	<i>boobook</i>	Southern Boobook	LC
PANDIONODAE	<i>Pandion</i>	<i>haliaetus</i>	Eastern Osprey	SLC
ACCIPITRIDAE	<i>Haliaeetus</i>	<i>leucogaster</i>	White-bellied Sea-Eagle	LC
ACCIPITRIDAE	<i>Haliastur</i>	<i>sphenurus</i>	Whistling Kite	LC
ACCIPITRIDAE	<i>Haliastur</i>	<i>indus</i>	Brahminy Kite	LC
ACCIPITRIDAE	<i>Accipiter</i>	<i>fasciatus</i>	Brown Goshawk	LC
MEROPIIDAE	<i>Merops</i>	<i>ornatus</i>	Rainbow Bee-eater	LC
ALCEDINIDAE	<i>Todiramphus</i>	<i>macleayi</i>	Forest Kingfisher	LC
ALCEDINIDAE	<i>Todiramphus</i>	<i>sanctus</i>	Sacred Kingfisher	LC
CAMPEPHAGIDAE	<i>Coracina</i>	<i>novaehollandiae</i>	Black-faced Cuckoo-Shrike	LC
CAMPEPHAGIDAE	<i>Edolisoma</i>	<i>tenuirostre</i>	Common Cicadabird	LC
RHIPIDURIDAE	<i>Rhipidura</i>	<i>rufifrons</i>	Rufous Fantail	SLC

Family	Genus	Species	Common Name	Status
DICRURIDAE	<i>Dicrurus</i>	<i>bracteatus</i>	Spangled Drongo	LC
MONARCHIDAE	<i>Monarcha</i>	<i>melanopsis</i>	Black-faced Monarch	SLC
MONARCHIDAE	<i>Symposiachus</i>	<i>trivirgatus</i>	Spectacled Monarch	SLC
MONARCHIDAE	<i>Grallina</i>	<i>cyanoleuca</i>	Magpie-lark	LC
ACROCEPHALIDAE	<i>Acrocephalus</i>	<i>australis</i>	Australian Reed Warbler	LC
HIRUNDINIDAE	<i>Hirundo</i>	<i>neoxena</i>	Welcome Swallow	LC
ZOSTEROPIDAE	<i>Zosterops</i>	<i>lateralis</i>	Silvereye	LC



### 5.2.1 City of Gold Coast City Wide Significant Species

During the current surveys, nine (9) species listed as CWS were recorded (**Table 14**). These were the tusked frog (*Adelotus brevis*), Lewin's rail (*Lewinia pectoralis*), powerful owl (*Ninox strenua*), koala (*Phascolarctos cinereus*), grey-headed flying-fox (*Pteropus poliocephalus*), large-footed Myotis (*Myotis macropus*), eastern broad-nosed bat (*Scotorepens orion*), Glossy Black-cockatoo (*Calyptorhynchus lathami*) and large forest bat (*Vespadelus darlingtoni*).

### 5.2.2 City of Gold Coast Priority species for conservation

During the current survey four (4) species listed as being a priority species for conservation were recorded. These were the Richmond birdwing butterfly (*Ornithoptera richmondia*), koala (*Phascolarctos cinereus*), Glossy Black-cockatoo (*Calyptorhynchus lathami*) and grey-headed flying-fox (*Pteropus poliocephalus*).

### 5.2.3 State listed threatened species

During the current survey, five (5) species scheduled *threatened* under the *Nature Conservation Act 1992* were recorded. These were the Richmond birdwing butterfly (*Ornithoptera richmondia*), tusked frog (*Adelotus brevis*), powerful owl (*Ninox strenua*), Glossy Black-cockatoo (*Calyptorhynchus lathami*) and koala (*Phascolarctos cinereus*). The short-beaked Echidna (*Tachyglossus aculeatus*), which is listed as special least concern was also recorded.

### 5.2.4 Commonwealth listed threatened species

During the current survey, Four (4) species scheduled as *threatened* under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) were recorded. These were the koala (*Phascolarctos cinereus*), Glossy Black-cockatoo (*Calyptorhynchus lathami*), Southern pink underwing moth (*Phyllodes imperialis smithersi*) and grey-headed flying-fox (*Pteropus poliocephalus*).

### 5.2.5 Migratory bird agreements

During the current survey four (4) bird species listed on international migratory bird agreements under the EPBC Act were recorded. These were the eastern osprey (*Pandion haliaetus*), rufous fantail (*Rhipidura rufifrons*), spectacled monarch (*Symposiachus trivirgatus*) and black-faced monarch (*Monarcha melanopsis*).

### 5.2.6 Marine listed bird species

During the field surveys 31 bird species listed as marine under the EPBC Act were recorded (**Table 15**).



### 5.2.7 Listed Threatened Species Profiles

Listed threatened species profiles for some of the species recorded during the field surveys are provided in **Attachment 9** providing detail on individual species descriptions, distribution, habitat, threats, and information on their occurrence at the Currumbin Eco-Parkland site.

## 5.3 Faunal Group Descriptions

### 5.3.1 Mammals

In total 36 mammal species were recorded during the current survey. This included a number of species of conservation significance including the aforementioned short-beaked echidna, koala, grey-headed flying-fox, large-footed Myotis, eastern broad-nosed bat and large forest bat.

Considering the size and vegetation types present on site this number is considered relatively high and included species from a number of different families and functional groups.

Included were two macropod species, the eastern grey kangaroo (*Macropus giganteus*), which was largely restricted to the lowland disturbed areas of the site and the swamp wallaby (*Wallabia bicolor*), which was recorded throughout the site, but predominately in the more upland closed forest regions.

Eight native small/medium ground mammals were recorded. Several were found to be common across much of the subject site, particularly the well vegetated sections, including the short-beaked echidna (*Tachyglossus aculeatus*), northern brown bandicoot (*Isodon macrourus*), bush rat (*Rattus fuscipes*) and yellow-footed antechinus (*Antechinus flavipes*). Others were less common and more restricted including the long-nosed bandicoot (*Perameles nasuta*) and fawn-footed melomys (*Melomys cervinipes*). The two introduced species the house mouse (*Mus musculus*) and black rat (*Rattus rattus*) were in general restricted to the more disturbed lowland parts of the site.

The arboreal mammal diversity was found to be relatively diverse with six species recorded. The common brushtail possum (*Trichosurus vulpecula*), short-eared brushtail possum (*Trichosurus caninus*), koala (*Phascolarctos cinereus*) and sugar glider (*Petaurus breviceps*) were all relatively common, while the common ringtail possum (*Pseudocheirus peregrinus*) and feathertail glider (*Acrobates pygmaeus*) were only recorded from a single location.

The greatest mammalian diversity of any group recorded on site was bats with 13 microchiropteran (insectivorous) bat species from five different families recorded, including the eastern horseshoe bat (*Rhinolophus megaphyllus*), yellow-bellied sheath-tailed bat (*Saccolaimus flaviventris*), white-striped free-tailed bat (*Austronomus australis*), little bent-



wing bat (*Miniopterus australis*), Gould's wattled bat (*Chalinolobus gouldii*), large-footed Myotis (*Myotis macropus*), large forest bat (*Vespadelus darlingtoni*).

These species utilise a number of different roosting strategies including caves, tree hollows, under loose bark, culverts, bridges etc., many of which either occur on site or are located nearby. Two macrochiropteran species - the black flying-fox (*Pteropus alecto*) and grey-headed flying-fox (*Pteropus poliocephalus*), were both recorded in large numbers during spotlight surveys, feeding on either blossom or the fruit of the numerous suitable feed tree species present. No roosts were recorded on the subject site during the current survey.

A small number of introduced species are also present including cattle (*Bos taurus*), horses (*Equus caballus*), brown hare (*Lepus europaeus*) and dogs (*Canis* spp.), as well as the aforementioned introduced rodent species. It is possible that both the domestic dog and the dingo occur on site and noted that the cattle and horses were removed from site early 2024.

The relatively high overall mammal species richness and diversity is due to a number of reasons including the presence of a large tract of good quality vegetation/habitat, a large number of hollow bearing trees, moist gullies, largely native open grassy habitat, large amounts of fallen timber, rocky areas, permanent and ephemeral waterbodies and open disturbed habitat generally located in the lower portion of the subject site.

Photo 14: Koala on Camera Trap (N. Power)



Photo 15: Grey-headed flying-fox (N. power)



*Photo 16: Sugar glider (N. Power)*





### 5.3.2 Birds

A total of 124 bird species were recorded during the current survey. This included a number of species of conservation significance including the aforementioned Lewin's rail, powerful owl, eastern osprey (which nests just off the subject site along Currumbin Creek Road), rufous fantail, spectacled monarch, glossy black-cockatoo and black-faced monarch. A total of 31 species listed as marine under the EPBC Act were also recorded.

The number of species recorded is considered high and it is likely that over 150 species utilise the site for breeding and/or foraging purposes, or potentially for its corridor value as a stepping-stone to other bushland areas to the east/west or north/south.

This number included 10 pigeon/dove species, six cuckoo species, eight herons/egret species, seven raptor species, nine parrot species and 11 honeyeater species, in addition to a large number of smaller forest/ground bird species i.e. thornbills, wrens, whistlers and flycatchers etc.

The moister gullies of the site were dominated by several species including the scarlet honeyeater (*Myzomela sanguinolenta*), eastern-yellow robin (*Eopsaltria australis*), eastern whipbird (*Psophodes olivaceus*), rufous fantail (*Rhipidura rufifrons*), eastern grey strike-thrush (*Colluricincla harmonica*), rufous strike-thrush (*Colluricincla rufogaster*), leaden flycatcher (*Myiagra rubecula*), white-browed scrubwren (*Sericornis frontalis*), large-billed scrubwren (*Sericornis magnirostra*), black-faced monarch (*Monarcha melanopsis*) and several pigeon species including the emerald dove (*Chalcophaps indica*), wonga pigeon (*Leucosarcia picata*) and wompoo fruit-dove (*Ptilinopus magnificus*).

The drier habitats were dominated by a number of species including white-throated gerygone (*Gerygone albogularis*), fairy-wrens (*Malurus* spp), yellow-faced honeyeater (*Lichenostomus chrysops*), brown honeyeater (*Lichmera indistincta*), white-throated honeyeater (*Melithreptus albogularis*), noisy friarbird (*Philemon corniculatus*), striated thornbill (*Acanthiza ineata*), brown thornbill (*Acanthiza pusilla*), laughing kookaburra (*Dacelo novaeguineae*), various cuckoo species, sulphur-crested cockatoo (*Cacatua galerita*), and rainbow lorikeet (*Trichoglossus haematodus*).

The more open disturbed habitats tended to be dominated by open-country specialists including the Australian magpie (*Cracticus tibicen*), both species of butcher birds (*Cracticus* spp.), masked lapwing (*Vanellus miles*), magpie lark (*Grallina cyanoleuca*) and red-browed finch (*Neochmia temporalis*).



Waterbirds were also well represented and were generally restricted to the dams or in the lower disturbed open areas subject to inundation or along the watercourse present. These included the purple swamphen (*Porphyrio porphyrio*), Australasian grebe (*Tachybaptus novaehollandiae*), Lewin's rail (*Lewinia pectoralis*), buff-banded rail (*Gallirallus philippensis*), Australian white ibis (*Threskiornis Molucca*), royal spoonbill (*Platalea regia*), cattle egret (*Ardea ibis*), white-faced heron (*Egretta novaehollandiae*), Pacific black duck (*Anas superciliosa*) and little black cormorant (*Phalacrocorax sulcirostris*).

Birds are an extremely diverse group of vertebrate fauna and therefore for areas to support a high species richness and diversity, they must be large enough to contain a variety of ecosystems and/or vegetation/habitat structural diversity. The bird species diversity was comprised of numerous guilds including forest, understory and open-country species. The well-developed ground layer and understorey vegetation supports many species which rely on these variables for foraging and nesting. Other species inhabit the mid and upper canopy and utilise these layers to feed on nectar, seeds and invertebrates. The disturbed/open habitat and associated lowland areas which are become inundated following rainfall supports species which tend to avoid internal forest habitat.

Photo 17: Powerful Owl (*N. Power*)





*Photo 18: Brahminy kite (N. Power)*



*Photo 19: Golden-headed cisticola (N. Power)*





### 5.3.3 Reptiles

A total of 11 reptile species were recorded during the current survey. This number is considered relatively low, and it is likely that up to three times this number utilise the subject site. The somewhat low diversity recorded may be in part be due to the relatively cool and overcast conditions present during both August and October and further surveys on hot days and nights would likely record additional species. Interestingly no turtle species were recorded although there are several dams present which provide suitable habitat for one or more of the local species.

The species recorded included one gecko species the introduced house gecko (*Hemidactylus frenatus*), which was present in the lowland areas closest to human habitation. Five skink species were recorded of which the garden skink (*Lampropholis delicata*) and three-toed skink (*Saiphos equalis*) were the only species which were considered common and widespread. One dragon and one monitor species were recorded - the eastern water dragon (*Intellagama lesueurii*) and lace monitor (*Varanus varius*), and two snake species the relatively common blackish-blind snake (*Anilius nigrescens*) and uncommon rough scaled snake (*Tropidechis carinatus*).

In general, reptiles require many of the ground-level habitat complexity variables as do small ground mammals, including a well-developed and complex understorey and a variety of microhabitats – such as fallen timber, leaf litter and rock cover.

Photo 20: Three-toed skink (N. Power)





### 5.3.4 Frogs

A total of nine frog species were recorded during the current survey. This included one species of conservation significance, the aforementioned tuskedfrog. The frog diversity was made up of three species of ground frogs, five species of treefrogs and the introduced cane toad (*Rhinella marina*) which was common throughout much of the site.

Most species were predominately recorded around the permanent dams and lowland grassland areas which are subject to inundation, including the striped marshfrog (*Limnodynastes peronii*), striped rocketfrog (*Litoria nasuta*), tuskedfrog (*Adelotus brevis*), eastern sedgefrog (*Litoria fallax*), graceful treefrog (*Litoria gracilentata*), emerald-spotted tree frog (*Litoria peronii*), laughing tree frog (*Litoria tyleri*) and the aforementioned cane toad. The copper-backed broodfrog (*Pseudophryne raveni*) was restricted to seasonally inundated ephemeral gullies and drainage lines which provide suitable breeding habitat.

The number of frog species recorded is considered moderate, although it is likely that other species may occur on site. One of the reasons for the relatively low diversity is due to the lack of a permanent good quality freshwater creek or stream system with deeper pool and shallow riffle sections or rainforest which provides habitat for a number of species not recorded during the current survey.

Photo 21: Tusked frog (N. Power)





### 5.3.5 Fishes

In total nine fish species were recorded. These were limited to a small number of largely freshwater species i.e. longfin Eel (*Anguilla reinhardtii*), striped gudgeon (*Gobiomorphus australis*), firetail gudgeon (*Hypseleotris galii*), plague minnow (*Gambusia holbrooki*) and a number of largely marine species including the banded toadfish (*Marilyna pleurosticta*), sea mullet (*Mugil cephalus*) and yellowfin bream (*Acanthopagrus australis*). The freshwater species were generally restricted to the dams and the upper portion of the central drainage line, while the marine species were generally restricted to the middle and lower portions of the drainage line which have tidal influence, although there are some species including the introduced plague minnow, which can utilise both habitats to some extent.

Additional fish sampling techniques including the use of fyke or seine netting which targeted the tidal sections of the subject site resulted in additional species being recorded. These are discussed in Section 6.0 Aquatic Ecological Assessment.

### 5.3.6 Invertebrates

In total 114 invertebrate species of the groups surveyed were recorded. This included five land snail species, four aquatic decapods and 98 insect species of the four groups surveyed.

In total four species of aquatic decapods were recorded including the orange-fingered yabby (*Cherax depressus*) which was recorded in large numbers from both the dams and ephemeral gullies. The ephemeral gullies were inspected for the *critically endangered* hinterland crayfish (*Euastacus madae*), however it was not recorded and although the subject site is potentially too low in elevation for this species, its presence cannot be discounted.

The insect fauna was found to be highly diverse with butterflies being the richest with 49 species. This included three species of particular interest, the *vulnerable* Richmond birdwing butterfly (*Ornithoptera richmondia*), whose larval host plant (*Pararistolochia praevenosa*) was recorded at a number of locations on site, the Australian leafwing (*Doleschallia bisaltide*) and spotted sedge-skipper (*Hesperilla ornata*), both of which are only infrequently recorded on the Gold Coast. The high species richness and diversity of butterflies recorded suggests that there is good quality habitat present for both butterflies and other invertebrate species (Harding *et al.* 1995).



One moth species of conservation significance was targeted, the southern pink underwing moth (*Phyllodes imperialis smithersi*), which is listed as *endangered* under the EPBC Act. The larval host plant (*Carronia multiseppalea*) was recorded at three locations on the subject site by Gold Coast Botany. Feeding damage was present but no caterpillars or adults were observed in the initial surveys. However in April 2025 a single southern pink underwing moth caterpillar was observed on the host plant along the southern property boundary.

The rich diversity of insects encountered is likely due to the variability and quality of the habitat present including waterbodies, closed and open forest, disturbed areas and a rich variety of groundcover, understory and canopy plant species.



Photo 22: Orange-tipped pea-blue butterfly (N. Power)

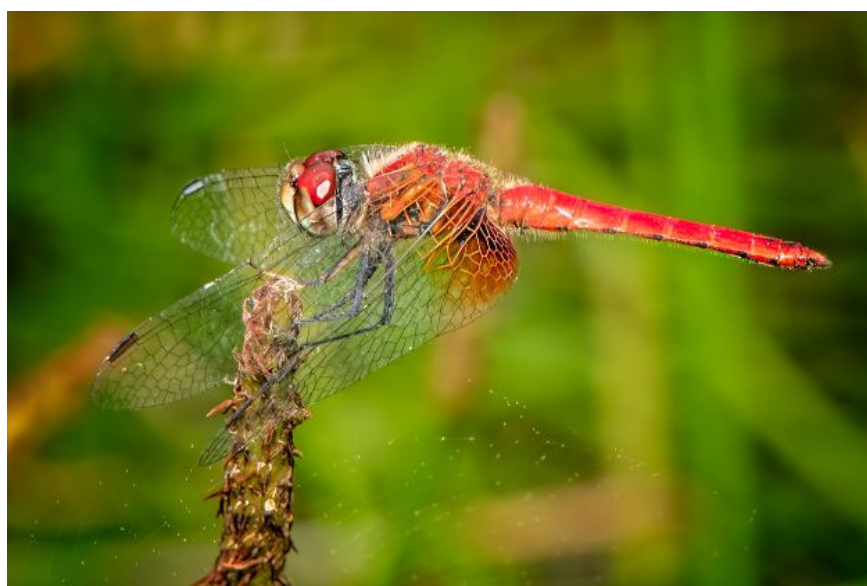


Photo 23: L spot basker dragonfly (N. Power)



## 5.4 Habitat Assessments

The results of the eight habitat assessments can be seen in **Attachment 10**. These indicate that overall, the subject site was found to be rich in many of the important habitat and vegetation variables required for a diverse and species rich faunal assemblage. The site is considered to have high ecological value and provides important habitat areas that support (or have the potential to support) numerous threatened or otherwise significant fauna species.

Much of the intact regions of vegetation appears to be in good ecological condition with areas having good canopy cover, fallen timber, rocky groundcover, an often dense and variable understory, numerous medium/large hollow bearing trees, ephemeral water bodies and areas of permanent water. There are however areas of altered and previously disturbed habitat which have extensive weed incursion, including introduced grasses i.e. molasses grass (*Melinis minutiflora*), lantana (*Lantana camara*) and camphor laurel (*Cinnamomum camphora*), areas of erosion or areas damaged by cattle. Excessive weed infestation often leads to an over-simplification of habit and can result in a reduction in both faunal species richness and diversity.

*Photo 23: Ephemeral gully holding water (N. Power)*



## 6.0 AQUATIC ECOLOGICAL ASSESSMENT<sup>23</sup>

Wetland types and habitat conditions for the aquatic habitats found on-site are summarised in **Table 16** and shown on **Figure 2-5**. Habitat Assessment Sheets are provided in **Attachment 11**.

Aquatic habitat types are different to the types and extents of wetlands identified in the Queensland Wetland Mapping (DESI 2024 – **Attachment 4**). Variations are likely the result of historic modifications to surface runoff on the floodplains. This includes damming off freshwater runoff within the estuarine reach, and construction of many drainage canals dissecting most sections of floodplain.

Table 16: Aquatic Habitat Summary

Wetlands	Types	Significant Matters
Estuarine	• Intertidal / subtidal channel	HEV* Wetlands and Waterways
	• Intertidal mangroves	
	• Intertidal drainage canals with mangrove regrowth and jointed rush ( <i>Juncus kraussii</i> )	
Riverine	• Stream order four watercourse	Nil
	• Ephemeral tributaries	
	• Ephemeral artificial drainage canals	
Lacustrine	• Dams above the floodplain	Special Least Concern Species - Water snowflake ( <i>Nymphoides indica</i> )
Palustrine	• Possible coastal floodplain tree swamp	Nil
	• Possible coastal grass, sedge, herb swamp	

\* High Environmental Value

### 6.1 Conservation Significant Species

Four freshwater species of conservation significance were identified within the literature review as potentially occurring within the vicinity of the Eco-Parkland including:

- Hinterland spiny crayfish (*Euastacus madae*);
- swamp crayfish (*Tenuibranchiurus glypticus*);
- Oxleyan pygmy perch (*Nannoperca oxleyana*), and;
- honey blue-eye (*Pseudomugil Mellis*).

<sup>23</sup> Blue Earth Environmental (Feb 2024) Currumbin Eco-Parkland Aquatic Ecological Assessment



Field surveys didn't observe any of these species. A range of Special Least Concern macrophytes were also identified within the desktop stage as either likely to occur or have potential to occur. Species have recently been listed as Special Least Concern that are likely to be subject to increased harvesting pressure due to their commercial and recreational demand, and the nature of their growth and reproduction. Of these, water snowflake (*Nymphoides indica*) was recorded on site within the lacustrine wetland.

## 6.2 Introduced Species

A number of exotic fish species have previously been recorded within the Coomera and Nerang Rivers Basin and include:

- Eastern mosquitofish (*Gambusia holbrooki*)
- Swordtail (*Xiphophorus helleri*)
- Platy (*Xiphophorus maculatus*)
- Mozambique tilapia (*Oreochromis mossambicus*)

Of the four listed, only Eastern mosquitofish were observed on-site in both the lacustrine wetland and the unnamed tributary of Currumbin Creek.

Three introduced macrophyte species were recorded during the field survey:

- Umbrella sedge (*Cyperus eragrostis*)
- Brazilian water milfoil (*Myriophyllum aquaticum*)
- *Mymphaea caerulea*

## 6.3 Aquatic Flora and Fauna

A total of 14 fish species were recorded within the study area, including six species within freshwater habitats (riverine and lacustrine) and eight species within the lower estuarine reach (Table 17).

**Table 17: Fish Species Recorded within Currumbin Eco-Parkland**

Common name	Scientific name	R2 Estuarine	R6 Riverine	L1 Lacustrine
<i>Fish</i>				
long-finned eel	<i>Anguilla reinhardtii</i>		1	1
Duboulay's rainbowfish	<i>Melanotaenia duboulayi</i>		1	
pacific blue-eye	<i>Pseudomugil signifer</i>	52		
estuary glassfish	<i>Ambassis marianus</i>	64		
moses perch	<i>Lutjanus russelli</i>	1		
common silverbiddy	<i>Gerres subfasciatus</i>	8		
common toadfish	<i>Tetractenos hamiltoni</i>	13		
gold spot mullet	<i>Liza argentea</i>	36		
sea mullet	<i>Mugil cephalus</i>	4		
<b>goby sp.</b>		2		
striped gudgeon	<i>Gobiomorphus australis</i>		15	
empire gudgeon	<i>Hypseleotris compressa</i>		58	6
firetail gudgeon	<i>Hypseleotris galii</i>			7
<b>gambusia</b>	<b><i>Gambusia holbrooki</i></b>		16	47
<i>Crustacea</i>				
prawns	<i>Palaemonidae sp.</i>	100s		

Note: **Bold** indicates exotic species

Two species of mangrove were recorded, being long stilted mangrove (*Rhizophora stylosa*) and grey mangrove (*Avicennia marina subsp Australasica*). Long stilted mangrove was recorded at the most downstream estuarine site (R1), while grey mangroves was present at all intertidal watercourse sites visited. Additionally juvenile grey mangrove observed in a number of drainage canal subject to tidal influence.

Sparse swamp sheoak (*Casuarina glauca*) was recorded fringing sections of grey mangrove in the lower sections of the estuary while juvenile stands were present at mid estuary sites R3 and R4. Jointed rush (*Juncus kraussii*) was present within upper tidal reaches of drainage canals where grey mangrove had not established (**Figure 2-5**).

A total of 21 freshwater macrophytes species were recorded within riverine and lacustrine wetland habitats, of these 15 species were recorded within the upper lacustrine wetland.

The habitat condition of wetlands ranged from poor to very good (**Attachment 11**).



Key processes impacting the condition of wetlands at the Currumbin Eco-Parklands included:

- Exposure of acid sulphate soils within drainage canals impacting water quality.
- Restriction of tidal flushing and fish passage from instream barriers (remnants of weir and several small culverts).
- Historic manipulation of freshwater runoff and riparian clearing resulting in a reduction in the extent and function of marine vegetation.
- Deterioration of defined stream banks (particularly on the floodplain) through clearing of riparian vegetation and cattle trampling.
- Occurrence of the invasive camphor laurel within riparian areas.

## 6.4 Wetland Habitats

Blue Earth Environmental (Feb 2024) conducted the aquatic ecological assessment of the Currumbin Eco-Parkland and described the four wetland habitat areas in the following sections:

### 6.4.1 Estuarine Wetlands

Estuarine wetland habitat within Currumbin Eco-Parkland includes:

- Intertidal / subtidal channel;
- Intertidal mangroves, and;
- Intertidal drainage canals with mangrove regrowth and jointed rush (*Juncus kraussii*)

The unnamed tributary of Currumbin Creek has approximately 1,100m of intertidal channel extending across the floodplain section of the Eco-Parkland. Fisheries and aquatic health ratings within this intertidal reach ranged from very good to poor (Refer **Attachment 11**).

The lower reach (sites R1, R2 and R3) is subject to regular tidal flushing with both subtidal and intertidal habitats present. There is a moderate to high abundance of crabs and burrows along the intertidal banks with abundance increasing downstream. Oysters are also present on rocky rubble at the lowest section (site R1). The bankfull width ranges from 15 to 22 meters with an approximate 5 to 10m wide band of continuous riparian vegetation on both banks consisting of established grey mangrove (*Avicennia marina subsp. Australasica*) and both established and juvenile swamp oak (*Casuarina glauca*).

Within the mid reaches (site R4 and downstream), the bankfull channel width reduces to approximately 10 to 15m with of a 5m wide semi continuous riparian zone consisting of juvenile and established grey mangrove and juvenile swamp oak. The tidal range is reduced though still likely subject to regular flushing. A culvert directly at site R4 partially restricts tidal movement further upstream. Only occasional crabs and burrows were observed here with an absence of low gradient intertidal bank habitat.



Upstream of site R4 the bankfull width further reduces to 5 to 10m with a 5m wide semi continuous riparian zone consisting of juvenile grey mangrove. No crabs or burrows were observed within only shallow intertidal habitat present. Tidal flushing may be restricted to larger tidal ranges around spring tides. Adjoining this reach is a number of small drainage canals approximately 4m in width with juvenile grey mangrove in lower sections and then jointed rush (*Juncus kraussii*) further upstream (**Figure 6-2**). These canals are largely intertidal, with less than 0.2m of shallow pool habitat present.

In-situ physio-chemical water quality data collected within intertidal habitats has been compared to local water quality objectives. Notably, both the pH and dissolved oxygen (DO) concentrations were considerably lower than what would be anticipated within an estuary with pH values ranging from highly acidic (pH 3.3) to slightly acidic (pH 6.8) and DO values ranging from 5.0 to 70.1% saturation. Data was predominately collected on an ebbing tide and a reduction in these parameters likely depicts acid sulphate soil runoff.

**Figure 6-1: Intertidal Drainage Canals**



#### **6.4.2 Riverine Wetlands**

Riverine wetland habitat within Currumbin Eco-Parkland includes:

- Stream order four watercourse (unnamed tributary of Currumbin Creek);
- Ephemeral tributaries (thirteen minor tributaries from stream order one to three), and;
- Ephemeral artificial drainage canals

Isolated pool habitat was recorded on the unnamed tributary of Currumbin Creek at three locations (sites R5, R6 and R8) and on a stream order three ephemeral tributary in the south-west section of the study area (site R7). All other minor tributaries and freshwater sections of drainage canals surveyed were dry at the time of assessment.

The most permanent of these isolated pools was a deep pool (average depth of 0.9m, 3.5m wide and >100m in length) at site R6 (**Figure 6-3**). It is likely that this semipermanent pool would provide some limited refugia for aquatic species during drier periods.

**Figure 6-2: Pool Habitat**



The *in-situ* physio-chemical water quality characteristics of riverine pool habitat identified during the site assessment has been compared against the local water quality objectives. The EC ranged from 286 to 310  $\mu\text{S}/\text{cm}$  in areas outside the tidal influence. At site R5, an increase in EC was recorded (1,007  $\mu\text{S}/\text{cm}$ ) being the upper extent of tidal reach. The pH ranged from highly acidic (pH 3.5 at R7) to moderately acidic (pH 6.3 at R5). Highly acidic surface waters recorded at R7 on the floodplain may likely be attributed acid sulphate soils as waters were generally clear and not tannin stained. Tannin staining was observed at waterbodies not on the floodplain (sites R6 and R7) and likely attributing to acidic conditions.

Dissolved oxygen concentrations naturally show diurnal variation based on changes in oxygen production (i.e. photosynthesis, riffles) and oxygen consumption (i.e. plant respiration and organic decomposition) where peak concentrations typically occur within the early afternoon and lowest concentrations occur prior to dawn. Dissolved oxygen was considerably low at all sites, ranging from 3.0 to 20.3% saturation. At non-floodplain sites (R6 and R7), low DO may be characteristic of these stream reaches resulting from high stream shading (and subsequent limited in primary production) and a high accumulation of organic material (organic decomposition). On the floodplain (sites R5 and R8) the occurrence of acid sulphate soils may have contributed to the reduction in DO.

Riverine habitat condition assessed during December 2023 using the AUSRIVAS bioassessment technique (DNRM 2001) determined that stream reaches not on the floodplain (sites R6 and R7) were in 'Good' condition, while other sections of the unnamed watercourse and low order ephemeral tributaries (stream order 1 and 2) were in 'Fair' condition. Key findings in habitat condition include:

- Sites R6 and R7 showed a good variation in substrate material (i.e. a mix of fines, sands, gravel etc) and adequate available structural habitat (i.e. logs, undercut banks). All other sites exhibited poor substrate composition (i.e. only clays / silts) and little to no structural habitat;



- Site R6 was the only site to exhibit more than one meso habitat type (i.e. shallow pool and deep pool);
- There was moderate deposits of anoxic silts at the lowest freshwater site (R5) with all other sites exhibiting little deposition or scouring of bed materials;
- Bank stability at all sites was good to excellent with no significant erosion or potential for significant erosion in extreme floods, and;
- Stream side cover was poor at all floodplain watercourse sites (R5 and R8) and tributaries, with a general absence of tree's in the riparian zone. Streamside cover at sites R6 and R7 was excellent, however the riparian zone was dominated by *Camphor laurel*.

#### 6.4.3 Lacustrine Wetlands

Two dams are located above the floodplain along a moderate gradient ephemeral tributary and can be classed as artificial coastal non-floodplain soil lakes (DESI 2013b) (**Figure 6-4**). The lower wetland is slightly smaller being approximately 30 in width and length. The larger wetland is approximately 40m upstream along the tributary and is approximately 70m in length and 35m in width. The depth of both wetlands is uncertain with water levels being greater than 1.3m along the banks, although depths would be greater than 2m beyond the margin of cape waterlily (*Nymphaea caerulea*).

Both wetlands displayed a high diversity of aquatic macrophytes. *In-situ* physio-chemical water quality parameters recorded in the upper wetland shown surface waters to be fresh (128  $\mu\text{S}/\text{cm}$ ), slightly acidic (pH 6.8), well oxygenated (107.2% saturation) and clear (4.4 NTU).

**Figure 6-3: Artificial Non-Floodplain Soil Lake (Dam) on Ephemeral Watercourse**



#### 6.4.4 Palustrine wetlands

The study area may contain small sections of coastal floodplain tree swamp and coastal grass, sedge, herb swamp. The occurrence and extent of these palustrine wetlands types are yet to be determine from terrestrial fauna survey results and further field validation.

## 7.0 SUMMARY OF ENVIRONMENTALLY SIGNIFICANT MATTERS

Desktop assessment and field surveys have determined the Currumbin Eco-Parkland site contains ecologically significant matters at the Local, State, Federal and International regulatory levels.

**Table 18** summarises the environmental values identified and confirmed during the ecological field assessments. The resultant environmental values mapping (**Figures 7-1 and 7-2**) have been prepared to show the areas of the site that have high environmental values, and which are recommended for protection/enhancement as part of the master planning process. These maps require refinement of boundaries, however, form the basis of the High Ecological Value Mapping described in **Section 8.0**.

**Table 18: Ecological Values at the Currumbin Eco-Parkland**

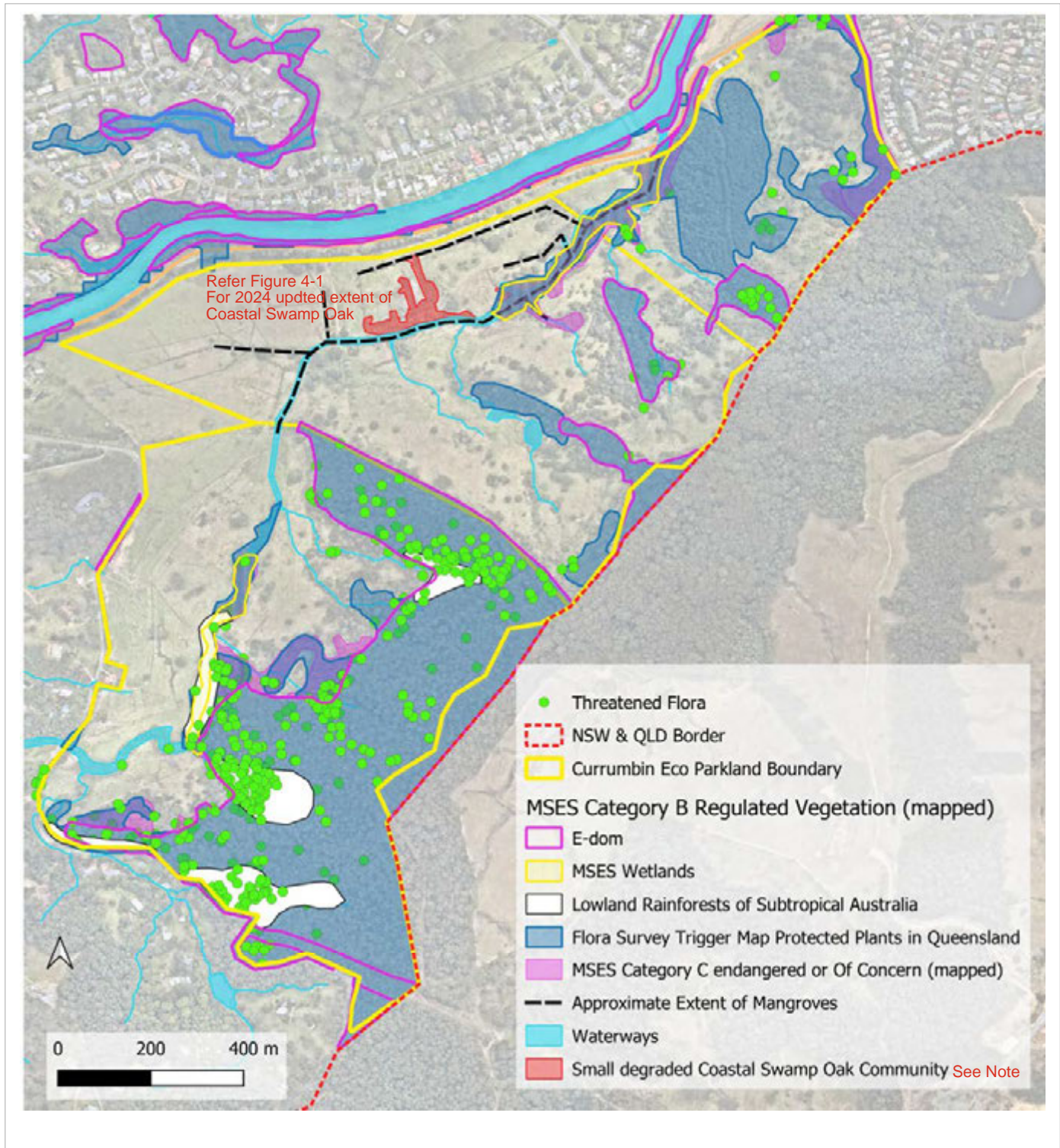
Ecological Values Identified on Site	National EPBC Act (MNES)	State NC Act/VM Act/F Act MSES	CoGC City Plan MLES
<b>Threatened Ecological Communities (Figure 4-1)</b>			
1. Coastal Swamp Oak ( <i>Casuarina glauca</i> ) Forest of New South Wales and Southeast Queensland ecological community	Endangered	Associated REs RE12.1.1 RE12.3.20	-
2. Lowland Rainforest of Subtropical Australia	Critically Endangered	Associated REs RE12.3.1 RE12.11.1	-
<b>Threatened Flora Species (Figure 4-3)</b>			
1. <i>Cassia marksiana</i>	-	Vulnerable	Priority species
2. <i>Cupaniopsis newmanii</i>	-	Near Threatened	Priority species
3. <i>Endiandra globosa</i>	-	Near Threatened	Priority species
4. <i>Endiandra hayesii</i>	Vulnerable	Vulnerable	Priority species
5. <i>Gossia hillii</i>	Critically Endangered	Critically Endangered	-
6. <i>Leichhardtia coronata</i>	-	Vulnerable	Priority species
7. <i>Leichhardtia longiloba</i>	Vulnerable	Vulnerable	Priority species
8. <i>Lepiderema pulchella</i>	-	Vulnerable	Priority species



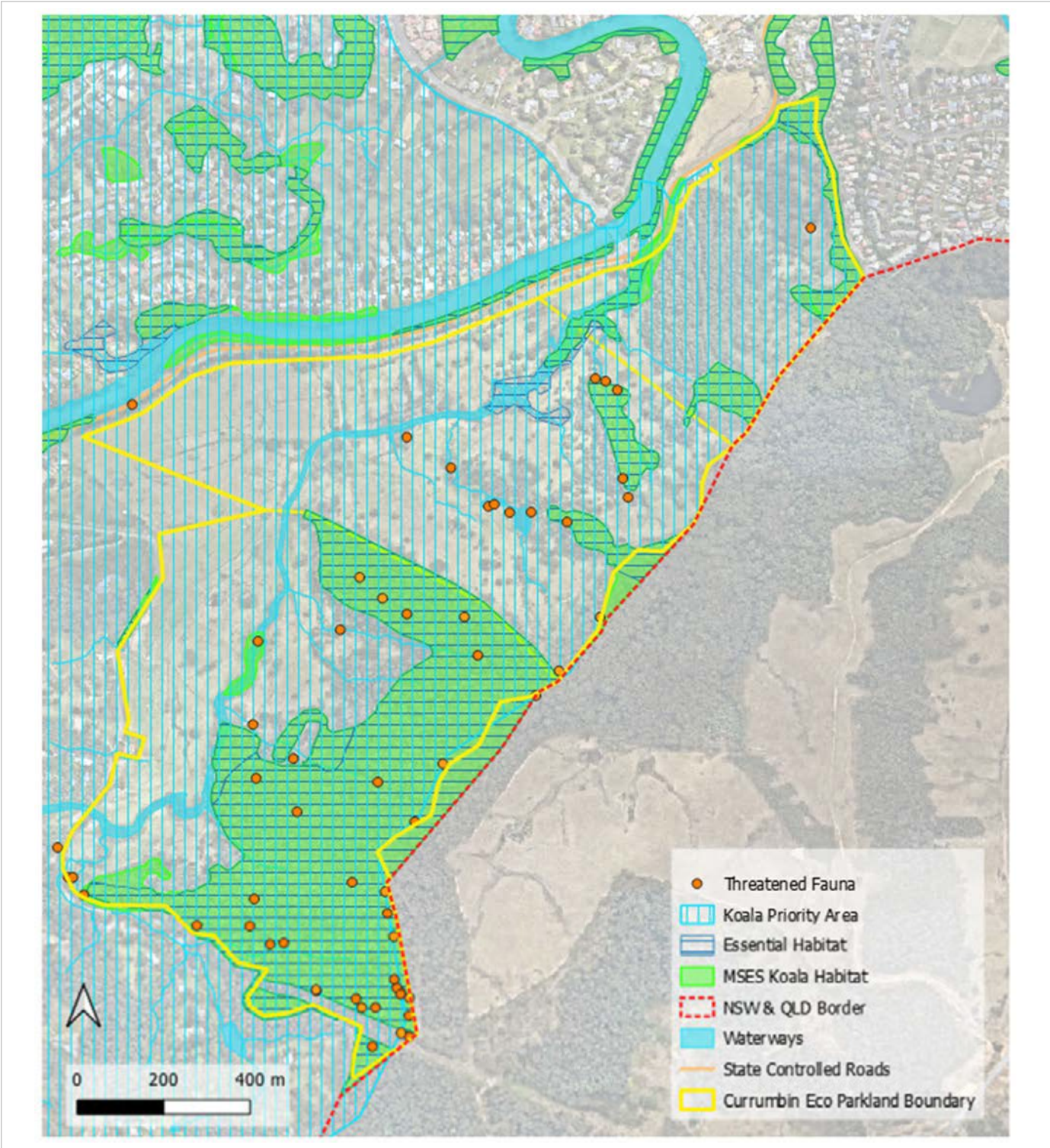
Ecological Values Identified on Site	National EPBC Act (MNES)	State NC Act/VM Act/F Act MSES	CoGC City Plan MLES
9. <i>Macadamia integrifolia</i>	Vulnerable	Vulnerable	Priority species
10. <i>Macadamia tetraphylla</i>	Vulnerable	Vulnerable	Priority
11. <i>Pararistolochia praevenosa</i>	-	Near Threatened	Priority species
12. <i>Randia moorei</i>	Endangered	Endangered	Priority species
13. <i>Rhodamnia maideniana</i>	Critically Endangered	Critically Endangered	Priority species
14. <i>Rhodamnia rubescens</i>	Critically Endangered	Critically Endangered	Priority species
15. <i>Rhodomyrtus psidioides</i>	Critically Endangered	Critically Endangered	Priority species
16. <i>Syzygium moorei</i>	Vulnerable	Vulnerable	Priority species
Marine Plants		MSES under Fisheries Act	
<b>Significant Fauna Species (Figure 5-1)</b>			
1. Koala ( <i>Phascolarctos cinereus</i> )	Endangered	Endangered	Priority, CWS
2. Grey-headed flying-fox ( <i>Pteropus poliocephalus</i> )	Vulnerable	Least Concern	Priority, CWS
3. Richmond birdwing butterfly ( <i>Ornithoptera richmondia</i> )	-	Vulnerable	Priority
4. Tusked frog ( <i>Adelotus brevis</i> )	-	Vulnerable	CWS
5. Powerful owl ( <i>Ninox strenua</i> )	-	Vulnerable	CWS
6. Short-beaked Echidna ( <i>Tachyglossus aculeatus</i> )	-	Special Least Concern	
7. Lewin's rail ( <i>Lewinia pectoralis</i> ),	-	-	CWS
8. Large-footed Myotis ( <i>Myotis macropus</i> ),	-	-	CWS
9. Eastern broad-nosed bat ( <i>Scotorepens orion</i> )	-	-	CWS
10. Large forest bat	-	-	CWS

Ecological Values Identified on Site	National EPBC Act (MNES)	State NC Act/VM Act/F Act MSES	CoGC City Plan MLES
<i>(Vespadelus darlingtoni)</i>			
11. Eastern osprey <i>(Pandion haliaetus)</i>	Migratory	Special Least Concern	
12. Rufous fantail <i>(Rhipidura rufifrons)</i>	Migratory	Special Least Concern	
13. Spectacled monarch <i>(Symposiachus trivirgatus)</i>	Migratory	Special Least Concern	
14. Black-faced monarch <i>(Monarcha melanopsis)</i> .	Migratory	Special Least Concern	
15. Glossy Black-cockatoo <i>(Calyptorhynchus lathami)</i>	Vulnerable	Vulnerable	
16. Pink underwing moth <i>(Phyllodes imperialis smithersi)</i>	Endangered	-	
17. Marine Bird species (x31)	Marine		
<b>Regulated Vegetation &amp; Habitat</b>			
Category B Remnant Vegetation	-	MSES	
Category C High-Value Regrowth	-	MSES	
Regional Ecosystem (RE) RE12.11.23	-	Endangered	
RE12.11.3a	-	Least concern	
RE12.3.1a	-	Endangered	
RE12.3.20	-	Endangered	
RE12.1.3b Mangrove shrubland	-	Least concern	
RE12.11.1	-	Least concern	
Wetland and Watercourses	-	MSES - Wetlands of High Ecological Value	MLES - Locally Significant Wetlands, Waterways and buffers
Protected Wildlife Habitat	-	- For Threatened Species - High Risk Area	Significant Species Habitat

Ecological Values Identified on Site	National EPBC Act (MNES)	State NC Act/VM Act/F Act MSES	CoGC City Plan MLES
		(Protected Plants) - Koala Habitat (Priority Area & Core Habitat)	
Waterway for Providing for Fish Passage	-	MSES if modification of waterway barrier works carried out.	-
Terrestrial habitat within a State biodiversity corridor - BAAM	-	MSES	-
Hinterland core habitat systems	-	-	MLES
Hinterland to coast critical corridors	-	-	MLES
Medium and High Priority Vegetation	-	-	MLES

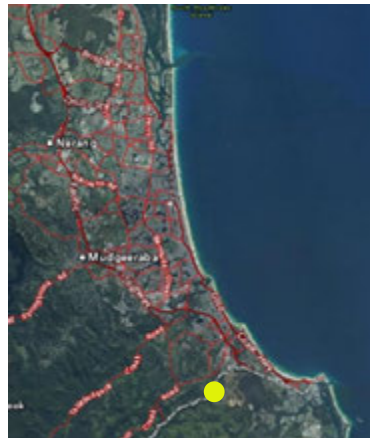


<b>Figure 7-1</b>			
<b>Client:</b>	<b>Project:</b>	<b>Title:</b>	
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Ecologically Significant Values Flora Associated	
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH	



**Figure 7-2**

<b>Client:</b>	<b>Project:</b>	<b>Title:</b>
Economic Development Queensland	Currumbin Eco-Parkland Ecological Assessment	Ecologically Significant Values Fauna Associated
<b>Data Source:</b> Nearmap	<b>Date:</b> 23 11 22	<b>Drawn:</b> NH



ddwfauna  
Environmental Consultants



## 8.0 OPPORTUNITIES & RECOMMENDATIONS

### 8.1 Restoration Opportunities

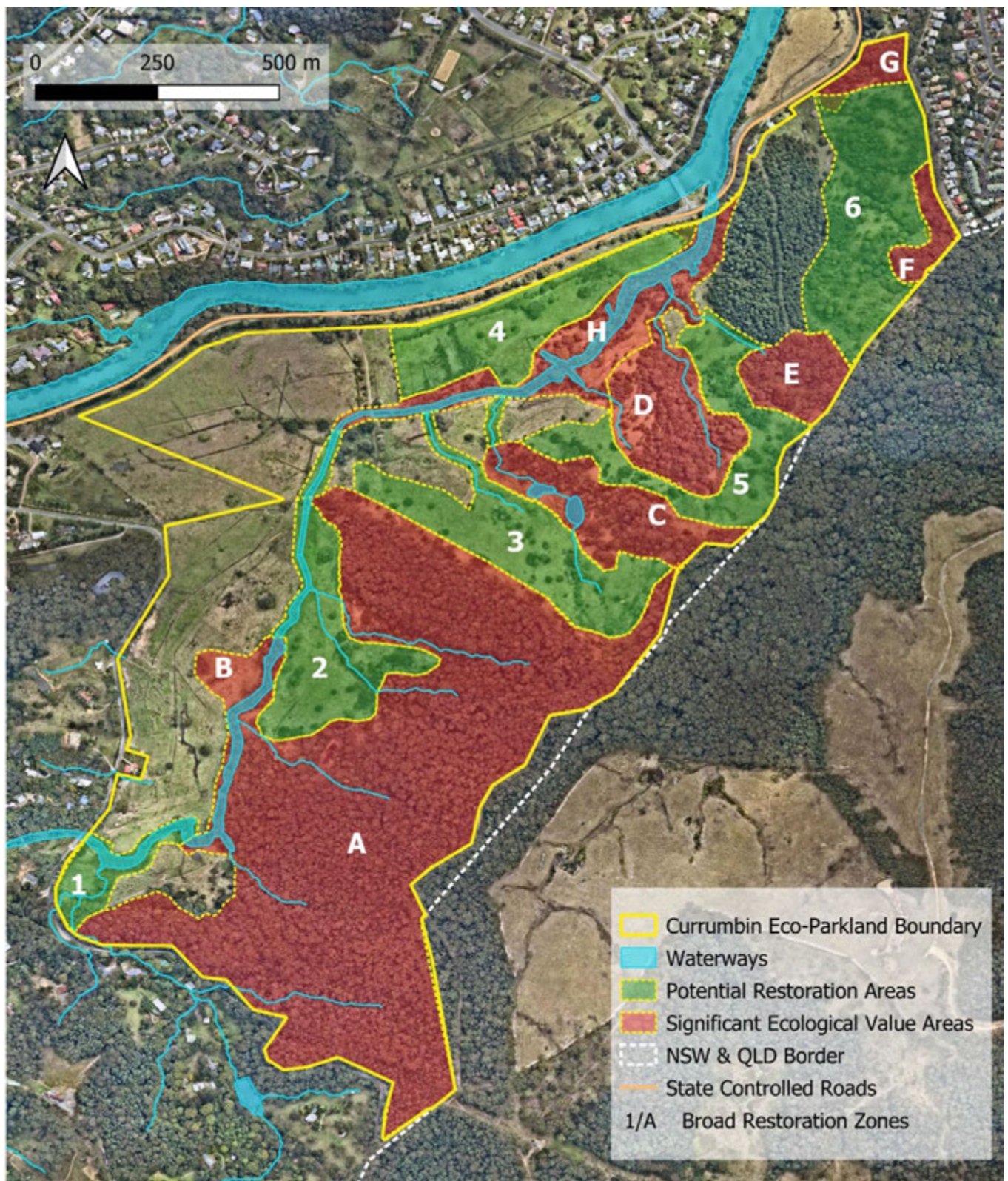
Based on the location of matters of environmental significance observed during the current survey and historically recorded on the site, a map of Ecological Values and Site Opportunities has been produced (**Figure 8-1**). This is a collaboration of various habitats that support threatened flora, significant fauna species, contain threatened vegetation/ecological communities (Significant Ecological Values **Areas A – G**), or degraded areas that have the potential for restoration to enhance and improve habitats across the site (Potential Restoration **Areas 1 - 6**). The existing condition of these areas and the 'restoration approached' recommended for these areas is summarised in **Table 19**. This table recommends broad approaches to ecological restoration, within various zones throughout the site, and in accordance with the SEQ Ecological Restoration Framework <sup>24</sup> discussed below.

As the site contains a complex mix of significant and less significant habitats in various conditions, ranging from near pristine to highly degraded, restoration opportunities vary significantly between and within these habitats, and as such will require 'area specific' restoration planning to identify detailed restoration opportunities and goals. Nonetheless, through the ecological work undertaken to-date on the Currumbin Eco-Parkland site, it is clear that the site contains areas of significant ecological value (**Areas A – G**) that require restoration and management to ensure the persistence of these ecosystems and ecological features into the future. The ecological work also found degraded areas with the potential for restoration (**Areas 1 - 6**) and other areas that are not defined on **Figure 8-1** that are highly modified and could be either restored with significant effort or utilised for recreational/development purposes.

Restoration opportunities for both areas of Significant Ecological Value and Potential Restoration identified on **Figure 8-1** could include for example, weed management to enhance threatened flora habitat, planting to improve the availability, integrity and connectivity of habitat for threatened fauna, or provide recontouring of drainage lines to minimise erosion and sediment loss to downstream aquatic environments. These actions will increase the existing ecological values of the site and potentially restore threatened communities that have been lost due to significant and historic site modification.

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<sup>24</sup> Chenoweth EPLA and Bushland Restoration Services (2012) South East Queensland Ecological Restoration Framework: Code of Practice. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane 2012.



		<b>Figure 8-1</b>
<b>Client:</b> Economic Development Queensland	<b>Project:</b> Currumbin Eco-Parkland Ecological Restoration Plan	<b>Title:</b> Ecologically Significant Areas Potential Restoration Areas
<b>Data Source:</b> Nearmap	<b>Date:</b> 01 10 24	<b>Drawn:</b> NH





According to the SEQ Ecological Restoration Framework mentioned above, which was prepared as a decision-making tool to assist environmental managers and practitioners to achieve the best possible outcomes when undertaking ecological restoration in Southeast Queensland, the definition of ecological restoration is:

*“The process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed”*

Choosing the appropriate approach to ecological restoration relies on an understanding of the type and extent of damage to the original ecosystem. It also requires an understanding of what the original ecosystem was, and whether only minor inputs are required (e.g. control of weeds) or substantial alteration of physical attributes of the landscape are needed to restore an ecosystem (e.g. reinstating overland flow paths).

The Framework presents four common restoration approaches that have been broadly considered for the Significant Ecological Values Areas and the Potential Restoration Areas nominated on **Figure 8-1**. The four approaches are:

- Natural Regeneration - applicable to large intact and weed-free areas of native vegetation with an aim to re-establish original vegetation. This may apply to parts of Area A.
- Assisted Natural Regeneration – applicable to areas with healthy and functioning native plant communities. Works are likely to be focused on weed and landuse management and may apply to parts of Area A, G & H and parts of Areas 1 - 6.
- Reconstruction (Revegetation) – applicable to areas that are degraded, altered and the original vegetation communities cannot recover by natural means. Planting is likely to occur in association with weed and land management, and may apply to Areas, B, C, D, E and F and parts of Areas 1 - 6.
- Fabrication (Type conversion) – applies to areas that have been irreversibly changed such as those not classified on **Figure 8-1**.

As mentioned previously, **Table 19** provides broad recommendations that would require Area specific details, and a restoration plan for the implementation of restoration works. We understand a Land Management Plan has been prepared by Saunders Havill Group (2022), however we recommend this plan is reviewed with respect to the data and site-specific information provided by this Ecological Site Assessment.

Areas with no **Letters** or **Numbers** still require management, particularly weed management and slashing/cattle, depending on the proposed use of the area and timeframes for development/restoration. Parts of upper gullies in all sections are very steep and are difficult to safely access.

Table 19: Preliminary Restoration Zones

Zone	Existing Condition	Suggested Ecological Restoration Approach
<b>Potential Restoration Zones (Figure 8-1)</b>		
1	Highly modified with riparian zones dominated by Camphor Laurel and Giant Devil's Fig. During conversion, careful consideration is needed regarding potential for bank instability and erosion. Areas not treed are heavily used by horses and some creek banks are badly damaged by horses.	Reconstruction
2	These areas are largely cleared but contain occasional copses of older trees and areas of regrowth. Conditions are ideal for assisted natural regeneration working out from canopy and regrowth area. Some optional reconstruction particularly in riparian sections.	Predominantly Assisted NR with optional Reconstruction
3	Same as Zone 2	
4	Currently mostly cleared with emerging copses of regrowth <i>Casuarina glauca</i> . This area could be rehabilitated with a combination of methods to allow for the area of Swamp Oak Forest to recover. Additional assessment is required to determine the extent and potential for restoration of this threatened ecological community.	A combination of Assisted NR and Reconstruction
5	Same as Zone 2	
6	Same as Zone 2 but less recently impacted from cattle so contains larger areas of regrowth with fewer cleared areas; large patches of woody weeds still persist.	Predominantly Assisted NR with optional Reconstruction
<b>Significant Ecological Value Areas (Figure 8-1)</b>		
A	<p>Large areas of mostly intact forest with good forest structure and minimal modification but has a range of rehabilitation needs. Most parts are in good condition and will be resilient with natural recruitment after initial primary weed control.</p> <p>Some areas of dominant weeds persist including Lantana, exotic vines (especially <i>Passiflora</i> spp.), Fishbone Fern and Molasses Grass. One section contains a large mature patch of Cat's Claw Creeper which will require a considerable amount of work to control (smaller outbreaks of Cat's Claw occur in several locations throughout the site and need priority control).</p> <p>Most edges are dominated by weed species such as Camphor Laurel, Devil's Fig, Lantana, and pasture grasses.</p>	Predominantly Assisted NR

Zone	Existing Condition	Suggested Ecological Restoration Approach
B	Mostly cleared but with an isolated copse of mature <i>Eucalyptus robusta</i> (Swamp Mahogany) plus numerous large remnant trees adjoining the creek. Consider reconstruction as a buffer to these trees.	A combination of Assisted NR and Reconstruction
C	<p>These areas are mostly vegetated with mature canopy trees and contain old and young regrowth. However, there is more understorey modification from cattle grazing with regard to the type and dominance of weed species and there is limited native regrowth (with new plants repeatedly grazed). Many areas are dominated by either/or pasture grass, exotic trees (especially Camphor Laurel), and woody weeds including <i>Solanum</i> spp., Lantana and Chinese Burr. These areas will require more work and will take longer to respond with natural recovery than in A.</p> <p>Some areas could benefit from in-fill reconstruction, particularly in modified riparian areas and where there are large canopy gaps.</p>	A combination of Assisted NR and Reconstruction
D	Same as C	
E	Same as C	
F	Same as C	
G	This area contains a small section of intact <i>Eucalyptus</i> forest in higher parts and rainforest in lower parts including numerous threatened species. There are various weeds associated with an old quarry and with edge effects.	Predominantly Assisted NR
H	This area includes Mangroves communities in northern and mid portions and regrowth RE12.3.20 in northern portions.	Predominantly Assisted NR



## 8.2 Threatened Species Threat Abatement Opportunities

During site visits for the ecological surveys, it was noted that impacts to threatened species, and the environment in general at the Eco-Parkland, was occurring from various site activities. These included:

- damaged to ground habitat and tree health from hooved animals
- erosion and sedimentation from actively used site tracks
- damage to tree health from inappropriate fencing management and recreational wood chopping
- Loss of habitat from weed incursion, including from regular flood events transporting plant propagules.
- Myrtle rust impacts to flora species in the Myrtaceae family
- Reduced health of select vegetation communities from changed fire regimes.

Development of the Eco-Parkland site will provide opportunities to manage the above impacts with the exception of Myrtle rust as discussed in Section 4.3.2.

## 8.3 Recommendations

### State Government Mapping Amendments

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State Government environmental mapping (**Attachment 4**) on the site has been groundtruthed during the current ecological assessment. Whilst the mapping generally reflects the ecological values on ground, some minor modification of boundaries is required to better reflect site attribute locations. Changes are recommended to:

- Regulated Vegetation Map
- Regulated Vegetation Supporting Map
- Flora Survey Trigger Map.

The project team is currently in discussion with the QLD Herbarium on RE boundaries.

### Threatened EPBC Ecological Community Surveys

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The Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales occurs near the cattle yards adjacent to Currumbin Creek Road (**Figure 4-1**). The area comprises relatively young regrowth vegetation. It was recommended in 2022 that further assessment occurs, specific to determining whether this patch of regrowth achieves the condition thresholds for this community. Consultation with the Federal Department of Climate Change, Energy, the Environment and Water Officers confirmed the presence of this community in 2023.

The investigation into this vegetation community has informed future restoration towards the Endangered Coastal Swamp Oak community.



Lowland Rainforest of Subtropical Australia Occurs on-site and are represented by Endangered Regional Ecosystem RE12.3.1 and RE12.11.1. **Figure 4-1** shows the location of this Threatened Ecological Community. Recommended was made in 2022 that further assessment occurs to more specifically determine the extent of this patch of vegetation. The extent has been further investigated.

### Weed Surveys

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Weeds are a well-known constraint to natural forest health and are a threat to the potential for natural biodiversity on the site. The current ecological site assessment recorded 187 weed species during this survey, including 16 restricted plants and 74 recognised environmental weeds, and it is recommended a weed map is prepared to guide and assist future weed management on-site. As previously mentioned, a Land Management Plan has been prepared by Saunders Havill Group, however, an updated weed species list and weed mapping are required to ensure effective and efficient use of resources and the desired ecological outcomes are achieved.

### Fauna Surveys

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Despite confirming the presence of 310 fauna species on the site, additional fauna species are likely to be identified under different seasonal conditions and other climatic conditions. If additional fauna information is required to assist with habitat protection or community education, additional targeted surveys for species of conservation significance, or for infrequent fauna visitors, would be beneficial. Survey timing would be dependent on the species targeted in the survey.

### Assessable Development Triggers

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As determined from the desktop assessment, the site contains a complex mix of development assessment triggers spanning numerous technical disciplines. A planning review of the master plan, in collaboration with the findings of this ecological assessment, is recommended to identify development assessment triggers for works required to facilitate the development of the Currumbin Eco-Parkland. These are likely to relate to vegetation management and the need for permits if impacts to vegetation are likely, as a consequence of developing the site. Assessable Development Triggers could occur, for example, from:

- City of Gold Coast's City Plan for tree clearing,
- Queensland Government legislation such as the *Planning Act 2016* or *Nature Conservation Act 1992* for impacts to wildlife habitat such as koala habitat, or
- Australian Government *EPBC Act 1999* for impacts to protected matters such as threatened ecological communities.



## Attachment 1: Detailed Description of Fauna Survey Methods

## Detailed Description of Survey Methods

### Habitat Assessments

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Eight habitat assessments were undertaken, one at each of the six primary survey sites and at two other locations (**Figure 2-4**). The aim was to identify and describe the habitat present and document its value to fauna.

The assessments included appraisal of the following variables:

- Fire history (years)
- Presence of leaf litter (% cover, average depth)
- Presence of rocky areas (size, cover etc.)
- Presence of hollow logs (size)
- Presence of arboreal termite mounds
- Presence of terrestrial termite mounds
- Groundcover vegetation (density, type, condition)
- Understorey vegetation (density, type, condition)
- Canopy cover (%)
- Canopy tree height (max)
- Median tree height (canopy)
- Presence of habitat trees
- Presence of exfoliating bark
- Presence of feed trees (fruiting, seed, species etc.)
- Presence of weeds
- Presence of water bodies
- Presence of major disturbance

#### *Fish Trapping (N. Power)*



## Mammals

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### **Elliott traps 'A' and 'B' (sampling for small and medium ground mammals)**

Traps were baited with the standard mixture of rolled-oats, peanut butter and honey, with pieces of apple added to the larger traps. Traps were checked early each morning and any animals captured released after identification.

### **Pitfall trapping (sampling for small ground mammals)**

Pitfall traps consisted of three 10 litre buckets, two funnel traps and a 10m long drift fence. Traps were checked early each morning and in the late afternoon and any animals captured released following identification.

### **Terrestrial remote sensing cameras**

Remote sensing cameras were set approximately 50 cm off the ground attached to a stake adjacent to (approximately 3 metres from the camera) a bait station consisting of apple and rolled oat bait, with truffle oil and mushrooms added to some bait stations to target the long-nosed bandicoot. Cameras were checked at regular intervals and re-baited as required.

### **Arboreal remote sensing cameras**

Arboreal camera traps were set approximately two metres off the ground attached to a wooden platform. The camera faced a 60 mm diameter x 150 mm long pvc pipe with numerous holes drilled in it also attached to the platform, and contained an absorbent sponge baited with 50mls of honey, a piece of apple and a standard bait ball added as an attractant.

*Photo 10: Elliot Trapping (N. Power)*



### **General diurnal observation**

All incidental observations were recorded.

### **Spotlighting**

Spotlighting searches were conducted on foot using 50-watt headlamps to locate arboreal mammals (gliders, possums, and koalas) and other night active species including bats. Surveys began approximately 30 minutes after dusk and lasted for between three and four hours.

### **Ultrasonic call microchiropteran bat detection**

This involved remote overnight sampling with the recorder placed at a number of locations including along open areas, closed forest and near waterbodies.

### **Acoustic meters**

This involved remote sampling with the recorder placed at a number of locations including in open areas, closed forest and near waterbodies. These record the calls/vocalisation of various species, which are then identified later.

### **Nocturnal species call playback**

This technique is useful in determining the presence of nocturnal species, which can be difficult to find during spotlight surveys. Call playback was performed using a 25-watt megaphone, with calls played for five minutes and then five minutes spent listening for replies.

Species played:

- Sugar glider (*Petaurus breviceps*)
- Squirrel glider (*Petaurus norfolcensis*)
- Yellow-bellied glider (*Petaurus australis*)
- Koala (*Phascolarctos cinereus*)

### **Scat, pellet, and other trace searches**

Predator and non-predator scat searches were undertaken during both diurnal and nocturnal ground searches. Traces such as scratches on trees and diggings in the ground layer were examined during diurnal searches.

## Birds

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### General observation and call recognition

Diurnal searches were performed both early morning and early evening when higher bird diversity is generally observed. Birds were identified from either direct observation and/or vocalisation.

### Spotlighting

See earlier discussion.

### Nocturnal species call playback

See earlier discussion.

Species played:

- Powerful owl (*Ninox strenua*)
- Barking owl (*Ninox connivens*)
- Southern boobook (*Ninox boobook*)
- Sooty owl (*Tyto tenebricosa*)
- Masked owl (*Tyto novaehollandiae*)
- Eastern barn owl (*Tyto javanica*)
- Plumed frogmouth (*Podargus ocellatus plumiferus*)
- White-throated nightjar (*Eurostopodus mystacalis*)

### Wetland species call playback

Calls were broadcast in suitable habitat, generally associated with the reeds and rushes at edges of dams.

Species played:

- Lewin's rail (*Lewinia pectoralis*)
- Buff-banded rail (*Gallirallus philippensis*)
- Pale-vented bush-hen (*Gallinula olivacea*)
- Australian crake (*Porzana fluminea*)
- Spotless crake (*Porzana tabuensis*)
- Ballion's crake (*Porzana pusilla*)
- Little bittern (*Ixobrychus minutus*)
- Black bittern (*Ixobrychus flavicollis*)
- Australian bittern (*Botaurus poiciloptilus*)

### **Acoustic meters**

See earlier discussion.

### **Reptiles**

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#### **General search and observation - diurnal and nocturnal**

Active ground searches involved the investigation of the ground layer including under rocks, fallen timber, leaf litter, raking soil, searching under exfoliating bark on logs and examining dead and live trees.

#### **Pitfall traps**

See earlier discussion.

### **Frogs**

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#### **Nocturnal general search and observation, including call recognition.**

Searches for frogs were conducted during spotlighting activities particularly in and around any waterbodies present.

#### **Pitfall traps**

See earlier discussion.

#### **Acoustic meters**

See earlier discussion.

*Pitfall Trapline (N. Power)*





## Attachment 2: Threatened Species Identified in Desktop Assessment

Table A – Flora Species

Table B – Fauna Species

Attachment 1 Table A

Desktop database search – 5k from the property boundary (Currumbin Eco-Parkland November 2024)

		Status		Wildlife Online (recorded within 5k)	Habitat preference; comments	Potential to occur: low, moderate, high	Observed this survey
<b><u>Botanical Name:</u></b>	<b><u>Common Name:</u></b>	<b>EPBC</b>	<b>NCA*</b>				
<i>Acacia baueri</i> ssp. <i>baueri</i>	Tiny Wattle	-	V	✓	Occurs in coastal heath in sandy sometimes waterlogged soils	Low	No
<i>Acronychia littoralis</i>	Scented Acronychia	E	E	✓	Occurs in coastal areas (<2km from the sea) in sub-littoral rainforest	Moderate	No
<i>Arthraxon hispidus</i>	Hairy-joint Grass	V	V		Occurs on the edges of rainforest and in wet eucalypt forest, often near creeks or swamps	Moderate	No
<i>Baloghia marmorata</i>	Jointed Baloghia	V	V		Occurs in subtropical rainforest and wet sclerophyll forest at altitudes between 150 - 550m	Low	No
<i>Blandfordia grandiflora</i>	Christmas Bells	-	E	✓	Occurs in coastal wet heath	Low	No
<i>Bosistoa transversa</i>	Three-leaved Bosistoa	V	-		Occurs in dry sclerophyll, wet sclerophyll and rainforest up to 300m in elevation	Low	No
<i>Bulbophyllum globuliforme</i>	Hoop Pine Orchid	V	NT		Occurs in rainforest growing on emergent <i>Araucaria cunninghamii</i> at altitudes between 500 – 900m	Low	No
<i>Cassia marksiana</i>	Brush Cassia	-	V	✓	Occurs in moist rainforest, littoral rainforest and moist wet sclerophyll forest	High	<b>Yes</b>

		Status		Wildlife Online (recorded within 5k)	Habitat preference; comments	Potential to occur: low, moderate, high	Observed this survey
<i>Coleus nitidus</i> **	Shining Plectranthus	E	E		Occurs in subtropical rainforest and ecotones on rocky boulders and cliff faces	Moderate	No
<i>Comesperma breviflorum</i>	Thin-stemmed Match-heads	-	NT	✓	Only known from the peaks of Mt Greville and Mt Barney	Low	No
<i>Corokia whiteana</i>	Corokia	E	-		Occurs in subtropical rainforest and wet sclerophyll forest. Not recorded in Qld, nearest record near Tumbulgum NSW	Low	No
<i>Cryptocarya foetida</i>	Stinking Laurel	V	V	✓	Found in littoral and subtropical rainforest on sand and occasionally basalt to an altitude of 150m	Moderate	No
<i>Cryptostylis hunteriana</i>	Leafless Tongue-orchid	V	-		Queensland populations found to occur in sandy heathland	Low	No
<i>Cupaniopsis newmanii</i>	Long-leaved Tuckeroo	-	NT	✓	Found in rainforest, wet sclerophyll forest, riparian areas and ecotones.	High	<b>Yes</b>
<i>Cynanchum elegans</i>	White-flowered Wax Plant	E	-		Occurs on the ecotone of dry rainforest and sclerophyll forest. Not recorded in Qld; nearest record near Brunswick Heads NSW	Low	No
<i>Davidsonia johnsonii</i>	Smooth Davidson's Plum	E	E	✓	Occurs in wet sclerophyll, rainforest and ecotones at altitudes 15–270 m above sea level.	Moderate	No
<i>Diospyros mabacea</i>	Red-fruited Ebony	E	-		Not recorded in Qld, nearest record Eungella NSW	Low	No
<i>Diploglottis campbellii</i>	Small-leaved Tamarind	E	E	✓	Occurs in dry sclerophyll and riparian rainforest on metasediments	Moderate	No

		Status		Wildlife Online (recorded within 5k)	Habitat preference; comments	Potential to occur: low, moderate, high	Observed this survey
<i>Endiandra floydii</i> ***	Crystal Creek Walnut	E	-		Occurs on ecotonal margins of rainforest and dry sclerophyll forest.	Moderate	No
<i>Endiandra globosa</i>	Black Walnut	-	NT	✓	Occurs from Tallebudgera Valley south, in rainforest, wet sclerophyll forest, riparian areas and ecotones	High	Yes
<i>Endiandra hayesii</i>	Rusty Rose Walnut	V	V	✓	Occurs in cool, moist sheltered valleys and gullies; mostly riverine and subtropical rainforest on sedimentary soils, alluvium and basalt	High	Yes
<i>Floydia praealta</i>	Ball Nut	V	V	✓	Occurs in subtropical and closer riverine rainforest at altitudes from 50 – 350m	Moderate	No
<i>Fontainea australis</i>	Southern Fontainea	V	V		Occurs in lowland subtropical rainforest and complex notophyll vine forest	Moderate	No
<i>Gossia fragrantissima</i>	Small-leaved Myrtle	E	E	✓	Occurs in subtropical and riverine rainforest in the Currumbin and Mooloolah Valleys	High	No
<i>Gossia hillii</i>	Scaly Myrtle	-	CE		Occurs in riverine scrubs	Low	Yes
<i>Hicksbeachia pinnatifolia</i>	Red Bopple Nut	V	V		Occurs in moist eucalypt forest, Brushbox forest, regrowth and remnant subtropical rainforest to 500m	Moderate	No
<i>Leichhardtia coronata</i>	Slender Milk Vine	-	V		Occurs in subtropical and littoral rainforest and Eucalyptus Forest in disjunct populations	Low	Yes

		Status		Wildlife Online (recorded within 5k)	Habitat preference; comments	Potential to occur: low, moderate, high	Observed this survey
<i>Leichhardtia longiloba</i>	Clear Milkvine	V	V	✓	Occurs in dry sclerophyll forest and ecotones of rainforest and rocky outcrops	High	<b>Yes</b>
<i>Lepiderema pulchella</i>	Fine-leaved Tuckeroo	-	V	✓	Found from Currumbin Valley to Neranwood in rainforest and wet sclerophyll forest.	High	<b>Yes</b>
<i>Macadamia integrifolia</i>	Macadamia Nut	V	V	✓	Occurs in rainforest and rainforest edges from 5–340m	High	<b>Yes</b>
<i>Macadamia tetraphylla</i>	Queensland Nut	V	V	✓	Occurs in rainforest and ecotones (often on steep slopes) in coastal areas.	High	<b>Yes</b>
<i>Ochrosia moorei</i>	Southern Ochrosia	E	E		Occurs in warm subtropical rainforest and complex notophyll vine forest at higher elevations. Nearest record is at Springbrook NP	Low	No
<i>Pararistolochia praevenosa</i>	Richmond Birdwing Vine	-	NT	✓	Found in rainforest gullies at elevations below 600m	High	<b>Yes</b>
<i>Phaius australis</i>	Lesser Swamp-orchid	E	E	✓	Occurs in association with coastal heath, sedgeland, wetlands and swampy forest.	Low	No
<i>Randia moorei</i>	Spiny Gardenia	E	E	✓	Occurs in riverine, littoral, subtropical and dry rainforests to an altitude of 360m	High	<b>Yes</b>
<i>Rhodamnia maideniana</i>	Smooth Scrub Turpentine	-	CR		Found in rainforest and wet sclerophyll forest at altitudes from 40 to 1000m	High	<b>Yes</b>
<i>Rhodamnia rubescens</i>	Scrub Turpentine	CE	CR	✓	Occurs in rainforest, ecotones, riparian areas and eucalypt forests	High	<b>Yes</b>
<i>Rhodomyrtus psidioides</i>	Native Guava	CE	CR	✓	Occurs in coastal and sub-	High	<b>Yes</b>

		Status		Wildlife Online (recorded within 5k)	Habitat preference; comments	Potential to occur: low, moderate, high	Observed this survey
					coastal areas at low elevation. Found in rainforest and wet sclerophyll forests		
<i>Ricinocarpos speciosus</i>	Springbrook Wedding Bush	-	V		Found in wet sclerophyll forests typically at higher altitudes (such as Springbrook and Mt Mee)	Moderate	No
<i>Samadera bidwillii</i>	Quassia	V	V		Occurs in dry rainforest. Nearest record is north of Gympie	Low	No
<i>Sarcochilus fitzgeraldii</i>	Ravine Orchid	V	E		Found in moist shady areas, often near streams as a lithophyte. Occurs in rainforest and open forests	Moderate	No
<i>Selaginella andrewsii</i>	Tallebudgera Spikemoss	V	-		Occurs in rainforest ecotone. Only known from two locations in Tallebudgera Valley	Low	No
<i>Sophora fraseri</i>	Sophora	V	V		Occurs in rainforest and wet sclerophyll forest on hillslopes at altitudes from 60 to 660m	Low	No
<i>Symplocos baeuerlenii</i>	Small-leaved Hazelwood	V	V		Occurs in warm subtropical rainforest at higher elevations.	Low	No
<i>Syzygium hodgkinsoniae</i>	Smooth-bark Rose Apple	V	V	✓	Occurs in gallery rainforest and riverine subtropical rainforest on rich alluvial and basalt soils to an altitude of 300m	Moderate	No
<i>Syzygium moorei</i>	Coolamon	V	V	✓	Found in subtropical and riverine rainforest at low altitude	High	<b>Yes</b>
<i>Thesium australe</i>	Austral Toadflax	V	V		Occurs in damp grassy areas	Low	No

		Status		Wildlife Online (recorded within 5k)	Habitat preference; comments	Potential to occur: low, moderate, high	Observed this survey
					in sclerophyll forest. Nearest record near Advancetown, Qld		
<i>Vincetoxicum woollsii</i>	Tylophora	E	E		Occurs in rainforest at higher elevations, nearest record Lamington NP	Low	No
<i>Westringia rupicola</i>	Rock Westringia	V	V		Occurs on cliff faces on McPherson Range, nearest record The Pinnacle, Springbrook NP	Low	No

\*Does not include SLC

\*\*Listed in the EPBC Act under its previous name of *Plectranthus nitidus*

\*\*\*Qld population of *E. floydii* recently recognised as a distinctly new species, namely, *E. wongawallanensis*

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**Significant Fauna Species Desktop Database Assessment**

Scientific Name	Common Name	Status	Habitat Preference	Likelihood of occurrence
<i>Thersites mitchellae</i>	Mitchell's Rainforest Snail	CE*	Remnant areas of lowland subtropical rainforest and swamp forest on alluvial soils. Prefers higher ground around the edges of wetlands with palms and fig trees.	Low potential to occur
<i>Euastacus madae</i>	Hinterland Crayfish	PS,CE	Occurs in upstream ephemeral micro streams and tributaries, generally associated with notophyll vine forest, above 100 m a.s.l.	Low potential to occur
<i>Phyllodes imperialis smithersi</i>	Southern Pink Underwing Moth	PS,V*	Occurs below the altitude of 600 m in undisturbed, subtropical rainforest in association with the vine <i>Carronia multiseppalea</i> , a collapsed shrub that provides the food and habitat the moth requires in order to breed.	Moderate potential to occur
<i>Ornithoptera richmondia</i>	Richmond Birdwing Butterfly	PS,V	Occurs in subtropical rainforest, littoral rainforest and gallery forest. Adults can disperse widely to locate the favoured larval food plant <i>Pararistolochia praevenosa</i> .	Present - recorded during current survey
<i>Argynnis hyperbius inconstans</i>	Australian Fritillary	E,CE*	Prefers swampy coastal habitat. Eggs are laid on the larval food plant, the Arrowhead Violet ( <i>Viola betonicifolia</i> ). The food plant occurs in the vegetation ground layer beneath grasses and mat-rushes ( <i>Lomandra</i> spp.)	Low potential to occur
<i>Acrodipsas illidgei</i>	Illidge's Ant Blue	PS,V	Occurs in mangroves and adjacent areas. Requires the presence of ant colonies of <i>Crematogaster</i> (acrobat ant) to breed.	Low potential to occur
<i>Adelotus brevis</i>	Tusked Frog	CWS,V	Recorded from dams, ditches, flooded grassland and creeks in rainforest, wet sclerophyll forest and woodland. It is known from coastal and upland areas.	Present - recorded during current survey
<i>Crinia tinnula</i>	Wallum Froglet	CWS,PS,V	Associated with wallum heath habitat, Melaleuca communities and sedgeland. Breeds in well-vegetated semi-permanent pools or adjacent flooded areas in acidic waters of pH below 6.0.	Low potential to occur
<i>Mixophyes fleayi</i>	Fleays Barred Frog	PS,CWS,E,E*	Associated with creeks and streams in montane rainforest and open forest communities adjoining rainforest, it is not found in ponds or ephemeral pools.	Low potential to occur

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<i>Mixophyes iteratus</i>	Giant Barred Frog	PS,CWS,V,V*	Occupies shallow rocky streams in rainforest, wet sclerophyll forest and farmland from 100 to 1000m but is also recorded from deep, slow moving streams with steep banks in the lowlands.	Low potential to occur
<i>Litoria olongburensis</i>	Wallum Sedgefrog	CWS,V,V*	Occurs in vegetated permanent and semi-permanent lowland wallum swamps, marshes, ponds with a pH below 6.0.	Low potential to occur
<i>Delma torquata</i>	Collared Delma	V,V*	Normally inhabits eucalypt-dominated woodlands and open-forests. Suitable habitats are commonly associated with exposed rocky outcrops on ridges or slopes.	Low potential to occur
<i>Coeranoscincus reticulatus</i>	Three-toed Snake-toothed Skink	PS,CWS,LC,V*	Found mainly in closed forest and occasionally open layered eucalyptus forest. Generally inhabits moist layered forest on loamy basaltic soils in well-mulched, loose, friable rainforest soil and leaf litter.	Low potential to occur
<i>Furina dunmalli</i>	Dunmall's Snake	V,V*	Occurs in forests and woodlands on black alluvial cracking clay and clay loams dominated by Brigalow other wattles, native Cypress or Bull-oak.	Low potential to occur
<i>Hemiaspis damelii</i>	Grey Snake	E,E*	Prefers woodlands (typically brigalow <i>Acacia harpophylla</i> and belah <i>Casuarina cristata</i> ), usually on heavier, cracking clay soils, particularly in association with water bodies or in areas with small gullies and ditches.	Low potential to occur
<i>Geophaps scripta scripta</i>	Squatter Pigeon	V,V*	Open-forests to sparse, open-woodlands and scrub that are mostly dominated by <i>Eucalyptus</i> , <i>Corymbia</i> , <i>Acacia</i> or <i>Callitris</i> species and within 3 km of water bodies or courses.	Low potential to occur
<i>Podargus ocellatus plumiferous</i>	Plumed Frogmouth	V	Prefers subtropical rainforest, particularly in deep, wet, sheltered gullies along creeklines often containing stands of palms, also occurs in wet forest or wet gullies in drier forest.	Moderate potential to occur - previously recorded
<i>Hirundapus caudacutus</i>	White-throated Needletail	PS,V,V*	Occurs in Australia during non-breeding season. Species is almost exclusively aerial from heights of less than 1 m to more than 1000 m above the ground. Occur mostly over wooded areas, rarely lands.	High potential to occur

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<i>Apus pacificus</i>	Fork-tailed Swift	SLC - Migratory	Occurs in Australia during non-breeding season. Species is almost exclusively aerial from heights of less than 1 m to more than 1000 m above the ground. Occur mostly over wooded areas, rarely lands.	High potential to occur
<i>Cuculus optatus</i>	Oriental Cuckoo	SLC - Migratory	Occurs in Monsoon forests, wet sclerophyll forests, paperbark swamps, mangroves. Non-breeding migrant.	Moderate potential to occur
<i>Plegadis falcinellus</i>	Glossy Ibis	SLC - Migratory	Fresh water marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds and cultivated areas under irrigation. Occasionally found in coastal locations such as estuaries, deltas, saltmarshes and coastal lagoons	High potential to occur
<i>Botaurus poiciloptilus</i>	Australasian Bittern	CWS,E,E*	Freshwater wetlands, occasionally estuarine with a preference for heavy vegetation. Forages in shallows or hunts in deeper water from platforms of bent over reeds. Solitary pairs breed in deep, densely vegetated swamps.	Low potential to occur
<i>Esacus magnirostris</i>	Beach Stone-curlew	CWS,PS,V	Found on open, undisturbed sandy beaches, reefs and lagoons and nearby mudflats and sandflats.	Low potential to occur
<i>Pluvialis fulva</i>	Pacific Golden Plover	CWS,SLC - Migratory	Occurs on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Pluvialis squatarola</i>	Grey Plover	CWS,SLC - Migratory	Inhabits intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Charadrius bicinctus</i>	Double-banded Plover	CWS,SLC - Migratory	Intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Charadrius mongolus</i>	Lesser Sand Plover	CWS,PS,E,E*	Found on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Charadrius leschenaultii</i>	Greater Sand Plover	CWS,PS,V,V*	Prefers intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Thinornis cucullatus</i>	Hooded Plover	V*	Inhabits ocean beaches and subcoastal lagoons.	Low potential to occur

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<i>Gallinago hardwickii</i>	Latham's Snipe	CWS,SLC - Migratory	Open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies.	Moderate potential to occur
<i>Rostratula australis</i>	Australian Painted Snipe	CWS,E,E*	Habitat includes shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans, inundated or waterlogged grassland or saltmarsh, dams and sewage farms.	Low potential to occur
<i>Gallinago megala</i>	Swinhoe's Snipe	SLC - Migratory	Damp grasslands, edges of waterbodies, and muddy freshwater marshes.	Low potential to occur
<i>Gallinago stenura</i>	Pin-tailed Snipe	SLC - Migratory	Wetlands, wet meadows, and both flooded and dry agricultural fields	Low potential to occur
<i>Numenius phaeopus</i>	Whimbrel	CWS,SLC - Migratory	Occurs on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Numenius madagascariensis</i>	Eastern Curlew	CWS,PS,E,CE*	Found on sheltered coasts, mangrove swamps, bays, harbours and lagoons that contain mudflats and sandflats, often with beds of seagrass.	Low potential to occur
<i>Tringa stagnatilis</i>	Marsh Sandpiper	CWS,SLC - Migratory	Found on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Actitis hypoleucos</i>	Common Sandpiper	CWS,SLC - Migratory	Utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity. Mostly found around muddy margins or rocky shores and rarely on mudflats.	Low potential to occur
<i>Calidris melanotos</i>	Pectoral Sandpiper	CWS,SLC - Migratory	Shallow fresh to saline wetlands in coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	Low potential to occur
<i>Xenus cinereus</i>	Terek Sandpiper	CWS,SLC - Migratory	Occurs on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Tringa glareola</i>	Wood Sandpiper	CWS,SLC - Migratory	Inhabits inland shallow freshwater wetlands, often with other waders. They prefer ponds and pools with emergent reeds and grass, surrounded by tall plants or dead trees and fallen timber.	Low potential to occur

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<i>Limicola falcinellus</i>	Broad-billed Sandpiper	CWS,SLC - Migratory	Sheltered parts of the coast such as estuarine sandflats and mudflats, harbours, lagoons, saltmarshes and reefs as feeding and roosting habitat.	Low potential to occur
<i>Tringa brevipes</i>	Grey-tailed Tattler	CWS,SLC - Migratory	Prefers intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Tringa incana</i>	Wandering Tattler	CWS,SLC - Migratory	Occurs along the edges of rocky shorelines.	Low potential to occur
<i>Tringa nebularia</i>	Common Greenshank	CWS,SLC - Migratory	All types of wetlands, including permanent and ephemeral terrestrial wetlands, swamps, lakes, dams, rivers, creeks and billabongs.	Low potential to occur
<i>Arenaria interpres</i>	Ruddy Turnstone	CWS,SLC - Migratory	Found on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Calidris canutus</i>	Red Knot	CWS,PS,E,E*	Occurs on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Calidris alba</i>	Sanderling	CWS,SLC - Migratory	Inhabits intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Calidris ruficollis</i>	Red-necked Stint	CWS,SLC - Migratory	Found on intertidal mudflats and sandflats, roosts on beaches, sandbars, claypans and saltmarshes near the high tide mark.	Low potential to occur
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	CWS,SLC - Migratory	Muddy edges of shallow fresh or brackish wetlands, sandflats, intertidal mudflats with often with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	Low potential to occur
<i>Calidris ferruginea</i>	Curlew Sandpiper	CWS,PS,E,CE*	Intertidal mudflats in sheltered coastal areas (estuaries, bays, inlets and lagoons), and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in salt works and sewage farms.	Low potential to occur
<i>Limosa lapponica baueri</i>	Nunivak bar-tailed Godwit	PS,V,V*	Coastal habitats, large intertidal sandflats, banks, mudflats, estuaries, harbours, coastal lagoons and bays.	Low potential to occur
<i>Limosa limosa</i>	Black-tailed Godwit	CWS,SLC - Migratory	Occurs in sheltered bays, estuaries and lagoons with large intertidal mudflats and/or sandflats and sometime inland in shallow lakes and swamps.	Low potential to occur

**Attachment 1 Table B**  
**Significant Fauna Species Desktop Database Assessment**

<i>Glareola maldivarum</i>	Oriental Pratincole	CWS,SLC - Migratory	Inhabits open grasslands and the muddy flood plains.	Low potential to occur
<i>Turnix melanogaster</i>	Black-breasted Button-quail	CWS,V,V*	Favours rainforests and forests, mostly in areas with 770-1200 mm rainfall per annum. The species prefers drier low closed forests, particularly semi-evergreen vine thicket, low microphyll vine forest, araucarian microphyll vine forest and araucarian notophyll vine forest.	Moderate potential to occur - previously recorded
<i>Sternula albifrons</i>	Little Tern	CWS,SLC - Migratory	Coastal waters, brackish lakes, salt fields and sewage ponds near the coast.	Low potential to occur
<i>Gelochelidon nilotica</i>	Gull-billed Tern	SLC - Migratory	Coastal bays, lagoons and freshwater wetlands, beaches and mudflats.	Low potential to occur
<i>Hydroprogne caspia</i>	Caspian Tern	SLC - Migratory	Coastal bays, lagoons and wetlands but also inland freshwater wetlands including lakes, reservoirs and large rivers.	Low potential to occur
<i>Sterna hirundo</i>	Common Tern	SLC - Migratory	Coastal bays, lagoons and wetlands but also inland freshwater wetlands including lakes, reservoirs and large rivers.	Low potential to occur
<i>Thalasseus bergii</i>	Crested Tern	SLC - Migratory	Coastal bays and offshore waters, lagoons and wetlands but also inland freshwater wetlands including lakes, reservoirs and large rivers.	Low potential to occur
<i>Ninox strenua</i>	Powerful Owl	CWS,V	Occupies a range of vegetation types, including woodland, open sclerophyll forest, tall open wet forest and rainforest. Require large tree hollows, at least 0.5 m deep.	Present - recorded during the current survey
<i>Pandion</i>	Eastern Osprey	SLC - Migratory	Littoral and coastal habitats and terrestrial wetlands. Known to nest on artificial structures, bays, estuaries, along tidal stretches of large coastal rivers, mangrove swamps, terrestrial wetlands and off-shore islands.	Present - recorded during current survey, nests on the northern boundary of the CEP.
<i>Erythrotriorchis radiatus</i>	Red Goshawk	E,V*	Undisturbed forest or woodland with mosaic of mixed vegetation, especially patches that include areas of river, billabong or swamp wetland.	Low potential to occur - previously recorded
<i>Falco hypoleucos</i>	Grey Falcon	V,V*	Occurs in arid grassland and woodland habitats of inland Australia	Low potential to occur

**Attachment 1 Table B**  
**Significant Fauna Species Desktop Database Assessment**

<i>Calyptorhynchus lathami</i>	Glossy Black-cockatoo	CWS,PS,V,V*	Coastal woodlands, drier forest areas, open inland woodlands or timbered watercourses preferring habitats containing she-oaks ( <i>Allocasuarina</i> spp. and certain <i>Casuarina</i> spp.), and areas with large hollows for nesting purposes.	Moderate potential to occur - previously recorded
<i>Lathamus discolor</i>	Swift Parrot	CWS,E,CE*	A migratory species which breeds mainly in the blue gum ( <i>Eucalyptus globulus</i> ) forests of southeast Tasmania, and spends the autumn and winter months on mainland Australia.	Low potential to occur
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's Fig Parrot	CWS,E,E*	From sea level to approximately 900 m above sea level within rainforest habitats including subtropical rainforest, dry rainforest, littoral and developing littoral rainforest, and vine forest.	Low potential to occur
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE,CE*	Mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia.	Low potential to occur
<i>Rhipidura rufifrons</i>	Rufous Fantail	SLC - Migratory	Rainforest, wet forests, swamp woodlands, damp gullies and mangroves. During migration, it may be found in more open habitats or urban areas.	Present - recorded during current survey
<i>Symposiachus trivirgatus</i>	Spectacled Monarch	SLC - Migratory	Generally prefers, thick understory vegetation in rainforests, moist gullies, riparian vegetation and mangroves.	Present - recorded during current survey
<i>Monarcha melanopsis</i>	Black-faced Monarch	SLC - Migratory	Generally, in rainforest ecosystems, including semi-deciduous vine-thickets, complex notophyll vine-forest, tropical and subtropical rainforest, but also moist gullies in drier forest.	Present - recorded during current survey
<i>Monarcha melanopsis</i>	Black-faced Monarch	SLC - Migratory	Generally, in rainforest ecosystems, including semi-deciduous vine-thickets, complex notophyll vine-forest, tropical and subtropical rainforest, but also in moist gullies in drier forest.	Present - recorded during current survey
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	SLC - Migratory	Well vegetated gullies in eucalypt-dominated forests and taller woodlands. During migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.	Moderate potential to occur

**Attachment 1 Table B**  
**Significant Fauna Species Desktop Database Assessment**

<i>Neochmia ruficauda</i>	Star Finch	E,E*	Occurs in dense, damp grasslands and sedgelands bordering estuarine areas, watercourses and swamps. Also found in grassy, open savanna type sclerophyll woodland.	Low potential to occur
<i>Motacilla flava</i>	Yellow Wagtail	SLC - Migratory	Migrant to coastal marshes, paddocks, open areas.	Low potential to occur
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna	CWS,SLC	Occupies most habitats where ants and termites are present, including forests, woodlands, shrublands, grasslands and disturbed habitats such as agricultural areas.	Present - recorded during current survey
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed Quoll	CWS,E,E*	Occupy a variety of habitat types including rainforest, wet and dry sclerophyll forests and heathlands.	Low potential to occur
<i>Phascolarctos cinereus</i>	Koala	CWS,PS,E,,E*	Forest type preferences vary with latitude and elevation, including mixed coastal forests to dry escarpment forests, moist coastal gullies and creek flats to tall montane forests.	Present - recorded during current survey
<i>Petaurus australis</i>	Yellow-bellied Glider	PS,V,V*	Occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils.	Low potential to occur
<i>Petauroides armillatus/volans</i>	Greater Glider	CWS,PS,E,E*	Typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows. Favours forests with a diversity of eucalypt species, due to seasonal variation in its preferred tree species.	Moderate potential to occur - previously recorded
<i>Potorous tridactylus</i>	Long-nosed Potoroo	CWS,PS,V,V*	Occur in a variety of habitats including subtropical rainforest, heathland, dry and wet sclerophyll forests, often with a dense well-developed understory.	Low potential to occur
<i>Notamacropus parma</i>	Parma Wallaby	V*	Wet sclerophyll forest with dense understory, occasionally rainforest and dry sclerophyll forest.	Low potential to occur
<i>Petrogale pencillata</i>	Brush-tailed Rock Wallaby	CWS,V,V*	Occupy rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north.	Low potential to occur
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	CWS,PS,V*	Requires foraging and roosting resources in a range of habitats including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands.	Present - recorded during current survey

**Attachment 1 Table B**  
**Significant Fauna Species Desktop Database Assessment**

<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	Occurs in rainforest and moist eucalypt forest habitats at high elevation. Roosting habitat comprises sandstone cliffs and fertile woodland valley habitat within close proximity of each other.	Low potential to occur
<i>Xeromys myoides</i>	Water Mouse	CWS,PS,V,V*	Occurs in mangroves, mudflats, saltmarshes and sometimes freshwater lagoons.	Low potential to occur
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	PS,V,V*	Inhabits open heathland, open woodland with a heathland understorey and vegetated sand dunes.	Low potential to occur



Attachment 3: EPBC Act Protected Matters Report

# 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. Please see the caveat for interpretation of information provided here.

Report created: 19-Nov-2024

## Summary

### Details

[Matters of NES](#)

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

[Extra Information](#)

### Caveat

### Acknowledgements

## Summary

### Matters of National Environment 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](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance (Ramsar):</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	7
<a href="#">Listed Threatened Species:</a>	123
<a href="#">Listed Migratory Species:</a>	75

### 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 <https://www.dcceew.gov.au/parks-heritage/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.

<a href="#">Commonwealth Lands:</a>	6
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	110
<a href="#">Whales and Other Cetaceans:</a>	13
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

### Extra Information

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

<a href="#">State and Territory Reserves:</a>	10
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	18
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	5
<a href="#">Bioregional Assessments:</a>	None
<a href="#">Geological and Bioregional Assessments:</a>	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.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community</a>	Endangered	Community likely to occur within area	In feature area
<a href="#">Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland</a>	Endangered	Community likely to occur within area	In feature area
<a href="#">Dunn's white gum (Eucalyptus dunni) moist forest in north-east New South Wales and south-east Queensland</a>	Endangered	Community may occur within area	In buffer area only
<a href="#">Grey box-grey gum wet forest of subtropical eastern Australia</a>	Endangered	Community may occur within area	In buffer area only
<a href="#">Lowland Rainforest of Subtropical Australia</a>	Critically Endangered	Community likely to occur within area	In feature area
<a href="#">Subtropical and Temperate Coastal Saltmarsh</a>	Vulnerable	Community likely to occur within area	In feature area
<a href="#">Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions</a>	Endangered	Community likely to occur within area	In feature area

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

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">BIRD</a> <a href="#">Anthochaera phrygia</a>			
<a href="#">Regent Honeyeater [82338]</a>	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Ardenna grisea</a> Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlw Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calyptorhynchus lathami lathami</a> South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In buffer area only
<a href="#">Climacteris picumnus victoriae</a> Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Cyclopsitta diophthalma coxeni</a> Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Diomedea antipodensis gibsoni</a> Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Fregatta grallaria grallaria</a> White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Geophaps scripta scripta</a> Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Limosa lapponica baueri</a> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In buffer area only
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Pachyptila turtur subantarctica</a> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Phoebastria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Pluvialis squatarola</a> Grey Plover [865]	Vulnerable	Roosting known to occur within area	In buffer area only
<a href="#">Pterodroma neglecta neglecta</a> Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In buffer area only
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Stagonopleura guttata</a> Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Sternula nereis nereis</a> Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Thalassarche carteri</a> Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Turnix melanogaster</a> Black-breasted Button-quail [923]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In buffer area only
<b>CRUSTACEAN</b>			
<a href="#">Euastacus madae</a> Hinterland Spiny Crayfish, Hinterland Crayfish [86603]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
<b>FISH</b>			
<a href="#">Epinephelus daemeli</a> Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Hippocampus whitei</a> White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Seriola lalandi</a> Blue Warehou [69374]	Conservation Dependent	Species or species habitat known to occur within area	In buffer area only
<b>FROG</b>			
<a href="#">Assa darlingtoni</a> Pouched Frog [1965]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Litoria olongburensis</a> Wallum Sedge Frog [1821]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Mixophyes fleayi</a> Fleay's Frog [25960]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Mixophyes iteratus</a> Giant Barred Frog, Southern Barred Frog [1944]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<b>INSECT</b>			
<a href="#">Argynnis hyperbius inconstans</a> Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Phyllodes imperialis smithersi</a> Pink Underwing Moth [86084]	Endangered	Species or species habitat known to occur within area	In buffer area only
<b>MAMMAL</b>			
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Notamacropus parma</a> Parma Wallaby [89289]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Petauroides volans</a> Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Petaurus australis australis</a> Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Potorous tridactylus tridactylus</a> Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Pseudomys novaehollandiae</a> New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
<a href="#">Xeromys myoides</a> Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat may occur within area	In feature area
<b>PLANT</b>			
<a href="#">Acronychia littoralis</a> Scented Acronychia [8582]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Arthraxon hispidus</a> Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Baloghia marmorata</a> Marbled Baloghia, Jointed Baloghia [8463]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Bosistoa transversa</a> Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Bulbophyllum globuliforme</a> Miniature Moss-orchid, Hoop Pine Orchid [6649]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Coleus nitidus listed as Plectranthus nitidus</a> Nightcap Plectranthus, Silver Plectranthus [91380]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Corokia whiteana</a> [17820]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Cryptocarya foetida</a> Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Cryptostylis hunteriana</a> Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Cynanchum elegans</a> White-flowered Wax Plant [12533]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Davidsonia johnsonii</a> Smooth Davidsonia, Smooth Davidson's Plum, Small-leaved Davidson's Plum [67178]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Diospyros mabacea</a> Red-fruited Ebony, Silky Persimmon, Ebony [18548]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Diploglottis campbellii</a> Small-leaved Tamarind [21484]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Endiandra floydii</a> Floyd's Walnut, Crystal Creek Walnut [52955]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Endiandra hayesii</a> Rusty Rose Walnut, Velvet Laurel [13866]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Floydia praealta</a> Ball Nut, Possum Nut, Big Nut, Beefwood [15762]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Fontainea australis</a> Southern Fontainea [24037]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Gossia fragrantissima</a> Sweet Myrtle, Small-leaved Myrtle [78867]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Hicksbeachia pinnatifolia</a> Monkey Nut, Bopple Nut, Red Bopple, Red Bopple Nut, Red Nut, Beef Nut, Red Apple Nut, Red Boppel Nut, Ivory Silky Oak [21189]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Leichhardtia longiloba listed as Marsdenia longiloba</a> Clear Milkvine [91911]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Macadamia integrifolia</a> Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Macadamia tetraphylla</a> Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Ochrosia moorei</a> Southern Ochrosia [11350]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Owenia ceptiodora</a> Onionwood, Bog Onion, Onion Cedar [11344]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Phaius australis</a> Lesser Swamp-orchid [5872]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Randia moorei</a> Spiny Gardenia [10577]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Rhodamnia maideniana</a> Smooth Scrub Turpentine [20665]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Rhodamnia rubescens</a> Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Rhodomyrtus psidioides</a> Native Guava [19162]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Samadera bidwillii</a> Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Sarcocochilus fitzgeraldii</a> Ravine Orchid [19131]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Selaginella andrewsii</a> Tallebudgera spikemoss [67901]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Sophora fraseri</a> [8836]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Symlocos bauerlenii</a> Small-leaved Hazelwood, Shrubby Hazelwood [19010]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Syzygium hodgkinsoniae</a> Smooth-bark Rose Apple, Red Lilly Pilly [3539]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Syzygium moorei</a> Rose Apple, Coolamon, Robby, Durobby, Watermelon Tree, Coolamon Rose Apple [12284]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Vincetoxicum woollsii listed as Tylophora woollsii</a> [40080]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Westringia rupicola</a> [18260]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<b>REPTILE</b>			
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In buffer area only
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Coeranoscincus reticulatus</a> Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Delma torquata</a> Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Furina dunmalli</a> Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Hemiaspis damelii</a> Grey Snake [1179]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In buffer area only
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<b>SHARK</b>			
<a href="#">Carcharias taurus (east coast population)</a> Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Galeorhinus galeus</a> School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat may occur within area	In buffer area only
<a href="#">Pristis zijsron</a> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area	In buffer area only
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Sphyrna lewini</a> Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
<b>SNAIL</b>			
<a href="#">Thersites mitchellae</a> Mitchell's Rainforest Snail [66774]	Critically Endangered	Species or species habitat may occur within area	In feature area

Listed Migratory Species			[ Resource Information ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Migratory Marine Birds</b>			
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
<a href="#">Ardenna carneipes</a> Flesh-footed Shearwater, Fleishy-footed Shearwater [82404]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Ardenna grisea</a> Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Phaethon lepturus</a> White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
<a href="#">Phoebastria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Sternula albifrons</a> Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche carteri</a> Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<b>Migratory Marine Species</b>			
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Carcharhinus longimanus</a> Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In buffer area only
<a href="#">Carcharias taurus</a> Grey Nurse Shark [64469]		Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In buffer area only
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Dugong dugong</a> Dugong [28]		Species or species habitat may occur within area	In buffer area only
<a href="#">Fretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Eubalaena australis as Balaena glacialis australis</a> Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In buffer area only
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]		Congregation or aggregation known to occur within area	In buffer area only
<a href="#">Mobula alfredi as Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In buffer area only
<a href="#">Mobula birostris as Manta birostris</a> Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Orcaella heinsohni</a> Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In buffer area only
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only
<a href="#">Pristis zijsron</a> Green Sawfish, Dindagubba, Narrownout Sawfish [68442]	Vulnerable	Breeding may occur within area	In buffer area only
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Sousa sahalensis as Sousa chinensis</a> Australian Humpback Dolphin [87942]		Breeding known to occur within area	In buffer area only
<b>Migratory Terrestrial Species</b>			
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area	In buffer area only
<b>Migratory Wetlands Species</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
<a href="#">Calidris alba</a> Sanderling [875]		Roosting known to occur within area	In buffer area only
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area	In buffer area only
<a href="#">Charadrius bicinctus</a> Double-banded Plover [895]		Roosting known to occur within area	In buffer area only
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In buffer area only
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area	In buffer area only
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area	In buffer area only
<a href="#">Glareola maldivanum</a> Oriental Pratincole [840]		Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In buffer area only
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting known to occur within area	In buffer area only
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area	In buffer area only
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area	In feature area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area	In buffer area only
<a href="#">Pluvialis squatarola</a> Grey Plover [865]	Vulnerable	Roosting known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Tringa brevipes</a> Grey-tailed Tattler [851]		Roosting known to occur within area	In buffer area only
<a href="#">Tringa glareola</a> Wood Sandpiper [829]		Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Tringa incana</a> Wandering Tattler [831]		Roosting known to occur within area	In buffer area only
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area	In buffer area only
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In buffer area only

#### Other Matters Protected by the EPBC Act

#### Commonwealth Lands [ 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.

Commonwealth Land Name	State	Buffer Status
<b>Communications, Information Technology and the Arts - Telstra Corporation Limited</b>		
Commonwealth Land - Australian Telecommunications Commission [11241]	NSW	In buffer area only
Commonwealth Land - Australian Telecommunications Commission [11242]	NSW	In buffer area only
Commonwealth Land - Australian Telecommunications Corporation [11237]	NSW	In buffer area only
<b>Transport and Regional Services - Airservices Australia</b>		
Commonwealth Land - Airservices Australia [11243]	NSW	In buffer area only
<b>Unknown</b>		
Commonwealth Land - [11236]	NSW	In buffer area only
Commonwealth Land - [15713]	NSW	In buffer area only

#### Listed Marine Species [ Resource Information ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Bird</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Anseranas semipalmata</a> Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Ardenna carneipes as Puffinus carneipes</a> Flesh-footed Shearwater, Fleishy-footed Shearwater [82404]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Ardenna grisea as Puffinus griseus</a> Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Breeding likely to occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
<a href="#">Calidris alba</a> Sanderling [875]		Roosting known to occur within area	In buffer area only
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Charadrius bicinctus</a> Double-banded Plover [895]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In buffer area only
<a href="#">Charadrius ruficapillus</a> Red-capped Plover [881]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Diomedea antipodensis gibsoni as Diomedea gibsoni</a> Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area	In buffer area only
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area	In buffer area only
<a href="#">Glareola maldivarum</a> Oriental Pratincole [840]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In buffer area only
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
<a href="#">Himantopus himantopus</a> Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Hirundapus caudacutus</a> White-throated Needle-tail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]	Endangered	Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In buffer area only
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area	In buffer area only
<a href="#">Pachyptila turtur</a> Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area	In feature area
<a href="#">Phaethon lepturus</a> White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
<a href="#">Phoebastria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area	In buffer area only
<a href="#">Pluvialis squatarola</a> Grey Plover [865]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Pterodroma cervicalis</a> White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
<a href="#">Recurvirostra novaehollandiae</a> Red-necked Avocet [871]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Stercorarius antarcticus as Catharacta skua</a> Brown Skua [85039]		Species or species habitat may occur within area	In buffer area only
<a href="#">Sterna striata</a> White-fronted Tern [799]		Foraging, feeding or related behaviour likely to occur within area	In feature area
<a href="#">Sternula albifrons as Sterna albifrons</a> Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
<a href="#">Symposiachrus trivirgatus as Monarcha trivirgatus</a> Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Thalassarche carteri</a> Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Tringa brevipes as Heteroscelus brevipes</a> Grey-tailed Tattler [851]		Roosting known to occur within area	In buffer area only
<a href="#">Tringa glareola</a> Wood Sandpiper [829]		Foraging, feeding or related behaviour known to occur within area overfly marine area	In buffer area only
<a href="#">Tringa incana as Heteroscelus incanus</a> Wandering Tattler [831]		Roosting known to occur within area	In buffer area only
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area overfly marine area	In buffer area only
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only
<b>Fish</b>			
<a href="#">Acentronura tentaculata</a> Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In buffer area only
<a href="#">Campichthys tryoni</a> Tryon's Pipefish [66193]		Species or species habitat may occur within area	In buffer area only
<a href="#">Corythoichthys amplexus</a> Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In buffer area only
<a href="#">Corythoichthys ocellatus</a> Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area	In buffer area only
<a href="#">Festucalex cinctus</a> Girdled Pipefish [66214]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Fiilicampus tigris</a> Tiger Pipefish [66217]		Species or species habitat may occur within area	In buffer area only
<a href="#">Halicampus grayi</a> Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippichthys cyanospilos</a> Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippichthys heptagonus</a> Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippichthys penicillus</a> Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippocampus kelloggi</a> Kellogg's Seahorse, Great Seahorse [66223]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippocampus kuda</a> Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippocampus planifrons</a> Flat-face Seahorse [66238]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippocampus trimaculatus</a> Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hippocampus whitei</a> White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Lissocampus runa</a> Javelin Pipefish [66251]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Maroubra perserrata</a> Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In buffer area only
<a href="#">Micrognathus andersonii</a> Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area	In buffer area only
<a href="#">Micrognathus brevis</a> thornail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area	In buffer area only
<a href="#">Microphis manadensis</a> Manado Pipefish, Manado River Pipefish [66258]		Species or species habitat may occur within area	In buffer area only
<a href="#">Solegnathus dunckeri</a> Duncker's Pipehorse [66271]		Species or species habitat may occur within area	In buffer area only
<a href="#">Solegnathus hardwickii</a> Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In buffer area only
<a href="#">Solegnathus spinosissimus</a> Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In buffer area only
<a href="#">Solenostomus cyanopterus</a> Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In buffer area only
<a href="#">Solenostomus paradoxus</a> Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In buffer area only
<a href="#">Stigmatopora nigra</a> Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In buffer area only
<a href="#">Syngnathoides biaculeatus</a> Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Trachyrhamphus bicoarctatus</a> Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In buffer area only
<a href="#">Urocampus carinirostris</a> Hairy Pipefish [66282]		Species or species habitat may occur within area	In buffer area only
<a href="#">Vanacampus margaritifer</a> Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In buffer area only
<b>Mammal</b>			
<a href="#">Dugong dugon</a> Dugong [28]		Species or species habitat may occur within area	In buffer area only
<b>Reptile</b>			
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In buffer area only
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Hydrophis elegans</a> Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hydrophis platura as Pelamis platurus</a> Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area	In buffer area only
<a href="#">Hydrophis stokesii as Astrotia stokesii</a> Stokes' Sea Snake [93510]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In buffer area only
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<b>Whales and Other Cetaceans [ Resource Information ]</b>			
<b>Current Scientific Name</b>		<b>Status</b>	<b>Type of Presence</b>
<b>Mammal</b>			
<a href="#">Balaenoptera acutorostrata</a> Minke Whale [33]		Species or species habitat may occur within area	In buffer area only
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Delphinus delphis</a> Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In buffer area only
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Grampus griseus</a> Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In buffer area only
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]		Congregation or aggregation known to occur within area	In buffer area only
<a href="#">Orcaella heinssohni</a> Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In buffer area only

Current Scientific Name	Status	Type of Presence	Buffer Status
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only
<a href="#">Sousa sahulensis</a> Australian Humpback Dolphin [87942]		Breeding known to occur within area	In buffer area only
<a href="#">Stenella attenuata</a> Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In buffer area only
<a href="#">Tursiops aduncus</a> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Tursiops truncatus s. str.</a> Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In buffer area only

#### Extra Information

State and Territory Reserves <a href="#">[ Resource Information ]</a>			
Protected Area Name	Reserve Type	State	Buffer Status
Cobaki	Nature Reserve	NSW	In buffer area only
Currumbin	Nature Refuge	QLD	In buffer area only
Currumbin Creek	Fish Habitat Area (B)	QLD	In buffer area only
Currumbin Hill	Conservation Park	QLD	In buffer area only
Griffiths	Nature Refuge	QLD	In buffer area only
Merala	Nature Refuge	QLD	In buffer area only
Nicoll Scrub	National Park	QLD	In buffer area only
Tallebudgera Creek	Conservation Park	QLD	In buffer area only
Tallebudgera Creek	Fish Habitat Area (B)	QLD	In buffer area only
Tweed Estuary	Nature Reserve	NSW	In buffer area only

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

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
<a href="#">North East NSW RFA</a>	New South Wales	In feature area

EPBC Act Referrals <a href="#">[ Resource Information ]</a>				
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">Access for industrial subdivision</a>	2023/09663		Completed	In buffer area only
<a href="#">Controlled action</a>				
<a href="#">Cobaki Lakes Residential Development</a>	2010/5296	Controlled Action	Post-Approval	In feature area
<a href="#">Extraction and processing of hard rock at Gold Coast Quarry</a>	2010/5757	Controlled Action	Post-Approval	In buffer area only
<a href="#">Gold Coast Airport Southern Development Area Expansion, Gold Coast, QLD</a>	2014/7266	Controlled Action	Post-Approval	In buffer area only
<a href="#">Stage 1 Tugan Bypass</a>	2002/883	Controlled Action	Completed	In buffer area only
<a href="#">Tugun Bypass</a>	2004/1861	Controlled Action	Post-Approval	In feature area
<a href="#">Tugun Bypass Four-lane Dual Motorway</a>	2003/1122	Controlled Action	Completed	In feature area
<a href="#">Not controlled action</a>				
<a href="#">Bonogin Subdivision</a>	2001/264	Not Controlled Action	Completed	In feature area
<a href="#">Boyd St Overpass</a>	2006/3094	Not Controlled Action	Completed	In buffer area only
<a href="#">Gold Coast Airport Instrument Landing Project, Qld</a>	2015/7428	Not Controlled Action	Completed	In buffer area only
<a href="#">Hideaway Currumbin Residential development</a>	2005/2136	Not Controlled Action	Completed	In feature area
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area
<a href="#">Proposed Retirement Facility, 48-86 Galleon Way, Currumbin Waters</a>	2020/8814	Not Controlled Action	Completed	In buffer area only
<a href="#">Not controlled action (particular manner)</a>				
<a href="#">Construction and Operation of Desalination Plant</a>	2006/2973	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">Not controlled action (particular manner)</a>				
<a href="#">Gold Coast Coastal Protection Three Point Plan, QLD</a>	2013/7103	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Gold Coast Ocean Terminal, Bilinga, Qld</a>	2012/6610	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Gold Coast Rapid Transit Project - Griffith University to Broadbeach</a>	2009/5199	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Referral decision</a>				
<a href="#">Breeding program for Grey Nurse Sharks</a>	2007/3245	Referral Decision	Completed	In buffer area only

#### Biologically Important Areas [\[ Resource Information \]](#)

Scientific Name	Behaviour	Presence	Buffer Status
<a href="#">Dolphins</a>			
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]	Breeding	Known to occur	In buffer area only
<a href="#">Tursiops aduncus</a> Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Likely to occur	In buffer area only
<a href="#">Marine Turtles</a>			
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Nesting	Known to occur	In buffer area only
<a href="#">Sharks</a>			
<a href="#">Carcharias taurus</a> Grey Nurse Shark [64469]	Foraging	Known to occur	In buffer area only
<a href="#">Whales</a>			
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Resting on migration (southbound)	Known to occur	In buffer area only

## Caveat

### 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

### 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

### 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and 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

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

Where little information is available for a 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 detailed distribution mapping methods are used to update these distributions when time permits.

### 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

## 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.

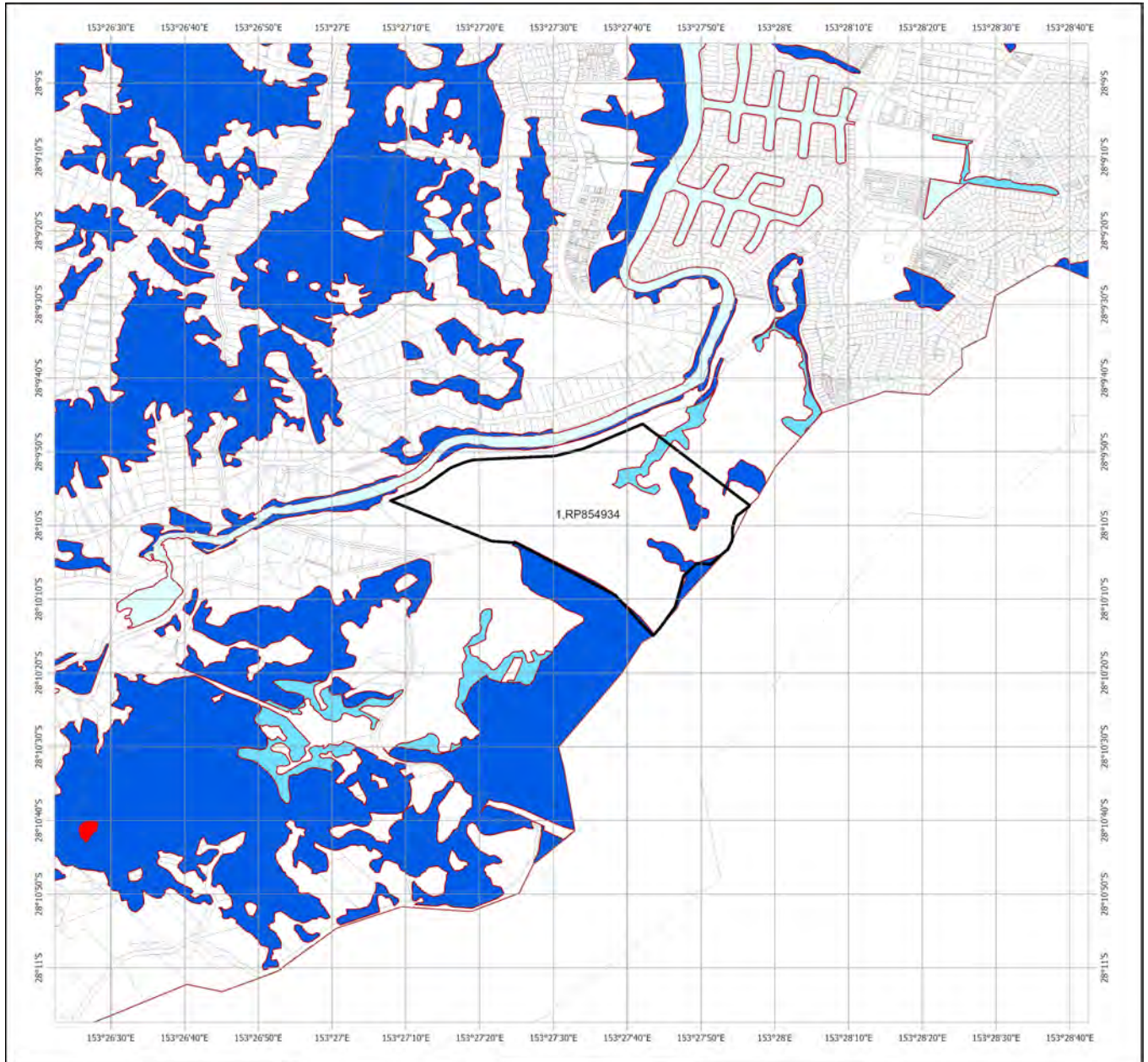
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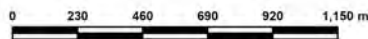
## Attachment 4: Matters of State Environmental Significance Desktop Assessment

# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Exempt clearing work on Freehold, Indigenous and Leasehold land
- Water
- Other land parcel boundaries
- Selected Lot and Plan



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Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

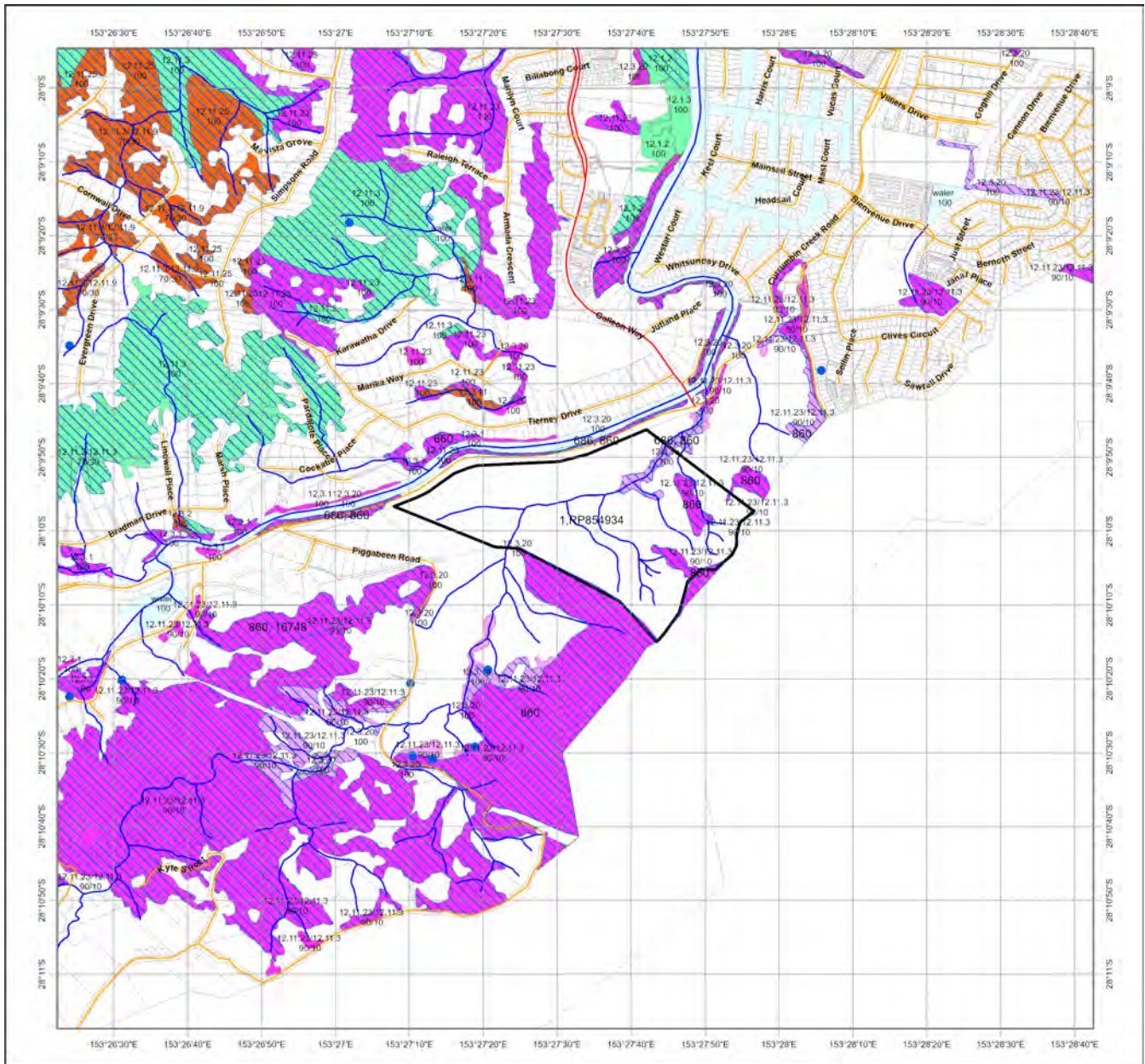
Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



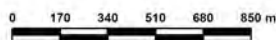
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## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries
- Selected Lot and Plan



This product is displayed in:  
GDA2020

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

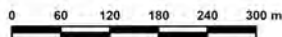
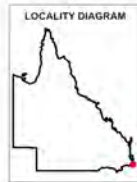
Land parcel boundaries are provided as locational aid only.





## Protected Plants Flora Survey Trigger Map

- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets
- Selected Lot and Plan



This product is displayed in:  
GDA2020

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

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# 7. Koala protection framework details for Lot: 1 Plan: RP854934

## 7.1 Koala districts

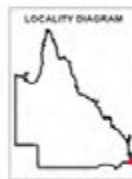
Koala District A

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare map



**Koala priority area, koala habitat area and identified koala broad-hectare area map**

- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Major rivers/creeks
- Highway
- Connector
- Street/Local Road
- Queensland
- Selected Lot and Plan



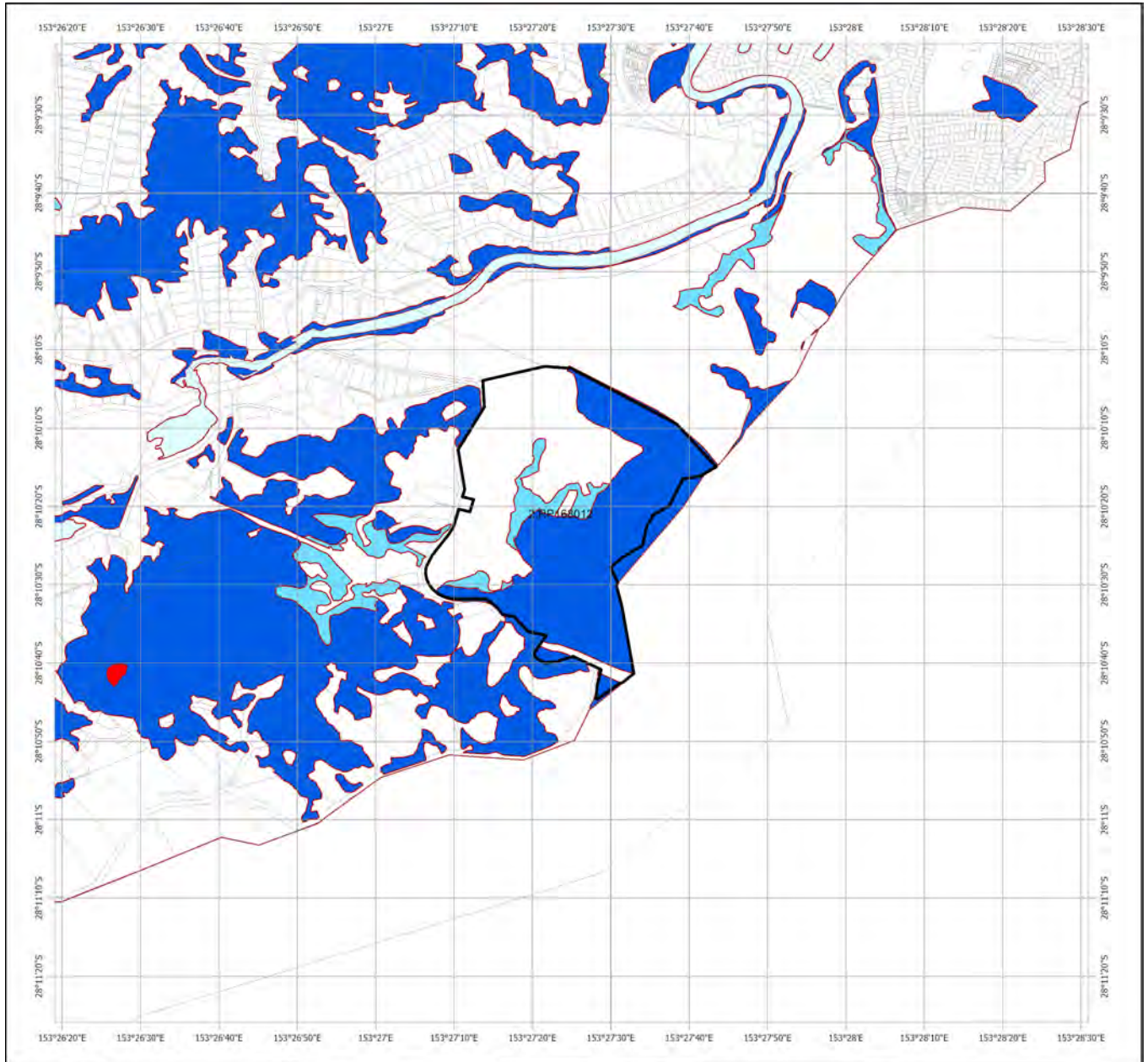
**Disclaimer:**  
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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>. The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

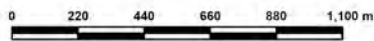
The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries
- Selected Lot and Plan



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Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

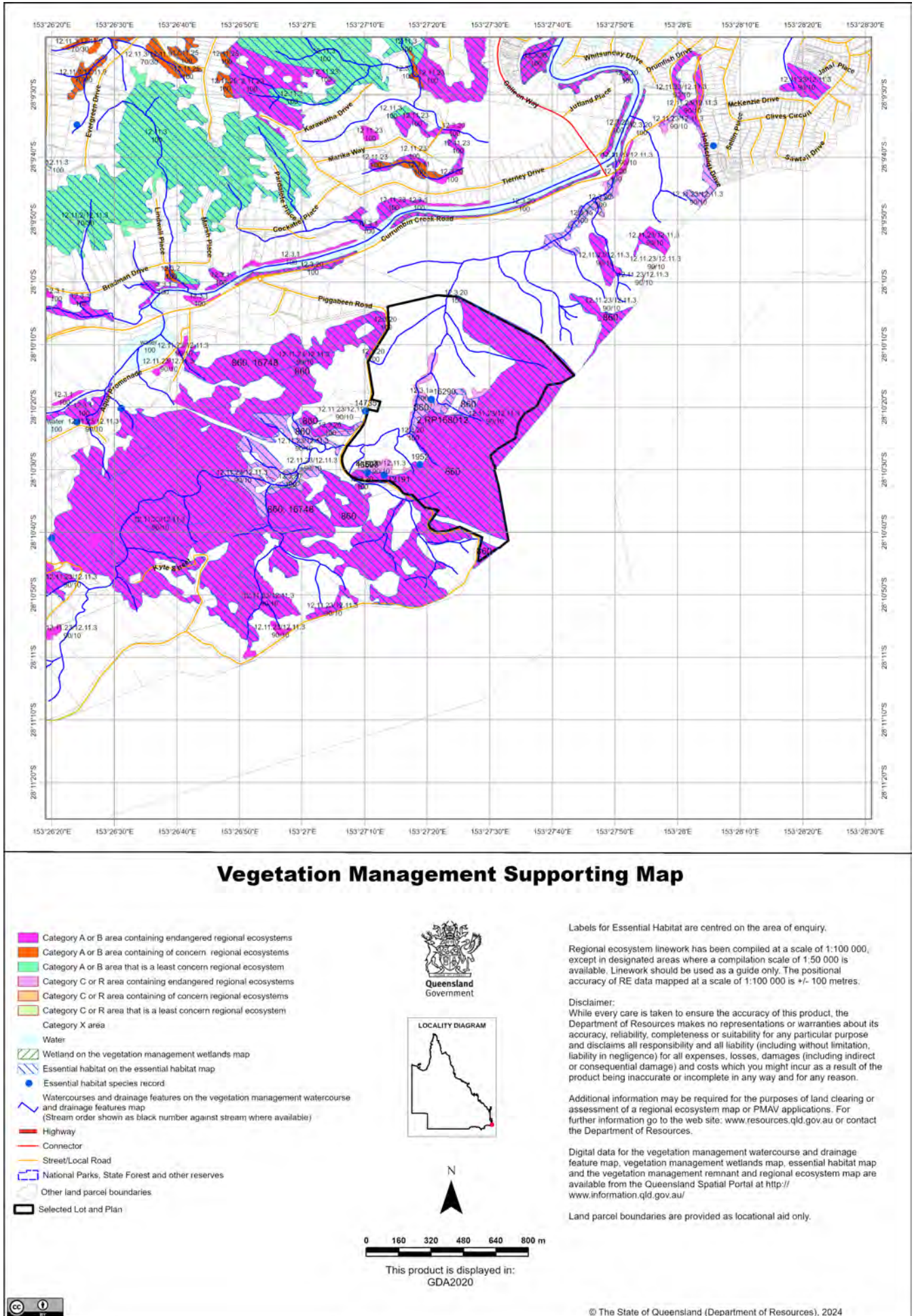
Land parcel boundaries are provided as locational aid only.

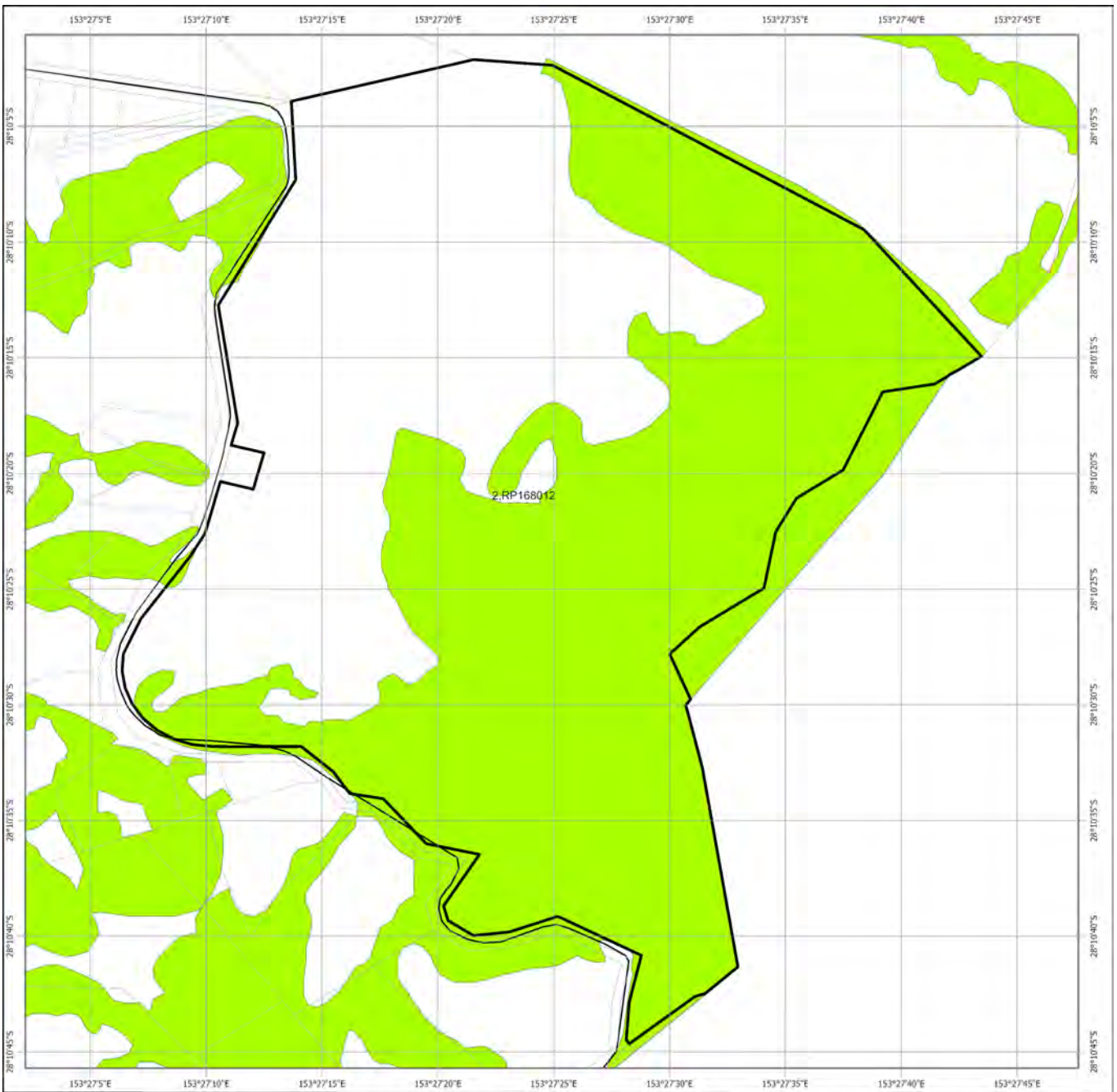
This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



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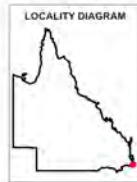
## 4.2 Vegetation management supporting map





## Protected Plants Flora Survey Trigger Map

- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets
- Selected Lot and Plan



0 53 106 159 212 265 m

This product is displayed in:  
GDA2020

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

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# 7. Koala protection framework details for Lot: 2 Plan: RP168012

## 7.1 Koala districts

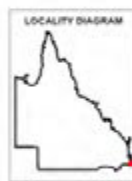
Koala District A

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare map



**Koala priority area, koala habitat area and identified koala broad-hectare area map**

- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Major rivers/creeks
- Highway
- Connector
- Street/Local Road
- Queensland
- Selected Lot and Plan

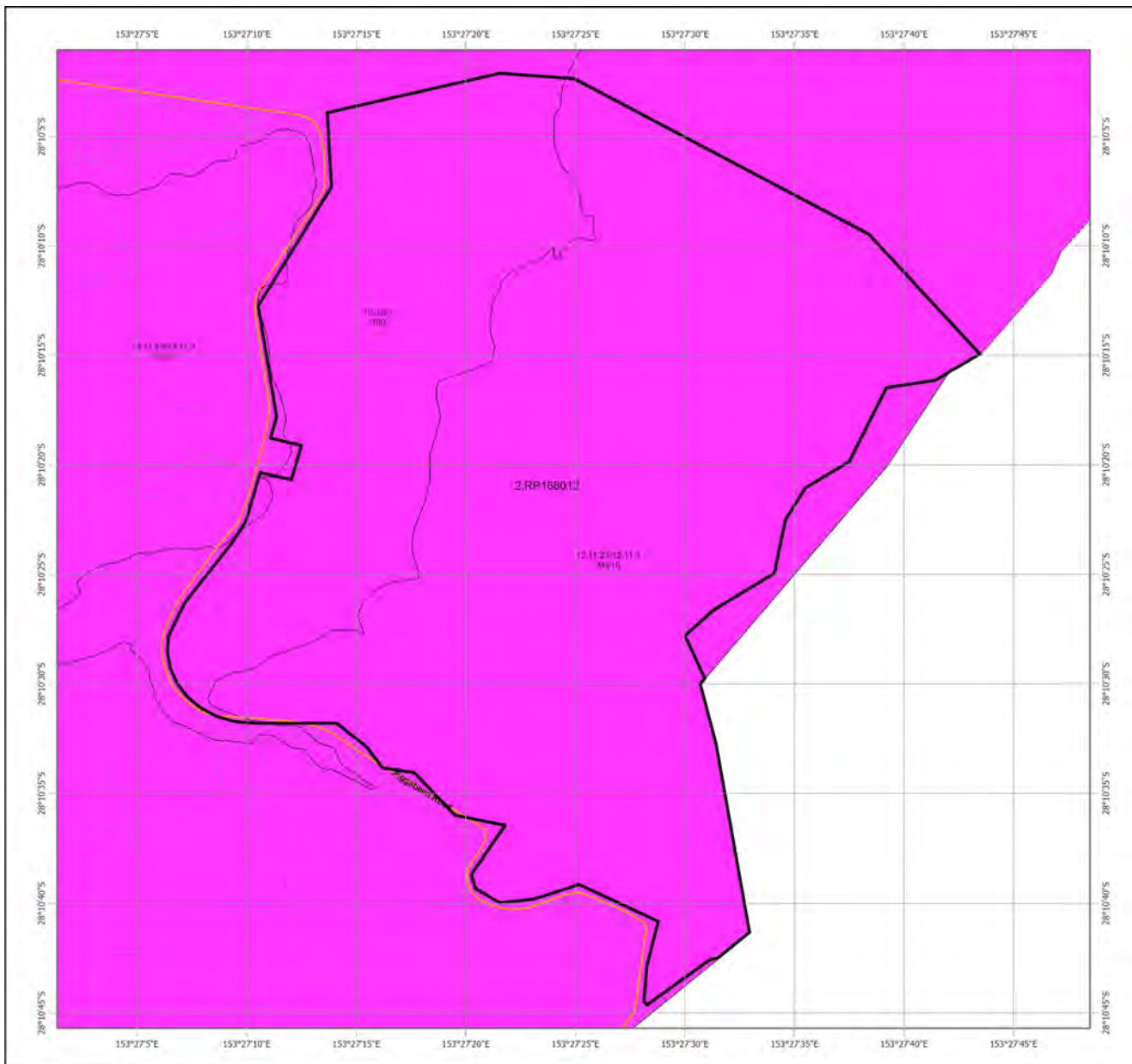


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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

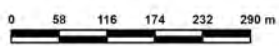
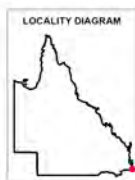
In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/>. The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



### Vegetation Management Pre-clear Regional Ecosystem Map

- Highway
- Connector
- Street/Local Road
- Other land parcel boundaries
- Pre-clearing area containing Endangered RE
- Pre-clearing area containing Of Concern RE
- Pre-clearing area that is a Least Concern RE
- Water
- Selected Lot and Plan



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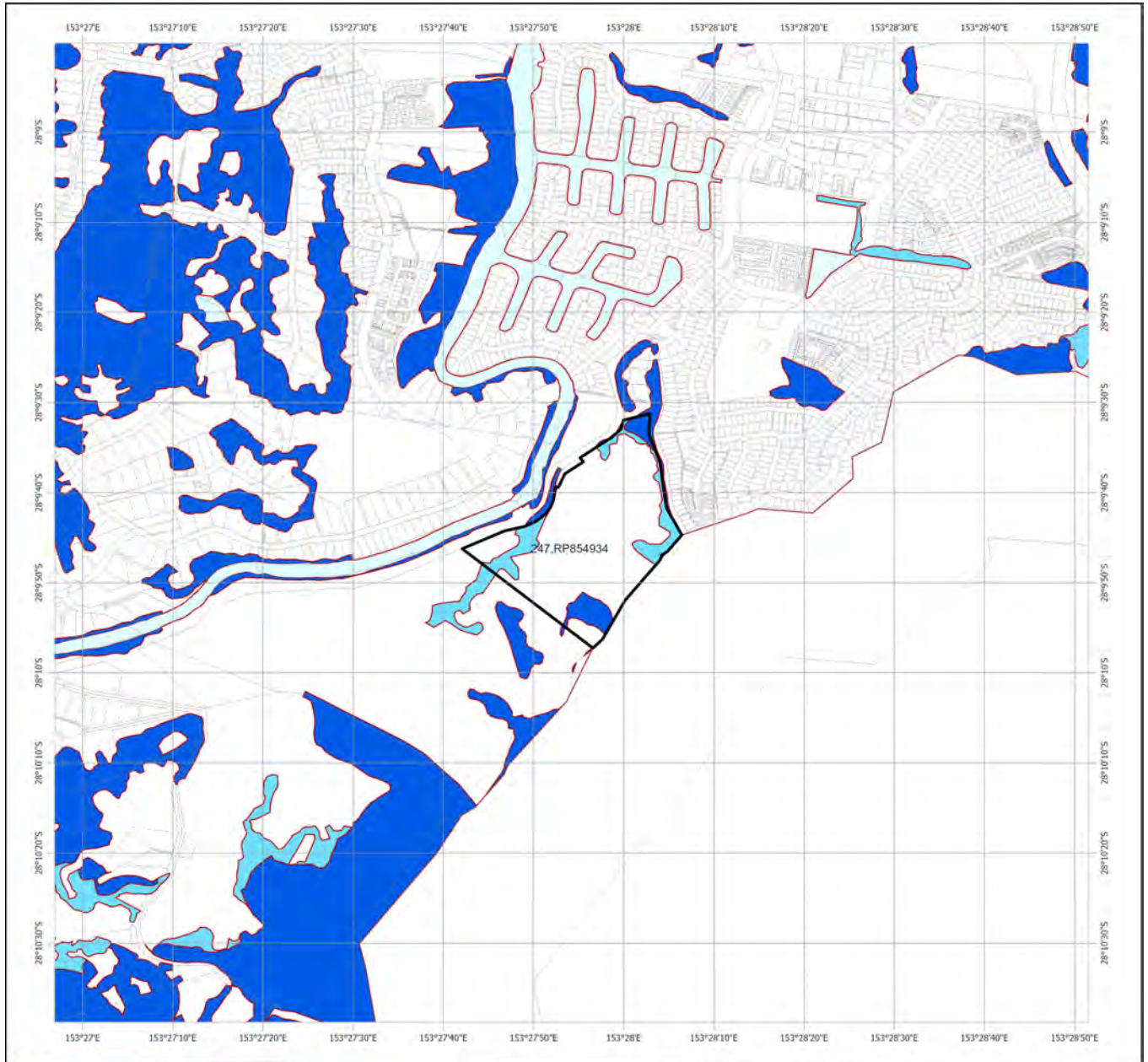
Pre-clearing regional ecosystem line-work reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only.

Digital data for the Pre-clearing regional ecosystem map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries shown are provided as a locational aid only.

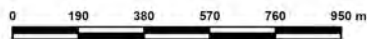


# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries
- Selected Lot and Plan



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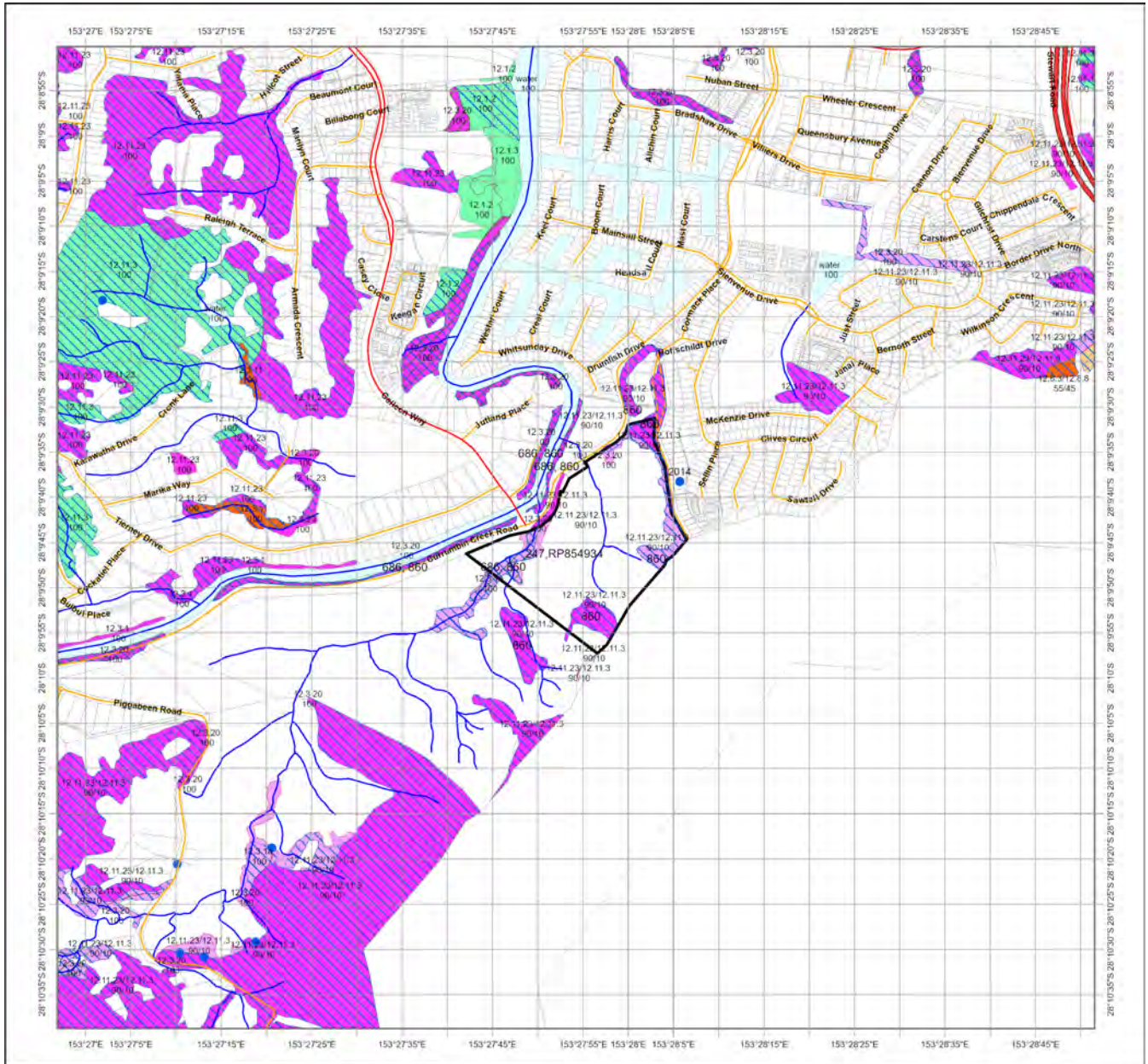
Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



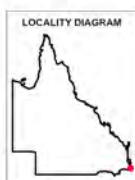
© The State of Queensland (Department of Resources), 2024

## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries
- Selected Lot and Plan



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Labels for Essential Habitat are centred on the area of enquiry.

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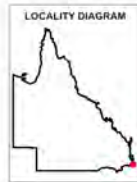
Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.



## Protected Plants Flora Survey Trigger Map

- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets
- Selected Lot and Plan



0 32.5 65 97.5 130 162.5 m

This product is displayed in:  
GDA2020

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

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# 7. Koala protection framework details for Lot: 247 Plan: RP854934

## 7.1 Koala districts

Koala District A

## 7.2 Koala priority area, koala habitat area and identified koala broad-hectare map



**Koala priority area, koala habitat area and identified koala broad-hectare area map**

- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Major rivers/creeks
- Highway
- Connector
- Street/Local Road
- Queensland
- Selected Lot and Plan

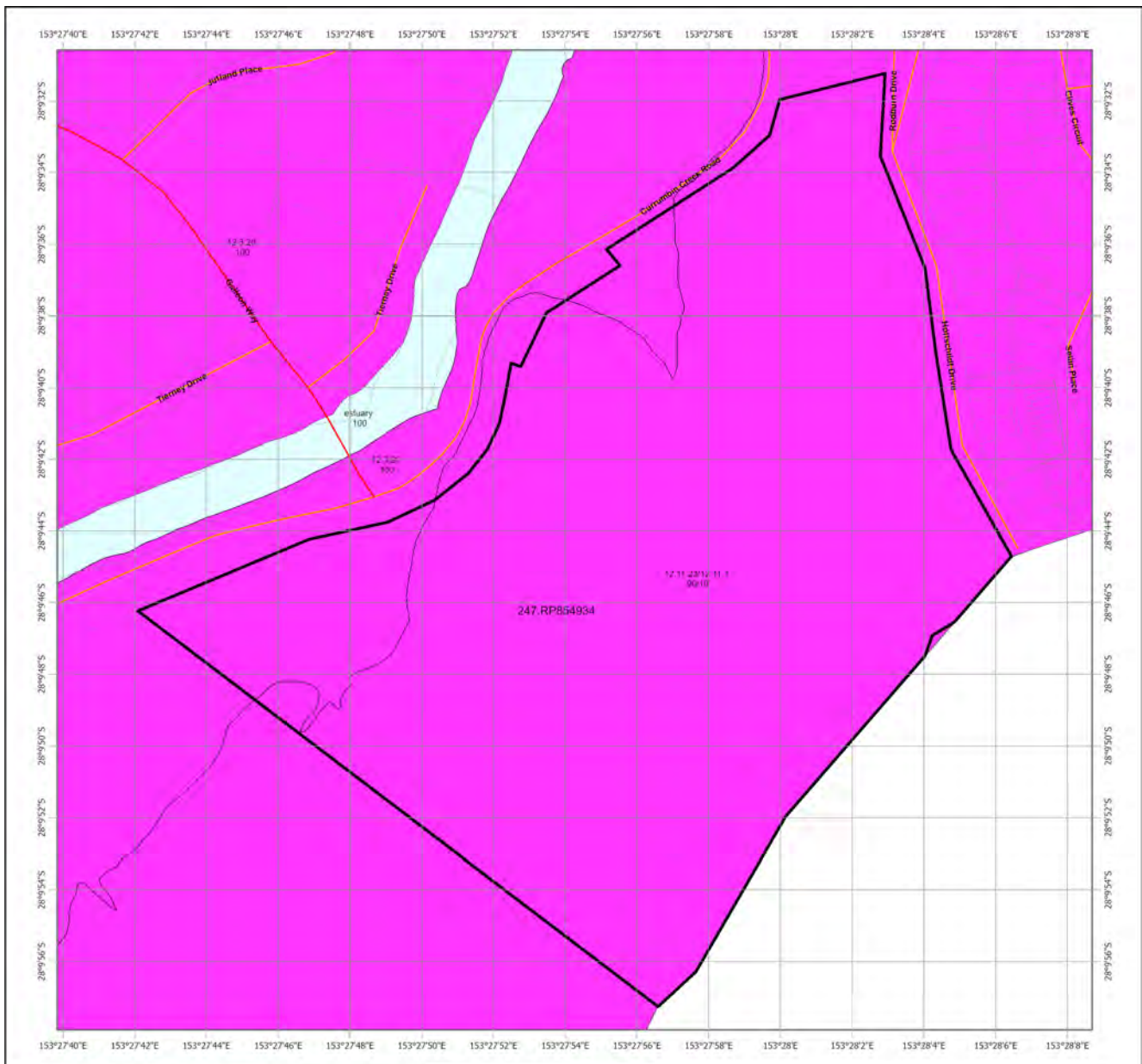
The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



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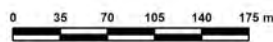
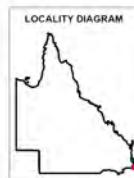
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### Vegetation Management Pre-clear Regional Ecosystem Map

- Highway
- Connector
- Street/Local Road
- Other land parcel boundaries
- Pre-clearing area containing Endangered RE
- Pre-clearing area containing Of Concern RE
- Pre-clearing area that is a Least Concern RE
- Water
- Selected Lot and Plan



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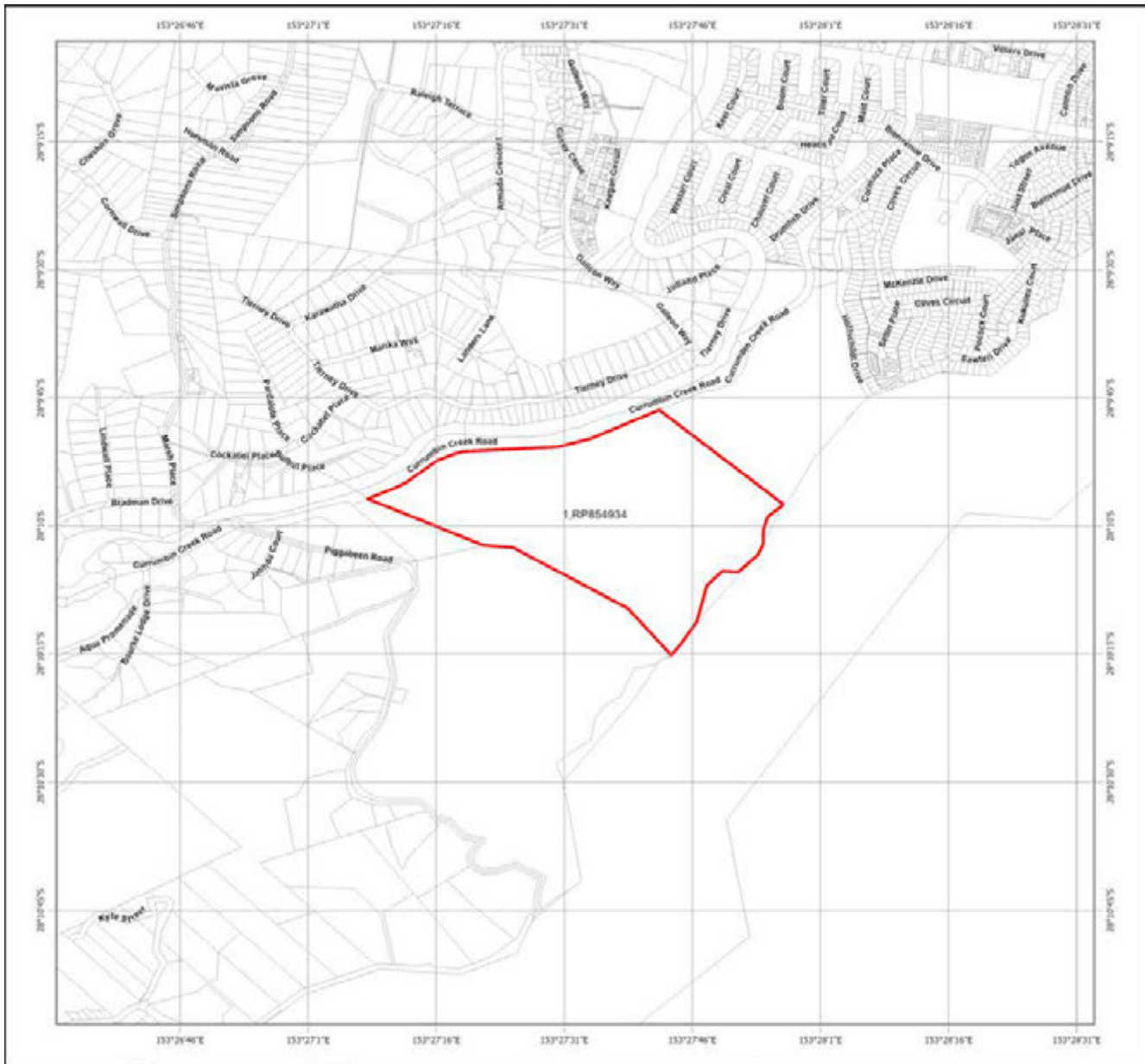
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Digital data for the Pre-clearing regional ecosystem map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries shown are provided as a locational aid only.

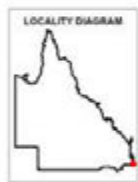






### Map of Great Barrier Reef Wetland Protection Areas

- Cadastral Boundary
- Wetland in a wetland protection area
- Great Barrier Reef wetland protection area
- Selected Lot and Plan



This product is displayed in GDA2020

**Note:**

This map shows the location of wetland protection areas which are defined under the Environmental Protection Regulation 2008. Within wetland protection areas, certain types of development involving high impact earthworks are made assessable under Schedule 3 of the Sustainable Planning Regulation 2009.

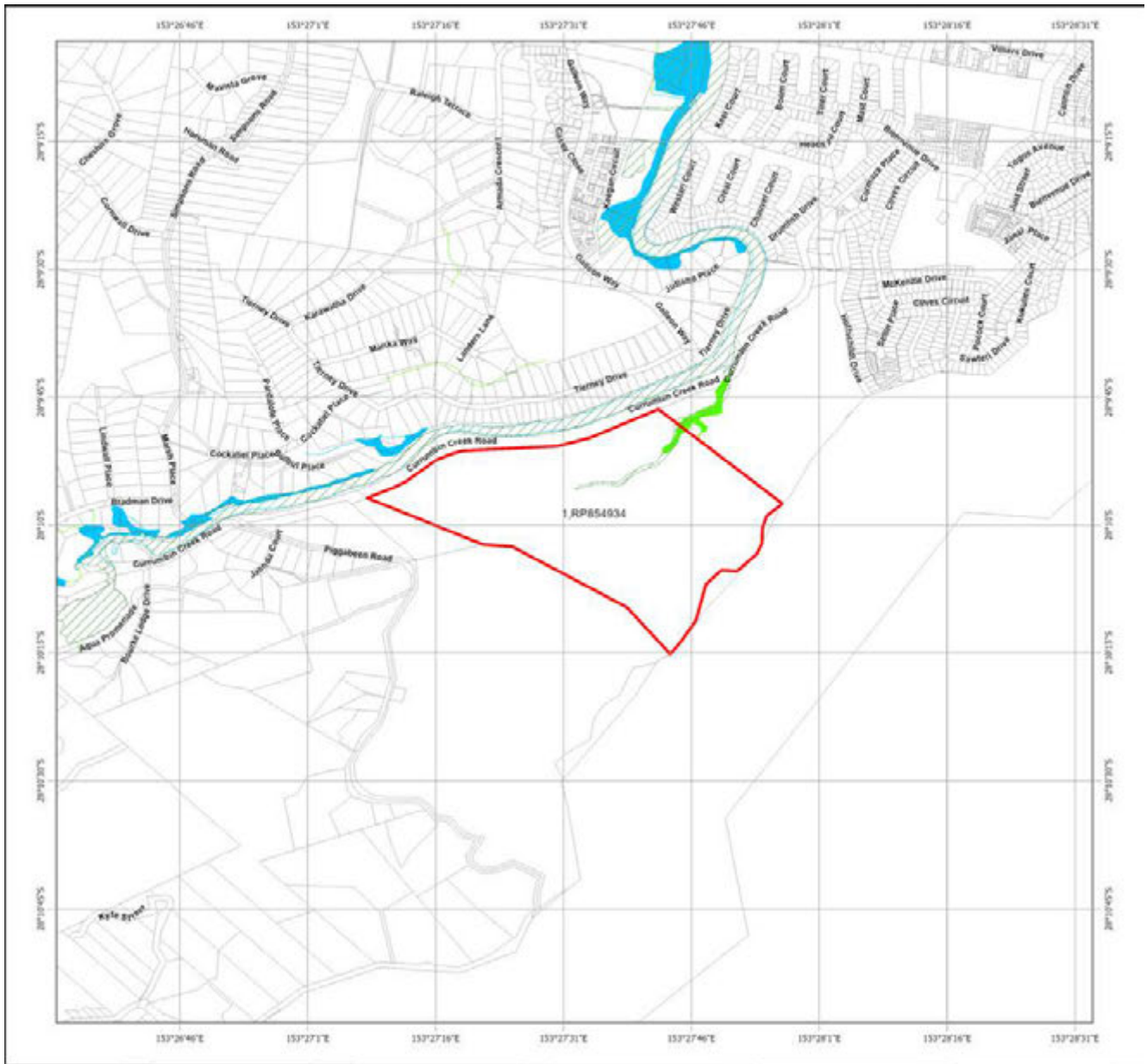
The Department of State Development, Manufacturing, Infrastructure and Planning is the State Assessment Referral Agency (SARA) under Schedule 7 of the Sustainable Planning Regulation 2009 for assessable development involving high impact earthworks within wetland protection areas. The Department of Environment, Science and Innovation is a technical agency.

The policy outcome and assessment criteria for assessing these applications are described in the State Development Assessment Provisions (SDAP) State Code 9 : Great Barrier Reef Wetland Protection Areas.

This map is produced at a scale relevant to the size of the lot on plan identified and should be printed at A4 size in portrait orientation. Consideration of the effects of mapped scale is necessary when interpreting data at a large scale.

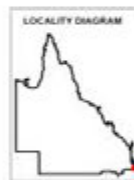
For further information or assistance with interpretation of this product, please contact the Department of Environment, Science and Innovation, email [planning.support@des.qld.gov.au](mailto:planning.support@des.qld.gov.au).

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### Map of Queensland Wetland Environmental Values

- Cadastral Boundary
- High ecological values waters management intent
- Wetlands assessed under section 7**
- GBR wetland of high ecological significance
- Wetland of high ecological significance
- Wetland of general ecological significance
- Selected Lot and Plan



This product is displayed in: GDA2020

**Note:**  
This map shows the location of wetlands on the Map of Queensland Wetlands Environmental Values under the Environmental Protection (Wetland and Water Biodiversity) Policy 2019. The map also shows high ecological value waters management intent under Schedule 2 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

Wetlands are assessed for ecological significance using the environmental values for wetlands in section 7 of the Environmental Protection (Wetland and Water Biodiversity) Policy 2019. Wetlands are considered either High Ecological Significance (HES) or of General Ecological Significance (GES) for the purposes of the environmental values.

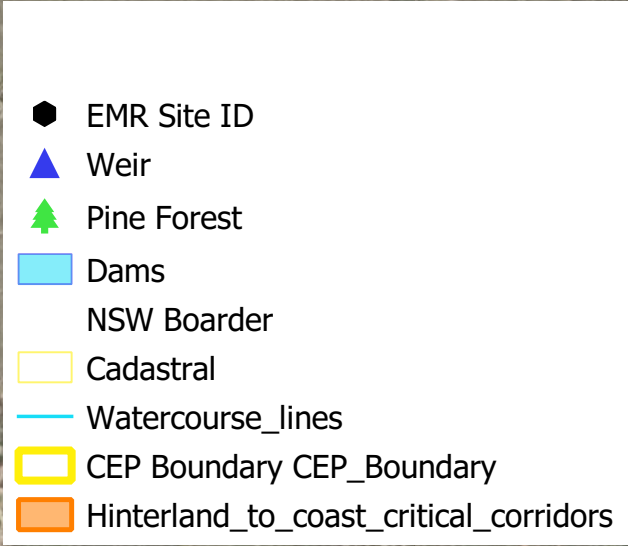
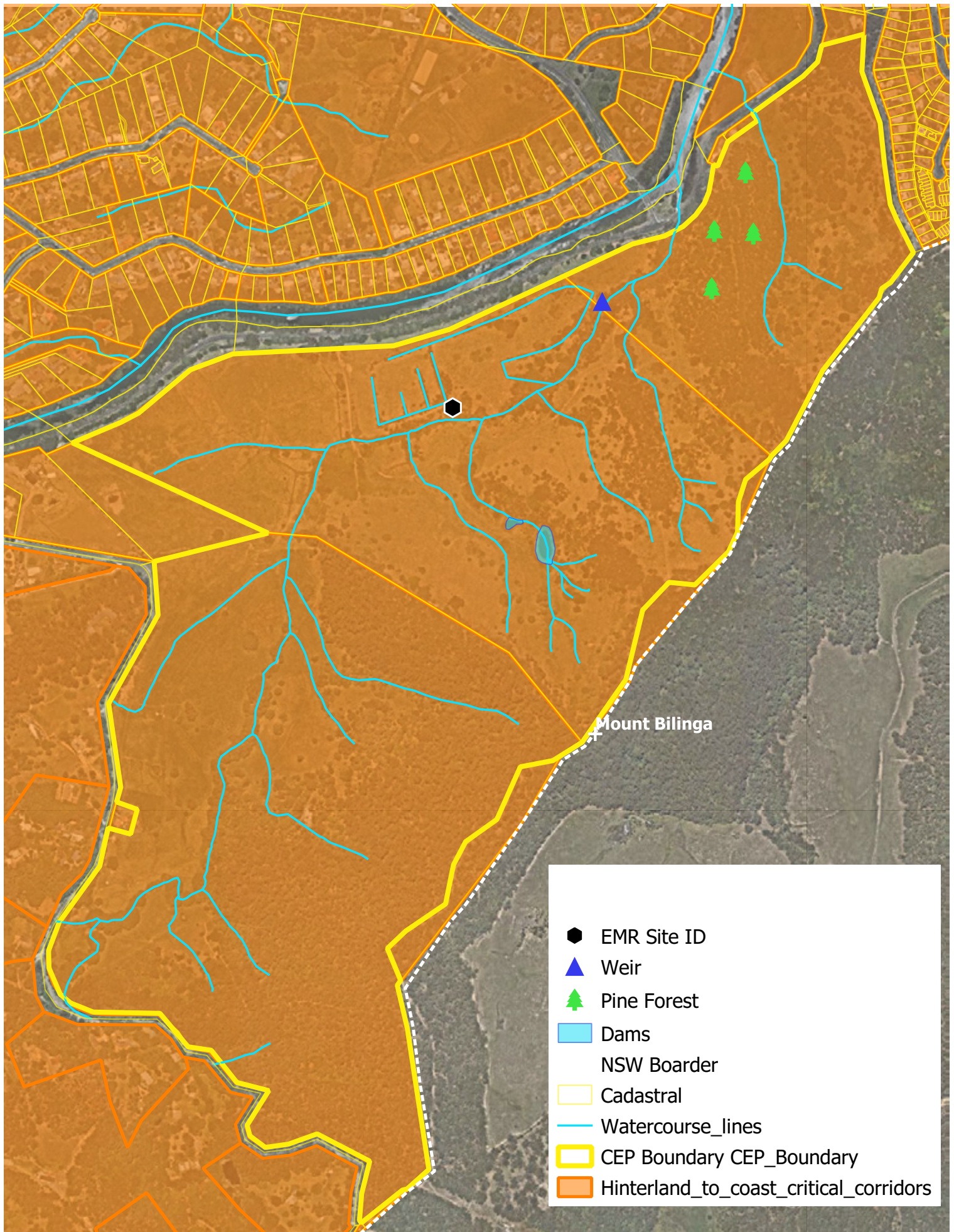
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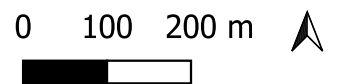
© The State of Queensland, 2024

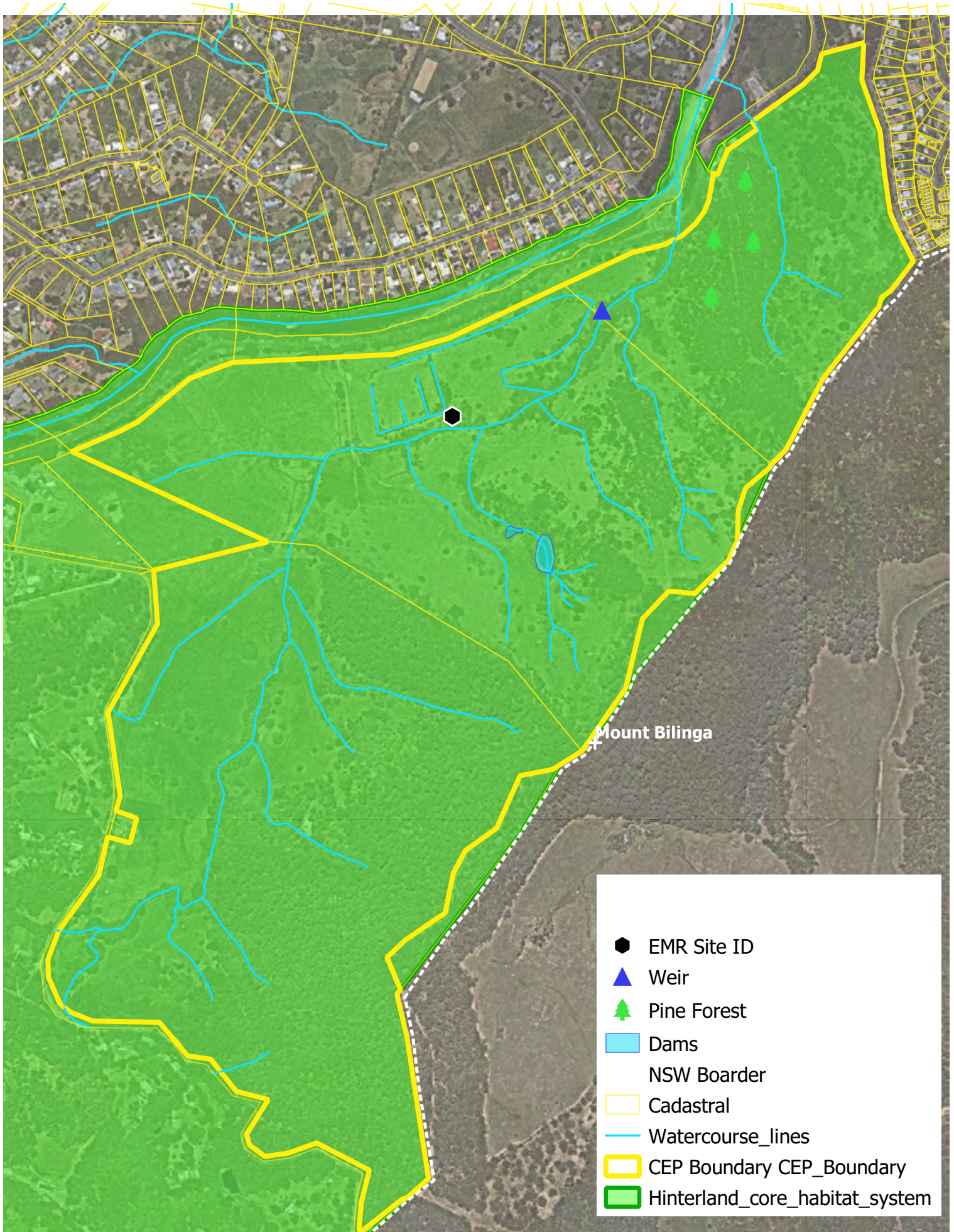


## Attachment 5: Matters of Local Environmental Significance Desktop Assessment

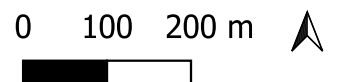


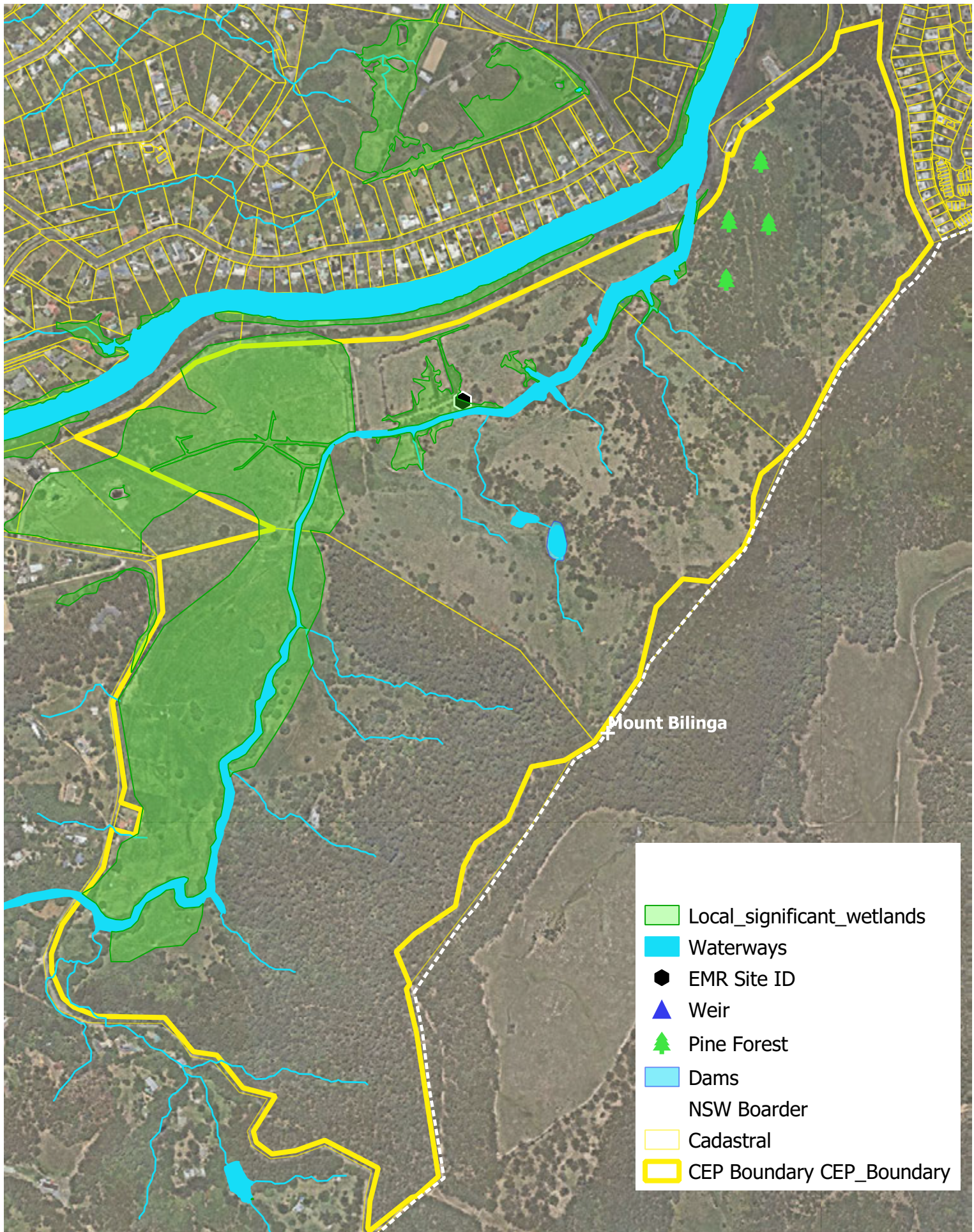
**City of Gold Coast**  
**Hinterland to Coast Critical Corridor**





**City of Gold Coast  
Hinterland Core Habitat System**

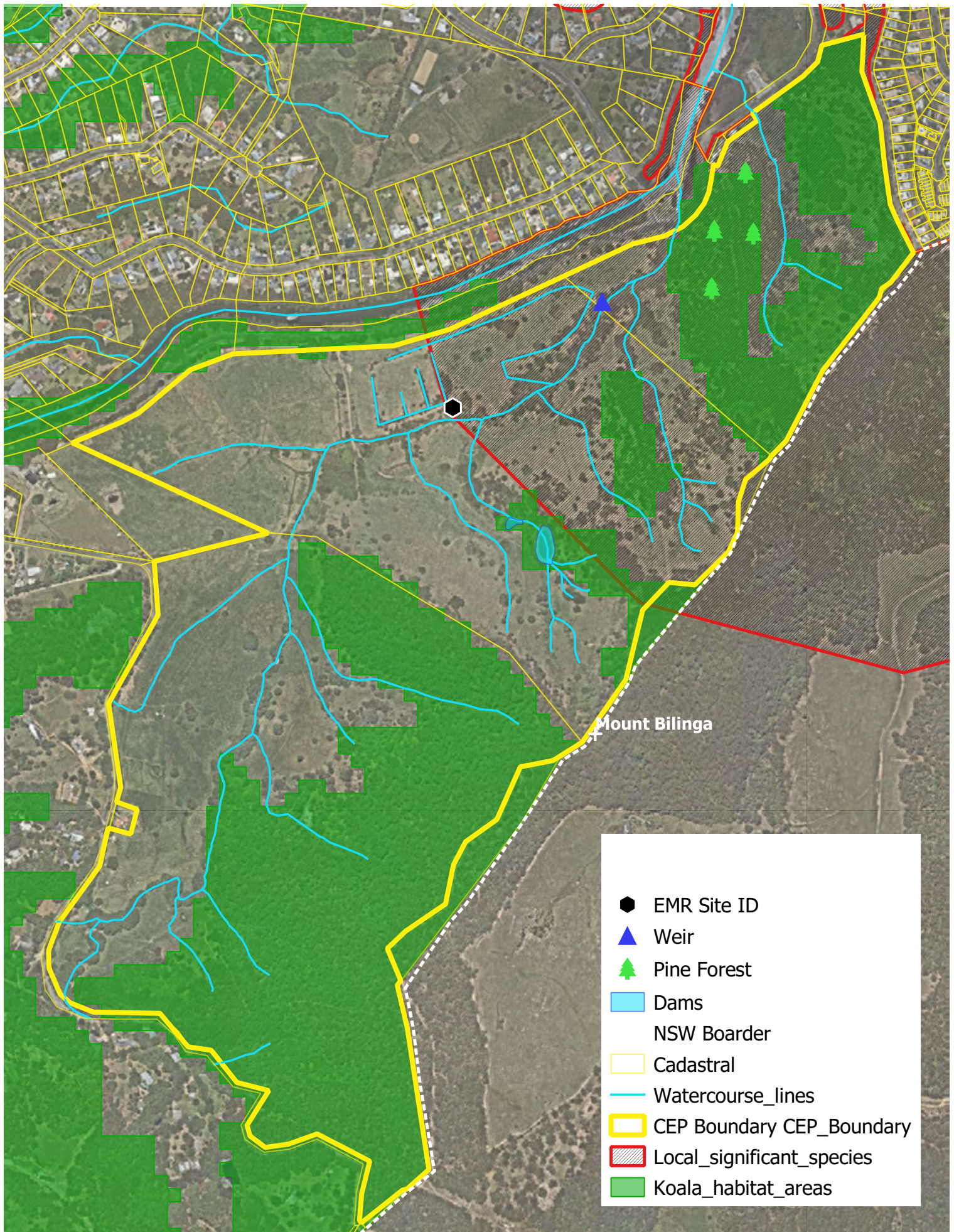




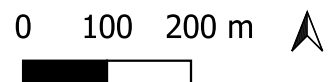
**City of Gold Coast  
Wetlands and Waterways**

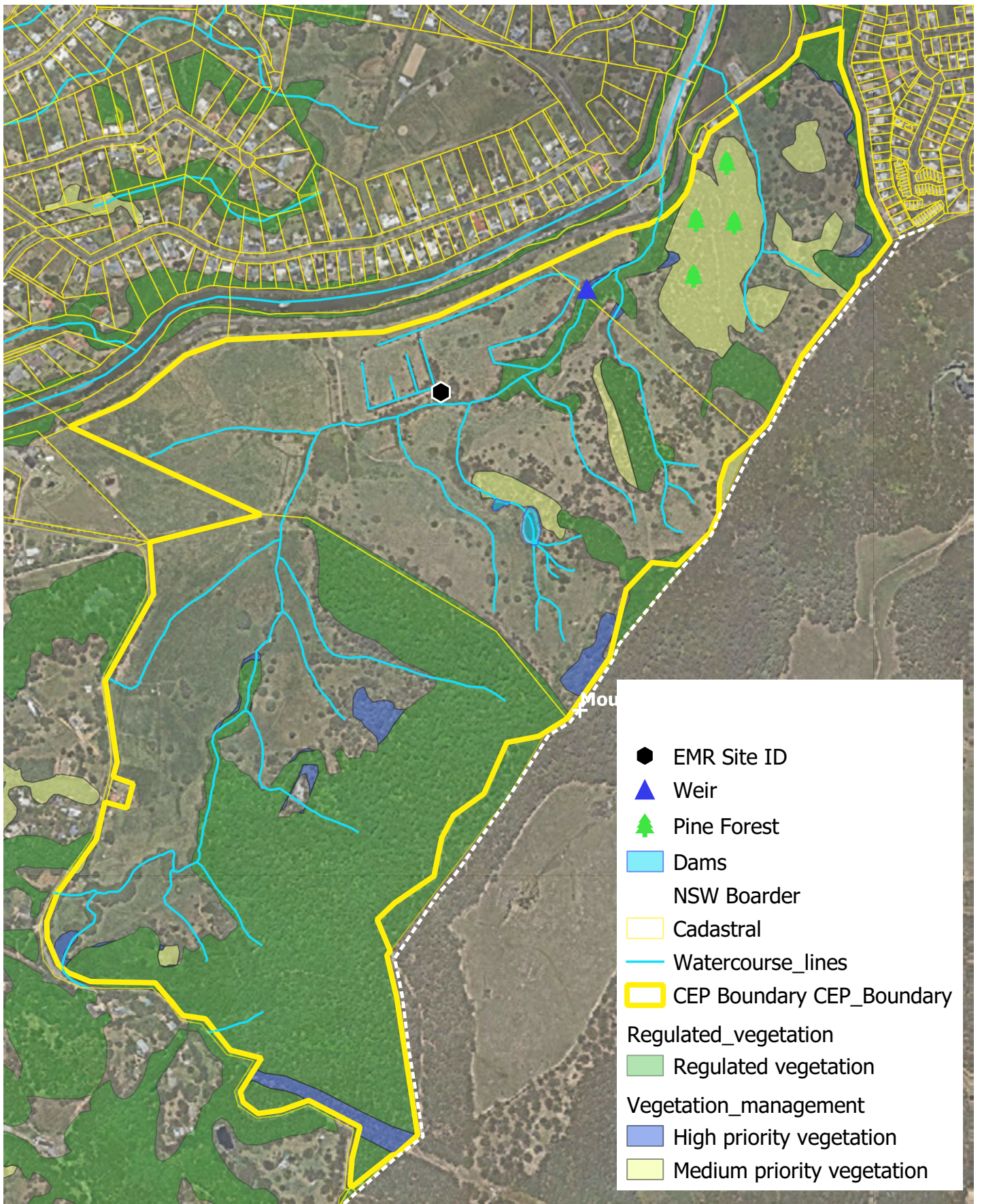
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**City of Gold Coast**  
**Koala Habitat and Local Significant**  
**Species**

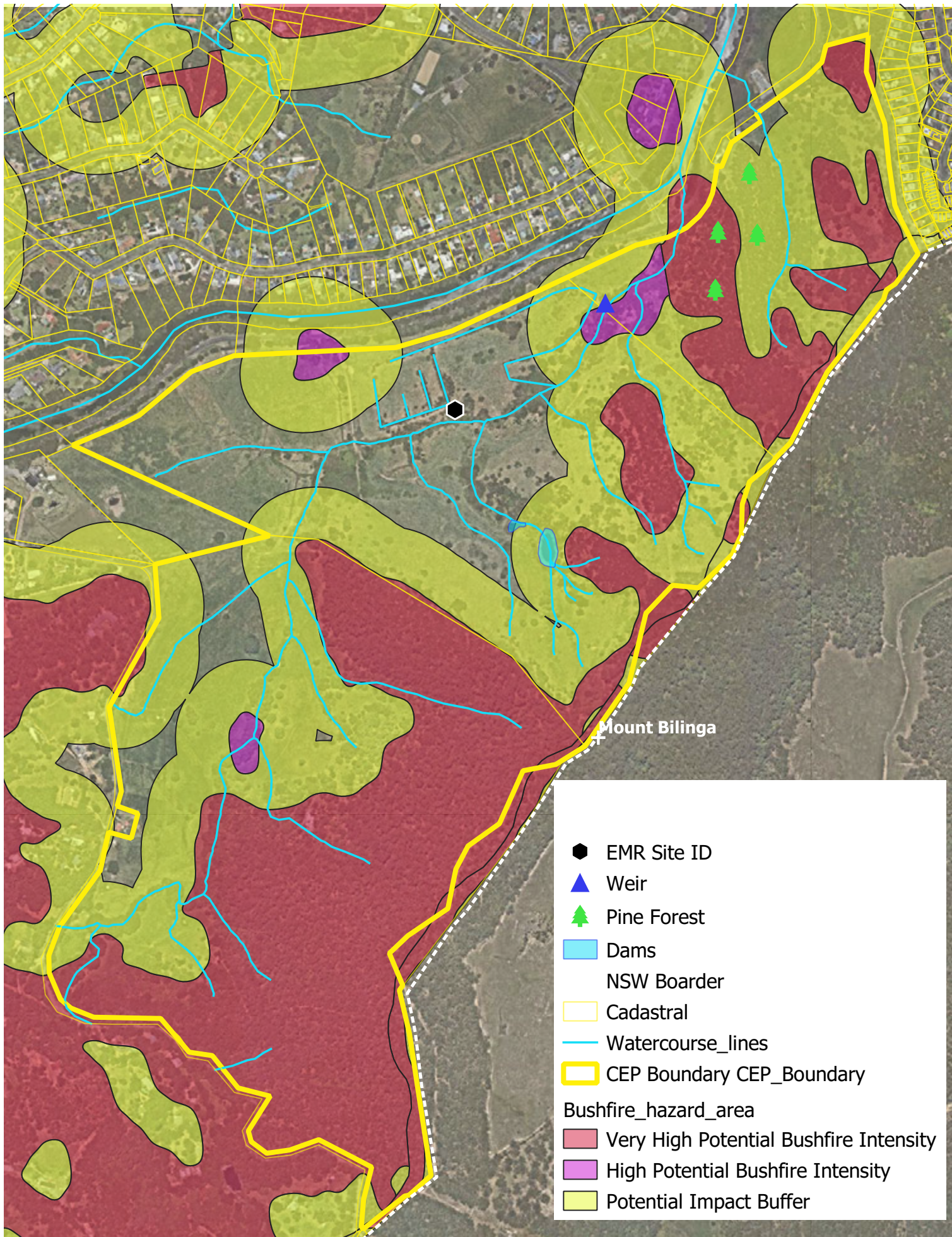


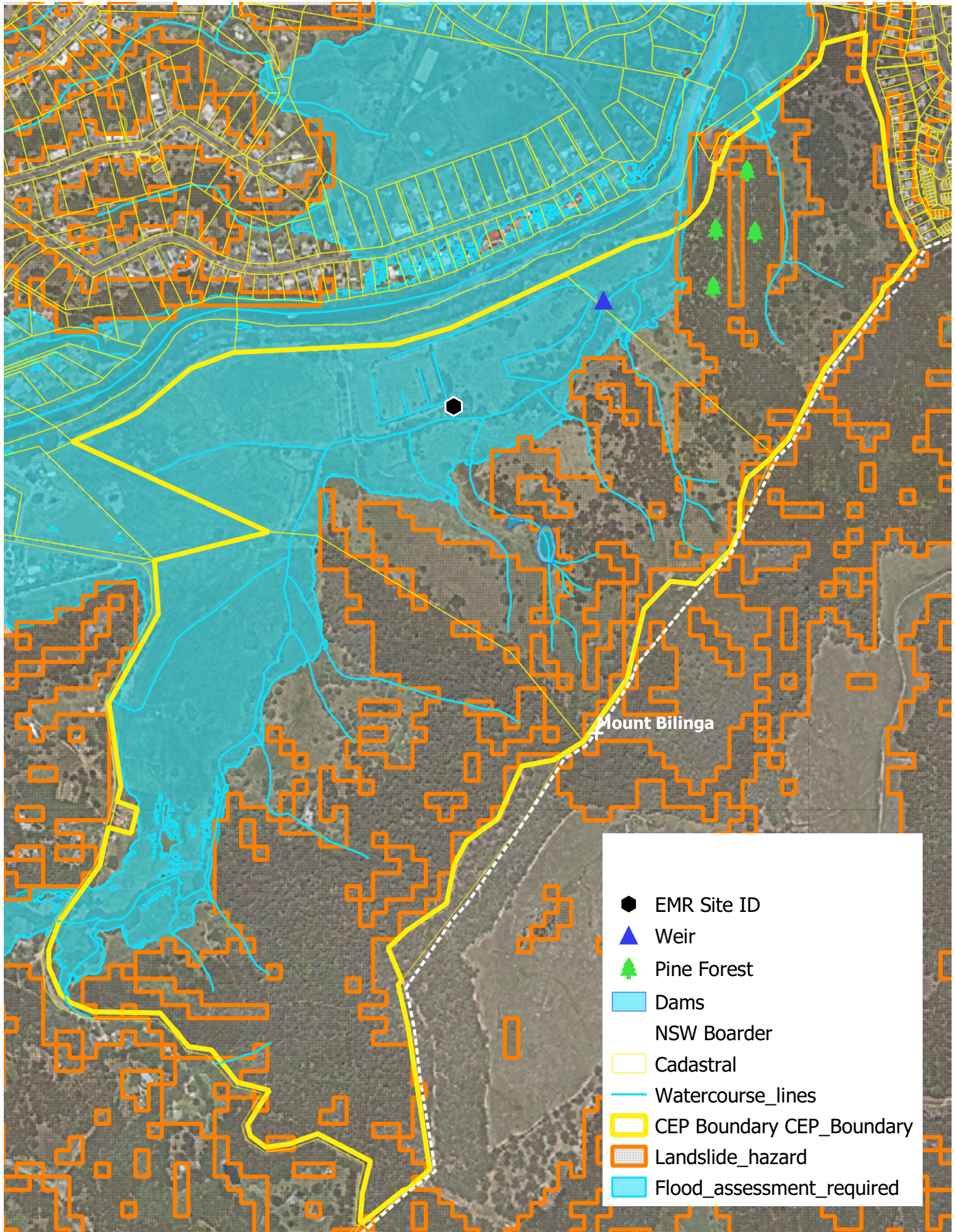


**Gold Coast City Council City Plan V11  
Vegetation Management**

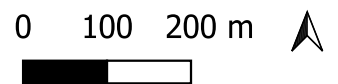
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**City of Gold Coast  
Flood and Landslide**





Attachment 6: Flora Survey Plot Data







Attachment 7: Flora Species List

**Native species:**

	<b><u>Botanical name:</u></b>	<b><u>Family name:</u></b>	<b><u>Common name:</u></b>	<b>Key below</b>			<b>CoGC</b>
				<b>EPBC</b>	<b>NCA</b>	<b>SLC</b>	<b>Priority</b>
1	<i>Acacia bakeri</i>	Leguminosae	Marblewood				1
2	<i>Acacia disparrima</i> ssp. <i>disparrima</i>	Mimosaceae	Hickory Wattle				
3	<i>Acacia leiocalyx</i>	Mimosaceae	Black Wattle				
4	<i>Acacia longissima</i>	Leguminosae	Long-leaf Wattle				
5	<i>Acacia melanoxylon</i>	Mimosaceae	Black Wattle				
6	<i>Acianthus</i> sp. ind.	Orchidaceae	Mosquito Orchid			1	
7	<i>Ackama paniculosa</i> syn. <i>Caldcluvia</i>	Cunoniaceae	Rose-leaf Marara				
8	<i>Acmena smithii</i> n.l.f.	Myrtaceae	Creek Lily Pily				
9	<i>Acronychia bauerlenii</i>	Rutaceae	Byron Bay Acronychia				
10	<i>Acronychia imperforata</i>	Rutaceae	Beach Acronychia				
11	<i>Acronychia pubescens</i>	Rutaceae	Hairy Acronychia				
12	<i>Acrostichum speciosum</i>	Pteridaceae	Mangrove Fern			1	
13	<i>Actephila mooreana</i> syn. <i>A. lindleyi</i>	Euphorbiaceae	Actephila				
14	<i>Adiantum atroviride</i>	Pteridaceae	Common Maidenhair			1	
15	<i>Adiantum diaphanum</i>	Pteridaceae	Filmy Maidenhair			1	
16	<i>Adiantum hispidulum</i>	Pteridaceae	Rough Maidenhair			1	
17	<i>Adiantum formosum</i>	Pteridaceae	Giant Maidenhair			1	
18	<i>Alchornea ilicifolia</i>	Euphorbiaceae	Native Holly				
19	<i>Allocasuarina torulosa</i>	Casuarinaceae	Forest Oak				
20	<i>Alocasia brisbanensis</i>	Araceae	Cunjevoi				
21	<i>Alphitonia excelsa</i>	Rhamnaceae	Red Ash				
22	<i>Alpinia arundelliana</i>	Zingiberaceae	Small Native Ginger				
23	<i>Alpinia caerulea</i>	Zingiberaceae	Native Ginger				
24	<i>Alternanthera denticulata</i>	Amaranthaceae	Lesser Joyweed				
25	<i>Amyema cambagei</i>	Loranthaceae	She-oak Mistletoe				
26	<i>Amyema pendula</i>	Loranthaceae	Drooping Mistletoe				
27	<i>Amylotheca dictyophleba</i>	Loranthaceae	Red-flowering Mistletoe				
28	<i>Aneilema acuminatum</i>	Commelinaceae	Native Wandering Jew				
29	<i>Aphananthe philippinensis</i>	Ulmaceae	Rough-leaved Elm				
30	<i>Araucaria cunninghamii</i>	Araucariaceae	Hoop Pine				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
31	<i>Archidendron grandiflorum</i>	Mimosaceae	Pink Laceflower				
32	<i>Archidendron muellerianum</i>	Mimosaceae	Small-flower Laceflower				1
33	<i>Archirhodomyrtus beckleri</i>	Myrtaceae	Rose Myrtle				
34	<i>Archontophoenix cunninghamiana</i>	Arecaceae	Bangalow Palm				
35	<i>Argyrodendron trifoliolatum</i>	Sterculiaceae	White Booyong				
36	<i>Artanema fimbriatum</i>	Linderniaceae	Artanema				
37	<i>Arthropteris tenella</i>	Davalliaceae	Climbing Fern				
38	<i>Arytera distylis</i>	Sapindaceae	Twin-leaved Coogera				
39	<i>Arytera divaricata</i>	Sapindaceae	Coogera; Rose Tamarind				
40	<i>Asplenium attenuatum</i> var. <i>attenuatum</i>	Aspleniaceae	Walking Fern				
41	<i>Asplenium australasicum</i>	Aspleniaceae	Bird's Nest Fern				
42	<i>Astrotricha latifolia</i>	Araliaceae	Broad-leaf Star-hair				
43	<i>Austrocallerya megasperma</i>	Fabaceae	Native Wisteria				
44	<i>Austromyrtus dulcis</i>	Myrtaceae	Midyim				
45	<i>Austrosteenisia blackii</i> var. <i>blackii</i>	Fabaceae	Blood Vine				
46	<i>Avicennia marina</i> ssp. <i>australasica</i>	Avicenniaceae	Grey Mangrove				
47	<i>Azolla pinnata</i>	Azollaceae	Ferny Azolla				
48	<i>Backhousia myrtifolia</i>	Myrtaceae	Grey Myrtle				
49	<i>Bacopa monnieri</i>	Plantaginaceae	Bacopa				
50	<i>Baloghia inophylla</i>	Euphorbiaceae	Scrub Bloodwood				
51	<i>Baumea articulata</i>	Cyperaceae	Jointed Twigrush				
52	<i>Beilschmiedia obtusifolia</i>	Lauraceae	Blush Walnut				
53	<i>Benthamia alyxifolia</i>	Loranthaceae	Shiny-leaved Mistletoe				
54	<i>Blechnum cartilagineum</i>	Blechnaceae	Gristle Fern				
55	<i>Blechnum indicum</i>	Blechnaceae	Bungwall Fern			1	
56	<i>Blechnum neohollandicum</i> syn. <i>Doodia aspera</i>	Blechnaceae	Prickly Rasp Fern				
57	<i>Brachychiton acerifolius</i>	Sterculiaceae	Flame Tree			1	
58	<i>Breynia oblongifolia</i>	Euphorbiaceae	Coffee Bush				
59	<i>Bridelia exaltata</i>	Euphorbiaceae	Scrub Ironbark				
60	<i>Brunoniella australis</i>	Acanthaceae	Blue Trumpet				
61	<i>Bursaria spinosa</i>	Pittosporaceae	Prickly Box				
62	<i>Calamus muelleri</i>	Arecaceae	Wait-a-while				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
63	<i>Callicarpa pedunculata</i>	Lamiaceae	Callicarpa				
64	<i>Calochlaena dubia</i>	Dicksoniaceae	Soft Bracken Fern				
65	<i>Capillipedium spicigerum</i>	Poaceae	Scented Top Grass				
66	<i>Capparis arborea</i>	Capparaceae	Brush Caper Berry				
67	<i>Carex hubbardii</i>	Cyperaceae	no common name				
68	<i>Carex breviculmis</i>	Cyperaceae	a Sedge				
69	<i>Carex polyantha</i>	Cyperaceae	a Sedge				
70	<i>Carissa ovata</i>	Apocynaceae	Carissa				
71	<i>Carronia multisepeala</i>	Menispermaceae	Carronia				
72	<b><i>Cassia marksiana</i></b>	Caesalpiniaceae	Brush Cassia		V		1
73	<i>Casuarina glauca</i>	Casuarinaceae	Swamp She-oak				
74	<i>Causonis clematidea</i> syn. <i>Cayratia</i>	Vitaceae	Slender Grape				
75	<i>Celastrus subspicata</i>	Celastraceae	Large-leaf Staff Vine				
76	<i>Centella asiatica</i>	Apiaceae	Gotu Kola				
77	<i>Centratherum riparium</i>	Asteraceae	no common name				
78	<i>Cheilanthes sieberi</i>	Schizaeaceae	Mulga Fern				
79	<i>Chiloglottis</i> sp. ind.	Orchidaceae				1	
80	<i>Christella dentata</i>	Thelypteridaceae	Binung				
81	<i>Cissus antarctica</i>	Vitaceae	Kangaroo Vine				
82	<i>Cissus hypoglauca</i>	Vitaceae	Native Grape				
83	<i>Clematicissus opaca</i>	Vitaceae	Small-leaf Water Vine				
84	<i>Clematis glycinoides</i>	Ranunculaceae	Forest Clematis				
85	<i>Clerodendrum floribundum</i>	Verbenaceae	Lolly Bush				
86	<i>Coelospermum paniculatum</i>	Rubiaceae	Coelospermum				
87	<i>Coleus australis</i>	Lamiaceae	Forest Plectranthus				
88	<i>Commelina diffusa</i>	Commelinaceae	Native Wandering Jew				
89	<i>Commersonia bartramia</i>	Byttneriaceae	Brown Kurrajong				
90	<i>Cordyline congesta</i>	Laxmanniaceae	Palm Lily			1	
91	<i>Cordyline petiolaris</i>	Laxmanniaceae	Broad-leaved Palm Lily				
92	<i>Cordyline rubra</i>	Laxmanniaceae	Small Palm Lily				
93	<i>Corymbia henryii</i>	Myrtaceae	Large-leaved Spotted Gum				
94	<i>Corymbia intermedia</i>	Myrtaceae	Pink Bloodwood				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
95	<i>Crinum pedunculatum</i>	Liliaceae	River Lily				
96	<i>Croton verreauxii</i>	Euphorbiaceae	Green Native Cascarilla				
97	<i>Cryptocarya glaucescens</i>	Lauraceae	Jackwood				
98	<i>Cryptocarya laevigata</i>	Lauraceae	Glossy Laurel				
99	<i>Cryptocarya microneura</i>	Lauraceae	Brown Jack				
100	<i>Cryptocarya obovata</i>	Lauraceae	White Walnut; Pepperberry				
101	<i>Cryptocarya triplinervis</i> var. <i>pubens</i>	Lauraceae	Hairy Three-veined Laurel				
102	<i>Cryptocarya triplinervis</i> var. <i>triplinervis</i>	Lauraceae	Three-veined Laurel				
103	<i>Cryptostylis subulata</i>	Orchidaceae	Large Tongue Orchid			1	
104	<i>Cupaniopsis anacardioides</i>	Sapindaceae	Tuckeroo				
105	<b><i>Cupaniopsis newmanii</i></b>	Sapindaceae	Long-leaved Tuckeroo		NT		1
106	<i>Cupaniopsis parvifolia</i>	Sapindaceae	Small-leaved Tuckeroo				
107	<i>Cyanthillium cinereum</i>	Asteraceae	Vernonia				
108	<i>Cyclophyllum longipetalum</i>	Rubiaceae	Large-leaved Canthium				
109	<i>Cymbidium madidum</i>	Orchidaceae	Tree Orchid			1	
110	<i>Cymbidium suave</i>	Orchidaceae	Green Tree Orchid			1	
111	<i>Cymbopogon refractus</i>	Poaceae	Barbed Wire Grass				
112	<i>Cyperus cyperoides</i>	Cyperaceae	no common name				
113	<i>Cyperus exaltatus</i>	Cyperaceae	Royal Sedge				
114	<i>Cyperus gracilis</i>	Cyperaceae	Whisker or Graceful Sedge				
115	<i>Cyperus polystachyos</i>	Cyperaceae	Common Sedge				
116	<i>Cyperus tetraphyllus</i>	Cyperaceae	no common name				
117	<i>Davallia pyxidata</i>	Davalliaceae	Hare's Foot Fern				
118	<i>Daviesia arborea</i>	Fabaceae	Tree Bitter-Pea				
119	<i>Decaspermum humile</i>	Myrtaceae	Silky Myrtle				
120	<i>Dendrobium aemulum</i>	Orchidaceae	Brush Box Orchid			1	
121	<i>Dendrobium linguiforme</i>	Orchidaceae	Tongue or Tick Orchid			1	
122	<i>Dendrophthoe glabrescens</i>	Loranthaceae	Orange-flowered Mistletoe				
123	<i>Denhamia celastroides</i>	Celastraceae	Denhamia				
124	<i>Desmodium brachypodum</i>	Fabaceae	Large Tick-trefoil				
125	<i>Desmodium gunnii</i>	Fabaceae	Slender Tick Trefoil				
126	<i>Desmodium heterocarpon</i>	Fabaceae	Hairy Tick Trefoil				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
127	<i>Desmodium rhytidophyllum</i>	Fabaceae	Rusty Tick Trefoil				
128	<i>Desmodium varians</i>	Fabaceae	Tick-trefoil				
129	<i>Dianella caerulea</i>	Hemerocallidaceae	Blueberry Lily				
130	<i>Dianella longifolia</i>	Hemerocallidaceae	Long-leaved Flax Lily				
131	<i>Digitaria parviflora</i>	Poaceae	Digitaria				
132	<i>Dioscorea transversa</i>	Dioscoreaceae	Native Yam				
133	<i>Diospyros fasciculosa</i>	Ebenaceae	Grey Ebony				
134	<i>Diospyros pentamera</i>	Ebenaceae	Grey Persimmon				
135	<i>Diploglottis australis</i>	Sapindaceae	Native Tamarind				
136	<i>Dipodium variegatum</i>	Orchidaceae	Hyacinth Orchid			1	
137	<i>Dockrillia linguiformis</i>	Orchidaceae	Tongue Orchid			1	
138	<i>Dodonaea triquetra</i>	Sapindaceae	Hop Bush				
139	<i>Doodia australis</i> syn. <i>D. caudata</i>	Blechnaceae	Small Rasp Fern			1	
140	<i>Drypetes deplanchei</i>	Euphorbiaceae	Yellow Tulip				
141	<i>Duboisia myoporoides</i>	Solanaceae	Duboisia				
142	<i>Dysoxylum mollissimum</i> ssp. <i>molle</i>	Meliaceae	Red Bean				
143	<i>Dysoxylum rufum</i>	Meliaceae	Hairy Rosewood				
144	<i>Echinostephia aculeata</i>	Menispermaceae	Prickly Tape Vine				
145	<i>Einadia hastata</i>	Chenopodiaceae	Red-berry Saltbush				
146	<i>Elaeocarpus grandis</i>	Elaeocarpaceae	Blue Quandong				
147	<i>Elaeocarpus obovatus</i>	Elaeocarpaceae	Hard Quandong				
148	<i>Elattostachys nervosa</i>	Sapindaceae	Beetroot				
149	<i>Embelia australiana</i>	Myrsinaceae	Embelia				
150	<i>Endiandra discolor</i>	Lauraceae	Rose Walnut				
151	<b><i>Endiandra globosa</i></b>	Lauraceae	Black Walnut		NT		1
152	<b><i>Endiandra hayesii</i></b>	Lauraceae	Rusty Rose Walnut	V	V		1
153	<i>Endiandra muelleri</i> ssp. <i>bracteata</i>	Lauraceae	Northern Rose Walnut				1
154	<i>Entolasia marginata</i>	Poaceae	Bordered Panic				
155	<i>Entolasia stricta</i>	Poaceae	Wiry Panic				
156	<i>Erythrorchis cassythoides</i>	Orchidaceae	Climbing Orchid			1	
157	<i>Eucalyptus acmenoides</i>	Myrtaceae	White Mahogany				
158	<i>Eucalyptus carnea</i>	Myrtaceae	Broad-leaved White Mahogany				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
159	<i>Eucalyptus fibrosa</i> ssp. <i>fibrosa</i>	Myrtaceae	Broad-leaved Red Ironbark				
160	<i>Eucalyptus grandis</i>	Myrtaceae	Flooded Gum				
161	<i>Eucalyptus microcorys</i>	Myrtaceae	Tallowwood				
162	<i>Eucalyptus pilularis</i>	Myrtaceae	Blackbutt				
163	<i>Eucalyptus propinqua</i>	Myrtaceae	Grey Gum				
164	<i>Eucalyptus resinifera</i>	Myrtaceae	Red Mahogany				
165	<i>Eucalyptus robusta</i>	Myrtaceae	Swamp Mahogany				
166	<i>Eucalyptus robusta</i> X <i>tereticornis</i>	Myrtaceae	Coastal Mahogany				
167	<i>Eucalyptus siderophloia</i>	Myrtaceae	Northern Grey Ironbark				
168	<i>Eucalyptus tereticornis</i>	Myrtaceae	Forest Red Gum				
169	<i>Euchiton sphaericus</i>	Asteraceae	Narrow-leaved Cudweed				
170	<i>Eupomatia bennettii</i>	Eupomatiaceae	Small Bolwarra				
171	<i>Eupomatia laurina</i>	Eupomatiaceae	Bolwarra				
172	<i>Euroschinus falcatus</i>	Anacardiaceae	Pink Poplar, Ribbonwood				
173	<i>Eustrephus latifolius</i>	Hemerocallidaceae	Wombat Berry				
174	<i>Ficus coronata</i>	Moraceae	Creek Sandpaper Fig				
175	<i>Ficus fraseri</i>	Moraceae	Sandpaper Fig				
176	<i>Ficus macrophylla</i>	Moraceae	Moreton Bay Fig				
177	<i>Ficus obliqua</i>	Moraceae	Small-leaved Fig				
178	<i>Ficus rubiginosa</i> forma <i>glabrescens</i>	Moraceae	Rusty Fig				
179	<i>Ficus virens</i> var. <i>sublanceolata</i>	Moraceae	White Fig				
180	<i>Ficus watkinsiana</i>	Moraceae	Strangler Fig				
181	<i>Fimbristylis ferruginea</i>	Cyperaceae	Fringe Sedge				
182	<i>Flagellaria indica</i>	Flagellariaceae	Whip Vine				
183	<i>Flindersia australis</i>	Rutaceae	Qld Teak				
184	<i>Flindersia bennettii</i>	Rutaceae	Bennett's Ash				
185	<i>Flindersia schottiana</i>	Rutaceae	Cudjerie				
186	<i>Gahnia aspera</i>	Cyperaceae	Sword Grass				
187	<i>Geitonoplesium cymosum</i>	Hemerocallidaceae	Scrambling Lily				
188	<i>Glochidion ferdinandi</i> var. <i>ferdinandi</i>	Euphorbiaceae	Cheese Tree				
189	<i>Glochidion ferdinandi</i> var. <i>pubens</i>	Euphorbiaceae	Hairy Cheese Tree				
190	<i>Glochidion sumatranum</i>	Euphorbiaceae	Umbrella Cheese Tree				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
191	<i>Glossocardia bidens</i>	Asteraceae	Native Cobbler's Pegs				
192	<i>Glycine clandestina</i>	Fabaceae	Brush Glycine				
193	<i>Glycine microphylla</i>	Fabaceae	Brush Glycine				
194	<i>Gmelina leichhardtii</i>	Verbenaceae	White Beech				
195	<i>Gonocarpus chinensis</i> ssp. <i>verrucosus</i>	Haloragaceae	no common name				
196	<i>Goodenia rotundifolia</i>	Goodeniaceae	Star Goodenia				
197	<b><i>Gossia hillii</i></b>	Myrtaceae	Scaly Myrtle	CE	CR		1
198	<i>Grevillea robusta</i>	Proteaceae	Silky Oak				
199	<i>Guioa semiglauca</i>	Sapindaceae	Guioa				
200	<i>Gymnostachys anceps</i>	Araceae	Settler's Flax				
201	<i>Gynochthodes jasminoides</i>	Rubiaceae	Morinda				
202	<i>Hakea florulenta</i>	Proteaceae	Forest Hakea				
203	<i>Hardenbergia violacea</i>	Fabaceae	Native Sarsparilla				
204	<i>Harpullia pendula</i>	Sapindaceae	Tulip Wood				
205	<i>Hedraianthera porphyropetala</i>	Celastraceae	Hedraianthera				
206	<i>Hibbertia aspera</i>	Dilleniaceae	a Guinea Flower				
207	<i>Hibbertia dentata</i>	Dilleniaceae	Trailing Guinea Flower				
208	<i>Hibbertia scandens</i>	Dilleniaceae	Snake Vine				
209	<i>Hibbertia vestita</i>	Dilleniaceae	Small-leaf Guinea Bush				
210	<i>Hibiscus splendens</i>	Malvaceae	Pink Hibiscus				
211	<i>Hippocratea barbata</i>	Celastraceae	Knot Vine				
212	<i>Hodgkinsonia ovatiflora</i>	Rubiaceae	Golden Ash				
213	<i>Homalanthus populifolius</i>	Euphorbiaceae	Bleeding Heart				
214	<i>Hovea acutifolia</i>	Fabaceae	Purple Pea				
215	<i>Hoya australis</i>	Apocynaceae	Native Hoya				
216	<i>Huberantha nitidissima</i> syn. <i>Polyalthia</i>	Annonaceae	Canary Beech				
217	<i>Hydrocotyle acutiloba</i>	Apiaceae	Stinking Pennywort				
218	<i>Hydrocotyle laxiflora</i>	Apiaceae	Stinking Pennywort				
219	<i>Hydrocotyle tripartita</i>	Apiaceae	Small-leaved Pennywort				
220	<i>Hymenosporum flavum</i>	Pittosporaceae	Native Frangipani				
221	<i>Hypericum gramineum</i>	Clusiaceae	Native St. John's Wort				
222	<i>Hypolepis muelleri</i>	Dennstaedtiaceae	Harsh Ground-fern				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
223	<i>Imperata cylindrica</i>	Poaceae	Blady Grass				
224	<i>Indigofera australis</i>	Fabaceae	Native Indigo				
225	<i>Ipomoea plebeia</i>	Convolvulaceae	Bellvine				
226	<i>Jagera pseudorhus</i>	Sapindaceae	Foambark				
227	<i>Jasminum simplicifolium</i>	Oleaceae	Native Jasmine				
228	<i>Juncus continuus</i>	Juncaceae	no common name				
229	<i>Juncus prismatocarpus</i>	Juncaceae	Branching Rush				
230	<i>Juncus usitatus</i>	Juncaceae	Common Rush				
231	<i>Karrabina benthamiana</i>	Cunoniaceae	Red Carabeen				
232	<i>Lagenophora gracilis</i>	Asteraceae	no common name				
233	<i>Lastreopsis decomposita</i>	Dryopteridaceae	Trim Shield Fern			1	
234	<i>Lastreopsis marginans</i>	Dryopteridaceae	Glossy Shield Fern			1	
235	<i>Leersia hexandra</i>	Poaceae	Swamp Ricegrass				
236	<b><i>Leichhardtia coronata</i></b>	Apocynaceae	Slender Milk Vine		V		1
237	<b><i>Leichhardtia longiloba</i></b>	Apocynaceae	Slender Marsdenia	V	V		1
238	<i>Leichhardtia rostrata</i>	Apocynaceae	Common Milk Vine				
239	<b><i>Lepiderema pulchella</i></b>	Sapindaceae	Fine-leaved Tuckeroo		V		1
240	<i>Lepidosperma laterale</i>	Cyperaceae	Tailed Sword-sedge				
241	<i>Lepironia articulata</i>	Cyperaceae	Aquatic Sedge				
242	<i>Litsea reticulata</i>	Lauraceae	Bolly Gum				
243	<i>Livistona australis</i>	Arecaceae	Cabbage Tree Palm			1	
244	<i>Lobelia gibbosa</i>	Campanulaceae	Tall Lobelia			1	
245	<i>Lobelia purpurascens</i>	Campanulaceae	White Root			1	
246	<i>Lobelia trigonocaulis</i>	Campanulaceae	Forest Lobelia			1	
247	<i>Lomandra confertifolia</i> ssp. <i>pallida</i>	Laxmanniaceae	no common name				
248	<i>Lomandra hystrix</i>	Laxmanniaceae	Creek Mat Rush				
249	<i>Lomandra laxa</i>	Laxmanniaceae	Mat Rush				
250	<i>Lomandra longifolia</i>	Laxmanniaceae	Mat Rush				
251	<i>Lomandra multiflora</i>	Laxmanniaceae	Many-flowered Mat Rush				
252	<i>Lomatia silaifolia</i>	Proteaceae	Crinkle Bush				
253	<i>Lophostemon confertus</i>	Myrtaceae	Brush Box				
254	<i>Lophostemon suaveolens</i>	Myrtaceae	Swamp Turpentine				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
255	<i>Ludwigia octovalvis</i>	Onagraceae	Willow Primrose				
256	<i>Ludwigia peploides</i>	Onagraceae	Water Primrose				
257	<i>Lygodium microphyllum</i>	Schizaeaceae	Climbing Maidenhair				
258	<i>Lythrum hyssopifolia</i>	Lythraceae	Lesser Loosestrife				
259	<b><i>Macadamia integrifolia</i></b>	Proteaceae	Queensland Nut	V	V		1
260	<b><i>Macadamia tetraphylla</i></b>	Proteaceae	Macadamia Nut	V	V		1
261	<i>Macaranga tanarius</i>	Euphorbiaceae	Macaranga				
262	<i>Maclura cochinchinensis</i>	Moraceae	Cockspur Thorn				
263	<i>Mallotus discolor</i>	Euphorbiaceae	White Kamala				
264	<i>Mallotus philippensis</i>	Euphorbiaceae	Red Kamala				
265	<i>Medicosma cunninghamii</i>	Rutaceae	Pinkheart				
266	<i>Meiogyne stenopetala</i> ssp. <i>stenopetala</i>	Annonaceae	Fissistigma				
267	<i>Melaleuca quinquenervia</i>	Myrtaceae	Broad-leaf Paperbark				
268	<i>Melaleuca salicina</i>	Myrtaceae	White Bottlebrush				
269	<i>Melicope elleryana</i>	Rutaceae	Pink Euodia				
270	<i>Melodinus australis</i>	Apocynaceae	Southern Melodinus				
271	<i>Mezoneuron brachycarpum</i>	Caesalpinaceae	Corky Prickle Vine				
272	<i>Mezoneuron scortechinii</i>	Caesalpinaceae	Prickle Vine				
273	<i>Microlaena stipoides</i>	Poaceae	Weeping Grass				
274	<i>Microtis parviflora</i>	Orchidaceae	Slender Onion Orchid			1	
275	<i>Mischocarpus pyriformis</i>	Sapindaceae	Yellow Pear-fruit				
276	<i>Mucuna gigantea</i>	Fabaceae	Burny Bean				
277	<i>Murdannia graminea</i>	Commelinaceae	Slug Herb				
278	<i>Myrsine angusta</i>	Myrsinaceae	no common name				
279	<i>Myrsine howittiana</i>	Myrsinaceae	Brush Muttonwood				
280	<i>Myrsine variabilis</i>	Myrsinaceae	Muttonwood				
281	<i>Neolitsea dealbata</i>	Lauraceae	White Bolly Gum				
282	<i>Notelaea longifolia</i>	Oleaceae	Large Mock-olive				
283	<i>Notothixos incanus</i>	Viscaceae	Downy Mistletoe				
284	<i>Notothixos subaureus</i>	Viscaceae	Golden Mistletoe				
285	<i>Olea paniculata</i>	Oleaceae	Native Olive				
286	<i>Olearia nernstii</i>	Asteraceae	Bush Daisy				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
287	<i>Ophioglossum pendulum</i>	Ophioglossaceae	Ribbon Fern			1	
288	<i>Oplismenus aemulus</i>	Poaceae	Creeping Beard Grass				
289	<i>Oplismenus imbecillis</i>	Poaceae	Pademelon Grass				
290	<i>Oplismenus mollis</i>	Poaceae	Rainforest Beard Grass				
291	<i>Ottochloa gracillima</i>	Poaceae	Graceful Grass				
292	<i>Ozothamnus diosmifolius</i>	Asteraceae	Sago Flower				
293	<i>Palmeria racemosa</i> syn. <i>P. scandens</i>	Monimiaceae	Anchor Vine				
294	<i>Pandorea jasminoides</i>	Bignoniaceae	Bower of Beauty				
295	<i>Pandorea pandorana</i> ssp. <i>pandorana</i>	Bignoniaceae	Wonga Vine				
296	<i>Panicum simile</i>	Poaceae	Two-colour Panic				
297	<i>Pararchidendron pruinatum</i>	Mimosaceae	Snow Wood				
298	<b><i>Pararistolochia praevenosa</i></b>	Aristolochiaceae	Bird-wing Butterfly Vine		NT		1
299	<i>Parsonsia lanceolata</i>	Apocynaceae	Rough Silkpod				
300	<i>Parsonsia latifolia</i>	Apocynaceae	Milky Silkpod				
301	<i>Parsonsia longipetiolata</i>	Apocynaceae	Green-leaved Silkpod				
302	<i>Parsonsia straminea</i>	Apocynaceae	Monkey Rope Vine				
303	<i>Paspalidium distans</i>	Poaceae	Watercrown Grass				
304	<i>Passiflora herbertiana</i>	Passifloraceae	Native Passion Vine				
305	<i>Pentaceras australis</i>	Rutaceae	Penta Ash				
306	<i>Peperomia leptostachya</i>	Peperomiaceae	no common name				
307	<i>Peristeranthus hillii</i>	Orchidaceae	Drooping Tree Orchid			1	
308	<i>Persicaria attenuata</i>	Polygonaceae	Smartweed				
309	<i>Persicaria hydropiper</i>	Polygonaceae	Water Pepper				
310	<i>Persicaria lapathifolium</i>	Polygonaceae	Pale Knotweed				
311	<i>Persicaria strigosa</i>	Polygonaceae	Spotted Knotweed				
312	<i>Persoonia adenantha</i>	Proteaceae	Southern Coastal Geebung				
313	<i>Philydrium lanuginosum</i>	Philydraceae	Woolly Frogmouth				
314	<i>Phragmites australis</i>	Gramineae	Common Reed				
315	<i>Phyllanthus virgatus</i>	Phyllanthaceae	Common Phyllanthus				
316	<i>Picris angustifolia</i> ssp. <i>carolorum-henricorum</i>	Asteraceae	Hawkweed				
317	<i>Pigea stellarioides</i>	Violaceae	Orange Spade Flower				
318	<i>Pilidiostigma glabrum</i>	Myrtaceae	Plum Myrtle				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
319	<i>Pimelea altior</i>	Thymelaeaceae	Short-leaved Riceflower				
320	<i>Pittosporum multiflorum</i>	Pittosporaceae	Orange Thorn				
321	<i>Pittosporum revolutum</i>	Pittosporaceae	Hairy Pittosporum				
322	<i>Pittosporum undulatum</i>	Pittosporaceae	Native Daphne				
323	<i>Planchonella australis</i>	Sapotaceae	Black Apple				
324	<i>Planchonella chartacea</i>	Sapotaceae	Thin-leaved Condoos				
325	<i>Planchonella pohlmanniana</i>	Sapotaceae	Yellow Boxwood				
326	<i>Platycterium bifurcatum</i>	Polypodiaceae	Elkhorn Fern			1	
327	<i>Platycterium superbum</i>	Polypodiaceae	Staghorn Fern			1	
328	<i>Plectorrhiza tridentata</i>	Orchidaceae	Tangle Orchid			1	
329	<i>Pleioluma queenslandica</i>	Sapotaceae	Blush Coondoo				
330	<i>Polyscias elegans</i>	Araliaceae	Celerywood				
331	<i>Poranthera microphylla</i>	Euphorbiaceae	Small Poranthera				
332	<i>Pothos longipes</i>	Araceae	Pothos				
333	<i>Pseudovanilla foliata</i>	Orchidaceae	Giant Climbing Orchid			1	
334	<i>Pseuderanthemum variabile</i>	Acanthaceae	Pastel Flower				
335	<i>Pseudoweinmannia lachnocarpa</i>	Cunoniaceae	Marara				
336	<i>Psilotum nudum</i>	Psilotaceae	Skeleton Fork-fern			1	
337	<i>Psychotria loniceroides</i>	Rubiaceae	Hairy Psychotria				
338	<i>Psydrax lamprophylla</i>	Rubiaceae	Large-leaved Canthium				
339	<i>Pteridium esculentum</i>	Dennstaedtiaceae	Common Bracken Fern				
340	<i>Pteris tremula</i>	Pteridaceae	no common name			1	
341	<i>Pterostylis nutans</i>	Orchidaceae	Nodding Greenhood			1	
342	<i>Pultenaea retusa</i>	Fabaceae	Swamp Pea Bush				
343	<i>Pyrrosia confluens</i>	Polypodiaceae	Robber Fern			1	
344	<i>Pyrrosia rupestris</i>	Polypodiaceae	Rock Felt-fern			1	
345	<i>Quintinia verdonii</i>	Escalloniaceae	Grey Possumwood				
346	<b><i>Randia moorei</i></b>	Rubiaceae	Spiny Gardenia	E	E		1
347	<i>Ranunculus inundatus</i>	Ranunculaceae	River Buttercup				
348	<b><i>Rhodamnia maideniana</i></b>	Myrtaceae	Smooth Scrub Turpentine	CE	CR		1
349	<b><i>Rhodamnia rubescens</i></b>	Myrtaceae	Scrub Turpentine	CE	CR		1
350	<b><i>Rhodomyrtus psidioides</i></b>	Myrtaceae	Native Guava	CE	CR		1

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
351	<i>Ripogonum album</i>	Ripogonaceae	White Supplejack				
352	<i>Rubus moluccanus</i> var. <i>moluccanus</i>	Rosaceae	Molucca Raspberry				
353	<i>Rubus moluccanus</i> var. <i>trilobus</i>	Rosaceae	Molucca Bramble				
354	<i>Rubus parvifolius</i>	Rosaceae	Small-leaf Bramble				
355	<i>Rubus rosifolius</i>	Rosaceae	Rose-leaf Bramble				
356	<i>Rumex brownii</i>	Polygonaceae	Swamp Dock				
357	<i>Sarcopetalum harveyanum</i>	Menispermaceae	Pearl Vine				
358	<i>Sarcopteryx stipata</i>	Sapindaceae	Steelwood				
359	<i>Schizaea bifida</i>	Schizaeaceae	Forked Comb-fern				
360	<i>Schizomeria ovata</i>	Cunoniaceae	Crab Apple				
361	<i>Schoenoplectiella mucronata</i>	Cyperaceae	Triangular Club-rush				
362	<i>Schoenoplectus tabernaemontani</i>	Cyperaceae	River Clubrush				
363	<i>Schoenus apongon</i> var. <i>apogon</i>	Cyperaceae	a sedge				
364	<i>Scleria mackaviensis</i>	Cyperaceae	Rasp-leaved Sedge				
365	<i>Secamone elliptica</i>	Asclepiadaceae	Corky Milk-vine				
366	<i>Sigesbeckia orientalis</i>	Asteraceae	Indian Weed				
367	<i>Siphonodon australis</i>	Celastraceae	Ivorywood				
368	<i>Sloanea australis</i> ssp. <i>australis</i>	Elaeocarpaceae	Maiden's Blush				
369	<i>Sloanea woollsii</i>	Elaeocarpaceae	Yellow Carabeen				
370	<i>Smilax australis</i>	Smilacaceae	Barbed-wire Vine				
371	<i>Smilax glyciophylla</i>	Smilacaceae	Sweet Sarsparilla				
372	<i>Smilax</i> sp. nov	Smilacaceae	Barbed-wire Vine				
373	<i>Solanum americanum</i>	Solanaceae	Glossy Nightshade				
374	<i>Solanum stelligerum</i>	Solanaceae	Devil's Needles				
375	<i>Solori involuta</i> syn. <i>Derris</i>	Fabaceae	Native Derris				
376	<i>Sparganium subglobosum</i>	Typhaceae	Floating Burr-reed				
377	<i>Sphaeropteris australis</i> syn. <i>Cyathea leichhardtii</i>	Cyatheaceae	Prickly Tree Fern				
378	<i>Sphaeropteris cooperi</i>	Cyatheaceae	Tree Fern				
379	<i>Stackhousia viminea</i>	Stackhousiaceae	no common name				
380	<i>Stenocarpus sinuatus</i>	Proteaceae	Firewheel Tree				
381	<i>Stephania japonica</i> var. <i>discolor</i>	Menispermaceae	Tape Vine				
382	<i>Sterculia quadrifida</i>	Sterculiaceae	Peanut Tree				

## Native species cont'd:

	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	CoGC Priority
383	<i>Sticherus flabellatus</i> var. <i>flabellatus</i>	Gleicheniaceae	Umbrella Fern				
384	<i>Streblus brunonianus</i>	Moraceae	Whalebone Tree				
385	<i>Styphelia sieberi</i> syn. <i>Leucopogon juniperinus</i>	Epacridaceae	Prickly Heath				
386	<i>Suaeda australis</i>	Chenopodiaceae	Sea Blite				
387	<i>Swainsona galegifolia</i>	Fabaceae	Smooth Darling Pea				
388	<i>Synoum glandulosum</i>	Meliaceae	Scentless Rosewood				
389	<i>Syzygium luehmannii</i>	Myrtaceae	Riberry				
390	<b><i>Syzygium moorei</i></b>	Myrtaceae	Durobby	V	V		1
391	<i>Syzygium oleosum</i>	Myrtaceae	Blue Lily Pily				
392	<i>Tabernaemontana pandacaqui</i>	Apocynaceae	Banana Bush				
393	<i>Taeniophyllum muelleri</i>	Orchidaceae	Chain Ribbon Root Orchid			1	
394	<i>Tephrosia rufula</i>	Fabaceae	no common name				
395	<i>Themeda triandra</i>	Poaceae	Kangaroo Grass				
396	<i>Thysanotus tuberosus</i>	Laxmanniaceae	Fringe-lily				
397	<i>Toechima dasyrrhache</i>	Sapindaceae	Blunt-leaved Steelwood				
398	<i>Toona ciliata</i>	Meliaceae	Red Cedar				
399	<i>Tragia novae-hollandiae</i>	Euphorbiaceae	Stinging Vine				
400	<i>Trema tomentosa</i>	Ulmaceae	Native Peach				
401	<i>Trichosanthes subvelutina</i>	Cucurbitaceae	Silky Cucumber				
402	<i>Triglochin striata</i>	Juncaginaceae	Streaked Arrow Grass				
403	<i>Tripladenia cunninghamii</i>	Colchicaceae	Kreysigia				
404	<i>Trochocarpa laurina</i>	Epacridaceae	Tree Heath				
405	<i>Trophis scandens</i> ssp. <i>scandens</i>	Moraceae	Burny Vine				
406	<i>Typha orientalis</i>	Typhaceae	Cumbungi				
407	<i>Veronica plebeia</i>	Scrophulariaceae	Creeping Speedwell				
408	<i>Viola hederacea</i>	Violaceae	Native Violet				
409	<i>Vitex lignum-vitae</i>	Verbenaceae	Satinwood				
410	<i>Wikstroemia indica</i>	Thymelaeaceae	Tie Bush				
411	<i>Wilkiea austroqueenslandica</i>	Monimiaceae	Smooth Wilkiea				
412	<i>Wilkiea huegeliana</i>	Monimiaceae	Tetra beech				
413	<i>Xanthorrhoea macronema</i>	Xanthorrhoeaceae	Bottlebrush Grass Tree			1	
414	<i>Xylosma terrae-reginae</i>	Flacourtiaceae	Xylosma				

**Native species cont'd:**

				CoGC			
	Botanical name:	Family name:	Common name:	EPBC	NCA	SLC	Priority
415	<i>Youngia japonica</i>	Asteraceae	no common name				
416	<i>Zeuxine oblonga</i>	Orchidaceae	Hairy Jewel Orchid			1	1
417	<i>Zieria smithii</i>	Rutaceae	Sandfly Zieria				
418	<i>Zoyzia micrantha</i>	Poaceae	Prickly Couch				
				8	14	40	20

1730 species in CoGC therefore 418 = 24.2%

<https://www.goldcoast.qld.gov.au/Council-region/About-our-city/Environment-sustainability/About-our-environment/Native-plants> (accessed Nov22)

**Non-native species:**

				SEQEW**		
	Botanical name:	Family name:	Common name:	Restricted*	Rank	Score
1	<i>Agave sisalana</i>	Asparagaceae	Sisal	-	-	-
2	<i>Ageratina adenophora</i>	Asteraceae	Crofton Weed	-	17	4.6
3	<i>Ageratina riparia</i>	Asteraceae	Mist Flower	-	25	4.6
4	<i>Ageratum houstonianum</i>	Asteraceae	Blue Billygoat Weed	-	115	3.8
5	<i>Albizia lebbek</i>	Mimosaceae	Siris Tree	-	-	-
6	<i>Alpinia caerulea</i> forma Atherton +	Zingiberaceae	Atherton Ginger	-	-	-
7	<i>Ambrosia artemisiifolia</i>	Asteraceae	Annual Ragweed	C3	-	-
8	<i>Andropogon virginicus</i>	Poaceae	Whiskey Grass	-	155	3.6
9	<i>Annona senegalensis</i>	Annonaceae	Wild Custard Apple	-	-	-
10	<i>Anredera cordifolia</i>	Basellaceae	Madeira Vine	C3	5	4.9
11	<i>Apium leptophyllum</i>	Apiaceae	Slender Celery	-	-	-
12	<i>Archontophoenix alexandrae</i> +	Arecaceae	Alexander Palm	-	-	-
13	<i>Archontophoenix X</i>	Arecaceae	Alex/Bangalow hybrid	-	-	-
14	<i>Ardisia crenata</i>	Myrsinaceae	China Bell	-	-	-
15	<i>Asclepias curassavica</i>	Apocynaceae	Red-head Cotton Bush	-	126	3.6
16	<i>Asparagus aethiopicus</i> 'Sprengeri'	Asparagaceae	Asparagus Fern	C3	23	4.5
17	<i>Asparagus plumosus</i>	Asparagaceae	Ferny Asparagus	C3	57	4.1
18	<i>Asparagus retrofractus</i>	Asparagaceae	Pom Pom Asparagus	-	-	-
19	<i>Austromyrtus dulcis</i> +	Myrtaceae	Midyim	-	-	-
20	<i>Axonopus compressus</i>	Poaceae	Broad-leaf Carpet Grass	-	113	3.6
21	<i>Baccharis halimifolia</i>	Asteraceae	Groundsel	C3	2	4.8
22	<i>Bauhinia galpinii</i>	Caesalpiniaceae	Butterfly Tree	-	-	-

**Non-native species cont'd:**

SEQEW\*\*

	<b>Botanical name:</b>	<b>Family name:</b>	<b>Common name:</b>	Restricted*	Rank	Score
23	<i>Bidens pilosa</i>	Asteraceae	Cobbler's Pegs	-	110	3.5
24	<i>Bougainvillea</i> sp. ind.	Nyctaginaceae	Bougainvillea	-	-	-
25	<i>Brachychiton discolor</i> +	Sterculiaceae	Lacebark	-	-	-
26	<i>Bryophyllum pinnatum</i>	Crassulaceae	Resurrection Plant	-	47	4.2
27	<i>Callisia repens</i>	Commelinaceae	Turtle Vine	-	-	-
28	<i>Capsicum annuum</i>	Solanaceae	Ornamental Chile	-	-	-
29	<i>Cardamine flexuosa</i>	Brassicaceae	Flickweed	-	-	-
30	<i>Carica papaya</i>	Caricaceae	Paw Paw	-	-	-
31	<i>Cedrela odorata</i>	Meliaceae	Cuban Cedar	-	-	-
32	<i>Celtis sinensis</i>	Ulmaceae	Chinese Elm	C3	7	4.9
33	<i>Centrosema molle</i>	Fabaceae	Spurred Butterfly Pea	-	-	-
34	<i>Cestrum parqui</i>	Solanaceae	Green Cestrum	-	59	3.9
35	<i>Chamaedorea sefrizii</i>	Arecaceae	Bamboo Palm	-	-	-
36	<i>Chloris gayana</i>	Poaceae	Rhodes Grass	-	46	4.3
37	<i>Chrysophyllum oliviforme</i>	Sapotaceae	Satin Leaf	-	-	-
38	<i>Cinnamomum camphora</i>	Lauraceae	Camphor Laurel	C3	8	4.8
39	<i>Cirsium vulgare</i>	Asteraceae	Spear Thistle	-	-	-
40	<i>Citrus limon</i>	Rutaceae	Wild Lemon	-	-	-
41	<i>Coffea arabica</i>	Rubiaceae	Coffee Tree	-	189	3.2
42	<i>Colocasia esculenta</i> CV#1	Araceae	Taro	-	-	-
43	<i>Colocasia esculenta</i> CV#2	Araceae	Taro	-	-	-
44	<i>Commelina benghalensis</i>	Commelinaceae	Hairy Wandering Jew	-	122	3.5
45	<i>Conyza bonariensis</i>	Asteraceae	Flax-leaf Fleabane	-	185	3.3
46	<i>Corymbia torelliana</i> +	Myrtaceae	Cadaghi	-	-	-
47	<i>Crassocephalum crepidioides</i>	Asteraceae	Thickhead	-	-	-
48	<i>Crotalaria pallida</i> var. <i>obovata</i>	Fabaceae	Rattlepod	-	-	-
49	<i>Cuphea carthagenensis</i>	Lythraceae	Columbian Waxweed	-	-	-
50	<i>Curculigo capitulata</i> +	Hypoxidaceae	Weevil Lily (Nth Qld)	-	-	-
51	<i>Cynodon dactylon</i>	Poaceae	Common Couch	-	99	3.6
52	<i>Cyperus involucratus</i>	Cyperaceae	Umbrella Sedge	-	-	-
53	<i>Cyperus rotundus</i>	Cyperaceae	Nut Grass	-	-	-
54	<i>Delonix regia</i>	Caesalpinaceae	Royal Poinciana	-	-	-

**Non-native species cont'd:**

SEQEW\*\*

	<b>Botanical name:</b>	<b>Family name:</b>	<b>Common name:</b>	Restricted*	Rank	Score
55	<i>Desmodium uncinatum</i>	Fabaceae	Silver-leaved Desmodium	-	64	4
56	<i>Dichorisandra thyrsoiflora</i>	Commelinaceae	Blue Ginger	-	-	-
57	<i>Digitaria eriantha</i>	Poaceae	Pangola Grass	-	196	3.1
58	<i>Diospyros kaki</i>	Ebenaceae	Persimmon	-	-	-
59	<i>Dolichandra unguis-cati</i>	Bignoniaceae	Cat's-claw Creeper	C3	4	4.9
60	<i>Dracaena fragrans</i> 'Massangeana'	Agavaceae	Happy Plant; Corn Plant	-	-	-
61	<i>Eclipta prostrata</i>	Asteraceae	White Eclipta	-	-	-
62	<i>Emilia sonchifolia</i>	Asteraceae	Emilia	-	-	-
63	<i>Epidendrum ibaguense</i>	Orchidaceae	Crucifix Orchid	-	-	-
64	<i>Epipremnum pinnatum</i>	Araceae	Devil's Ivy	-	-	-
65	<i>Erythrina crista-galli</i>	Fabaceae	Cockscomb Coral Tree	-	169	3.5
66	<i>Eugenia uniflora</i>	Myrtaceae	Brazilian Cherry	-	118	3.5
67	<i>Ficus benjamina</i> 'Exotica'	Moraceae	Small-leaved Weeping Fig	-	-	-
68	<i>Ficus benjamina</i> +	Moraceae	Weeping Fig	-	-	-
69	<i>Ficus hillii</i> +	Moraceae	Hill's Fig	-	-	-
70	<i>Fraxinus excelsior</i>	Oleaceae	European Ash	-	-	-
71	<i>Fraxinus griffithii</i>	Oleaceae	Himalayan Cedar	-	-	-
72	<i>Gamochoaeta coarctata</i>	Asteraceae	Cudweed	-	-	-
73	<i>Gomphocarpus fruticosus</i>	Apocynaceae	Narrow-leaf Cotton Bush	-	-	-
74	<i>Gomphocarpus physocarpus</i>	Apocynaceae	Balloon Cotton Bush	-	86	3.7
75	<i>Hedychium gardnerianum</i>	Zingiberaceae	Kahili Ginger	C3	171	3.6
76	<i>Heptapleurum actinophyllum</i> +	Araliaceae	Umbrella Tree	-	-	-
77	<i>Hypochoeris radicata</i>	Asteraceae	Flatweed	-	-	-
78	<i>Hypoestes phyllostachya</i>	Acanthaceae	Polka-dot Plant	-	172	3.5
79	<i>Inga edulis</i>	Fabaceae	Ice Cream Bean	-	-	-
80	<i>Ipomoea cairica</i>	Convolvulaceae	Five-leaf Morning Glory	-	28	4.4
81	<i>Ipomoea indica</i>	Convolvulaceae	Blue Morning Glory	-	40	4.3
82	<i>Jacaranda mimosifolia</i>	Bignoniaceae	Jacaranda	-	156	3.4
83	<i>Koelreuteria paniculata</i>	Sapindaceae	Golden Rain Tree	-	170	3.6
84	<i>Lagerstroemia indica</i>	Lythraceae	Crepe Myrtle	-	-	-
85	<i>Lantana camara</i>	Verbenaceae	Lantana	C3	1	5
86	<i>Lepidium bonariense</i>	Brassicaceae	Argentine Peppergrass	-	-	-

**Non-native species cont'd:**

				SEQEW**		
	<b>Botanical name:</b>	<b>Family name:</b>	<b>Common name:</b>	Restricted*	Rank	Score
87	<i>Libidibia ferrea</i> syn. <i>Caesalpinia</i>	Caesalpinaceae	Leopard Tree	-	-	-
88	<i>Ligustrum lucidum</i>	Oleaceae	Large-leaved Privet	C3	15	4.8
89	<i>Livistona chinensis</i>	Arecaceae	Chinese Fan Palm	-	-	-
90	<i>Lonicera japonica</i>	Caprifoliaceae	Japanese Honeysuckle	-	49	4.3
91	<i>Macroptilium atropurpureum</i>	Fabaceae	Siratro	-	51	4.2
92	<i>Macrotyloma axillare</i>	Fabaceae	Horse Gram	-	191	4.1
93	<i>Megathyrsus maximus</i> var. <i>maximus</i>	Poaceae	Guinea Grass	-	20	4.6
94	<i>Megathyrsus maximus</i> var. <i>pubiglumis</i>	Poaceae	Green Panic	-	-	-
95	<i>Melicope rubra</i> syn. <i>Evodiella muelleri</i> +	Rutaceae	Little Evodia	-	-	-
96	<i>Melinis minutiflora</i>	Poaceae	Molasses Grass	-	38	4.5
97	<i>Melinis repens</i>	Poaceae	Red Natal Grass	-	65	4.1
98	<i>Mentha sylvestris</i>	Labiataeae	English Horsemint	-	-	-
99	<i>Morus alba</i>	Moraceae	Mulberry	-	162	3.4
100	<i>Murraya koenigii</i>	Rutaceae	Curry Tree	-	-	-
101	<i>Murraya paniculata</i>	Rutaceae	Orange Jessamine	-	139	3.6
102	<i>Myriophyllum aquaticum</i>	Haloragaceae	Parrots Feather	-	69	4
103	<i>Nandina domestica</i> 'nana'	Berberidaceae	Dwarf Sacred Bamboo	-	-	-
104	<i>Neomarica gracilis</i>	Iridaceae	Walking Iris	-	-	-
105	<i>Neonotonia wightii</i>	Fabaceae	Velcro Vine	-	19	4.7
106	<i>Nephrolepis cordifolia</i>	Davalliaceae	Fishbone Fern	-	-	-
107	<i>Nephrolepis exaltata</i>	Davalliaceae	Boston Fern	-	-	-
108	<i>Nymphaea caerulea</i> ssp. <i>zanzibarensis</i>	Nymphaeaceae	Cape Waterlily	-	66	4
109	<i>Ochna serrulata</i>	Ochnaceae	Mickey Mouse Plant	-	22	4.5
110	<i>Oxalis corniculata</i>	Oxalidaceae	Yellow Wood-sorrel	-	-	-
111	<i>Oxalis corymbosa</i>	Oxalidaceae	Pink Shamrock	-	-	-
112	<i>Paspalum mandiocanum</i>	Poaceae	Broad-leaved Paspalum	-	72	4
113	<i>Passiflora coccinea</i>	Passifloraceae	Red Passion Flower	-	-	-
114	<i>Passiflora edulis</i>	Passifloraceae	Passionfruit	-	193	3.2
115	<i>Passiflora foetida</i>	Passifloraceae	Stinking Passion-flower	-	70	3.9
116	<i>Passiflora pallida</i>	Passifloraceae	Corky Passionfruit	-	-	-
117	<i>Passiflora suberosa</i> ssp. <i>litoralis</i>	Passifloraceae	Small Passionfruit	-	37	4.2
118	<i>Passiflora subpeltata</i>	Passifloraceae	White Passionflower	-	63	3.9

**Non-native species cont'd:**

SEQEW\*\*

	<b>Botanical name:</b>	<b>Family name:</b>	<b>Common name:</b>	Restricted*	Rank	Score
119	<i>Pellaea viridis</i>	Sinopteridaceae	Green Cliff Brake	-	-	-
120	<i>Pennisetum clandestinum</i>	Poaceae	Kikuyu Grass	-	107	3.8
121	<i>Persea americana</i>	Lauraceae	Avocado	-	-	-
122	<i>Philodendron cordatum</i>	Araceae	Heart-leaf Philodendron	-	-	-
123	<i>Phoenix reclinata</i>	Arecaceae	Senegal Date Palm	-	-	-
124	<i>Phoenix roebelenii</i>	Arecaceae	Dwarf Date Palm	-	-	-
125	<i>Phyllanthus tenellus</i>	Phyllanthaceae	no common name	-	-	-
126	<i>Physalis peruviana</i>	Solanaceae	Cape Gooseberry	-	-	-
127	<i>Phytolacca octandra</i>	Phytolaccaceae	Inkweed	-	125	3.4
128	<i>Pinus elliottii</i>	Pinaceae	Slash Pine	-	44	4.3
129	<i>Plantago major</i>	Plantaginaceae	Cart-track Plantain	-	-	-
130	<i>Polygala paniculata</i>	Polygalaceae	Milkwort; Denco-root	-	-	-
131	<i>Polygonum aviculare</i>	Polygonaceae	Prostrate Knotweed	-	-	-
132	<i>Portulaca oleracea</i>	Portulacaceae	Pigweed	-	-	-
133	<i>Pothos aureus</i>	Araceae	Scindapsus	-	-	-
134	<i>Prunus persica</i>	Rosaceae	Peach	-	-	-
135	<i>Psidium cattleianum</i>	Myrtaceae	Cherry Guava	-	-	-
136	<i>Psidium guajava</i>	Myrtaceae	Yellow Guava	-	116	3.7
137	<i>Radermachera sinica</i>	Bignoniaceae	China Doll	-	-	-
138	<i>Raphiolepis indica</i>	Rosaceae	Indian Hawthorn	-	101	3.5
139	<i>Ricinus communis</i>	Euphorbiaceae	Castor Oil Plant	-	81	3.9
140	<i>Ruellia squarrosa</i>	Acanthaceae	Wild Petunia	-	-	-
141	<i>Salvia coccinea</i>	Lamiaceae	Red Salvia	-	114	4
142	<i>Salvinia molesta</i>	Salviniaceae	Salvinia	-	-	-
143	<i>Sambucus canadensis</i>	Sambucaceae	American Elder	-	173	3.4
144	<i>Sansevieria trifasciata</i>	Agavaceae	Mother-in-law's Tongue	-	195	3.1
145	<i>Schefflera aboricola</i>	Araliaceae	Dwarf Umbrella Tree	-	-	-
146	<i>Schinus terebinthifolius</i>	Anacardiaceae	Broad-leaved Pepper Tree	C3	9	4.8
147	<i>Schotia brachypetala</i>	Fabaceae	Drunken Parrot Tree	-	-	-
148	<i>Senecio madagascariensis</i>	Asteraceae	Fireweed	C3	82	3.8
149	<i>Senna pendula</i> var. <i>glabrata</i>	Caesalpinioideae	Winter Senna	-	45	4.2
150	<i>Senna septemtrionalis</i>	Caesalpinioideae	Brush Cassia	-	60	4

**Non-native species cont'd:**

SEQEW\*\*

	<b>Botanical name:</b>	<b>Family name:</b>	<b>Common name:</b>	Restricted*	Rank	Score
151	<i>Setaria palmifolia</i>	Poaceae	Palm Grass	-	-	-
152	<i>Setaria sphacelata</i> var. <i>sericae</i>	Poaceae	Sth African Pigeon Grass	-	85	3.8
153	<i>Sida cordifolia</i>	Malvaceae	Flannel Weed	-	-	-
154	<i>Sida rhombifolia</i>	Malvaceae	Paddy's Lucerne	-	153	3.6
155	<i>Solanum capsicoides</i>	Solanaceae	Devil's Apple	-	-	-
156	<i>Solanum chrysotrichum</i>	Solanaceae	Giant Devil's Fig	-	135	3.6
157	<i>Solanum lycopersicum</i>	Solanaceae	Tomato	-	-	-
158	<i>Solanum mauritianum</i>	Solanaceae	Tobacco Weed	-	61	4
159	<i>Solanum pseudocapsicum</i>	Solanaceae	Jerusalem Cherry	-	-	-
160	<i>Solanum seafortianum</i>	Solanaceae	Climbing Nightshade	-	55	4
161	<i>Solanum torvum</i>	Solanaceae	Devil's Fig	-	93	3.9
162	<i>Soliva anthemifolia</i>	Asteraceae	Bindi-Eye	-	-	-
163	<i>Sonchus oleraceus</i>	Asteraceae	Milk Thistle	-	-	-
164	<i>Sorghum halepense</i>	Poaceae	Johnson Grass	-	-	-
165	<i>Spathodea campanulata</i>	Bignoniaceae	African Tulip Tree	C3	190	3.4
166	<i>Sphagneticola trilobata</i>	Asteraceae	Singapore Daisy	C3	16	4.6
167	<i>Sporobolus pyramidalis</i>	Poaceae	Giant Rat's-tail Grass	C3	24	4.8
168	<i>Strelitzia nicolai</i>	Strelitziaceae	Giant Bird-of-Paradise	-	-	-
169	<i>Stylosanthes scabra</i>	Fabaceae	Shrubby Stylo	-	121	4.3
170	<i>Syagrus romanzoffiana</i>	Arecaceae	Cocos Palm	-	92	3.9
171	<i>Symphyotrichum subulatum</i>	Asteraceae	Aster Weed	-	-	-
172	<i>Synedrella nodiflora</i>	Asteraceae	Cindarella Weed	-	-	-
173	<i>Syngonium podophyllum</i>	Araceae	Syngonium	-	-	-
174	<i>Tabebuia chrysotricha</i>	Bignoniaceae	Golden Trumpet Tree	-	-	-
175	<i>Tagetes minuta</i>	Asteraceae	Stinking Roger	-	176	3.3
176	<i>Tephrosia noctiflora</i>	Leguminosae	Petai Balong Kecil	-	-	-
177	<i>Tithonia diversifolia</i>	Asteraceae	Japanese Sunflower	-	84	3.9
178	<i>Toxicodendron succedaneum</i>	Anacardiaceae	Rhus	-	-	-
179	<i>Tradescantia fluminensis</i>	Commelinaceae	Wandering Jew	-	58	4.1
180	<i>Trifolium pratense</i>	Fabaceae	Red Clover	-	-	-
181	<i>Triumfetta rhomboidea</i>	Malvaceae	Chinese Burr	-	68	4
182	<i>Urena lobata</i>	Malvaceae	Caesar Weed	-	-	-

**Non-native species cont'd:**

				SEQEW**		
	Botanical name:	Family name:	Common name:	Restricted*	Rank	Score
183	<i>Verbena rigida</i>	Verbenaceae	Veined Verbena	-	-	-
184	<i>Viburnum odoratissimum</i> 'Emerald Lustre'	Adoxaceae	Emerald Lustre	-	-	-
185	<i>Vigna parkeri</i>	Fabaceae	Creeping Vigna	-	-	-
186	<i>Xanthium occidentale</i>	Asteraceae	Noogoora Burr	-	-	-
187	<i>Zephyranthes minuta</i>	Amaryllidaceae	Storm Lily	-	-	-
418	native species					
187	non-native species					
605	total species this survey					

**Key:**

CV	cultivar	<b>EPBC</b>	Threatened species listed in the National <i>Environment Protection and Biodiversity Conservation Act</i> 1999
n.l.f	narrow leaf form	<b>NCA</b>	Threatened species listed in the State <i>Nature Conservation (Plants) Regulation</i> 2020
sp. ind.	species indeterminate	<b>SLC</b>	Special Least Concern species listed in the State <i>Nature Conservation (Plants) Regulation</i> 2020
sp. nov.	new species	<b>CoGC</b>	City of Gold Coast Priority Species
ssp.	subspecies	<b>CE, CR</b>	Critically endangered
syn.	synonym	<b>E</b>	Endangered
var.	variety	<b>V</b>	Vulnerable
+	alien native species (non-provenance native)	<b>NT</b>	Near threatened
* Restricted plant under the <i>Biosecurity Act (Qld)</i> 2014 where Category 3 states: " <i>the invasive plant must not be distributed either by sale or gift, or released into the environment</i> "			
<a href="https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/controlling-weeds/laws">https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/controlling-weeds/laws</a> (accessed Feb25)			
** <i>SEQ Environmental Weeds Strategy</i> (August 2002), where: Rank = rank of invasiveness using estimated residency years (since naturalisation/cultivation). Score = based on expert panel assessed data of invasiveness, 5 = highest risk, below 3 = invasiveness doubtful (Batianoff and Butler 2001), <a href="https://www.daf.qld.gov.au/_data/assets/pdf_file/0008/64637/IPA-Assessment-Invasive-Plants.pdf">https://www.daf.qld.gov.au/_data/assets/pdf_file/0008/64637/IPA-Assessment-Invasive-Plants.pdf</a> (accessed Feb25)			

- Notes:**
- This list represents cumulative totals of surveys to date undertaken for this project. Additional species are likely to be added in the future.
  - This list is to be read in conjunction with the report: *Currumbin Eco-Parkland Ecological Study Version 5 January 2025 (MRA, GCB, DDW)*
  - Not all non-native species are invasive. Weed priorities and control methods are addressed elsewhere.



## Attachment 8: Fauna Species List

Family	Genus	Species	Common Name	Status
<b>LAND SNAILS</b>				
HELICARIONIDAE	<i>Nitor</i>	<i>pudivunda</i>	Pink Glass snail	-
HELICARIONIDAE	<i>Stanisicaron</i>	<i>virens</i>	Fine-speckled Semi-slug	-
CAMAENIDAE	<i>Ramogenia</i>	<i>challengeri</i>	Challenger's Hairy Snail	-
CAMAENIDAE	<i>Sphaerospira</i>	<i>fraseri</i>	Fraser's Banded Snail	-
ATHORACOPHORIDAE	<i>Triboniophorus</i>	<i>graeffeii</i>	Red-triangle Slug	-
<b>AQUATIC DECAPODS</b>				
ATYIDAE	<i>Caradina</i>	<i>indistincta</i>	Indistinct Caradina	-
ATYIDAE	<i>Metapenaeus</i>	<i>macleayi</i>	School Prawn	-
ATYIDAE	<i>Paratya</i>	<i>australiense</i>	Australian Paratya	-
PARASTACIDAE	<i>Cherax</i>	<i>depressus</i>	Orange-fingered Crayfish	-
<b>DRAGONFLIES and DAMSELFLIES</b>				
LESTIDAE	<i>Austrolestes</i>	<i>leda</i>	Wandering Ringtail	-
ARGIOLESTIDAE	<i>Austroargiolestes</i>	<i>icteremeles</i>	Common Flatwing	-
COENAGRIONIDAE	<i>Agriocnemis</i>	<i>pygmaea</i>	Pygmy Wisp	-
COENAGRIONIDAE	<i>Agriocnemis</i>	<i>rubescens</i>	Red-tipped Shadefly	-
COENAGRIONIDAE	<i>Austroagrion</i>	<i>watsoni</i>	Eastern Billabongfly	-
COENAGRIONIDAE	<i>Ceragrion</i>	<i>aeruginosum</i>	Redtail	-
COENAGRIONIDAE	<i>Ischnura</i>	<i>aurora</i>	Aurora Bluetail	-
COENAGRIONIDAE	<i>Ischnura</i>	<i>heterosticta</i>	Common Bluetail	-
AESHNIDAE	<i>Adversaeschna</i>	<i>brevistyla</i>	Blue-spotted Hawker	-
AESHNIDAE	<i>Anax</i>	<i>papuensis</i>	Australian Emperor	-
GOMPHIDAE	<i>Austrogomphus</i>	<i>amphiclitus</i>	Pale Hunter	-
GOMPHIDAE	<i>Austrogomphus</i>	<i>ochraeus</i>	Jade Hunter	-
SYNTHEMISTIDAE	<i>Choristhemis</i>	<i>flavoterminata</i>	Yellow-tipped Tigertail	-
CORDULIIDAE	<i>Hemicordulia</i>	<i>australiae</i>	Australian Emerald	-
CORDULIIDAE	<i>Hemicordulia</i>	<i>continentalis</i>	Fat-bellied Emerald	-
LIBELLULIDAE	<i>Aethriamanta</i>	<i>nymphaeae</i>	L-spot Basker	-
LIBELLULIDAE	<i>Brahychioplax</i>	<i>denticauda</i>	Palemouth	-
LIBELLULIDAE	<i>Crocothemis</i>	<i>nigrofrons</i>	Black-headed Skimmer	-
LIBELLULIDAE	<i>Diplacodes</i>	<i>bipunctata</i>	Wandering Percher	-
LIBELLULIDAE	<i>Diplacodes</i>	<i>haematodes</i>	Scarlet Percher	-
LIBELLULIDAE	<i>Diplacodes</i>	<i>melanopsis</i>	Black-faced Percher	-
LIBELLULIDAE	<i>Hydrobasileus</i>	<i>brevistylus</i>	Water Prince	-
LIBELLULIDAE	<i>Nannodiplax</i>	<i>rubra</i>	Pygmy Percher	-
LIBELLULIDAE	<i>Orthetrum</i>	<i>caledonicum</i>	Blue Skimmer	-
LIBELLULIDAE	<i>Orthetrum</i>	<i>sabina</i>	Slender Skimmer	-
LIBELLULIDAE	<i>Orthetrum</i>	<i>villosovittatum</i>	Fiery Skimmer	-
LIBELLULIDAE	<i>Rhodothemis</i>	<i>lieftincki</i>	Red Arrow	-
LIBELLULIDAE	<i>Rhyothemis</i>	<i>graphiptera</i>	Graphic Flutterer	-
LIBELLULIDAE	<i>Rhyothemis</i>	<i>phyllis</i>	Yellow-striped Flutterer	-
LIBELLULIDAE	<i>Tramea</i>	<i>loewii</i>	Common Glider	-
LIBELLULIDAE	<i>Zyxomma</i>	<i>elgneri</i>	Short-tailed Duskdarter	-
<b>CICADAS</b>				
CICADIDAE	<i>Aleeta</i>	<i>curvicosta</i>	Floury Baker Cicada	-
CICADIDAE	<i>Atrapsalta</i>	<i>corticina</i>	Bark Squeaker	-
CICADIDAE	<i>Atrapsalta</i>	<i>fuscata</i>	Small Bark Squeaker	-
CICADIDAE	<i>Birrima</i>	<i>castanea</i>	Red Treeticker	-
CICADIDAE	<i>Birrima</i>	<i>varians</i>	Black Treeticker	-
CICADIDAE	<i>Chlorocysta</i>	<i>vitripennis</i>	Small Bottle Cicada	-
CICADIDAE	<i>Cystosoma</i>	<i>saundersii</i>	Bladder Cicada	-
CICADIDAE	<i>Ewartia</i>	<i>oldfieldi</i>	Broad-striped Wattle Cicada	-
CICADIDAE	<i>Glaucopsaltria</i>	<i>viridis</i>	Bottle Cicada	-
CICADIDAE	<i>Haemapsalta</i>	<i>rubea</i>	Red Squeaker	-
CICADIDAE	<i>Henicopsaltria</i>	<i>eydouxii</i>	Razor Grinder	-
CICADIDAE	<i>Popplepsalta</i>	<i>annulata</i>	Sprinkler Squeaker	-
CICADIDAE	<i>Psaltoda</i>	<i>claripennis</i>	Clanger Cicada	-
CICADIDAE	<i>Psaltoda</i>	<i>harrisii</i>	Yellowbelly	-
CICADIDAE	<i>Tamasa</i>	<i>tristigma</i>	Brown Bunyip	-
CICADIDAE	<i>Telmapsalta</i>	<i>hackeri</i>	Paperbark Cicada	-
CICADIDAE	<i>Yoyetta</i>	<i>sp cf. tristrigata</i>	Treetop Ticker	-
<b>LACEWINGS</b>				
MANTISPIDAE	<i>Ditaxis</i>	<i>biseriata</i>	-	-
CHRYSOPIDAE	<i>Apochrysa</i>	<i>lutea</i>	-	-
CHRYSOPIDAE	<i>Italochrysa</i>	<i>insignis</i>	-	-

CHRYSOPIDAE	<i>Mallada</i>	<i>signatus</i>	-	-
NYMPHIDAE	<i>Nymphes</i>	<i>myrmeleonides</i>	Blue Eyes Lacewing	-
MYRMELEONTIDAE	<i>Myrmeleon</i>	<i>acer</i>	Common Brown Antlion	-
ASCALAPHIDAE	<i>Suhpalasca</i>	<i>flavipes</i>	Yellow Owfly	-
<b>BUTTERFLIES</b>				
HESPERIIDAE	<i>Arrhenes</i>	<i>marnas</i>	Swamp Darter	-
HESPERIIDAE	<i>Euschemon</i>	<i>rafflesia</i>	Regent Skipper	-
HESPERIIDAE	<i>Hesperilla</i>	<i>ornata</i>	Spotted Sedge-skipper	-
HESPERIIDAE	<i>Ocybadistes</i>	<i>flavovittata</i>	Narrow-brand Grass-dart	-
HESPERIIDAE	<i>Ocybadistes</i>	<i>walkeri</i>	Green Grass-Dart	-
HESPERIIDAE	<i>Pelopidas</i>	<i>lyelli</i>	Lyell's Swift	-
HESPERIIDAE	<i>Pelopidas</i>	<i>agna</i>	Dingy Swift	-
HESPERIIDAE	<i>Suniana</i>	<i>sunias</i>	Wide-brand Grass-dart	-
HESPERIIDAE	<i>Toxidia</i>	<i>doubledayi</i>	Lilac Grass Skipper	-
HESPERIIDAE	<i>Toxidia</i>	<i>peron</i>	Dingy Grass-skipper	-
HESPERIIDAE	<i>Trapezites</i>	<i>symmopus</i>	Splendid Ochre	-
PAPILIONIDAE	<i>Cressida</i>	<i>cressida</i>	Clearwing Swallowtail	-
PAPILIONIDAE	<i>Graphium</i>	<i>eurypylus</i>	Pale Triangle	-
PAPILIONIDAE	<i>Graphium</i>	<i>sarpedon</i>	Blue Triangle	-
PAPILIONIDAE	<i>Ornithoptera</i>	<i>richmondia</i>	Richmond birdwing	PS,V
PAPILIONIDAE	<i>Papilio</i>	<i>aegeus</i>	Orchard Swallowtail	-
PIERIDAE	<i>Appias</i>	<i>paulina</i>	Yellow Albatross	-
PIERIDAE	<i>Belenois</i>	<i>java</i>	Caper White	-
PIERIDAE	<i>Catopsilia</i>	<i>pomona</i>	Lemon Migrant	-
PIERIDAE	<i>Catopsilia</i>	<i>pyranthe</i>	White Migrant	-
PIERIDAE	<i>Cepora</i>	<i>perimale</i>	Capper Gull	-
PIERIDAE	<i>Delias</i>	<i>argenthona</i>	Scarlet Jezabel	-
PIERIDAE	<i>Delias</i>	<i>nigrina</i>	Black Jezabel	-
PIERIDAE	<i>Eurema</i>	<i>hecabe</i>	Large Grass-yellow	-
PIERIDAE	<i>Eurema</i>	<i>smilax</i>	Small Grass-yellow	-
PIERIDAE	<i>Pieris</i>	<i>rapae</i>	Cabbage White	I
NYMPHALIDAE	<i>Acraea</i>	<i>andromacha</i>	Glasswing	-
NYMPHALIDAE	<i>Charaxes</i>	<i>semprius</i>	Tailed Emperor	-
NYMPHALIDAE	<i>Cupha</i>	<i>prosope</i>	Bordered rustic	-
NYMPHALIDAE	<i>Danaus</i>	<i>petilia</i>	Lesser Wanderer	-
NYMPHALIDAE	<i>Danaus</i>	<i>plexippus</i>	Monarch	-
NYMPHALIDAE	<i>Doleschallia</i>	<i>bisaltide</i>	Australian Leafwing	-
NYMPHALIDAE	<i>Euploea</i>	<i>corinna</i>	Common Crow	-
NYMPHALIDAE	<i>Euploea</i>	<i>tulliolus</i>	Purple Crow	-
NYMPHALIDAE	<i>Heteronympha</i>	<i>mirifica</i>	Wonder Brown	-
NYMPHALIDAE	<i>Hypocysta</i>	<i>metirius</i>	Brown Ringlet	-
NYMPHALIDAE	<i>Hypolimnas</i>	<i>bolina</i>	Varied Eggfly	-
NYMPHALIDAE	<i>Junonia</i>	<i>villida</i>	Meadow Argus	-
NYMPHALIDAE	<i>Melanitis</i>	<i>leda</i>	Evening Brown	-
NYMPHALIDAE	<i>Phaedyma</i>	<i>shepherdi</i>	White-banded Plane	-
NYMPHALIDAE	<i>Tirumala</i>	<i>hamata</i>	Blue Tiger	-
LYCAENIDAE	<i>Candalides</i>	<i>consimilis</i>	Dark Pencilled-blue	-
LYCAENIDAE	<i>Candalides</i>	<i>erinus</i>	Small Dusky-blue	-
LYCAENIDAE	<i>Catopyrops</i>	<i>florinda</i>	Speckled Line-blue	-
LYCAENIDAE	<i>Everes</i>	<i>lacturnus</i>	Orange-tipped Pea-blue	-
LYCAENIDAE	<i>Lampides</i>	<i>boeticus</i>	Long-tailed Pea-blue	-
LYCAENIDAE	<i>Nacaduba</i>	<i>berenice</i>	Large purple Line-blue	-
LYCAENIDAE	<i>Prosotas</i>	<i>felderi</i>	Small-tailed Line-blue	-
LYCAENIDAE	<i>Zizina</i>	<i>otis</i>	Common Grass-blue	-
<b>FISHES</b>				
ANGUILLIDAE	<i>Anguilla</i>	<i>reinhardtii</i>	Longfin Eel	LC
MELANOtaeniidae	<i>Melanotaenia</i>	<i>duboulayi</i>	Crimson-spotted Rainbowfish	LC
PSEUDOMUGILIDAE	<i>Pseudomugil</i>	<i>signifer</i>	Pacific blue-eye	LC
TETRAROGIDAE	<i>Marilyna</i>	<i>pleurosticta</i>	Banded Toadfish	LC
TETRAROGIDAE	<i>Tetractenos</i>	<i>hamilton</i>	Common Toadfish	LC
AMBASSIDAE	<i>Ambassis</i>	<i>marianus</i>	Estuary Glassfish	LC
LUTJANIDAE	<i>Lutjanus</i>	<i>russelli</i>	Moses Perach	LC
GERREIDAE	<i>Gerres</i>	<i>subfasciatus</i>	Common Silverbiddy	LC
MUGILIDAE	<i>Liza</i>	<i>argentea</i>	Gold Spot Mullet	LC
MUGILIDAE	<i>Mugil</i>	<i>cephalus</i>	Sea Mullet	LC

ELEOTRIDAE	<i>Gobiomorphus</i>	<i>australis</i>	Striped Gudgeon	LC
ELEOTRIDAE	<i>Hypseleotris</i>	<i>compressa</i>	Empire Gudgeon	LC
ELEOTRIDAE	<i>Hypseleotris</i>	<i>galii</i>	Firetail Gudgeon	LC
ELEOTRIDAE	<i>Goby</i>	sp.	-	-
SPASRIDAE	<i>Acanthopagrus</i>	<i>australis</i>	Yellowfin Bream	LC
POECILIIDAE	<i>Gambusia</i>	<i>holbrooki</i>	Plague Minnow	I
POECILIIDAE	Xiphophorus	<i>hellerii</i>	Swordtail	I
<b>FROGS</b>				
LIMNODYNASTIDAE	<i>Adelotus</i>	<i>brevis</i>	Tusked Frog	CWS,V
LIMNODYNASTIDAE	<i>Limnodynastes</i>	<i>peronii</i>	Striped Marshfrog	LC
MYOBATRACHIDAE	<i>Pseudophryne</i>	<i>raveni</i>	Copper-backed Broodfrog	LC
PELODRYADIDAE	<i>Litoria</i>	<i>fallax</i>	Eastern Sedgefrog	LC
PELODRYADIDAE	<i>Litoria</i>	<i>gracilentata</i>	Graceful Treefrog	LC
PELODRYADIDAE	<i>Litoria</i>	<i>nasuta</i>	Striped Rocketfrog	LC
PELODRYADIDAE	<i>Litoria</i>	<i>peronii</i>	Emerald-spotted Treefrog	LC
PELODRYADIDAE	<i>Litoria</i>	<i>tyleri</i>	Southern-laughing Treefrog	LC
BUFONIDAE	<i>Rhinella</i>	<i>marina</i>	Cane Toad	I
<b>REPTILES</b>				
GEKKONIDAE	<i>Hemidactylus</i>	<i>frenatus</i>	House Gecko	I
SCINCIDAE	<i>Calyptotis</i>	<i>scutirostrum</i>	Scute-snouted Calyptotis	LC
SCINCIDAE	<i>Cryptoblepharus</i>	<i>pulcher</i>	Cream-striped Shinning-skink	LC
SCINCIDAE	<i>Cyclodomorphus</i>	<i>gerrardii</i>	Pink-tongued Lizard	LC
SCINCIDAE	<i>Lampropholis</i>	<i>delicata</i>	Garden Skink	LC
SCINCIDAE	<i>Saiphos</i>	<i>equalis</i>	Three-toed Skink	LC
AGAMIDAE	<i>Intellagama</i>	<i>lesueurii</i>	Eastern Water Dragon	LC
VARANIDAE	<i>Varanus</i>	<i>varius</i>	Lace Monitor	LC
TYPHLOPIDAE	<i>Anilius</i>	<i>nigrescens</i>	Blackish Blind Snake	LC
ELAPIDAE	<i>Cryptophis</i>	<i>nigrescens</i>	Eastern Small-eyed Snake	LC
ELAPIDAE	<i>Tropidechis</i>	<i>carinatus</i>	Rough-scaled Snake	LC
<b>BIRDS</b>				
MEGAPODIDAE	<i>Alectura</i>	<i>lathamii</i>	Australian Brush-turkey	LC
ANATIDAE	<i>Dendrocygna</i>	<i>eytoni</i>	Plumed Whistling-Duck	M,LC
ANATIDAE	<i>Chenonetta</i>	<i>jubata</i>	Australian Wood Duck	LC
ANATIDAE	<i>Anas</i>	<i>supercilliosa</i>	Pacific Black Duck	LC
PODICIPEDIDAE	<i>Tachybaptus</i>	<i>novaehollandiae</i>	Australasian Grebe	LC
COLUMBIDAE	<i>Columba</i>	<i>livia</i>	Rock Dove	I
COLUMBIDAE	<i>Columba</i>	<i>leucomela</i>	White-headed Pigeon	LC
COLUMBIDAE	<i>Streptopelia</i>	<i>chinensis</i>	Spotted Dove	I
COLUMBIDAE	<i>Macropygia</i>	<i>amboinensis</i>	Brown Cuckoo-Dove	LC
COLUMBIDAE	<i>Chalcophaps</i>	<i>indica</i>	Emerald Dove	LC
COLUMBIDAE	<i>Geopelia</i>	<i>humeralis</i>	Bar-shouldered Dove	LC
COLUMBIDAE	<i>Leucosarcia</i>	<i>picata</i>	Wonga Pigeon	LC
COLUMBIDAE	<i>Ptilinopus</i>	<i>magnificus</i>	Wompoo Fruit-Dove	LC
COLUMBIDAE	<i>Ptilinopus</i>	<i>regina</i>	Rose-crowned Fruit-Dove	LC
COLUMBIDAE	<i>Lopholaimus</i>	<i>antarcticus</i>	Topknot Pigeon	LC
PODARGIDAE	<i>Podargus</i>	<i>strigoides</i>	Tawny Frogmouth	LC
AEGOTHELIDAE	<i>Aegotheles</i>	<i>cristatus</i>	Australian Owllet-nightjar	LC
CUCULIDAE	<i>Centropus</i>	<i>phasianinus</i>	Pheasant Coucal	LC
CUCULIDAE	<i>Eudynamis</i>	<i>orientalis</i>	Pacific Koel	M,LC
CUCULIDAE	<i>Scythrops</i>	<i>novaehollandiae</i>	Channel-billed Cuckoo	M,LC
CUCULIDAE	<i>Chalcites</i>	<i>lucidus</i>	Shining Bronze-Cuckoo	M,LC
CUCULIDAE	<i>Cacomantis</i>	<i>flabelliformis</i>	Fan-tailed Cuckoo	M,LC
CUCULIDAE	<i>Cacomantis</i>	<i>variolosus</i>	Brush Cuckoo	LC
RALLIDAE	<i>Porphyrio</i>	<i>porphyrio</i>	Purple Swamphen	LC
RALLIDAE	<i>Lewinia</i>	<i>pectoralis</i>	Lewin's Rail	CWS,LC
RALLIDAE	<i>Gallirallus</i>	<i>philippensis</i>	Buff-banded Rail	LC
RALLIDAE	<i>Fulica</i>	<i>atra</i>	Eurasian Coot	LC
THRESKIORNITHIDAE	<i>Threskiornis</i>	<i>molucca</i>	Australian White Ibis	M,LC
THRESKIORNITHIDAE	<i>Threskiornis</i>	<i>spicicollis</i>	Straw-necked Ibis	M,LC
THRESKIORNITHIDAE	<i>Platalea</i>	<i>regia</i>	Royal Spoonbill	LC
ARDEIDAE	<i>Ardea</i>	<i>pacifica</i>	White-necked Heron	LC
ARDEIDAE	<i>Ardea</i>	<i>modesta</i>	Eastern Great Egret	M,LC
ARDEIDAE	<i>Ardea</i>	<i>intermedia</i>	Intermediate Egret	M,LC
ARDEIDAE	<i>Ardea</i>	<i>ibis</i>	Cattle Egret	M,LC
ARDEIDAE	<i>Butorides</i>	<i>striatus</i>	Striated Heron	LC

ARDEIDAE	<i>Egretta</i>	<i>novaehollandiae</i>	White-faced Heron	LC
ARDEIDAE	<i>Egretta</i>	<i>garzetta</i>	Little Egret	LC
ARDEIDAE	<i>Nycticorax</i>	<i>caledonicus</i>	Nankeen Night Heron	M,LC
PELECANIDAE	<i>Pelecanus</i>	<i>conspicillatus</i>	Australian Pelican#	M,LC
PHALACROCORACIDAE	<i>Microcarbo</i>	<i>melanoleucos</i>	Little Pied Cormorant	LC
PHALACROCORACIDAE	<i>Phalacrocorax</i>	<i>sulcirostris</i>	Little Black Cormorant	LC
PHALACROCORACIDAE	<i>Phalacrocorax</i>	<i>varius</i>	Pied Cormorant	LC
CHARADRIIDAE	<i>Vanellus</i>	<i>miles</i>	Masked Lapwing	LC
STRIGIDAE	<i>Ninox</i>	<i>strenua</i>	Powerful Owl	CWS,V
STRIGIDAE	<i>Ninox</i>	<i>boobook</i>	Southern Boobook	M,LC
TYTONIDAE	<i>Tyto</i>	<i>javanica</i>	Eastern Barn Owl	LC
PANDIONODAE	<i>Pandion</i>	<i>haliaetus</i>	Eastern Osprey	M,Mi,SLC
ACCIPITRIDAE	<i>Aviceda</i>	<i>subcristata</i>	Pacific Baza	LC
ACCIPITRIDAE	<i>Haliaeetus</i>	<i>leucogaster</i>	White-bellied Sea-Eagle	M,LC
ACCIPITRIDAE	<i>Haliastur</i>	<i>sphenurus</i>	Whistling Kite	M,LC
ACCIPITRIDAE	<i>Haliastur</i>	<i>indus</i>	Brahminy Kite	M,LC
ACCIPITRIDAE	<i>Accipiter</i>	<i>fasciatus</i>	Brown Goshawk	M,LC
ACCIPITRIDAE	<i>Accipiter</i>	<i>cirrocephalus</i>	Collared Sparrowhawk	LC
ACCIPITRIDAE	<i>Aquila</i>	<i>audax</i>	Wedge-tailed Eagle	LC
MEROPIIDAE	<i>Merops</i>	<i>ornatus</i>	Rainbow Bee-eater	M,LC
CORACIIDAE	<i>Eurystomus</i>	<i>orientalis</i>	Dollarbird	LC
ALCEDINIDAE	<i>Ceyx</i>	<i>azureus</i>	Azure Kingfisher	LC
ALCEDINIDAE	<i>Dacelo</i>	<i>novaequinae</i>	Laughing Kookaburra	LC
ALCEDINIDAE	<i>Todiramphus</i>	<i>macleayii</i>	Forest Kingfisher	M,LC
ALCEDINIDAE	<i>Todiramphus</i>	<i>sanctus</i>	Sacred Kingfisher	M,LC
CACATUIDAE	<i>Calyptorhynchus</i>	<i>lathamii</i>	Glossy Black-cockatoo	CWS,PS,V,V*
CACATUIDAE	<i>Calyptorhynchus</i>	<i>funereus</i>	Yellow-tailed Black-cockatoo	LC
CACATUIDAE	<i>Eolophus</i>	<i>roseicapillus</i>	Galah	LC
CACATUIDAE	<i>Cacatua</i>	<i>sanguinea</i>	Little Corella	LC
CACATUIDAE	<i>Cacatua</i>	<i>galerita</i>	Sulphur-crested Cockatoo	LC
PSITTACULIDAE	<i>Trichoglossus</i>	<i>moluccanus</i>	Rainbow Lorikeet	LC
PSITTACULIDAE	<i>Trichoglossus</i>	<i>chlorolepidotus</i>	Scaly-breasted Lorikeet	LC
PSITTACULIDAE	<i>Glossopsitta</i>	<i>pusilla</i>	Little Lorikeet	LC
PSITTACULIDAE	<i>Alisterus</i>	<i>scapularis</i>	Australian King-Parrot	LC
PSITTACULIDAE	<i>Platycercus</i>	<i>adscitus</i>	Pale-headed Rosella	LC
CLIMACTERIDAE	<i>Cormobates</i>	<i>leucophaea</i>	White-throated Treecreeper	LC
MALURIDAE	<i>Malurus</i>	<i>cyaneus</i>	Superb Fairy-wren	LC
MALURIDAE	<i>Malurus</i>	<i>melanocephalus</i>	Red-backed Fairy-wren	LC
MALURIDAE	<i>Malurus</i>	<i>lamberti</i>	Variagated Fairy-wren	LC
MELIPHAGIDAE	<i>Acanthorhynchus</i>	<i>tenuirostris</i>	Eastern Spinebill	LC
MELIPHAGIDAE	<i>Meliphaga</i>	<i>lewini</i>	Lewin's Honeyeater	LC
MELIPHAGIDAE	<i>Lichenostomus</i>	<i>chrysops</i>	Yellow-faced Honeyeater	LC
MELIPHAGIDAE	<i>Manorina</i>	<i>melanocephala</i>	Noisy Miner	LC
MELIPHAGIDAE	<i>Myzomela</i>	<i>sanguinolenta</i>	Scarlet Honeyeater	LC
MELIPHAGIDAE	<i>Lichmera</i>	<i>indistincta</i>	Brown Honeyeater	LC
MELIPHAGIDAE	<i>Melithreptus</i>	<i>albugularis</i>	White-throated Honeyeater	LC
MELIPHAGIDAE	<i>Melithreptus</i>	<i>lunatus</i>	White-naped Honeyeater	LC
MELIPHAGIDAE	<i>Entomyzon</i>	<i>cyanotis</i>	Blue-faced Honeyeater	LC
MELIPHAGIDAE	<i>Philemon</i>	<i>corniculatus</i>	Noisy Friarbird	LC
MELIPHAGIDAE	<i>Philemon</i>	<i>citreogularis</i>	Little Friarbird	LC
PARDALOTIDAE	<i>Pardalotus</i>	<i>punctatus</i>	Spotted Pardalote	LC
PARDALOTIDAE	<i>Pardalotus</i>	<i>striatus</i>	Striated Pardalote	LC
ACANTHIZIDAE	<i>Sericornis</i>	<i>frontalis</i>	White-browed Scrubwren	LC
ACANTHIZIDAE	<i>Sericornis</i>	<i>magnirostra</i>	Large-billed Scrubwren	LC
ACANTHIZIDAE	<i>Gerygone</i>	<i>albugularis</i>	White-throated Gerygone	LC
ACANTHIZIDAE	<i>Acanthiza</i>	<i>lineata</i>	Striated Thornbill	LC
ACANTHIZIDAE	<i>Acanthiza</i>	<i>pusilla</i>	Brown Thornbill	LC
ORIOIDAE	<i>Sphecotheres</i>	<i>vieilloti</i>	Australasian Figbird	LC
ORIOIDAE	<i>Oriolus</i>	<i>sagittatus</i>	Olive-backed Oriole	LC
PACHYCEPHALIDAE	<i>Pachycephala</i>	<i>pectoralis</i>	Golden Whistler	LC
PACHYCEPHALIDAE	<i>Pachycephala</i>	<i>rufiventris</i>	Rufous Whistler	LC
PACHYCEPHALIDAE	<i>Colluricincla</i>	<i>rufogaster</i>	Rufous Shrike-thrush	LC
PACHYCEPHALIDAE	<i>Colluricincla</i>	<i>harmonica</i>	Eastern Grey Shrike-thrush	LC
PSOPHODIDAE	<i>Psophodes</i>	<i>olivaceus</i>	Eastern Whipbird	LC
CAMPEPHAGIDAE	<i>Coracina</i>	<i>novaehollandiae</i>	Black-faced Cuckoo-Shrike	M,LC

CAMPEPHAGIDAE	<i>Edolisoma</i>	<i>tenuirostre</i>	Common Cicadabird	M,LC
CAMPEPHAGIDAE	<i>Lalage</i>	<i>leucomela</i>	Varied Triller	LC
ARTAMIDAE	<i>Cracticus</i>	<i>nigrogularis</i>	Pied Butcherbird	LC
ARTAMIDAE	<i>Cracticus</i>	<i>torquatus</i>	Grey Butcherbird	LC
ARTAMIDAE	<i>Gymnorhina</i>	<i>tibicen</i>	Australian Magpie	LC
ARTAMIDAE	<i>Strepera</i>	<i>graculina</i>	Pied Currawong	LC
RHIPIDURIDAE	<i>Rhipidura</i>	<i>rufifrons</i>	Rufous Fantail	M,Mi,SLC
RHIPIDURIDAE	<i>Rhipidura</i>	<i>albiscapa</i>	Grey Fantail	LC
RHIPIDURIDAE	<i>Rhipidura</i>	<i>leucophrys</i>	Willie Wagtail	LC
DICRURIDAE	<i>Dicrurus</i>	<i>bracteatus</i>	Spangled Drongo	M,LC
MONARCHIDAE	<i>Myiagra</i>	<i>rubecula</i>	Leaden Flycatcher	LC
MONARCHIDAE	<i>Monarcha</i>	<i>melanopsis</i>	Black-faced Monarch	M,Mi,SLC
MONARCHIDAE	<i>Symposiachus</i>	<i>trivirgatus</i>	Spectacled Monarch	M,Mi,SLC
MONARCHIDAE	<i>Grallina</i>	<i>cyanoleuca</i>	Magpie-lark	M,LC
CORVIDAE	<i>Corvus</i>	<i>orru</i>	Torresian Crow	LC
PETROICIDAE	<i>Eopsaltria</i>	<i>australis</i>	Eastern Yellow Robin	LC
CISTICOLIDAE	<i>Cisticola</i>	<i>exilis</i>	Golden-headed Cisticola	LC
ACROCEPHALIDAE	<i>Acrocephalus</i>	<i>australis</i>	Australian Reed Warbler	M,LC
LOCUSTELLIDAE	<i>Megalurus</i>	<i>timoriensis</i>	Tawny Grassbird	LC
HIRUNDINIDAE	<i>Hirundo</i>	<i>neoxena</i>	Welcome Swallow	M,LC
ZOSTEROPIDAE	<i>Zosterops</i>	<i>lateralis</i>	Silvereeye	M,LC
STURNIDAE	<i>Sturnus</i>	<i>tristis</i>	Common Mynah	I
DICAEIDAE	<i>Dicaeum</i>	<i>hirundinaceum</i>	Mistletoebird	LC
ESTRILDIDAE	<i>Neochmia</i>	<i>temporalis</i>	Red-browed Finch	LC
<b>MAMMALS</b>				
TACHYGLOSSIDAE	<i>Tachyglossus</i>	<i>aculeatus</i>	Short-beaked Echidna	SLC
DASYURIDAE	<i>Antechinus</i>	<i>flavipes</i>	Yellow-footed Antechinus	LC
PERAMELIDAE	<i>Isoodon</i>	<i>macrourus</i>	Northern Brown Bandicoot	LC
PERAMELIDAE	<i>Perameles</i>	<i>nasuta</i>	Long-nosed Bandicoot	LC
ACROBATIDAE	<i>Acrobates</i>	<i>pygmaeus</i>	Feathertail Glider	LC
PSEUDOCHEIRIDAE	<i>Pseudocheirus</i>	<i>peregrinus</i>	Common Ringtail Possum	LC
PETAURIDAE	<i>Petaurus</i>	<i>breviceps</i>	Sugar Glider	LC
PHALANGERIDAE	<i>Trichosurus</i>	<i>caninus</i>	Short-eared Brushtail Possum	LC
PHALANGERIDAE	<i>Trichosurus</i>	<i>vulpecula</i>	Common Brushtail Possum	LC
PHASCOLARCTIDAE	<i>Phascolarctos</i>	<i>cinereus</i>	Koala	CWS,PS,E,E*
MACROPODIDAE	<i>Macropus</i>	<i>giganteus</i>	Eastern Grey Kangaroo	LC
MACROPODIDAE	<i>Wallabia</i>	<i>bicolor</i>	Swamp Wallaby	LC
PTEROPODIDAE	<i>Pteropus</i>	<i>alecto</i>	Black Flying-fox	LC
PTEROPODIDAE	<i>Pteropus</i>	<i>poliocephalus</i>	Grey-headed Flying-fox	CWS,PS,LC,V*
RHINOLOPHIDAE	<i>Rhinolophus</i>	<i>megaphyllus</i>	Eastern Horseshoe Bat	LC
EMBALLONURIDAE	<i>Saccolaimus</i>	<i>flaviventris</i>	Yellow-bellied Sheath-tailed Bat	LC
MOLOSSIDAE	<i>Austronomus</i>	<i>australis</i>	White-striped Free-tailed Bat	LC
MOLOSSIDAE	<i>Ozimops</i>	<i>ridei</i>	Ride's Free-tailed Bat	LC
MINIOPTERIDAE	<i>Miniopterus</i>	<i>australis</i>	Little Bent-wing Bat	LC
MINIOPTERIDAE	<i>Miniopterus</i>	<i>orianae oceanensis</i>	Northern Bent-wing Bat	LC
VESPERTILIONIDAE	<i>Chalinolobus</i>	<i>gouldii</i>	Gould's Wattled Bat	LC
VESPERTILIONIDAE	<i>Chalinolobus</i>	<i>morio</i>	Chocolate Wattled Bat	LC
VESPERTILIONIDAE	<i>Myotis</i>	<i>macropus</i>	Large-footed Myotis	CWS,LC
VESPERTILIONIDAE	<i>Nyctophilus</i>	sp.	-	LC
VESPERTILIONIDAE	<i>Scotorepens</i>	<i>orion</i>	Eastern Broad-nosed Bat	CWS,LC
VESPERTILIONIDAE	<i>Vespadelus</i>	<i>darlingtoni</i>	Large Forest Bat	CWS,LC
VESPERTILIONIDAE	<i>Vespadelus</i>	<i>pumilis</i>	Eastern Forest Bat	LC
MURIDAE	<i>Melomys</i>	<i>cervinipes</i>	Fawn-footed Melomys	LC
MURIDAE	<i>Mus</i>	<i>musculus</i>	House Mouse	I
MURIDAE	<i>Rattus</i>	<i>fuscipes</i>	Bush Rat	LC
MURIDAE	<i>Rattus</i>	<i>rattus</i>	Black Rat	I
CANIDAE	<i>Canis</i>	<i>lupus familiaris</i>	Domestic Dog	I
CANIDAE	<i>Canis</i>	<i>lupus dingo</i>	Dingo	I
LEPORIDAE	<i>Lepus</i>	<i>europaeus</i>	Brown Hare	I
EQUIDAE	<i>Equus</i>	<i>caballus</i>	Horse	I
BOVIDAE	<i>Bos</i>	<i>taurus</i>	Cattle	I



## Attachment 9: Threatened Fauna Species Profiles

## Richmond birdwing butterfly (*Ornithoptera richmondia*)

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### General

The Richmond birdwing butterfly is the third largest butterfly in Australia, with a wingspan of up to 16cm in females and 13cm in males. This butterfly is generally more active during the early morning and late afternoon. The wings of the female are dark grey or brown with white and yellow patches on the upper and underside. The upper forewing of males is black with a distinctive iridescent green leading edge, while the upper hindwing is predominantly iridescent green with black spots. The underside of the male's forewing is black with extensive blue-green and yellow markings whereas the hindwing is largely blue-green and yellow with obvious black spots. (Braby 2016). The larvae food plants are *Pararistolochia praevenosa* below 600m and *P. laheyana* above 800m (Braby 2000).

### Distribution

It occurs from Kin Kin in southern Queensland to Wardell in northern New South Wales (Sands and New 2002).

### Habitat

They occur in subtropical rainforest, littoral rainforest and gallery forest in lowland and upland areas (Braby 2016) and will fly long distances to sites which contain their larval host plant.

### Threats

The main threats are the loss of habitat particularly on the lowland, weed invasion, inappropriate fire regimes and the introduced South American Dutchman's Pipe Vine (*Aristolochia elegans*). The Richmond birdwing will oviposit onto South American Dutchman's Pipe Vine, however the plant is toxic to larvae (Sands and New 2002).

### Subject Site

This species was recorded from one location, with a male and female flying over vegetation, above a large patch of the host plant in the southern section of the site (Fig 5-1). It is likely to utilise much of the site for both feeding and breeding purposes. The site also serves as a corridor along which it can travel to other areas of suitable habitat. It was formally very rare on the Gold Coast (D. White pers. obs.), but over the last 20 years, it has become more common and widespread. This is probably largely due to a program (Richmond Birdwing Recovery Network) which has encouraged, and in some instances, supplied the host plant to local residents and environmental groups for planting, and publicised the removal of the aforementioned Dutchman's Pipe Vine (Sands and New 2013).

## Tusked frog (*Adelotus brevis*)

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### General

Tusked frogs are between 35 and 50 mm long and have a mottled dark brown dorsal surface that is covered with small warts. Bright red patches are located in the groin area and on the back of the legs. Males have large heads and large 'tusks' (tooth-like projections from the lower jaw) and are larger than females which is unusual in Australian frogs. The belly of the male is black with white spots, while the female has a marbled black and white belly. The males call from the water in spring and summer and the call is a single "cluck" repeated slowly. They are territorial and fight using their tusks to bite other males around the throat. The female lays her eggs in a floating foam nest (Sanders 2021).

### Habitat

They are usually found in slow-moving pools in creeks and streams, dams, ditches and ponds, and call while hidden amongst vegetation or debris. Tusked frogs occur in a wide range of habitats including rainforest, wet and dry sclerophyll, open country and the urban environment (Vanderduys 2012).

### Distribution

They occur along the eastern seaboard from central Queensland to central New South Wales (Cogger 2018).

### Threats

Although it appears to adapt well to habitat disturbance in some instances, this frog has undergone localised declines, particularly west of the great divide, and may be vulnerable to the chytrid fungi (Berger *et al.* 1999). Threats include the destruction and disturbance of streamside and pond habitat by fire or weeds, reduced water quality, chytrid fungal disease and predation of eggs and tadpoles by introduced fish species.

### Subject Site

The habitat on-site is highly suitable for this species and during the current survey it was recorded by both its characteristic call and was also seen during spotlight surveys at a number of locations, included dams, flooded areas and both permanent and ephemeral drainage lines (Fig 5-1). This species is relatively common and widespread on the Gold Coast particularly in the foothill and hinterland region and does not appear to have undergone any significant local decline over the last 20 years (White *et al.* 2016).



## Powerful owl (*Ninox strenua*)

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### General

The powerful owl is the largest owl species in Australia (60 – 66 cm) and feeds mainly on glider and possum species, but may also predate birds, flying-foxes rats and insects. The upper parts of the powerful owl are dark, greyish-brown with indistinct off-white bars. The underparts are whitish with dark greyish-brown V-shaped markings. It generally breeds from May to August with nests located in large hollows of trunks or limbs (Slater *et al.* 2009).

### Distribution

It occurs in eastern Australia generally on the eastern side of the Great Dividing Range from about Mackay in Queensland to south-eastern Victoria, and prefers large tracts of continuous bushland (Higgins 1999).

### Habitat

They occur in a variety of habitat types including open forests and woodlands, gullies in wet forest, farmland and even urban parkland provided large hollow bearing old growth trees are present. Pairs occupy large territories in excess of 500 ha (Higgins 1999; Garnett and Crowley 2000). Research also suggests that they can survive in a fragmented landscape, often along watercourses, provided there are sufficient large hollow bearing trees for breeding purposes and a large enough possum and glider populations to predate (Pavey 1995).

### Threats

Threats include fire, habitat clearing and the removal of large hollow bearing trees used for breeding purposes, disturbance at the nest site, secondary poisoning and predation of chicks (Garnett and Crowley 2000).

### Subject Site

The habitat on the site is highly suitable for this species with a large number of suitable hollow bearing trees present, and during the current survey it was recorded by both its characteristic call and seen during spotlight surveys (Fig 5-1). At least two individuals were recorded, likely male and female, over a number of nights, particularly during the August survey. No breeding activity or chicks were seen, but it is possible that the nesting hollow occurs on site or is relatively nearby. A large number of known prey species, at seemingly high densities were recorded on site including the sugar glider, common ringtail possum, common brushtail possum, short-eared brushtail possum and flying fox, further enhancing the habitat value for this species. Although not common on the Gold Coast, Powerful Owls are relatively widespread, and known to occur at a number of both upland and lowland locations (generally in mating pairs), including Austinville, Bonogin, Coombabah, Mount Nathan, Nerang, Southport and Tallebudgera (D. White pers. obs.).

## Koala (*Phascolarctos cinereus*)

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### General

The koala is a tree-dwelling, generally nocturnal, herbivorous marsupial which in Queensland averages about 6.5kg in weight. Its fur is thick and usually ash grey with a tinge of brown in places. They occupy home ranges which vary greatly in size generally due to the quality of the habitat present and eat the foliage of range of mainly, but not only, myrtaceous species (Van Dyck and Strahan 2008).

### Distribution

Their range extends from the Atherton Tableland west of Cairns in Queensland to islands off the coast of Victoria and South Australia in the south, and west to central and western Queensland, New South Wales and Victoria.

### Habitat

This species inhabits eucalypt woodlands and forests at varying densities from below one per hectare to much higher numbers, depending on several factors including habitat quality and historical factors. It is known to inhabit both remnant and urban vegetation (Van Dyck *et al.* 2013).

### Threats

The primary threats to koalas include loss and fragmentation of habitat, fire, disease, road fatalities and domestic animal induced mortality (mainly from dogs) (Maxwell *et al.* 1996; Van Dyck and Strahan 2008).

### Subject Site

The koala was recorded at several locations during the current survey either by direct observation, vocalising, remote camera or via its characteristic scats (Fig 5-1). The site is highly suitable for koalas as it contains a large number of suitable shelter and fodder tree species including *Eucalyptus crebra*, *E. microcorys*, *E. pilularis* and *E. propinqua* amongst others. It is likely that koalas utilise the majority of the site, particularly the well vegetated portions of RE 12.11.23/12.11.3a, but would also utilise individual trees or small stands of trees in the largely cleared lowland regions of the site. Based on the site survey, the density of koalas is probably relatively low, however the site provides important habitat in the local area and forms all or part of the home range for an unknown number of individuals. The site also acts as a potential corridor for animals dispersing from adjacent properties. The koala has undergone significant decline in recent years throughout much of the Gold Coast, particularly in lowland and foothill regions, with loss of habitat, disease, roadkill and dogs being the primary reason for this reduction in numbers.

## Grey-headed flying-fox (*Pteropus poliocephalus*)

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### General

The grey-headed flying-fox weighs between 600 and 1000 grams and has a head-body length of between 230–289 cm (Eby and Lunney 2002; Tidemann 1998). A collar of orange/brown fully encircles its neck and thick leg fur extends to the ankle, in contrast to other *Pteropus* spp. in which it only reaches the knee (Hall 1987; Tidemann 1998). As its name implies, the head is covered by light grey fur (Hall 1987). They breed in spring with roost sites, sometimes containing many hundreds of individuals, generally located close to water in rainforest, *Melaleuca* stands or mangroves (Van Dyck and Strahan 2008).

### Distribution

They occur in the coastal belt from Rockhampton in central Queensland to Melbourne in Victoria (Van Dyck and Strahan 2008).

### Habitat

They require both foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, utilising rainforests, open forests, closed and open woodlands, *Melaleuca* swamps and *Banksia* woodlands for foraging purposes. As none of the vegetation communities utilised produce continuous foraging resources throughout the year, the grey-headed flying-fox adopts complex migration traits in response to temporary and patchy food availability (Duncan *et al.* 1999; Eby 1998).

### Threats

The grey-headed flying-fox was scheduled *vulnerable* in 2001 under Commonwealth legislation. There had been an estimated 30% decline in abundance in this species in the years from 1989 to 2001. The primary threat is loss of suitable roosting and foraging habitat due to fires or clearing for agricultural purposes or urban development (Duncan *et al.* 1999).

### Subject Site

It was recorded in large numbers throughout most of the site during nocturnal investigations, generally flying in to feed on suitable trees in blossom or fruit. The habitat on the site is highly suitable for this species with a large stands of suitable feed tree species present, including a number of *Eucalyptus* spp., *Ficus* spp. and fruit bearing rainforest trees. No day-time roosting grey-headed flying-fox or other flying-fox species were recorded on site. This species is still relatively common and widespread on the Gold Coast with several roosting colonies present, with the nearest located less than 5 km to the west of the subject site on Currumbin Creek (D. White pers. obs.).



## Attachment 10: Fauna Habitat Assessments

Habitat Assessment 1, Transect 1	Yes	No	Comments
<b>GPS: Lat 28.1766 Long 153.4561</b>			
Fire history (years, scars, severity etc.)	x		>5yrs
Presence of leaf litter (% cover, average depth)	x		60% cover, 40 mm deep
Presence of rocky areas (size, cover etc.)	x		Ephemeral drainage line
Presence of hollow logs (size)	x		Numerous
Presence of arboreal termite mounds		x	-
Presence of terrestrial termite mounds		x	-
Groundcover vegetation (density, type, condition)	x		40% cover, Ferns, <i>Lomandra</i> spp., <i>Gahnia</i> sp.
Understory vegetation (density, type, condition)	x		50%, ginger, rainforest species
Canopy cover (%)	x		70%,
Canopy tree height (max)	x		25 metres
Median tree height (canopy)	x		20 metres
Presence of habitat trees (holes, large trees etc.)	x		Few
Presence of exfoliating bark	x		-
Presence of feed trees (fruiting, seed, species etc.)	x		<i>Eucalyptus</i> spp. <i>Melaleuca</i> spp., <i>Corymbia</i> spp.
Presence of weeds (cover, type etc.)	x		<i>Lantana camara</i>
Presence of water bodies (Type, cover etc.)	x		Ephemera drainage line with standing pools
Presence of major disturbance		x	-



Habitat Assessment 2, Transect 2	Yes	No	Comments
<b>GPS: Lat 28.1684 Long 153.4575</b>			
Fire history (years, scars, severity etc.)		x	-
Presence of leaf litter (% cover, average depth)	x		60% cover, 30 mm deep
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)	x		Numerous
Presence of arboreal termite mounds	x		-
Presence of terrestrial termite mounds	x		-
Groundcover vegetation (density, type, condition)	x		40% cover, Ferns, <i>Gahnia</i> sp., <i>Smilax</i> sp.
Understory vegetation (density, type, condition)	x		30%, regrowth of larger tree species, <i>Lantana camara</i>
Canopy cover (%)	x		60%,
Canopy tree height (max)	x		30 metres
Median tree height (canopy)	x		25 metres
Presence of habitat trees (holes, large trees etc.)	x		Numerous
Presence of exfoliating bark	x		-
Presence of feed trees (fruiting, seed, species etc.)	x		<i>Eucalyptus</i> spp., <i>Corymbia</i> spp., <i>Acacia</i> spp.
Presence of weeds (cover, type etc.)	x		<i>Lantana camara</i> . Camphor laurel, <i>Cassia</i> , introduced grasses
Presence of water bodies (Type, cover etc.)		x	-
Presence of major disturbance	x		Tracks, cattle, erosion



Habitat Assessment 3, Transect 3	Yes	No	Comments
<b>GPS: Lat 28.1733 Long 153.4565</b>			
Fire history (years, scars, severity etc.)	x		>5yrs
Presence of leaf litter (% cover, average depth)	x		30% cover, 30 mm deep
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)	x		Few
Presence of arboreal termite mounds	x		-
Presence of terrestrial termite mounds		x	-
Groundcover vegetation (density, type, condition)	x		70% grass
Understory vegetation (density, type, condition)	x		40%, regrowth, <i>Lantana camara</i> , various vines
Canopy cover (%)	x		60%,
Canopy tree height (max)	x		25 metres
Median tree height (canopy)	x		20 metres
Presence of habitat trees (holes, large trees etc.)	x		Numerous
Presence of exfoliating bark	x		-
Presence of feed trees (fruiting, seed, species etc.)	x		<i>Eucalyptus</i> spp., <i>Corymbia</i> spp.
Presence of weeds (cover, type etc.)	x		<i>Lantana camara</i> , <i>Solanum</i> sp., vines, grasses
Presence of water bodies (Type, cover etc.)		x	-
Presence of major disturbance	x		Previous clearing, cattle, weeds, erosion



Habitat Assessment 4, Transect 4	Yes	No	Comments
<b>GPS: Lat 28.1668 Long 153.4603</b>			
Fire history (years, scars, severity etc.)		x	>5yrs
Presence of leaf litter (% cover, average depth)	x		10% cover, 30 mm deep
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)	x		Few
Presence of arboreal termite mounds		x	-
Presence of terrestrial termite mounds	x		-
Groundcover vegetation (density, type, condition)	x		90% grasses and herbs
Understorey vegetation (density, type, condition)	x		20% <i>Lantana camara</i> , <i>Solanum</i> sp.
Canopy cover (%)	x		20%,
Canopy tree height (max)	x		15 metres
Median tree height (canopy)	x		10 metres
Presence of habitat trees (holes, large trees etc.)	x		Few
Presence of exfoliating bark		x	-
Presence of feed trees (fruiting, seed, species etc.)	x		<i>Eucalyptus</i> spp., <i>Corymbia</i> spp., <i>Lophostemon confertus</i> , Camphor laurel
Presence of weeds (cover, type etc.)	x		<i>Lantana camara</i> , <i>Solanum</i> sp., herbs, grasses
Presence of water bodies (Type, cover etc.)	x		Adjacent to three dams
Presence of major disturbance	x		Previous clearing, cattle, weeds, erosion



Habitat Assessment 5, Transect 5	Yes	No	Comments
<b>GPS: Lat 28.1648 Long 153.4614</b>			
Fire history (years, scars, severity etc.)		x	>5yrs
Presence of leaf litter (% cover, average depth)	x		10% cover, 10 mm deep
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)	x		Few
Presence of arboreal termite mounds		x	-
Presence of terrestrial termite mounds		x	-
Groundcover vegetation (density, type, condition)	x		90% grasses and herbs
Understory vegetation (density, type, condition)	x		10%
Canopy cover (%)	x		10%,
Canopy tree height (max)	x		25 metres
Median tree height (canopy)	x		15 metres
Presence of habitat trees (holes, large trees etc.)	x		Few
Presence of exfoliating bark	x		-
Presence of feed trees (fruiting, seed, species etc.)	x		<i>Eucalyptus</i> spp., <i>Ficus</i> spp. Mangroves, <i>Melaleuca</i> sp.
Presence of weeds (cover, type etc.)	x		Grasses
Presence of water bodies (Type, cover etc.)	x		Tidal creek
Presence of major disturbance	x		Previous clearing, cattle, weeds, erosion



Habitat Assessment 6, Transect 6	Yes	No	Comments
<b>GPS: Lat 28.1631 Long 153.4643</b>			
Fire history (years, scars, severity etc.)		x	>5yrs
Presence of leaf litter (% cover, average depth)	x		50% cover pine tree needles, 20 mm deep
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)		x	-
Presence of arboreal termite mounds		x	-
Presence of terrestrial termite mounds	x		-
Groundcover vegetation (density, type, condition)	x		50%, herbs ferns
Understory vegetation (density, type, condition)	x		60%, hibiscus
Canopy cover (%)	x		50% pine trees
Canopy tree height (max)	x		15 metres
Median tree height (canopy)	x		10 metres
Presence of habitat trees (holes, large trees etc.)		x	-
Presence of exfoliating bark		x	-
Presence of feed trees (fruiting, seed, species etc.)		x	-
Presence of weeds (cover, type etc.)	x		Pine trees, herbs, <i>Cassia</i> sp., <i>Lantana camara</i>
Presence of water bodies (Type, cover etc.)		x	-
Presence of major disturbance	x		Pine trees, cattle, weeds



Habitat Assessment 7	Yes	No	Comments
<b>GPS: Lat 28.1669 Long 153.4559</b>			
Fire history (years, scars, severity etc.)		x	>5yrs
Presence of leaf litter (% cover, average depth)		x	-
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)		x	-
Presence of arboreal termite mounds		x	-
Presence of terrestrial termite mounds		x	-
Groundcover vegetation (density, type, condition)	x		100%, grasses, herbs, pasture
Understory vegetation (density, type, condition)	x		-
Canopy cover (%)		x	-
Canopy tree height (max)		x	-
Median tree height (canopy)		x	-
Presence of habitat trees (holes, large trees etc.)		x	-
Presence of exfoliating bark		x	-
Presence of feed trees (fruiting, seed, species etc.)		x	-
Presence of weeds (cover, type etc.)	x		Grasses and herbs
Presence of water bodies (Type, cover etc.)	x		Drains with sedges and mangroves nearby
Presence of major disturbance	x		Previous clearing, cattle, weeds



Habitat Assessment 8	Yes	No	Comments
<b>GPS: Lat 28.1656 Long 153.4549</b>			
Fire history (years, scars, severity etc.)		x	-
Presence of leaf litter (% cover, average depth)	x		10%, recent flooding
Presence of rocky areas (size, cover etc.)		x	-
Presence of hollow logs (size)	x		Few
Presence of arboreal termite mounds		x	-
Presence of terrestrial termite mounds		x	-
Groundcover vegetation (density, type, condition)	x		10%, grasses, herbs
Understory vegetation (density, type, condition)	x		10% regrowth of large tree species
Canopy cover (%)	x		90%
Canopy tree height (max)	x		30 metres
Median tree height (canopy)	x		20 metres
Presence of habitat trees (holes, large trees etc.)		x	-
Presence of exfoliating bark		x	-
Presence of feed trees (fruiting, seed, species etc.)		x	<i>Ficus</i> spp. Camphor laural, rainforest species
Presence of weeds (cover, type etc.)	x		Camphor laurel
Presence of water bodies (Type, cover etc.)	x		Creekline
Presence of major disturbance	x		Previous clearing, cattle, weeds, flooding





## Attachment 11: Aquatic Habitat Assessments

**Site code: R1**    **Location: Unnamed tidal channel**    **-28.16214, 153.46382 (GDA 2020)**    **Date: 11/12/2023**

Stream order: **4**                      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): **Moderate**

State waterway mapping (*Water Act*): **Unmapped**

MNES / MSES wetland or watercourse: **HEV wetland**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **Tidal**              Mean depth: **vary, some subtidal**

Bankfull width: **22m**                      Bankfull height: **4.5m**

Channel width: **Tidal**                      Flow level: **Tidal**

Bed stability: **Stable**                      Bank shape: **Concave**

Bank stability: **Stable**                      Bank soils: **Clays**

#### Meso Habitat:

Shallow pool (<50cm): **20%**              Deep pool (>50cm): **80%**

Run: -    Riffle: -

Dry: -

#### Micro habitat attributes:

Detritus / leaf litter: **S**                      Sticks (<2cm diam): **S**

Branches (<15cm diam): **S**                      Logs (>15cm diam): **S**

Trailing bank veg: **N**                              Overhanging veg: **N**

Undercut banks: **L**                              Root overhang: **L**

Macrophytes (emergent): **N**                      Algae (periphytic): **N**

Macrophytes (submerged): **N**                      Algae (filamentous): **N**

Macrophytes (floating): **N**                      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **100%**                              Sands (0.5–2mm): -

Gravel (2-4mm): -                              Pebble (4-64mm): -

Cobble (64-256mm): -                              Boulders (>256mm): -

Bedrock: -    Substrate anoxia: -

#### WATER QUALITY

Time sampled: **12:30**                              Habitat sampled: **Pool**

Temperature: **28.8 °C**                              Conductivity: **47,905 µS/cm**

Dissolved oxygen: **70.1 %**                              pH: **6.8**

Dissolved oxygen: **4.6 mg/L**                              Turbidity: **20.5 NTU**

Water colour: **Opaque**                              Water surface: **Normal**

DO influences: -

#### RIPARIAN VEGETATION

Riparian width (DLB): **10m**                              Riparian width (DRB): **10m**

Riparian height: **13m**                              Stream cover: **50%**

Dominant layer: **Trees >10m**                              Bare ground: **50%**

Grass / ground cover: **40%**                              Shrubs: **10%**

Trees (<10m): **5%**                              Trees (>10m): **80%**

Key species:

**Grey mangrove (*Avicennia marina subsp. australasica*)**  
**occasional long-style stilt mangrove (*Rhizophora stylosa*)**

Notes:

**Sub-tidal habitat present; banks comprise clays with sections of cobbles, pebbles and boulders; High abundance crab burrows present; regular inundation; some structural habitat; some anthropogenic disturbance**

**Fisheries value assessment score: Very good**

**Overall aquatic value: High**



Upstream



Downstream Left Bank (DLB)



Downstream



Downstream Right Bank (DRB)

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



**Site code: R3**    **Location: Unnamed tidal channel**    **-28.16531, 153.46048 (GDA 2020)**    **Date: 12/12/2023**

Stream order: **4**                      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): **Moderate**

State waterway mapping (*Water Act*): **Unmapped**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **Tidal**                      Mean depth: **vary, some subtidal**

Bankfull width: **15.5m**                      Bankfull height: **2.5m**

Channel width: **Tidal**                      Flow level: **Tidal**

Bed stability: **Stable**                      Bank shape: **Stepped**

Bank stability: **Stable**                      Bank soils: **Clays**

#### Meso Habitat:

Shallow pool (<50cm): **50%**                      Deep pool (>50cm): **50%**

Run: -                      Riffle: -

Dry: -

#### Micro habitat attributes:

Detritus / leaf litter: **S**                      Sticks (<2cm diam): **L**

Branches (<15cm diam): **L**                      Logs (>15cm diam): **L**

Trailing bank veg: **N**                      Overhanging veg: **N**

Undercut banks: **N**                      Root overhang: **N**

Macrophytes (emergent): **L**                      Algae (periphytic): **N**

Macrophytes (submerged): **N**                      Algae (filamentous): **N**

Macrophytes (floating): **N**                      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **100%**                      Sands (0.5–2mm): -

Gravel (2-4mm): -                      Pebble (4-64mm): -

Cobble (64-256mm): -                      Boulders (>256mm): -

Bedrock: -                      Substrate anoxia: -

#### WATER QUALITY

Time sampled: **10:45**                      Habitat sampled: **Pool**

Temperature: **26.1 °C**                      Conductivity: **44,653 µS/cm**

Dissolved oxygen: **27.1 %**                      pH: **6.6**

Dissolved oxygen: **1.9 mg/L**                      Turbidity: **10.5 NTU**

Water colour: **Opaque**                      Water surface: **Normal**

DO influences: **acid sulphate soils**

#### RIPARIAN VEGETATION

Riparian width (DLB): **10m**                      Riparian width (DRB): **10m**

Riparian height: **14m**                      Stream cover: **40%**

Dominant layer: **Trees <10m**                      Bare ground: **25%**

Grass / ground cover: **50%**                      Shrubs: **25%**

Trees (<10m): **50%**                      Trees (>10m): **30%**

Key species:

***Avicennia marina subsp. australasica*, *Casuarina glauca* regrowth, and jointed rush (*Juncus kraussii*)**

Notes:

**some fauna / crab burrows; some structural habitat; regular inundation; juvenile schooling mullet observed**

**Fisheries value assessment score: Good**

**Overall aquatic value: High**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



Upstream



Downstream Left Bank (DLB)



Downstream



Downstream Right Bank (DRB)

**Site code: R4**    **Location: Unnamed tidal channel**    **-28.16566, 153.45769 (GDA 2020)**    **Date: 12/12/2023**

Stream order: **4**                      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): **Moderate**

State waterway mapping (*Water Act*): **Unmapped**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: <b>Tidal</b>	Mean depth: <b>Tidal</b>
Bankfull width: <b>11.4m</b>	Bankfull height: <b>2.5m</b>
Channel width: <b>Tidal</b>	Flow level: <b>Tidal</b>
Bed stability: <b>Stable</b>	Bank shape: <b>Convex</b>
Bank stability: <b>Stable</b>	Bank soils: <b>Clays</b>

#### Meso Habitat:

Shallow pool (<50cm): **100%**      Deep pool (>50cm): **-**

Run: **-**                                      Riffle: **-**

Dry: **-**

#### Micro habitat attributes:

Detritus / leaf litter: <b>S</b>	Sticks (<2cm diam): <b>S</b>
Branches (<15cm diam): <b>N</b>	Logs (>15cm diam): <b>N</b>
Trailing bank veg: <b>N</b>	Overhanging veg: <b>N</b>
Undercut banks: <b>N</b>	Root overhang: <b>N</b>
Macrophytes (emergent): <b>N</b>	Algae (periphytic): <b>N</b>
Macrophytes (submerged): <b>N</b>	Algae (filamentous): <b>N</b>
Macrophytes (floating): <b>N</b>	Algae (charophytes): <b>N</b>

#### Stream substrate composition:

Clay / silts: <b>100%</b>	Sands (0.5–2mm): <b>-</b>
Gravel (2-4mm): <b>-</b>	Pebble (4-64mm): <b>-</b>
Cobble (64-256mm): <b>-</b>	Boulders (>256mm): <b>-</b>
Bedrock: <b>-</b>	Substrate anoxia: <b>-</b>

#### WATER QUALITY

Time sampled: <b>06:40</b>	Habitat sampled: <b>Pool</b>
Temperature: <b>25.5°C</b>	Conductivity: <b>40,262 µS/cm</b>
Dissolved oxygen: <b>5.0 %</b>	pH: <b>6.4</b>
Dissolved oxygen: <b>0.3 mg/L</b>	Turbidity: <b>12.2 NTU</b>
Water colour: <b>Opaque</b>	Water surface: <b>Organic sheen</b>

DO influences: **acid sulphate soils**

#### RIPARIAN VEGETATION

Riparian width (DLB): <b>5m</b>	Riparian width (DRB): <b>5m</b>
Riparian height: <b>14m</b>	Stream cover: <b>30%</b>
Dominant layer: <b>Trees &lt;10m</b>	Bare ground: <b>30%</b>
Grass / ground cover: <b>50%</b>	Shrubs: <b>20%</b>
Trees (<10m): <b>60%</b>	Trees (>10m): <b>5%</b>

Key species:

***Avicennia marina subsp. Australasica* regrowth, *Casuarina glauca* regrowth**

Notes:

**Culvert restricting tidal flow**  
**Low abundance of fauna / crab burrows; some structural habitat; regular inundation; some disturbance**

**Fisheries value assessment score: Good**

**Overall aquatic value: Moderate**



**Upstream**



**Downstream Left Bank (DLB)**



**Downstream**



**Downstream Right Bank (DRB)**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



**Site code: R6**    **Location: unnamed watercourse**    **-28.16976 153.45593 (GDA 2020)**    **Date: 11/12/2023**

Stream order: **4**                      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): **Moderate**

State waterway mapping (*Water Act*): **Mapped watercourse**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: <b>4.0m</b>	Mean depth: <b>0.9m</b>
Bankfull width: <b>35m</b>	Bankfull height: <b>4.0m</b>
Channel width: <b>4.0m</b>	Flow level: <b>No flow</b>
Bed stability: <b>Stable</b>	Bank shape: <b>Undercut, convex</b>
Bank stability: <b>Stable</b>	Bank soils: <b>Clays</b>

#### Meso Habitat:

Shallow pool (<50cm): -	Deep pool (>50cm): <b>100%</b>
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Run: -	Riffle: -
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Dry: -

#### Micro habitat attributes:

Detritus / leaf litter: <b>E</b>	Sticks (<2cm diam): <b>E</b>
Branches (<15cm diam): <b>M</b>	Logs (>15cm diam): <b>M</b>
Trailing bank veg: <b>S</b>	Overhanging veg: <b>N</b>
Undercut banks: <b>S</b>	Root overhang: <b>L</b>
Macrophytes (emergent): <b>L</b>	Algae (periphytic): <b>S</b>
Macrophytes (submerged): <b>L</b>	Algae (filamentous): <b>S</b>
Macrophytes (floating): <b>L</b>	Algae (charophytes): <b>N</b>

#### Stream substrate composition:

Clay / silts: <b>10%</b>	Sands (0.5–2mm): <b>25%</b>
Gravel (2-4mm): <b>40%</b>	Pebble (4-64mm): <b>20%</b>
Cobble (64-256mm): <b>5%</b>	Boulders (>256mm): -
Bedrock: -	Substrate anoxia: <b>Anoxic</b>

#### WATER QUALITY

Time sampled: <b>15:45</b>	Habitat sampled: <b>Pool</b>
Temperature: <b>22.7 °C</b>	Conductivity: <b>286 µS/cm</b>
Dissolved oxygen: <b>4.1 %</b>	pH: <b>6.2</b>
Dissolved oxygen: <b>0.3 mg/L</b>	Turbidity: <b>NTU</b>
Water colour: <b>Tanin</b>	Water surface: <b>scum, o sheen</b>
DO influences: <b>shading, high organic matter</b>	

#### RIPARIAN VEGETATION

Riparian width (DLB): <b>10m</b>	Riparian width (DRB): <b>15m</b>
Riparian height: <b>22m</b>	Stream cover: <b>90%</b>
Dominant layer: <b>Trees &gt;10m</b>	Bare ground: <b>40%</b>
Grass / ground cover: <b>60%</b>	Shrubs: <b>5%</b>
Trees (<10m): <b>80%</b>	Trees (>10m): <b>5%</b>

Key species:

**Hoop pine, camphor laurel, Palm sp. Rainforest spp.**

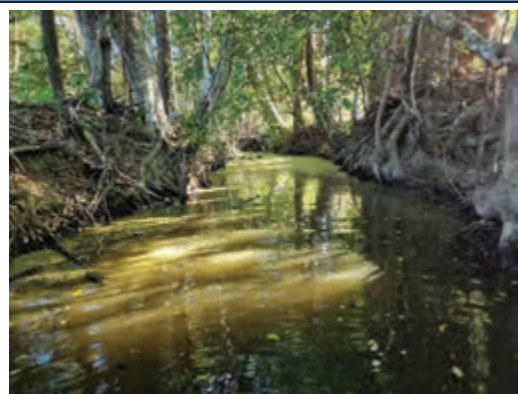
Notes:

**Semi-permanent aquatic refugia**

**AUSRIVAS Bio-assessment score: Good**

**Overall aquatic value: Moderate**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



**Upstream**



**Downstream Left Bank (DLB)**



**Downstream**



**Downstream Right Bank (DRB)**



**Site code: R8**    **Location: unnamed watercourse**    **-28.16817, 153.45628 (GDA 2020)**    **Date: 11/12/2023**

Stream order: **4**                      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): **Moderate**

State waterway mapping (*Water Act*): **Mapped watercourse**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **0.5m**                      Mean depth: **0.2m**

Bankfull width: **? floodplain**                      Bankfull height: **? floodplain**

Channel width: **?**                      Flow level: **No flow**

Bed stability: **Stable**                      Bank shape: **Concave**

Bank stability: **Stable**                      Bank soils: **Clays / silts**

#### Meso Habitat:

Shallow pool (<50cm): **100%**                      Deep pool (>50cm): **-**

Run: **-**                      Riffle: **-**

Dry: **-**

#### Micro habitat attributes:

Detritus / leaf litter: **E**                      Sticks (<2cm diam): **N**

Branches (<15cm diam): **N**                      Logs (>15cm diam): **N**

Trailing bank veg: **E**                      Overhanging veg: **N**

Undercut banks: **N**                      Root overhang: **N**

Macrophytes (emergent): **E**                      Algae (periphytic): **N**

Macrophytes (submerged): **N**                      Algae (filamentous): **N**

Macrophytes (floating): **N**                      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **20%**                      Sands (0.5–2mm): **30%**

Gravel (2-4mm): **40%**                      Pebble (4-64mm): **10%**

Cobble (64-256mm): **-**                      Boulders (>256mm): **-**

Bedrock: **-**                      Substrate anoxia: **Slightly anoxic**

#### WATER QUALITY

Time sampled: **07:50**                      Habitat sampled: **shallow pool**

Temperature: **21.6 °C**                      Conductivity: **309 µS/cm**

Dissolved oxygen: **20.3 %**                      pH: **3.5**

Dissolved oxygen: **mg/L**                      Turbidity: **98.3 NTU**

Water colour: **Clear**                      Water surface: **Normal**

DO influences: **acid sulphate soils**

#### RIPARIAN VEGETATION

Riparian width (DLB): **0m**                      Riparian width (DRB): **0m**

Riparian height: **1.5m**                      Stream cover: **-**

Dominant layer: **Grasses**                      Bare ground: **-**

Grass / ground cover: **100%**                      Shrubs: **-**

Trees (<10m): **-**                      Trees (>10m): **-**

Key species:

**Grasses, persicaria**

Notes:

**AUSRIVAS rating higher than actual conditions, channel almost completely absent due to removal of riparian vegetation, cattle**

**Turbidity likely lower – disturbed when sampling**

**AUSRIVAS Bio-assessment score: Fair**

**Overall aquatic value: Moderate**



**Upstream**



**Downstream Left Bank (DLB)**



**Downstream**



**Downstream Right Bank (DRB)**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)

**Site code: L1**    **Location: on drainage feature**    **-28.16783, 153.46142 (GDA 2020)**    **Date: 11/12/2023**

Stream order: -                      Assessment reach: **70m**

Fish passage value (*Fisheries Act*): -

State waterway mapping (*Water Act*): -

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width:                      Mean depth:

Bankfull width:                          Bankfull height:

Channel width:                          Flow level:

Bed stability:                          Bank shape:

Bank stability:                          Bank soils:

#### Meso Habitat:

Shallow pool (<50cm): -                      Deep pool (>50cm): **100%**

Run: -    Riffle: -

Dry: -

#### Micro habitat attributes:

Detritus / leaf litter: **?**                      Sticks (<2cm diam): **?**

Branches (<15cm diam): **?**                      Logs (>15cm diam): **?**

Trailing bank veg: **N**                      Overhanging veg: **N**

Undercut banks: **N**                      Root overhang: **N**

Macrophytes (emergent): **M**                      Algae (periphytic): **L**

Macrophytes (submerged): **S**                      Algae (filamentous): **L**

Macrophytes (floating): **M**                      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **100%**                      Sands (0.5–2mm): -

Gravel (2-4mm): -                      Pebble (4-64mm): -

Cobble (64-256mm): -                      Boulders (>256mm): -

Bedrock: -                                      Substrate anoxia:

#### WATER QUALITY

Time sampled: **13:05**                      Habitat sampled: **pool**

Temperature: **31.8 °C**                      Conductivity: **128 µS/cm**

Dissolved oxygen: **107.2 %**                      pH: **6.8**

Dissolved oxygen: **7.9 mg/L**                      Turbidity: **4.4 NTU**

Water colour: **Clear**                      Water surface: **Normal**

DO influences: **aquatic macrophytes**

#### RIPARIAN VEGETATION

Riparian width (DLB):                      Riparian width (DRB):

Riparian height:                          Stream cover:

Dominant layer:                          Bare ground:

Grass / ground cover:                      Shrubs:

Trees (<10m):                          Trees (>10m):

Key species:

Notes:

**AUSRIVAS Bio-assessment score: n/a**

**Overall aquatic value: n/a**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



**Upstream**

**Downstream Left Bank (DLB)**



**Downstream**

**Downstream Right Bank (DRB)**

**Site code: D1**    **Location: drainage feature**    **-28.16682, 153.45954 (GDA 2020)**    **Date: 12/12/2023**

Stream order: **1**                      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): -

State waterway mapping (*Water Act*): **Mapped drainage feature**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **0m**                      Mean depth: **0m**

Bankfull width: **5 to 10m**                      Bankfull height: **1.5m**

Channel width: **0.5m**                      Flow level: **Dry**

Bed stability: **Stable**                      Bank shape: **Convex**

Bank stability: **Stable**                      Bank soils: **Clays**

#### Meso Habitat:

Shallow pool (<50cm): -                      Deep pool (>50cm): -

Run: -                      Riffle: -

Dry: **100%**

#### Micro habitat attributes:

Detritus / leaf litter: **N**                      Sticks (<2cm diam): **N**

Branches (<15cm diam): **N**                      Logs (>15cm diam): **N**

Trailing bank veg: **E**                      Overhanging veg: **N**

Undercut banks: **N**                      Root overhang: **N**

Macrophytes (emergent): **L**                      Algae (periphytic): **N**

Macrophytes (submerged): **N**                      Algae (filamentous): **N**

Macrophytes (floating): **N**                      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts:                      Sands (0.5–2mm):

Gravel (2-4mm):                      Pebble (4-64mm):

Cobble (64-256mm):                      Boulders (>256mm):

Bedrock:                      Substrate anoxia:

#### WATER QUALITY

Time sampled: **DRY**                      Habitat sampled:

Temperature: **°C**                      Conductivity: **µS/cm**

Dissolved oxygen: %                      pH:

Dissolved oxygen: **mg/L**                      Turbidity: **NTU**

Water colour:                      Water surface:

DO influences:

#### RIPARIAN VEGETATION

Riparian width (DLB): **0m**                      Riparian width (DRB): **2m**

Riparian height: **12m**                      Stream cover: **0**

Dominant layer: **Grasses**                      Bare ground: **N**

Grass / ground cover: **100%**                      Shrubs: **N**

Trees (<10m): **N**                      Trees (>10m): **5%**

Key species:

**Camphor laurel, grasses**

Notes:

**AUSRIVAS Bio-assessment score: Fair**

**Overall aquatic value: Low**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



Upstream



Downstream Left Bank (DLB)



Downstream



Downstream Right Bank (DRB)

**Site code: D2**      **Location: drainage feature**      **-28.16871, 153.45473 (GDA 2020)**      **Date: 12/12/2023**

Stream order: **1**      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): -

State waterway mapping (*Water Act*): **Unmapped**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **0m**      Mean depth: **0m**

Bankfull width: **4.0m**      Bankfull height: **1.0m**

Channel width: **1.5m**      Flow level: **Dry**

Bed stability: **Stable**      Bank shape: **Convex, artificial**

Bank stability: **Stable**      Bank soils: **Clays**

#### Meso Habitat:

Shallow pool (<50cm): -      Deep pool (>50cm): -

Run: -      Riffle: -

Dry: **100%**

#### Micro habitat attributes:

Detritus / leaf litter: **L**      Sticks (<2cm diam): **N**

Branches (<15cm diam): **N**      Logs (>15cm diam): **N**

Trailing bank veg: **E**      Overhanging veg: **N**

Undercut banks: **N**      Root overhang: **N**

Macrophytes (emergent): **L**      Algae (periphytic): **N**

Macrophytes (submerged): **N**      Algae (filamentous): **N**

Macrophytes (floating): **N**      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **100%**      Sands (0.5–2mm): -

Gravel (2-4mm): -      Pebble (4-64mm): -

Cobble (64-256mm): -      Boulders (>256mm): -

Bedrock: -      Substrate anoxia: -

#### WATER QUALITY

Time sampled: **DRY**      Habitat sampled:

Temperature: **°C**      Conductivity: **µS/cm**

Dissolved oxygen: %      pH:

Dissolved oxygen: **mg/L**      Turbidity: **NTU**

Water colour:      Water surface:

DO influences:

#### RIPARIAN VEGETATION

Riparian width (DLB): **1m**      Riparian width (DRB): **0m**

Riparian height: **14m**      Stream cover: **0m**

Dominant layer: **Grasses**      Bare ground: **N**

Grass / ground cover:      Shrubs: **N**

Trees (<10m): **N**      Trees (>10m): **5%**

Key species:

**Eucalyptus robusta, grasses**

Notes:

**Artificial drainage canal**

**AUSRIVAS Bio-assessment score: Fair**

**Overall aquatic value: Low**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



Upstream



Downstream Left Bank (DLB)



Downstream



Downstream Right Bank (DRB)

**Site code: D3**      **Location: drainage feature**      **-28.16602, 153.45455 (GDA 2020)**      **Date: 12/12/2023**

Stream order: **1**      Assessment reach: **100m**

Fish passage value (*Fisheries Act*): -

State waterway mapping (*Water Act*): **Unmapped**

MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **1.0m**      Mean depth: **0.2m**

Bankfull width: **4.0m**      Bankfull height: **1.2m**

Channel width: **1.5m**      Flow level: **No flow**

Bed stability: **Stable**      Bank shape: **Convex, artificial**

Bank stability: **Stable**      Bank soils: **Clays**

#### Meso Habitat:

Shallow pool (<50cm): **90%**      Deep pool (>50cm): -

Run: -      Riffle: -

Dry: **10%**

#### Micro habitat attributes:

Detritus / leaf litter: **L**      Sticks (<2cm diam): **L**

Branches (<15cm diam): **N**      Logs (>15cm diam): **N**

Trailing bank veg: **N**      Overhanging veg: **N**

Undercut banks: **N**      Root overhang: **N**

Macrophytes (emergent): **E**      Algae (periphytic): **S**

Macrophytes (submerged): **N**      Algae (filamentous): **N**

Macrophytes (floating): **N**      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **100%**      Sands (0.5–2mm): -

Gravel (2-4mm): -      Pebble (4-64mm): -

Cobble (64-256mm): -      Boulders (>256mm): -

Bedrock: -      Substrate anoxia: **slightly anoxic**

#### WATER QUALITY

Time sampled: **08:20**      Habitat sampled: **Shallow pool**

Temperature: **24.2 °C**      Conductivity: **30,776µS/cm**

Dissolved oxygen: **14.0 %**      pH: **5.9**

Dissolved oxygen: **mg/L**      Turbidity: **97.2 NTU**

Water colour: **Opaque**      Water surface: **Organic sheen**

DO influences: **acid sulphate soils**

#### RIPARIAN VEGETATION

Riparian width (DLB): **1m**      Riparian width (DRB): **1m**

Riparian height: **0.5m**      Stream cover: **5%**

Dominant layer: **Shrubs**      Bare ground: **N**

Grass / ground cover: **50%**      Shrubs: **50%**

Trees (<10m): **5%**      Trees (>10m): **N**

Key species:

**Jointed rush (*Juncus kraussii*)**

Notes:

**Artificial drainage canal, tidally influenced, poorly flushed  
Likely iron floc – Acid Sulphate Soils**

**Fisheries value assessment score: Poor**

**Overall aquatic value: Low**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



**Upstream**



**Downstream Left Bank (DLB)**



**Downstream**



**Downstream Right Bank (DRB)**

**Site code: D4**      **Location: drainage feature**      **-28.16783, 153.46141 (GDA 2020)**      **Date: 12/12/2023**

Stream order: **2**      Assessment reach: **100m**  
 Fish passage value (*Fisheries Act*): -  
 State waterway mapping (*Water Act*): **Mapped drainage feature**  
 MNES / MSES wetland or watercourse: **No**

#### PHYSICAL ATTRIBUTES IN ASSESSMENT REACH

Mean wetted width: **0m**      Mean depth: **0m**  
 Bankfull width: **6m**      Bankfull height: **1.5m**  
 Channel width: **0.8m**      Flow level: **Dry**  
 Bed stability: **Stable**      Bank shape: **Convex**  
 Bank stability: **Stable**      Bank soils: **Silts / clays**

#### Meso Habitat:

Shallow pool (<50cm): -      Deep pool (>50cm): -  
 Run: -      Riffle: -  
 Dry: **100%**

#### Micro habitat attributes:

Detritus / leaf litter: **S**      Sticks (<2cm diam): **S**  
 Branches (<15cm diam): **N**      Logs (>15cm diam): **N**  
 Trailing bank veg: **M**      Overhanging veg: **N**  
 Undercut banks: **N**      Root overhang: **L**  
 Macrophytes (emergent): **L**      Algae (periphytic): **N**  
 Macrophytes (submerged): **N**      Algae (filamentous): **N**  
 Macrophytes (floating): **N**      Algae (charophytes): **N**

#### Stream substrate composition:

Clay / silts: **100%**      Sands (0.5–2mm): -  
 Gravel (2-4mm): -      Pebble (4-64mm): -  
 Cobble (64-256mm): -      Boulders (>256mm): -  
 Bedrock: -      Substrate anoxia: -

#### WATER QUALITY

Time sampled: **DRY**      Habitat sampled:  
 Temperature: **°C**      Conductivity: **µS/cm**  
 Dissolved oxygen: %      pH:  
 Dissolved oxygen: **mg/L**      Turbidity: **NTU**  
 Water colour:      Water surface:  
 DO influences:

#### RIPARIAN VEGETATION

Riparian width (DLB): **2m**      Riparian width (DRB): **15m**  
 Riparian height: **18m**      Stream cover: **60%**  
 Dominant layer: **Trees >10m**      Bare ground: **L**  
 Grass / ground cover: **E**      Shrubs: **S**  
 Trees (<10m): **S**      Trees (>10m): **M**

Key species:  
**Sandpaper fig, Stringybark, Ironbark, Lantana**

#### Notes:

**Some crayfish bioturbation in banks**

**AUSRIVAS Bio-assessment score: Fair**

**Overall aquatic value: Low**

Key: None (N), Little 1-10% (L), Some 10-50% (S), Moderate 50-75% (M), Extensive >75% (E)



**Upstream**



**Downstream Left Bank (DLB)**



**Downstream**



**Downstream Right Bank (DRB)**