

# **Ecological Assessment Report**

## 125 Myall Street, Cooroy

Prepared for Fabcot Pty Ltd

Prepared by:





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## Acronyms and Glossary

Term	Definition
ALA	Atlas of Living Australia
DESI	Department of Environment, Science and Innovation (QLD)
DOR	Department of Resources (QLD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cwth)
DSDILGP	State Development, Infrastructure, Local Government and Planning (QLD)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cwth)
EVNT	Endangered, vulnerable, near threatened
GTRE	Ground-truthed regional ecosystem
MNES	Matters of national environmental significance
MSES	Matters of state environmental significance
NC Act	Nature Conservation Act 1992 (Qld)
The 'Site'	Refers to the area within which development, over- and under-ground services, access tracks and other associated infrastructure may be located.
RE	Regional ecosystem
PMST	Protected matters search tool
Site boundary	The extent of the properties that the project is located within
SARA	State assessment and referral agency
SDAP	State development assessment provisions
SPRAT	Species profile and threats database
TEC	Threatened ecological community
VM Act	Vegetation Management Act 1999 (Qld)
WoNS	Weeds of National Significance



### I. Introduction

Green Tape Solutions was engaged by Fabcot Pty Ltd to prepare an ecological assessment (EA) report for a site located at 125 Myall Street, Cooroy (Lot 4 on SP248479) (the 'site').

This report has been prepared to form part of a development application to Noosa Shire Council for a mixed-use development including a shopping centre in the eastern portion of the site and a residential aged care facility (Site 1) in the western portion. The development has been designed to primarily utilise an existing cleared area in the western portion of the site; however, some removal of vegetation shall be required along the northern boundary and within the eastern portion of the site to facilitate the development.

This report identifies the ecological values associated with the site, including the potential presence of threatened species listed under Local, State and Commonwealth legislation, fauna and flora habitat and landscape connectivity values. This report also assesses potential impacts associated within the proposed development and where required, provides mitigation measures to ensure that the proposal complies with relevant environmental legislation.

### 1.1 Site Description

The site is located on a single lot comprising a total area of approximately 66,588 m² (6.6588 ha) within the Noosa Shire Council (NSC) local government area. The site is located about 1 km to the south of the Cooroy town centre. The site is bounded by Myall Road to the north, Ferrells Road to the west and the Bruce Highway (M1) and associated off-ramp for Cooroy exit to the east and south. Outside of road reserve, current land use within the immediate surrounding area predominantly comprises low to medium density residential development to the west and the Cooroy Golf Course on the northern side of Myall Street, which is the subject of a current development application for a residential development lodged by Gemlife.

A large portion of the site has been historically cleared of native vegetation, with a contiguous small patch of native vegetation associated with a watercourse in the south-eastern corner and planted vegetation within road reserve located along the northern boundary. Native and planted canopy vegetation within the site is affected by the Biodiversity, Waterways and Wetlands overlay and is within the Environmental Management and Conservation zone under the Noosa Plan 2020. The development proposes the retention of most of this vegetation.

The cleared portion of the site had been utilised as a laydown and stockpiling area from 2015-2016; however, it has been vacant since this time and has now reverted to grassland that is regularly maintained by mowing/slashing.

The existing site currently discharges stormwater to an open channel in the eastern portion of the site (within the Environmental Management and Conservative Zone) and the proposed lawful point of discharge for the development shall continue to be this channel. The extent and profile of the channel shall remain undisturbed as part of the development works.



A more detailed description of the vegetation communities within and surrounding the site is provided in **Section 3.1.2** 

Table 1 provides property details of the site and Figure 2 depicts the location of the site.

**Table 1: Property Information** 

Address	125 Myall Street, Cooroy
Lot / Plan	Lot 4 on SP248479
Area (m²)	66 588.14 m² (ca. 6.66 ha)
LGA	Noosa Shire Council
Local Plan	ZM-10 Cooroy
Zone	Community Facilities Environmental Management and Conservation

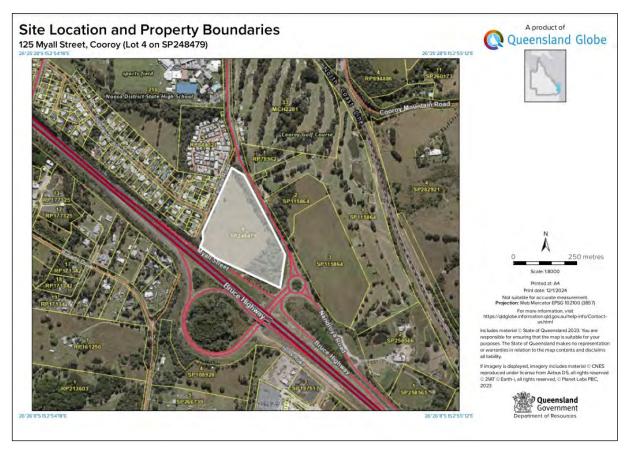


Figure 1: Site Location and Property Boundaries (Source: Queensland Globe, 2023)



### 1.2 Proposed Development

The proposed development comprises a shopping centre precinct and aged care facility. The development will include a supermarket (Woolworths Cooroy) and an additional 830 m² of shop frontage and car parking. The development will also involve the construction of an age care facility within the northern portion of the site. Access is proposed to be provided via a roundabout on Myall Street and secondary access off Ferrells Road.

The proposed development plan is provided in **Appendix 1.** 

### 1.3 Scope of Works

The scope of works for this report includes:

- A detailed desktop assessment, including review of relevant background, database and mapping information to identify applicable Local, State and Commonwealth government overlays/mapping triggers and potential constraints and development opportunities for the site.
- A site assessment to determine the extent and structural integrity of vegetation communities (including the presence of weed species) and fauna habitat values, and to identify and assess ecologically significant areas and features.
- Assessment of the site's conservation values with respect to its position within the local and broader landscape, including corridor linkages and riparian areas.
- A description of the ecological values (field survey results) of the site and confirmation of the likelihood of occurrence of flora and fauna species and vegetation communities protected under Local, State and Commonwealth legislation.
- Identification of statutory considerations relevant to ecological aspects of the proposed development and assessment of the proposed development against the relevant Local and State legislation (including State Development codes and local planning scheme provisions) with recommendations on how to meet the environmental overlay codes and protect environmental values.
- Evaluation of ecological constraints on the site and impacts and provision of management measures to mitigate such impacts.
- Preparation of maps relevant to the report, including vegetation clearing plan (tree survey).



### 2 Methodology

### 2.1 Desktop Assessment

A desktop assessment was undertaken prior to field investigations to review relevant environmental databases, technical reports, maps and legislation (Commonwealth, State and Local) to identify ecological values with the potential to occur within and surrounding the site. Recent and historical aerial imagery was also reviewed to assist with the verification of remnant vegetation. The results of the desktop assessment were used to inform the field survey design.

Searches undertaken as part of the desktop assessment were based on the site's central coordinates with a standard 10 km buffer or by lot and plan. The likelihood of occurrence of threatened flora species was further narrowed using a search radius of 2 km. The following resources were reviewed:

- Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) Protected Matters Search Tool (PMST), Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW), accessed 17<sup>th</sup> January 2024 (Appendix 2).
- Department of Environment, Sciences and Innovation (DESI) WildNet database (Wildlife Online) records, accessed 17<sup>th</sup> January 2024 (Appendix 3);
- Department of Resources (DOR) Vegetation Management Report, accessed 17<sup>th</sup> January 2024
   (Appendix 4) which includes the following:
  - Regulated vegetation management (RVM) map;
  - Vegetation management supporting map (VM Act Regional Ecosystems) including Essential Habitat;
  - Vegetation management pre-clear regional ecosystem map;
  - Vegetation management watercourse and drainage features map;
  - Protected plants flora survey trigger map (administered by the Department of Environment, Sciences and Innovation (DESI); and
  - Koala priority area (KPA) and Koala habitat area (KHA) (Koala Conservation Plan Map; administered by DES).
- Watercourse Identification Map under the Water Act 2000, accessed 17<sup>th</sup> January 2024 via Queensland Globe;
- DESI Biomaps online mapping portal (DES, 2020);
- Atlas of Living Australia (ALA) species search, accessed 17th January 2024 (ALA, 2014);
- Noosa Shire Council (NSC) Planning Scheme 2020 overlay maps, accessed 17<sup>th</sup> January 2024 (Appendix 5); and
- Aerial imagery (Queensland Globe / Google Earth Pro / ESRI).

### 2.2 Field Survey

An initial site assessment was conducted on 16<sup>th</sup> November 2022 to provide preliminary advice regarding suitable areas of access along Myall Street. A follow-up site visit was undertaken on 12<sup>th</sup>



December 2023 for a more detailed ecological and bushfire hazard assessment encompassing the entire site Both site assessments were conducted by ecologist experienced in conducting fauna and flora surveys within the Noosa and Sunshine Coast Region.

The assessment involved the following:

- Validation of desktop findings;
- Verifying the floristic structure and composition of vegetation communities present;
- Describing the fauna habitat present and recording any incidental fauna sightings;
- Searching for potentially occurring significant species (and associated habitat) as listed under the EPBC Act and/or Nature Conservation Act 1992 (NC Act);
- Identifying weed species and documenting vegetation disturbance;
- Assessment of the ecological values on site with respect to the mapped environmental values on the site.

### 2.2.1 Flora Species Survey

General baseline botanical surveys were undertaken to describe the vegetation communities, dominant flora species and their extent. Fauna habitat values and opportunistic sightings of fauna were also recorded. The survey was undertaken in accordance with quaternary survey methods described in Neldner *et al.* (Version 5.1) (2019) by compiling a species inventory and assigning relative dominance of each flora species within the dominant structural layer.

Threatened species searches were undertaken using the random meander technique described by Cropper (1993), which involved traversing areas of suitable habitat in a non-standardised manner. Where identified, samples from each threatened flora species were sent to the Queensland Herbarium to confirm identification.

### 2.2.2 Fauna Species and Habitat Survey

Fauna and habitat values were assessed at the same time as conducting the vegetation survey. The following characteristics were observed to determine fauna likely to be present on-site based on the type and quality of habitat present:

- Confirmation of habitat units and habitat structure including an analysis of habitat quality;
- Presence of koala food and habitat trees;
- Presence of hollow-bearing trees, their form and size;
- · Presence of scratches on tree trunks and scats of wildlife;
- Presence of hollow logs/debris and areas of dense leaf litter cover;
- · Level of disturbance (e.g. weed, litter); and,
- Habitat connectivity within the network.

No fauna trapping was undertaken for the site.



#### 2.2.3 Survey Limitations

The ability to detect plants and accurately identify them to species level can vary greatly with season, prevailing climatic conditions and the presence of reproductive material (e.g. flowers, fruit and seed capsules). The survey undertaken as part of this assessment only represents a 'snapshot' in time and therefore may not provide a true indication of plant presence at the site. For example, some cryptic flora species may only be detected during flowering periods that were not present during the current survey. Hence, this survey should not be regarded as conclusive evidence that certain protected plants do not occur at the site. However, every effort has been made to detect these species in their preferred habitat areas. Where required, we have assumed a precautionary approach, assuming a species is present unless good reasons exist to preclude its use of the site. Information on the ecology and flight paths (for bird and bat species), as well as movement patterns are not available for some species and in this instance, specific impacts cannot be quantified.

Where required, we have assumed a precautionary approach, assuming a species is present unless good reasons exist to preclude its use of the site. Information on the ecology and flight paths (where relevant) (for bird and bat species), as well as movement patterns are not available for some species and in this instance, specific impacts cannot be quantified.

Tree locations depicted in this report have not been accurately surveyed with survey-grade equipment. The detailed survey plan prepared by the surveyor should be referred to for confirmation of vegetation to be removed. Green Tape Solutions does not accept responsibility for any use of or reliance upon the contents of these drawings by any third party. Accurate location and details regarding vegetation to be retained/protected or removed (e.g. height, canopy spread, diameter at breast height) must be confirmed prior to commencement of site works.

The tree survey plan provided in this report delineates certain trees situated on the periphery of the undisturbed vegetation area, with a Diameter at Breast Height (DBH) exceeding 100mm. The survey does not comprehensively represent the entirety of the site's vegetation, omitting regrowth vegetation in the mid-canopy layer, as well as the shrub and ground layers, which were not accounted for during the field assessment. The challenges of accessibility and the extensive vegetation within the site's communities hindered the completion of a comprehensive tree survey across the whole property.



## 3 Environmental Regulatory Framework

**Table 2** describes Australian, State and Local Government legislative arrangements to manage potential environmental and ecological impacts arising from development. The table details the relevant Act, Regulation, Policy, Code, Zoning Scheme and overlays for Matters of National Environmental Significance (MNES), Matters of State Environmental Significance (MSES) and Matters of Local Environmental Significance (MLES). Some matters are listed in all three jurisdictions while others are specific to a single authority.



**Table 2: Legislative Framework** 

Legislative Element	Description	Triggers	Database Search	Applicable to report		
Australian Government						
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The EPBC Act protects the environment in relation to Matters of National Environmental Significance (MNES). Under the EPBC Act, if a development proposal involves an action that will or is likely to result in a significant impact on a MNES, the proposal must be referred to the DCCEEW (an EPBC Referral).	Action resulting in significant impacts upon a MNES.	EPBC Protected Matters Search Tool (PMST)	Yes – refer to <b>Section 4</b>		
Queensland Governmen	ıt					
Coastal Protection and Management Act 1995	The State Coastal Management Plan 2002 (Coastal Plan) describes how the coastal zone is to be managed and guides relevant decisions by the State and local governments for effective protection and management of the coastal zone. The State Coastal Plan applies to the coastal zone defined in section 11 of the Coastal Protection and Management Act 1995. The determination of the coastal zone depends on the existence of a clear link with the coast or coastal resources.	Action resulting in interference with the coastal zone.	Coastal Management District and the coastal hazard maps	No. The site is not located within a coastal management district.		



Legislative Element	Description	Triggers	Database Search	Applicable to report
Biosecurity Act 2014	The main purpose of the <i>Biosecurity Act 2014</i> is to provide for the risk-based management of biosecurity matters, including prohibited and restricted invasive animals and plants.	Presence of prohibited and/ or restricted invasive animals or plants on site.	Review of Schedule 2 of the Act and Weeds of National Significance (WoNS) database	Yes – refer to <b>Section 4.</b>
Fisheries Act 1994	The Fisheries Act 1994 (Fisheries Act) provides for the use, conservation and enhancement of Queensland's fisheries resources and fish habitats.  Waterway barrier works are regulated under the Fisheries Act 1994 and Planning Act 2016 when barriers to fish movement, including partial barriers, are installed across waterways. Any waterway barrier works within a mapped waterway defined under the Fisheries Act 1994 as shown on the Queensland Waterways for Waterway Barrier Works Map will require either a development application under the Planning Act 2016 or must achieve compliance with the Accepted development requirements for operational works that is constructing or raising waterway barrier works. Barrier works include construction, raising, replacement and some maintenance works on structures such as culvert crossings, bed level and low-level	Action resulting in interference with fish passage in a mapped watercourse defined under the Fisheries Act (waterway barrier work) or interference with marine plants/ mangroves.	Mapped waterway on the Queensland Waterways for Waterway Barrier Works (QWWBW) Map.	The watercourse in the eastern portion of the site is mapped as a moderate risk (amber) (fish passage attribute 2) waterway under the mapping. Whilst it is not expected that development shall require any works within this waterway, a waterway barrier works Development Approval (DA) will be required where works are proposed and where these works are unable to comply with the Accepted Development Requirements (ADRs).



Legislative Element	Description	Triggers	Database Search	Applicable to report
	crossings, weirs and dams, both permanent and temporary. Where a waterway determination is questionable, it is the onground physical and hydrological attributes that ultimately determines whether a particular feature is a defined waterway that provides for fish passage and consultation with Fisheries Queensland is mandatory.  In addition, marine plants are protected under the <i>Fisheries Act 1994</i> . The destruction, damage or disturbance of marine plants without prior approval from Fisheries Queensland is prohibited			
Nature Conservation Act 1992 (NC Act)	The primary purpose of the <i>Nature</i> Conservation Act 1992 (NC Act) is to conserve biodiversity by creating and managing protected areas, managing and protecting native wildlife, and managing the spread of non-native wildlife. Unless authorised, it is an offence under the NC Act to take, keep, use, or move protected flora	Actions resulting in a significant impact upon NC Act listed matters and special least concern fauna and/or impacts to animal breeding places  Action occurring within a	WildNet database  DES Protected Flora	Yes – refer to <b>Section 4.</b> Yes – refer to <b>Section 4.</b>
	and fauna for commercial, recreational or other purposes. Where a proposed development will result in such impacts to flora and/or fauna protected under the NC Act, authorisation from DESI will be required.	mapped high-risk area and will directly or indirectly impact (occurring 100 m of) threatened flora	Survey Trigger Map – as part of the DOR Vegetation Management Report	



Legislative Element	Description	Triggers	Database Search	Applicable to report
		species listed under NC Act.		
Vegetation Management Act 1999 Vegetation Management and Other Legislation Amendment Bill 2018 (VM Act)	Queensland is regulated by the VM Act, which protects the clearing of remnant vegetation as shown by the DOR mapping.	Clearing of regulated vegetation communities, unless exempt under the <i>Planning Act 2016</i> and/or Vegetation Management Regulation.	DOR Vegetation Management Report - Regulated Vegetation Management (RVM) Map	No. The site is not mapped as supporting regulated vegetation under the RVM map.
		Clearing of habitat that is mapped as essential habitat for endangered, vulnerable or near-threatened wildlife protected under the NC Act.	DOR Vegetation Management Report - Vegetation management supporting map	No. The site is not mapped as supporting essential habitat.
Water Act 2000	The Water Act 2000 provides a framework for the planning, allocation and use of surface water and groundwater in Queensland, including regulating major water impoundments (e.g. dams and weirs) and extraction through pumping for irrigation and other uses. It provides a system of interrelated plans, licences and permits for the regulation of in-stream (watercourses, lakes and springs), overland water flow and	Action that involves take or interference	Mapped Watercourse on the Watercourse identification map (WIM)	The site is located within the Mary Bason water plan area. The watercourse in the eastern portion of the site is mapped as a drainage feature defined by the Water Act. Whilst it is not expected that development shall require any works within this waterway, an authority or development application to take or interfere with water may be required.



Legislative Element	Description	Triggers	Database Search	Applicable to report
	groundwater. It also controls water use and activities that may impact on water resources, for example, placement of fill in a watercourse.			
Economic Development Act 2012	The purpose of this act is to facilitate economic growth and development in Queensland.	Action within a Priority Development Area.	SPP Interactive Mapping System	No. The site is not mapped in a PDA.
Planning Act 2016 and Planning Regulation 2017	The SEQ Koala Conversation Plan mapping identifies Koala Priority Areas (KPAs) and Koala Habitat Area (KHA) regulated under the Act and Regulation.  EPP/2020 Assessment Benchmarks in relation to Koala Habitat in South East Queensland (Inside Koala Priority Areas)  State Code 25 - Guideline: State Development Assessment Provisions Development in South East Queensland koala habitat areas (Outside Koala Priority Areas).	Action resulting in impact on mapped Koala habitat areas regulated under Schedule 11 of the Regulation.	SEQ Koala Conservation Plan map provided as part of the DOR Vegetation Management Report.	No. The site is not mapped KPA and/or KHA.
	State code 8: Coastal development and tidal works	Refer to Coastal Protection and Management Act 1995 section.		Not Applicable



Legislative Element	Description	Triggers	Database Search	Applicable to report
	State code 9: Great Barrier Reef Wetland Protection Areas	Action resulting in interference with Great Barrier Reef wetland protection areas or wetland of high (HES) or general (GES) ecological significance.	Wetland maps under the Environmental Protection Act 1994 -	No. The site is not mapped as supporting a regulated wetland area.
	State code 10: Taking or interfering with water  The purpose of this code is to provide for the sustainable management of water by ensuring that development for taking or interfering with water.  SDAP Guideline 18: Waterway barrier works	Action resulting in interference with mapped watercourses, lakes, spring, underground water and overland flow water.	Mapped Watercourse on the Watercourse Identification Map (WIM)	The watercourse in the eastern portion of the site is mapped as a moderate risk (amber) (fish passage attribute 2) waterway under the mapping. Whilst it is not expected that development shall require any works within this waterway, a waterway barrier works Development Approval (DA) will be required where works are proposed and where these works are unable to comply with the Accepted Development Requirements (ADRs).
	State code 11: Removal, destruction or damage of marine plants and State code 12: Development in a declared fish habitat area	Refer to Fisheries Act 1994 section		Not Applicable
	State code 16: Native vegetation clearing	Refer to Vegetation Management Act 1999 section		Not Applicable. The site is mapped as Category X (non-remnant) under a PMAV



Legislative Element	Description	Triggers	Database Search	Applicable to report
				approved in 2018. Clearing Category X areas on freehold, Indigenous and leasehold land is exempt clearing work under the vegetation management framework.
Noosa Shire Council				
NSC Planning Scheme 2020	Biodiversity, Waterways and Wetlands Overlay	The site is mapped under the Biodiversity, Waterways and Wetlands Overlay –  • Area of Biodiversity Significance  • Area subject to Riparian Buffer Overlay – Waterway, MSES Regulated Vegetation – Intersecting a Watercourse and Riparian Buffer Area.	Noosa Plan 2020 Interactive Mapping	Yes – refer to <b>Section 4</b> .



Legislative Element	Description	Triggers	Database Search	Applicable to report
		An assessment against the relevant provisions of the Biodiversity, Waterways and Wetlands Overlay Code is required.		



## 4 Ecological Values Assessment

### 4.1 Ground-truthed Vegetation Communities

The site assessment determined that the proposed development site supports three (3) vegetation communities and illustrated in **Figure 2**.

### 4.1.1 Tall Open Eucalypt Forest

The site assessment identified that the site does contains a native vegetation community associated the waterway and the retained vegetation corridor on the eastern boundary. This community comprises a small, highly degraded non-remnant patch of tall open eucalypt forest that aligns with the regional ecosystem (RE) 12.3.2, which is listed as Of Concern under the VM Act. This community contains a canopy layer dominated by eucalypts with riparian and rainforest species in the subcanopy, including invasive species. The contains considerable infestations of woody weed species, slash pine (*Pinus elliottii*) and camphor laurel (*Cinnamomum camphora*). Where present, the native canopy consists of flooded gum (*Eucalyptus grandis*), Qld blue gum (*Eucalyptus tereticornis*), red bloodwood (*Corymbia gummifera*), brush box (*Lophostemon confertus*) and swamp box (*Lophostemon suaveolens*). Other canopy and sub-canopy species include cheese tree (*Glochidion ferdinandi*), umbrella cheese tree (*Glochidion sumatranum*), blue quandong (*Elaeocarpus grandis*), turpentine tree (*Syncarpia glomulifera*), weeping lilly pilly (*Waterhousia floribunda*), tallowwood (*Eucalyptus microcorys*) and small-leaved fig (*Ficus obliqua*). Canopy cover is 80-90% with an average height of 19 m.

This community contains a moderately dense subcanopy and shrub layer of black wattle (*Acacia concurrens*), Australian blackwood (*Acacia melanoxylon*), soap tree (*Alphitonia excelsa*), tuckeroo (*Cupaniopsis anacardioides*), foam bark (*Jagera pseudorhus*) and Macaranga (*Macaranga tanarius*). Juvenile canopy and shrub species are present in the understorey. Weeds within the lower strata include Singapore daisy (*Sphagneticola trilobata*), species of Asparagus (*Asparagus spp.*) and ochna (*Ochna serrulata*). Ground cover within this community consists primarily of bracken fern (*Pteridium sp*) with a high density of leaf litter coverage and spiny-head mat-rush (*Lomandra longifolia*) along the watercourse banks.

The entire site has been locked in as Category X (non-remnant) area under a property map of assessable vegetation (PMAV) in 2018 *(PMAV Reference: 2018/001186)*. Pre-clearing vegetation Regional Ecosystem (RE) mapping published by the Department of Resources (DoR) identifies vegetation within this portion of the site as a heterogeneous mixed polygon comprising three regional ecosystems (40:40:20):

- RE 12.3.11 Eucalyptus tereticornis +/- Eucalyptus siderophloia, Corymbia intermedia open forest on alluvial plains usually near the coast;
- o RE 12.3.2 Eucalyptus grandis tall open forest on alluvial plains; and
- o RE 12.3.1a Gallery rainforest (notophyll vine forest) on alluvial plains.

RE 12.3.2 is identified as an RE that is likely to correspond to the 'Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions' Threatened Ecological Community (TEC), which is listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999.* This RE is confined to vegetation that is proposed to be retained and no works are proposed within this TEC. The existing channel shall be utilised for stormwater



conveyance and will remain undisturbed. Works associated with the development are unlikely to result in any significant residual impact upon MNES (including TECs). Based on the current design, further assessment (including more detailed assessment of this vegetation community against the diagnostic characteristics and the condition classes, categories and thresholds outlined in the approved Conservation Advice for this TEC and self-assessment of the significance of impacts) is not currently warranted.



Plate 1: Tall Open Eucalypt Forest within the site.

Plate 2: Camphor laurel (*Cinnamomum camphora*) within the community.



Plate 3: Dense understorey vegetation within the southern portion of the site.



Plate 4: Creek catchment within Tall Open Eucalypt Forest.

#### 4.1.2 Mixed Community

Vegetation surrounding the rest of the property boundary to the west and south consists of an exotic grassland with a mix of native including Acacia spp, *Macaranga tanarius*, and *Glochidion ferdinandi*, and invasive plants such as Cadaghi (*Eucalyptus torelliana*) are also present along the western and southern boundary, however native canopy trees are absent.

Vegetation within the Myall Street road reserve and other retained vegetated regions surrounding the site consists primarily of a highly modified vegetation community. The vegetation community is dominated by weeds such as slash pine (*Pinus elliottii*), with a canopy layer of camphor laurel (*Cinnamomum camphora*) and also native trees including tallowwood (*Eucalyptus microcorys*), swamp box (*Lophostemon suaveolens*), broad-leaved paperbark (*Melaleuca quinquenervia*) and Queensland blue gum (*Eucalyptus tereticornis*). The subcanopy layer is sparse and contains black wattle (*Acacia concurrens*) and Australian blackwood (*Acacia melanoxylon*). The understorey consists of spiny-headed mat-rush (*Lomandra longifolia*) among other grasses and herbaceous plants. Weeds within this



community include Singapore daisy (*Sphagneticola trilobata*), species of Asparagus (*Asparagus spp.*) and ochna (*Ochna serrulata*).

This community does not correlate to any Threatened ecological communities (TECs) listed under the *Environment Protection and Biodiversity Conservation Act 1999.* 



Plate 5: Slash pine (*Pinus elliottii*) found within the Myall Street road reserve



Plate 6: Camphor laurel (Cinnamomum camphora) within Myall Street road reserve



Plate 7: Vegetation within the north-eastern corner of the site



Plate 8: Singapore daisy (Sphagneticola trilobata) infestation

### 4.1.3 Modified and Landscape Vegetation

Most of the site has been historically cleared and currently consists of a grassland community that is regularly maintained by mowing/slashing. Vegetation within the road reserve on Ferrells Road consists of streetscape vegetation.

Cleared areas within the site contains some thickets of Lantana (*Lantana camara*) with a small, highly disturbed patch of native vegetation within the northern portion of the site. This community is highly modified by previous land use practices including historical grazing and continual slashing and mowing. As a result, formal identification of the grasses was hard to achieve due to the lack of mature reproductive material. The grassland was found to be an heterogenous patch of native and introduced pasture grasses including blady grass (*Imperata cylindrica*), Kangaroo grass (*Themeda triandra*), Bahia grass (*Paspalum notatum*), Rhodes grass (*Chloris gayana*), molasses grass (*Melinis minutiflora*) and several species of *Setaria* grass.

The road reserve is lined with planted canopy species including several weed species, that consists of flame bottletree (*Brachychiton acerifolius*), mango (*Mangifera indica*), umbrella tree (*Heptapleurum actinophyllum*), common coral tree (*Erythrina* x sykesii), camphor laurel (*Cinnamomum camphora*),



slash pine (Pinus elliottii), cotton tree (Hibiscus tiliaceus) and cadaghi (Corymbia torelliana).

This community does not correlate to any Threatened ecological communities (TECs) listed under the *Environment Protection and Biodiversity Conservation Act 1999.* 





Plate 9: Rural Landscape Vegetation within the site.

Plate 10: Road Reserve to the south of the site (Facing East).



Plate 11: The site facing south towards vegetation community one.



### Figure 2: Vegetation **Communities Map**

PR22385\_125 Myall Street, Cooroy

Site Boundaries

Digital Cadastral Database (DCDB)

Waterways

Vegetation Community 1 - Tall Open Forest Dominated by Emergent Eucalypts and Riparian Rainforest Canopy Species

Vegetation Community 2 - Vegetation Dominated by Slash Pine and Eucalypt Regrowth

Vegetation Community 3 - Streetscape and Rural Landscape Vegetation



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Created By: JG Date: 31/01/2023 Version: 1



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### 4.2 Weed Species

The weed species are present on site, including invasive species listed under the *Biosecurity Act 2014* (Qld) and Weeds of National Significance (WoNS), including:

- Asparagus spp. Category 3 Restricted Matter, WoNS;
- Broad-leaved pepper tree (Schinus terebinthifolius) Category 3 Restricted Matter;
- Camphor laurel (Cinnamomum camphora) Category 3 Restricted Matter;
- Cat's claw creeper (Dolichandra unguis-cati) Category 3 Restricted Matter; WoNS;
- Easter cassia (Senna pendula var. glabrata) Category 3 Restricted Matter;
- Lantana (Lantana camera) Category 3 Restricted Matter, WoNS; and
- Singapore daisy (Sphagneticola trilobata) Category 3 Restricted Matter.

A full list of weed species present on site is provided in **Appendix 6.** 

### 4.3 Flora Species Assessment

The shopping centre precinct, aged care facilities and access road are all predominantly sited within existing cleared and disturbed areas of the site. The eastern portion of the site is mapped as a high-risk area (i.e. an area where critically endangered, endangered, vulnerable or near threatened (CEEVNT) native plants are present or are likely to be present) on the Protected plants flora survey trigger map.

No threatened flora species were found on site during the site assessment; however, a formal protected flora survey was not conducted as it was not within this scope of works. Whilst the patch is significantly disturbed, a range of CEEVNT flora species are known to persist within small, degraded patches within the area. Based on a search radius of 2 km, the WildNet database contains records of four (4) threatened flora species within the surrounding area. An assessment of habitat suitability and likelihood of occurrence for each of these species is provided in **Table 3**.

Refer to **Section 5.2.2** for further details regarding requirements under the Protected Plants legislative framework.

Table 3: Habitat suitability and likelihood of occurrence for NC Act listed flora species.

Species Name	NC Act	EPBC Act	Habitat suitability and Likelihood of Occurrence
Sunshine Coast myrtle  Lenwebbia sp. Blackall  Range	Endangered	٠	Possible Occurrence (1 record within 2 km of the site).  The species is endemic to the Sunshine Coast region and only occurs in a handful of unconnected patches of remnant rainforest and wet sclerophyll forest.
hairy hazelwood Symplocos harroldii	Near Threatened	-	Possible Occurrence (5 records within 2 km of the site).  The species occurs from Cooloola National Park to Beenleigh and west to near Yarraman in notophyll



			vine forest and adjacent sclerophyll forests (Jessup, 1993).
			Possible Occurrence (4 records within 2 km of the site).
native guava Rhodomyrtus psidioides	Critically Endangered	Critically Endangered	The habitat of native guava is likely to include the following vegetation types: Subtropical Rainforests, Warm Temperate Rainforests, Littoral Rainforest, and Wet Sclerophyll Forests. <i>R. psidioides</i> has also been described as a pioneer species in disturbed environments (DCCEEW, 2020).
scrub turpentine Rhodamnia rubescens	Critically Endangered	Critically Endangered	Possible Occurrence (3 record within 2 km).  Rhodamnia rubescens occupies a range of volcanically derived and sedimentary soils. scrub turpentine has been documented occurring in association with Acacia melanoxylon, Corymbia intermedia, E. tereticornis, Glochidion sumatranum and Lophostemon suaveolens (DCCEEW, 2020).

### 4.4 Fauna Species Assessment

Fauna species recorded on site during the site surveys comprise mainly generalist and urban-adapted avifauna, including Australian Magpie (*Cracticus tibicen*), Noisy Miner (*Manorina melanocephala*), Willie Wagtail (*Rhipidura leucophrys*), Rainbow Lorikeet (Trichoglossus moluccanus), Crested Pigeon (*Ocyphaps lophotes*), Brown Honeyeater (*Lichmera indistincta*) and Torresian Crow (*Corvus orru*).

During the 2022 field assessment, a nesting pair of Grey Goshawk (*Accipiter novaehollandiae*) was noted to be present within the southern vegetation patch. Grey Goshawk is a rare species within the area. These individuals were not present on the time of the surveys in 2024 and supporting habitat shall be retained (including the tree used for nesting).

The waterway corridor contains diverse and abundance of resources including foraging and shelter values for several listened species under the *EPBC Act 1999* and *NC Act 1992*. The remaining area of the site include sparse vegetation, large open space and rows of native and exotic trees along the roads. This vegetation can provide some resource for common species within the landscape.

While not seen during the field inspection, Koala may also be using the site. 291 records of koala have been confirmed within 10 km of the site. An assessment of habitat values is provided in **Section 4.5.**A full list of fauna occurring on site during the site assessment is provided in **Appendix 6.** 

#### 4.5 Habitat Assessment

Habitat features within the site consists of predominantly of moderate to high habitat values for foraging, shelter/refuge, breeding and roosting resources. The vegetation community within the eastern portion of the site supports a sclerophyll forest strata providing ground, midstorey and canopy cover. The dense leaf litter and rocky areas within the site and the abundance of woody debris provides shelter and foraging resources for terrestrial species. The watercourse provides aquatic habitat for potentially several species of amphibians, aquatic invertebrates (crayfish, shrimp, snails etc.) and insects that utilise the slow-moving channel for breeding and foraging. Other resources include:



- Foraging resources associated with native flowering plants nectar, pollen / insect prey items;
- Coarse and fine woody debris;
- Dense vegetation on the creek banks and riparian area;
- Dense areas of undergrowth vegetation;
- · Dry grass, long grass and leaf litter; and
- Arboreal termitaria and minimal and small tree hollows present.

Based on a search radius of 10 km, the WildNet database contains records of 13 threatened fauna species within the surrounding area. An assessment of habitat suitability and likelihood of occurrence for each of these species is provided in **Table 4**.

Table 4: Habitat suitability and likelihood of occurrence for NC Act listed fauna species.

Species Name	NC Act	EPBC Act	Habitat suitability and Likelihood of Occurrence	
Birds				
Glossy Black-cockatoo Calyptorhynchus lathami	Vulnerable	Vulnerable	Unlikely to be present (57 records within 10 km).  This species relies on feed trees ( <i>Allocasuarina</i> spp.) that were not detected to be present on site.	
Plumed Frogmouth  Podargus ocellatus  plumiferu	Vulnerable	-	Unlikely to be present (1 record within 10 km).  In SEQ, this species prefers subtropical rainforest, particularly in deep, wet, sheltered gullies along creek lines and often containing stands of Bangalow Palms or ferns. The vegetation on the site is considered to be too fragmentated for this species.	
White-Throated Needletail Hirundapus caudacutus	Vulnerable	Vulnerable	Possibly present (2 records within 10 km).  Migratory non-breeding (summer) visitor that may periodically forage over the site. Increasingly thought to utilise ridgelines for roosting. Given that most of the near-intact vegetation present within the site shall be retained, the development shall not result in a significant loss of foraging habitat for this species and due to the landform of the site, this species is unlikely to use site vegetation for roosting.	
Powerful Owl Ninox strenua	Vulnerable	-	Possibly present (1 records within 10 km).  Suitably large hollows for roosting are not present; however, this species is known to hunt in peri-urban areas. Given that most of the near-intact vegetation present within the site shall be retained, the development shall not result in a significant loss of foraging habitat for this species.	
Mammals				
Southern Greater Glider	Endangered	Endangered	Unlikely to be present (5 record within 10 km).	



Species Name	NC Act	EPBC Act	Habitat suitability and Likelihood of Occurrence
Petaurus volans volans			The site does not support high-quality habitat that is preferred by this species. The site does not contain a high enough density of mature Glider habitat trees and the surrounding area does not support large, contiguous patches of suitable habitat.
Koala  Phascolarctos cinereus	Endangered	Endangered	Likely to be present (291 records within 10 km).  Koala habitat trees are present within the site. The site assessment did not detect any scats. Given that suitable koala habitat is present within the site and there is high level of connectivity with other koala habitat patches in the area, koalas are considered likely to utilise the site for foraging and dispersal. Given that most of the near-intact vegetation present within the site shall be retained, the development shall not result in a significant impact to koala habitat; however increased traffic may present an intensification of the threat of vehicle-strike.
Insects			
			Possibly present (4 record within 10 km).
Richmond Birdwing  Ornithoptera richmondia	Vulnerable	-	Prefers subtropical rainforests on the eastern coast and lower ranges (< 600m), in association with Pararistolochia praevenosa (36 records / 10 km).
Aquatic Species			
Giant Barred Frog  Mixophyes iteratus	Vulnerable	Vulnerable	Possibly present (287 records within 10 km).  Prefers rocky rainforest streams to slow-moving rivers in lowland wet sclerophyll and rainforest.
			Unlikely to be present (1 records within 10 km).
Swamp Crayfish  Tenuibranchiurus glypticus	Endangered	-	Inhabits forests and woodlands, typically dominated by <i>Melaleuca sp.</i> , that contain poorly drained areas with standing water in summer and seasonally dried up in winter. A significant period of the year is spent in burrows. No habitat within the region.
Tusked Frog  Adelotus brevis	Vulnerable	Vulnerable	Likely to be present (419 records within 10 km).  This species can occur in dams and garden ponds in urban and peri-urban areas; however preferred habitat is eucalypt forest and rainforest can be found in close proximity to suitable breeding habitat.
Wallum Froglet  Crinia tinnula	Vulnerable	-	Unlikely to be present (30 records within 10 km).  Inhabits acid paperbark ( <i>Melaleuca</i> ) swamps, sedgelands and drainage lines in wet heath and disturbed wallum habitat. The site does provide suitable habitat for this species.



Species Name	NC Act	EPBC Act	Habitat suitability and Likelihood of Occurrence
Wallum Sedgefrog  Litoria olongburensis	Vulnerable	Vulnerable	Unlikely to be present (1 record within 10 km).  Inhabits acid paperbark ( <i>Melaleuca</i> ) swamps, sedgelands and drainage lines in wet heath and disturbed wallum habitat. The site provides no suitable habitat for this species.
Cascade Treefrog  Litoria pearsoniana	Vulnerable	-	Possibly present (65 record within 10 km).  Found in rainforest gullies and adjacent wet sclerophyll forest, in association with flowing streams, however, can occasionally inhabits ponds and slow-moving streams.

A total of 291 sightings of koalas have been recorded in this search radius (<10 km) over a period of many years (since 1980). Koala habitat trees are present within the site, and a review of records within the DESI Biomaps portal determined that sightings of Koala (*Phascolarctos cinereus*) have been recorded within 5 km of the site. Given that suitable koala habitat is present and there is some level of connectivity with other koala habitat patches in the area, it is likely that koalas currently utilise the site vegetation at least periodically, particularly during movement, natal dispersal and breeding.

The property contains a slow-moving tributary that will provide habitat for several species of frog. The WildNet database and Protected Matters Search Tool identified a range of species listed as marine or migratory within 5km of the site; however, the site does not support the breeding or foraging resources for these species and therefore are considered unlikely to occur on the site and have not been assessed in **Table 4**.

### 4.6 Corridors and Linkages

The site provides limited linkages across the local area. Linkages from the site are limited and reduced to remnant corridors that fringe the tributaries and drainage lines of Lake McDonald. To the north of the site, limited fauna movement can occur due to medium-density urban development on the outskirts of Cooroy town centre.

The site is also restricted as surrounding land use is utilised for rural agriculture or recreational usage (Corroy Golf Course) and historical clearing has removed large linkages of the site and surrounds. There is a large, high-quality area of vegetation associated with State reserves to the north and south, approximately 2-5 kilometres from the site, that provides high quality habitat and corridor/movement opportunities across the local area. These larger vegetation patches are of sufficient size to support a range of terrestrial and arboreal/avian fauna species and therefore the development site is a key part of the wildlife movement corridor between these larger habitat areas, for both terrestrial fauna and arboreal/avian species, thereby contributing to ecological connectivity and wildlife movement.

The site is intersected via the east and west due to high traffic arterial road corridors. These corridors present a major physical and behavioural barrier to wildlife movement (particularly for terrestrial species), which may impede wildlife movement and ecological processes. It is likely that site vegetation is only utilised by a restricted suite of fauna species, mostly more mobile species such as avian and arboreal mammal species. Isolated stands of vegetation within the site are likely to be used as 'stepping stone' habitat.



### 4.7 Summary of Ecological Values

**Table 5** details the findings of the desktop review, field survey/s and analysis of these findings against Commonwealth, state and local government environmental legislation, policies, codes and planning instruments. This analysis includes the following matters:

- Ground-truthed vegetation communities, including EPBC-listed Threatened Ecological Communities (TECs), state-listed vegetation communities, wetlands and essential habitat reported within a 10 km buffer from the site;
- · Weeds on site and significance of the infestations;
- Listed fauna and flora species recorded within a 10km buffer from the site and recorded on the site;
- Habitat assessment to determine fauna habitat features of the site, including corridors and linkages that the site may form part of and the potential impact to landscape connectivity; and
- Council listed matters in addition to matters applicable under Commonwealth and state legislation.



Table 5: Summary of desktop and site assessment results.

Legislative / Compliance Element	Desktop Assessment Results	Field Survey Results and Assessment
Australian Legislation		
Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)	<ul> <li>One (1) wetland of international importance:</li> <li>30-40 km upstream from Ramsar site – Great Sandy Strait;</li> <li>Four (4) listed threatened ecological communities (TEC):</li> <li>Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland ecological community (Endangered);</li> <li>Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland (Endangered);</li> <li>Lowland Rainforest of Subtropical Australia (Critically Endangered); and</li> <li>Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions (Endangered).</li> <li>Eighty – four (84) threatened species; and</li> <li>Nineteen (19) migratory species.</li> </ul>	No species listed under the EPBC Act were found to be present on site during the surveys.  Vegetation in the south-eastern corner of the site is analogous to RE12.3.2 and may be conform to the EPBC-listed TEC - Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions.  RE 12.3.2 is confined to vegetation that is proposed to be retained and no works are proposed within this vegetation. The existing channel shall be utilised for stormwater conveyance and will remain undisturbed.  An assessment of the likelihood of occurrence for species identified by the desktop searches was undertaken based on the presence of suitable habitat within the site and database records for each threatened species. Based on this assessment, the following MNES were identified as potentially occurring within, or periodically utilising, the site:
	Refer to complete PMST Report in Appendix 2	<ul> <li>Koala (<i>Phascolarctos cinereus</i>);</li> <li>Giant Barred Frog (<i>Mixophyes iteratus</i>); and</li> </ul>



Legislative / Compliance Element	Desktop Assessment Results	Field Survey Results and Assessment
		Tusked Frog (Adelotus brevis).  The development will be sited in predominantly cleared areas of the site and therefore is unlikely to result in a significant impact on the habitat of these species.  Works associated with the development are unlikely to result in any significant residual impact upon MNES (including TECs). Based on the current design, further assessment is not currently warranted and an EPBC referral is not required.
Queensland Legislation		
Biosecurity Act 2014	DES WildNet Records identified four weed species as occurring occur within two kilometres of the site. No mapped species are Weeds of National Significance (WONS) or listed under the Biosecurity Act 2014.	The site supports WoNS species and restricted weed species, including some large infestations within the southern portion of the development site. Infestations should be controlled before construction commences to prevent further distribution.  Ongoing monitoring and management following construction is recommended to ensure weeds are
		controlled.  A full list of weed species present on site is provided in <b>Appendix 7</b> .



Legislative / Compliance Element	Desktop Assessment Results	Field Survey Results and Assessment
Nature Conservation Act 1992 - DESI WildNet database	<ul> <li>WildNet database shows records of the following listed species within a 10 km buffer of the site:</li> <li>Wallum Sedgefrog (<i>Litoria olongburensis</i>);</li> <li>Cascade Treefrog (<i>Litoria pearsoniana</i>);</li> <li>Tusked Frog (<i>Adelotus brevis</i>);</li> <li>Wallum Froglet (<i>Crinia tinnula</i>);</li> <li>Giant Barred Frog (<i>Mixophyes iteratus</i>);</li> <li>White-Throated Needletail (<i>Hirundapus caudacutus</i>);</li> <li>Glossy Black-Cockatoo (eastern) (<i>Calyptorhynchus lathami lathami</i>);</li> <li>Plumed Frogmouth (<i>Podargus ocellatus plumiferus</i>);</li> <li>Powerful Owl (<i>Ninox strenua</i>);</li> <li>Richmond Birdwing (<i>Ornithoptera richmondia</i>);</li> <li>Swamp Crayfish (<i>Tenuibranchiurus glypticus</i>);</li> <li>Koala (<i>Phascolarctos cinereus</i>); and</li> <li>Southern Greater Glider (<i>Petauroides volans volans</i>).</li> </ul>	No species listed under the NC Act were found to be present during the site survey. Table 4 illustrates a Habitat suitability and likelihood of occurrence for species found to be present on the site.  Based on this assessment 3 species have been identified as potentially occurring within, or periodically utilising, the site:  • Koala (Phascolarctos cinereus)  • Giant Barred Frog (Mixophyes iteratus)  • Tusked Frog (Adelotus brevis)  Refer to Section 5.2.2 for further compliance with the Nature Conservation Act 1992.
Nature Conservation Act 1992 - Protected Plants Flora Survey Trigger Map	The southern Portion of the development site is mapped within a mapped high-risk trigger area for protected plants.  Refer to <b>Appendix 4.</b>	No listed threatened flora species were detected on site during the site assessment, although no formal assessment has been undertaken.  Based on 2 km search radius, 4 species have been



Legislative / Compliance Element	Desktop Assessment Results	Field Survey Results and Assessment
		<ul> <li>identified as occurring within the surrounding area:</li> <li>Lenwebbia sp. Blackall Range</li> <li>hairy hazelwood (Symplocos harroldii)</li> <li>native guava (Rhodomyrtus psidioides)</li> <li>scrub turpentine (Rhodamnia rubescens)</li> <li>Refer to Section 5.2.2 for details of further compliance with the protected plants framework.</li> </ul>
Vegetation Management Act 1999 (VM Act) Regulated Vegetation Management Map	The Vegetation Management Report maps the subject site as Category X (non-remnant) vegetation.  The site is also subject to an existing property map of assessable vegetation (PMAV) to contain Category X (non-remnant) vegetation. (PMAV Reference: 2018/001186).	The clearing of Category X (non-remnant) vegetation on freehold land for any purpose is exempt clearing works under the VM Act.  No further assessment is required under the Vegetation Management Act 1999
Noosa Shire Council Planning Scheme 2020	The site is subject to mapping under the Area of Biodiversity, Waterways and Wetlands Overlay under the NSC Plan, Including mapped extent of:  Biodiversity Significance overlays  Waterway overlays  MSES Regulated Vegetation overlays  Riparian Buffer Area overlays	The site assessment confirmed that site values within the eastern portion of the site are consistent with the designation under the Noosa Plan 2020 Biodiversity, Waterways and Wetlands Overlay mapping.  A further assessment has been undertaken in accordance with the Noosa Shire Council Planning Scheme 2020 specifically the code assessment (Appendix 7).



Legislative / Compliance Element	Desktop Assessment Results	Field Survey Results and Assessment
		Refer to Section 5.2.1 for compliance to the previsions of the Noosa Plan 2020



### 5 Proposed Development Impact Assessment

#### 5.1 Impact Assessment and Mitigation Measures

The current development design consolidates the development footprint to the western and central portions of the site within the cleared area to minimise impact to the existing vegetation and ecological impacts as much as possible. Vegetation clearing for the development will result in a slight reduction in the extent of the vegetation patch, and other associated impacts to fauna habitat and fauna occupying the site. The total clearing impact area is 0.2515 hectares (2,515 m²) for the project area (**Figure 3**), with 715 m² clearing required for the development of the shopping centre precinct and approximately 1,800 m² clearing required for the development of access via Myall Road along the northern boundary of the site.

The development will require the removal of the patch of vegetation described in **Section 4.1.2.** This vegetation community contains exotic and invasive species (e.g. slash pines and camphor laurel) and native species such as *Acacia* sp, *Eucalyptus* species and *Lophostemon* species. This area is modified and disturbed by current land use. Most of the woody canopy vegetation being impacted consists of Camphor laurel (*Cinnamomum camphora*) and slash pine (*Pinus elliottii*). The understory of regrowth and sparse native canopy vegetation constitutes approximately 50% of the vegetation, while exotic species constitutes the other 50%.

The tree survey plan (Figure 3) delineates certain trees situated on the periphery of the undisturbed vegetation area, with a Diameter at Breast Height (DBH) exceeding 100mm. This survey does not comprehensively represent the entirety of the site's vegetation, omitting regrowth vegetation in the mid-canopy layer, as well as the shrub and ground layers, which were not accounted for during the field assessment (see plates 5-7). The challenges of accessibility and the extensive vegetation within the site's communities hindered the completion of a comprehensive tree survey. The 2022 Due Diligence assessment identified significant trees with a DBH exceeding 300mm across the site; most of which have been deliberately avoided to minimise the development impact on the local environment. The removal of one larger flooded gum (*E. grandis*) (Tree 2) is deemed necessary to facilitate access, particularly as the roundabout's location is constrained by the need to align with future access to the proposed Gemlife development in the north-east. Approval for additional roadworks in this part of the road reserve is anticipated to facilitate access to the Gemlife development.

Based on the tree survey, the proposal will require the removal of 46 trees which is comprised of 13 native trees and 33 exotic trees. Some regrowth vegetation and shrubs will also be removed. Actual and potential direct and indirect impacts from the proposed development on ecological values include:

- The loss of vegetation is minimal as the development has been designed to occupy the open and already cleared section of the site. However, the complete retention of all native vegetation is not feasible and some loss of habitat, shelter, refuge, food and other resources for a range of fauna species will occur.
- Injury and mortality of fauna species from vegetation clearing, indirect impacts associated with dispersal of fauna during vegetation clearing works and delayed mortality due to displacement forced dispersal into occupied territories and/or inability to re-establish territory within other habitat patches.



- Minimal increase in edge effects and associated degradation of retained vegetation. The community is already subject to edge effects along the existing patch boundary; in particular, effects such as weed invasion. Expected edge effect impacts include:
  - New weed species introduction and an increase in weed infestations within the currently intact native community as part of the operational works.
  - Some loss of suitable habitat for fauna due to environmental changes and potential unsuitability of retained vegetation due to disturbance associated with future land use; for example, detrimental impacts to breeding behaviour or deterrence of breeding due to noise (such as emergency helicopter access) and light pollution from street and hospital lights. Light pollution impacts fauna in several ways including reduction in sleep quality, reduced ability to forage and behavioural changes such as avoidance of lit areas. Overall, light pollution will reduce the amount and quality of habitat available for fauna in the retained vegetation. Other edge effects that will also impact fauna include changes in moisture and an increase in noise and disturbance.
- Sediment run-off impacting into retained vegetation communities and riparian catchments during earthworks.
- Increase in hydrological flow of the creek due to increased impermeable surfaces, thereby resulting in altered hydrology and reduction in suitable breeding habitat for amphibians, fish and invertebrate species that have adapted to the current ecosystem.

The retention of vegetation within the south-eastern corner will ensure that the development will not have a significant impact on habitat trees, recruitment habitat trees, roosting, breeding and feeding areas. The development will also provide for restoration of ecologically important areas through rehabilitation of the riparian corridor and removal of weed species including camphor loreals and slash pine.

The above impacts will be mitigated through a series of management plans, including robust erosion and sediment control measures to minimise environmental disturbances. Additionally, a comprehensive fauna management plan will be implemented to safeguard local wildlife during the development process, ensuring their habitat is protected. This will avoid any injuries to wildlife during clearing. Furthermore, a vegetation management plan will be enacted to address the impact on trees and vegetation. These integrated management plans aim to harmonise the developmental objectives with environmental preservation, fostering a balanced and sustainable approach to the proposed changes in the landscape. Details of the mitigation measures are provided in Table 7.



Figure 3: Tree Retention Plan

Prepare a Tree Retention Map based on digital aerial photography or the best available imagery, showing (at a recommended scale of 1:1000 or finer):

- the boundary of the subject land (in red)
- the cadastral
- Covenant area (if any)
- landscape features identified rivers, streams, estuaries and wetlands
- State and Council overlays
- Legend must be as follow (exact same words):
  - 'Trees to be retained' (in green),
  - o 'Trees to be removed' (in red) and
  - 'Trees to be assessed by a qualified arborist' (in orange)
- Label on all trees (tree numbers)
- Clearly differentiate non-juvenile koala trees on the map when we are trying to assess the
  development against the koala overlay under the planning regulation. Maybe include different
  colour around the circle and add to legend
- Tree Protection Zone this should be calculated as follow TPZ = DBH x 12 DBH must be in meters and make sure it is the radius and not the diameter in QGIS! Verify the distance before you finalise the map
- Native trees and native habitat trees (change outlined of the point into a different colour)
- Rehabilitation Area (if relevant) Note that if the map is getting too busy, best is to create a
  new map showing the rehabilitation area.
- Bushfire Asset Protection Zone (if relevant)
- Additional features (if relevant) such as koala trees with a different outlined on the circle
- If in Koala habitat area, we MUST include a note on the map about the total clearing area and illustrate the exemptions for instance and annotation such as:
  - XX ha of clearing for 500m<sup>2</sup> exemptions as per Schedule 24 Exempted development definition (k)
  - 20m buffer around the dwelling clearing distance for the BMP as per Schedule 24, Exempted development definition (n)(vii)

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Table 6: Tree Schedule

Tree ID	Scientific Name	Common Name	DBH (mm)	TPZ (m)	Comment
1	Eucalyptus tereticornis	Queensland blue gum	1100	13.2	Habitat tree
2	Eucalyptus grandis	flooded gum	800	9.6	
3	Eucalyptus grandis	flooded gum	650	7.8	
4	Eucalyptus grandis	flooded gum	650	7.8	
5	Eucalyptus grandis	flooded gum	650	7.8	
6	Lophostemon suaveolens	swamp box	400	4.8	
7	Corymbia intermedia	pink bloodwood	650	7.8	
8	Eucalyptus grandis	flooded gum	350	4.2	
9	Dead stag	Dead stag	500	6	Habitat tree
10	Dead stag	Dead stag	400	4.8	
11	Corymbia intermedia	pink bloodwood	600	7.2	
12	Eucalyptus tereticornis	Queensland blue gum	600	7.2	
13	Dead stag	Dead stag	750	9	Habitat tree
14	Dead stag	Dead stag	600	7.2	Habitat tree
15	Eucalyptus grandis	flooded gum	1200	14.4	Habitat tree.
16	Eucalyptus grandis	flooded gum	430	5.16	
17	Acacia sp.	Acacia sp.	150	1.8	
18	Eucalyptus grandis	flooded gum	380	4.56	
19	Lophostemon suaveolens	swamp box	513	6.156	
20	Acacia sp.	Acacia sp.	410	4.92	



Tree ID	Scientific Name	Common Name	DBH (mm)	TPZ (m)	Comment
21	Acacia sp.	Acacia sp.	200	2.4	
22	Cinnamomum camphora	Camphor laurel	500	6	Weed
23	Acacia sp.	Acacia sp.	400	4.8	
24	Ficus sp.	Ficus sp.	500	6	
25	Cinnamomum camphora	Camphor laurel	400	4.8	Weed
26	Cinnamomum camphora	Camphor laurel	300	3.6	Weed
27	Lophostemon suaveolens	swamp box	200	2.4	
28	Cinnamomum camphora	Camphor laurel	350	4.2	Weed
29	Cinnamomum camphora	Camphor laurel	240	2.88	Weed
30	Cinnamomum camphora	Camphor laurel	280	3.36	Weed
31	Cinnamomum camphora	Camphor laurel	260	3.12	Weed
32	Cinnamomum camphora	Camphor laurel	250	3	Weed
33	Pinus elliottii	slash pine	240	2.88	Weed
34	Eucalyptus grandis	flooded gum	450	5.4	
35	Cinnamomum camphora	Camphor laurel	200	2.4	Weed
36	Melaleuca quinquenervia	broad-leaved paperbark	230	2.76	
37	Lophostemon suaveolens	swamp box	400	4.8	
38	Melaleuca quinquenervia	broad-leaved paperbark	420	5.04	
39	Lophostemon suaveolens	swamp box	200	2.4	
40	Acacia sp.	Acacia sp.	260	3.12	
41	Pinus elliottii	slash pine	400	4.8	Weed



Tree ID	Scientific Name	Common Name	DBH (mm)	TPZ (m)	Comment
42	Pinus elliottii	slash pine	400	4.8	Weed
43	Pinus elliottii	slash pine	400	4.8	Weed
44	Pinus elliottii	slash pine	390	4.68	Weed
45	Eucalyptus grandis	flooded gum	430	5.16	
46	Pinus elliottii	slash pine	400	4.8	Weed
47	Acacia sp.	Acacia sp.	400	4.8	
48	Acacia sp.	Acacia sp.	350	4.2	
49	Acacia sp.	Acacia sp.	300	3.6	
50	Acacia sp.	Acacia sp.	360	4.32	
51	Acacia sp.	Acacia sp.	100	1.2	
52	Pinus elliottii	slash pine	400	4.8	
53	Acacia sp.	Acacia sp.	100	1.2	
54	Eucalyptus grandis	flooded gum	280	3.36	
55	Pinus elliottii	slash pine	300	3.6	Weed
56	Pinus elliottii	slash pine	200	2.4	Weed
57	Banksia aemula	Wallum Banksia	120	1.44	
58	Pinus elliottii	slash pine	200	2.4	Weed
59	Pinus elliottii	slash pine	400	4.8	Weed
60	Pinus elliottii	slash pine	400	4.8	Weed
61	Melaleuca quinquenervia	broad-leaved paperbark	200	2.4	
62	Acacia sp.	Acacia sp.	300	3.6	



Tree ID	Scientific Name	Common Name	DBH (mm)	TPZ (m)	Comment
63	Acacia sp.	Acacia sp.	100	1.2	
64	Acacia sp.	Acacia sp.			DBH not recorded
65	Cinnamomum camphora	Camphor laurel	460	5.52	
66	Eucalyptus grandis	flooded gum	300	3.6	
67	Cinnamomum camphora	Camphor laurel	600	7.2	Weed
68	Cinnamomum camphora	Camphor laurel	500	6	Weed
69	Acacia sp.	Acacia sp.	390	4.68	
70	Acacia sp.	Acacia sp.	540	6.48	
71	Mangifera indica	Mango Tree	300	3.6	
72	Mangifera indica	Mango Tree	300	3.6	
73	Cinnamomum camphora	Camphor laurel	500	6	
74	Mangifera indica	Mango Tree	120	1.44	
75	Corymbia torelliana	Cadaghi	260	3.12	Weed
76	Corymbia torelliana	Cadaghi	570	6.84	Weed
77	Corymbia torelliana	Cadaghi	500	6	Weed
78	Corymbia torelliana	Cadaghi	300	3.6	Weed
79	Melaleuca quinquenervia	broad-leaved paperbark	240	2.88	
80	Lophostemon suaveolens	swamp box	430	5.16	
81	Cinnamomum camphora	Camphor laurel	250	3	Weed
82	Unknown	Unknown	100	1.2	



Table 7: Summary of potential impacts and associated mitigation measures

Potential Impact-s	Mitigation measures
Planning and Design Phase	
<ul> <li>Removal of some vegetation is required from site, resulting in some loss of ecological values including foraging and habitat resources and loss of landscape amenity values.</li> <li>Increased light pollution resulting in light spill, noise, erosion, etc and associated impacts to adjacent residents and urban fauna.</li> </ul>	<ul> <li>Avoid the impact: Complete avoidance of clearing of native vegetation within mapped overlays is not feasible but has been minimised as much as reasonably possible.</li> <li>Minimise the impact: The development seeks to avoid removal of mature native canopy trees and native vegetation as much as possible, including clearing of vegetation within mapped overlays.</li> <li>Mitigate the impact:         <ul> <li>Provision of fauna-friendly fences along the perimeter between the development and retained vegetation in the south-eastern corner of the site will ensure that wildlife can move safely along existing corridors and prevent wildlife access to the premises.</li> <li>Directional lighting guards should be installed to minimise light spill. Lighting must comply with the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023)</li> <li>No fencing will be installed across/within the waterway to maintain connectivity and wildlife movement.</li> <li>Weed management will be undertaken within disturbed areas.</li> <li>Erosion and sediment control measures are to be implemented in line with the Erosion and Sediment control plan.</li> <li>The full rehabilitation of the 10 metres either side of the centre line of any other waterway identified on a Biodiversity, Waterways and Wetlands Overlay Map will be undertaken to improve the ecological values of the values.</li> </ul> </li> </ul>



	Potential Impact-s		Mitigation measures
C	onstruction and Clearing Phase		
•	Minimal loss and degradation of food and shelter resources for urban fauna due to vegetation clearing.  Potential injury and mortality of fauna due	•	The construction contractor shall take all reasonable and practicable management measures to avoid environmental harm and environmental nuisance to native fauna and known fauna habitat and breeding places, including preparation of a Species Management Program (SMP) where interference with any animal breeding places is required.
	to vegetation clearing due to the vegetation clearing	•	Contractors will be supplied with a construction protocol regarding clearing requirements through a work site start-up and induction program.
•	Potential indirect impacts such as displacement and dispersal into adjacent habitats that may be at their carry-capacity.	•	Prior to the commencement of any vegetation clearing on site, tree protection/exclusion fencing is to be installed around the tree protection zone/s (TPZ) of vegetation to be retained and trees to be removed shall be visibly marked and identified with flagging tape or similar. No disturbance should
•	Loss of potential breeding habitat and resources (e.g. hollows and nests),		occur outside the clearance zone or within exclusion zones without appropriate approvals and/or further assessments.
•	including future breeding habitat.  Temporary disturbance (noise, light, etc.) to	•	Erosion and sediment control measures are to be implemented in line with the Erosion and Sediment control plan.
	local fauna species.	•	Construction activities will be restricted to daylight hours to minimise noise, dust and light impacts.
•	Introduction and spread of biosecurity	•	No domestic animals will be allowed onto the construction site.
	matters such as invasive species e.g. from fill material or machinery.	•	The rehabilitation of the riparian area identified on a Biodiversity, Waterways and Wetlands Overlay Map will be undertaken to improve the ecological values of the site.
	•		Avoid high risk construction activities such as earthworks during severe wet weather.
		•	An appropriately experienced and suitably qualified fauna spotter catcher with experience in koala spotting is to be engaged to conduct a pre-clearing fauna survey to identify fauna habitat and breeding places and remove fauna from vegetation to be cleared. Only a designated and trained person (fauna spotter catcher) can handle and remove fauna.



Potential Impact-s	Mitigation measures
	The fauna spotter catcher shall be present during all vegetation clearing to supervise clearing.
	Injury or mortality of fauna species will be minimised by managing habitat clearing and by having a qualified fauna spotter supervising all clearing activities. If koalas are found to be present, they will be managed on site in line with the Nature Conservation (Koala) Conservation Plan 2017. Clearing and post clearing activities (including fauna spotter activities) are detailed below.
	• The <i>Biosecurity Act 2014</i> (Qld) imposes a general biosecurity obligation of landowners and managers to minimise biosecurity risks. This includes risks associated with invasive flora and fauna species.
	Fire ant movement controls shall be implemented to restrict and monitor the movement of materials that may carry fire ants. These controls may include obtaining a Biosecurity Instrument Permit to move soil and other landscaping materials where required. The site foreman/supervisor shall be responsible for ensuring all fire ant compliance requirements are met at all times. Further advice regarding fire ant compliance can be obtained on the Business Queensland website at <a href="https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/pests/fire-ants/advice-tool">https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/pests/fire-ants/advice-tool</a>
	<ul> <li>Monitoring shall be undertaken to detect new infestations of invasive flora species listed under the Biosecurity Act 2014 (Qld) and to ensure that listed invasive flora species do not spread beyond the site into the environment.</li> </ul>
	<ul> <li>Monitor the effectiveness of controls and establish triggers for corrective action where potential impacts are observed.</li> </ul>
	<ul> <li>Landscaping using locally indigenous plant species shall provide foraging and shelter resources and assist in compensating for these values.</li> </ul>
Operation Phase	



	Potential Impact-s	Mitigation measures
•	New weed species introduction and an increase in existing weed infestations.	<ul> <li>Monitoring should be undertaken to detect new infestations and to ensure that existing infestations of species listed under <i>Biosecurity Act 2014</i> (Qld) do not spread into the environment.</li> </ul>
•	Increased light pollution resulting in light spill and associated impacts to adjacent residents and urban fauna.	Light shall not be left all night in the effort to reduce light pollution. Any new outside lights shall be sensor lights.



#### 5.2 Assessment of Compliance

#### 5.2.1 Local Planning Scheme

The site is mapped under the Noosa Plan 2020 – Biodiversity, Waterways and Wetlands Overlay Map (Figure 4). An assessment against the relevant provisions of the Biodiversity, Waterways and Wetlands Overlay Code is required – this is provided in **Appendix 7**.

While the development encroaches into the mapped waterway corridor, the rehabilitation of the remaining riparian area identified on a Biodiversity, Waterways and Wetlands Overlay Map will be undertaken to improve the ecological values of the site.



Figure 4: Biodiversity, Waterways and Wetlands Overlay Map

#### 5.2.2 State Legislation

#### Vegetation Management Act 1999

The entire site is mapped as Category X (non-remnant) under a PMAV approved in 2018. Clearing of Category X areas on freehold, Indigenous and leasehold land is exempt clearing work under the VM framework.

#### Nature Conservation Act 1992 - Protected Plants Framework

No threatened flora was identified during the site assessment; however, a formal protected flora survey was not conducted as it was not within this scope of works. Whilst the mapped high-risk area in the south-eastern corner of the site is somewhat disturbed, a range of CEEVNT flora species are known to persist within small, degraded patches within the area. Based on a search radius of 2 km, the WildNet database contains records of four (4) threatened flora species within 10 km of the development site –



Lenwebbia sp. Blackall Range, hairy hazelwood (*Symplocos harroldii*), native guava (*Rhodomyrtus psidioides*) and scrub turpentine (*Rhodamnia rubescens*).

The development shall require the clearing of a total of 9 trees along the interface with retained vegetation within the eastern portion of the site (i.e. vegetation along the watercourse within the Environmental Management and Conservative Zone). These trees are located within a mapped High-Risk area. In accordance with requirements under Section 141 of the *Nature Conservation (Plants) Regulation 2020*, a flora survey of the 'clearing impact area' is required if any part of an area to be cleared is within a mapped high-risk area under the Protected Plants Flora Survey Trigger map. The clearing impact area is defined as the area to be cleared and a 100m buffer area around the clearing area (collectively referred to as the 'clearing impact area').

The flora survey is required to identify CEEVNT (flora species that may be present and must be undertaken by a suitably qualified and experienced person in accordance with the DES Flora Survey Guidelines – Protected Plants (DES, 2019a). The results of the survey are required to be presented in a flora survey report that shall require submission as part of either a protected plant clearing permit (where CEEVNT species are present within the clearing impact area), or an exempt clearing notification. Clearing of areas outside of mapped high-risk areas is exempt i.e. clearing of native plants that are 'in the wild' can be undertaken with no need for a flora survey undertaken in accordance with protected plants flora survey guidelines, a protected plant clearing permit, or to notify the department. The flora survey report must be submitted before clearing commences and no later than 12 months after the flora survey undertaken for the report was completed.

Mapped Watercourses - Watercourses regulated under the Water Act 2000 and Fisheries Act 1994

The watercourse in the eastern portion of the site is mapped as a moderate risk (amber) (fish passage attribute 2 *Act 1z994* and as a drainage feature defined by the *Water Act 2000*. Whilst it is not expected that development shall require any works within this waterway, further assessments and approvals may be required; for example, a waterway barrier works Development Approval (DA) will be required where works are proposed and where these works are unable to comply with the Accepted Development Requirements (ADRs) and/or authority or development application to take or interfere with water.

#### 5.3 Environmental Offsets

The development has proposed to minimise and mitigate the loss of native vegetation and associated values within the site and impacts to ecologically important areas have been reduced as much as reasonably possible.

Any formal offsets can be conditioned by Council at operational works stage to account for any significant residual impact/s to within ecologically important areas.



### 6 Conclusion

Green Tape Solutions was engaged by Woolworths Group Limited to prepare an ecological assessment (EA) for a site located at 125 Myall Street, Cooroy (Lot 4 on SP248479). This report has been prepared for a development application for the construction of a mixed-use development including a new shopping centre and aged care facility.

The development has been designed to primarily utilise existing cleared areas; however, some removal of vegetation shall be required to facilitate the development. Site investigations undertaken in November 2022 and December 2023 determined that the site supports three (3) vegetation communities, including an area of degraded, tall open forest that conforms to RE 12.3.2 in the south-eastern corner of the site. This vegetation community is in non-remnant condition; however, it is likely to support habitat for several threatened fauna species listed under the EPBC and/or NC Act and as well as habitat, resources and landscape connectivity values. This community may also conform to the EPBC-listed TEC, Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions.

The development design has been refined to consolidate the development footprint to minimise vegetation clearing and ecological impacts as much as possible by retaining vegetation within the south-eastern corner of the site. The development footprint has been consolidated to the cleared portion of the site, along the edge of existing road and highly disturbed areas. Vegetation clearing for the development will result in a reduction in the extent of the vegetation patch, and other associated impacts to fauna habitat and fauna occupying the site. The development will mostly intrude on regrowth and rainforest successional species (e.g *Acacia sp., Macaranga sp. and Alphitonia sp.*) with most of woody vegetation being impacted being the dense population of Camphor laurel (*Cinnamomum camphora*) and slash pine (*Pinus elliottii*).

Vegetation within the south-eastern corner of the site is mapped as high-risk protected flora trigger area on the Protected plants flora survey trigger map administered by DESI. There is a formal requirement to undertake a protected plant flora survey and submit the flora survey report to DESI prior to commencement of any site works within 100m of the mapped high-risk area.

By implementing the key recommendations designed to minimise impacts during the construction and operational phases, the proposed development will reduce its impact on the ecological values of the site and surrounding area. The report also provides mitigation measures to ensure that the development complies with the relevant environmental legislation.



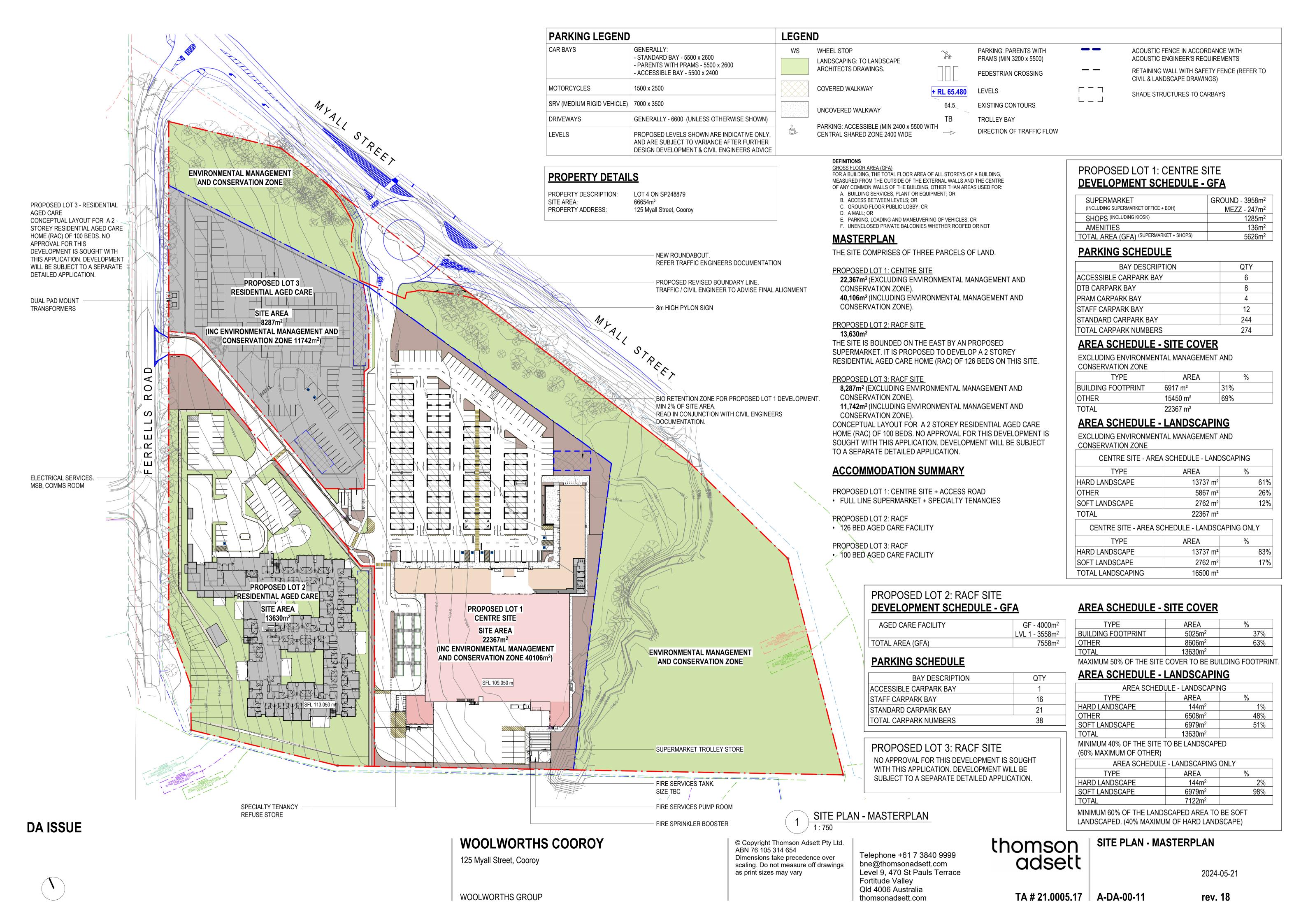
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## Appendix 1

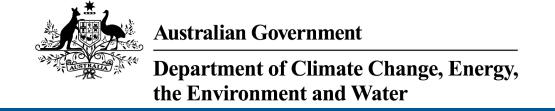
## **Development Layout**





## Appendix 2

## **EPBC Act Protected Matters Search**



# **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: 17-Jan-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 <u>Administrative Guidelines on Significance</u>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	84
Listed Migratory Species:	19

## 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 <a href="https://www.dcceew.gov.au/parks-heritage/heritage">https://www.dcceew.gov.au/parks-heritage/heritage</a>

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	1
Listed Marine Species:	26
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

## **Extra Information**

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

State and Territory Reserves:	15
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	13
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

## **Details**

## Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)	[ Resource Information	
Ramsar Site Name	Proximity	Buffer Status
Great sandy strait (including great sandy strait, tin can bay and tin can inlet)	30 - 40km upstream from Ramsar site	In feature area

## 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
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occu within area	rIn buffer area only
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community likely to occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area	In feature area
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	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
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat known to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<u>Lathamus discolor</u>			
Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area	In feature area
<u>Limnodromus semipalmatus</u>			
Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
Stagonopleura guttata			
Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Tringo pobulario			
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<u>Turnix melanogaster</u>			
Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area	In feature area
CRUSTACEAN			
Cherax robustus			
Sand Yabby [91922]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
FISH			
Maccullochella mariensis  Mary River Cod [83806]	Endangered	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Nannoperca oxleyana Oxleyan Pygmy Perch [64468]	Endangered	Species or species habitat may occur within area	In buffer area only
Neoceratodus forsteri Australian Lungfish, Queensland Lungfish [67620]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Pseudomugil mellis Honey Blue Eye, Honey Blue-eye [26180]	Endangered	Species or species habitat may occur within area	In feature area
FROG			
Assa darlingtoni Pouched Frog [1965]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<u>Litoria olongburensis</u> Wallum Sedge Frog [1821]	Vulnerable	Species or species habitat known to occur within area	In feature area
Mixophyes fleayi Fleay's Frog [25960]	Endangered	Species or species habitat likely to occur within area	In feature area
Mixophyes iteratus Giant Barred Frog, Southern Barred Frog [1944]	Vulnerable	Species or species habitat known to occur within area	In feature area
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
Phyllodes imperialis smithersi Pink Underwing Moth [86084]	Endangered	Species or species habitat likely to occur within area	In buffer area only
MAMMAL			
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus maculatus (SE main Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	nland population) Endangered	Species or species habitat likely to occur within area	In feature area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Phascolarctos cinereus (combined popul	ations of Qld, NSW and th	ne ACT)	
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
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
PLANT			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Acacia attenuata [10690]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Acronychia littoralis Scented Acronychia [8582]	Endangered	Species or species habitat may occur within area	In buffer area only
Archidendron lovelliae Bacon Wood, Tulip Siris [13451]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Baloghia marmorata Marbled Balogia, Jointed Baloghia [8463]	Vulnerable	Species or species habitat likely to occur within area	_
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat known to occur within area	In feature area
Coleus nitidus listed as Plectranthus nitid Nightcap Plectranthus, Silver Plectranthus [91380]	<mark>dus</mark> Endangered	Species or species habitat may occur within area	In buffer area only
Coleus omissus listed as Plectranthus or [91381]	<u>nissus</u> Endangered	Species or species habitat may occur within area	In buffer area only
Coleus torrenticola listed as Plectranthus [91382]	s torrenticola Endangered	Species or species habitat known to occur within area	In buffer area only
Cossinia australiana Cossinia [3066]	Endangered	Species or species habitat may occur within area	In feature area
Cryptocarya foetida Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In feature area
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Eucalyptus conglomerata Swamp Stringybark [3160]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Floydia praealta Ball Nut, Possum Nut, Big Nut, Beefwood [15762]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macadamia ternifolia Small-fruited Queensland Nut, Gympie Nut [7214]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough- leaved Queensland Nut [6581]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Macrozamia pauli-guilielmi Pineapple Zamia [5712]	Endangered	Species or species habitat likely to occur within area	In feature area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat known to occur within area	In feature area
Picris evae Hawkweed [10839]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Planchonella eerwah Shiny-leaved Condoo, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat known to occur within area	In feature area
Prostanthera spathulata [88266]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Romnalda strobilacea [5948]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Sarcochilus fitzgeraldii Ravine Orchid [19131]	Vulnerable	Species or species habitat may occur within area	In feature area
Sophora fraseri [8836]	Vulnerable	Species or species habitat may occur within area	In feature area
Syzygium hodgkinsoniae Smooth-bark Rose Apple, Red Lilly Pilly [3539]	Vulnerable	Species or species habitat may occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Triunia robusta Glossy Spice Bush [14747]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Xanthostemon oppositifolius Penda, Southern Penda, Luya's Hardwood [8738]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area
Elseya albagula Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	Species or species habitat may occur within area	In feature area
Elusor macrurus  Mary River Turtle, Mary River Tortoise [64389]	Endangered	Species or species habitat may occur within area	In buffer area only
<u>Furina dunmalli</u> Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat may occur within area	In feature area
Listed Migratory Species		[Res	source Information ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Marine Species  Crocodylus porosus  Salt-water Crocodile, Estuarine Crocodile [1774]  Migratory Terrestrial Species		Species or species habitat likely to occur within area	In feature area
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus	•		
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha t Spectacled Monarch [83946]	<u>rivirgatus</u>	Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
<u>Limnodromus semipalmatus</u> Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In buffer area only

## Other Matters Protected by the EPBC Act

Commonwealth Heritage Places		[Res	source Information ]
Name	State	Status	Buffer Status
Historic			
Cooroy Post Office	QLD	Listed place	In buffer area only
Listed Marine Species		[Res	source Information ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<u>Limnodromus semipalmatus</u> Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area	In buffer area only
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula bengh	alensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Sterna striata			
White-fronted Tern [799]		Migration route may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status		
Symposiachrus trivirgatus as Monarcha trivirgatus					
Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In feature area		
Tringa nebularia					
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In buffer area only		
Reptile					
<u>Crocodylus porosus</u>					
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area	In feature area		

## Extra Information

State and Territory Reserves			[ Resource Information ]
Protected Area Name	Reserve Type	State	Buffer Status
Bellbird Stud	Nature Refuge	QLD	In buffer area only
Bryn Glas	Nature Refuge	QLD	In buffer area only
Eumundi	Conservation Park	QLD	In buffer area only
Gooungalba	Nature Refuge	QLD	In buffer area only
Kingsgate Drive	Nature Refuge	QLD	In buffer area only
Mapleton	National Park	QLD	In buffer area only
Mapleton	Forest Reserve	QLD	In buffer area only
Mount Cooroy	Conservation Park	QLD	In buffer area only
Mount Eerwah	Conservation Park	QLD	In buffer area only
Symplocos	Nature Refuge	QLD	In buffer area only
Tewantin	National Park	QLD	In buffer area only
Tuchekoi	National Park	QLD	In buffer area only
Tuchekoi	Conservation Park	QLD	In buffer area only
Verrierdale Rise	Nature Refuge	QLD	In buffer area only
Yurol	Nature Refuge	QLD	In buffer area only

EPBC Act Referrals			[ Resou	rce Information ]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Six Mile Creek Dam Safety Upgrade Project, Qld	2017/8078		Post-Approval	In buffer area only
Controlled action				
Bruce Highway Upgrade - Section A	2011/6024	Controlled Action	Post-Approval	In feature area
Northern Pipeline Interconnector Stage 2	2007/3686	Controlled Action	Post-Approval	In feature area
Rural residential subdivision	2007/3460	Controlled Action	Completed	In buffer area only
Traveston Crossing Dam	2006/3150	Controlled Action	Completed	In buffer area only
Not controlled action				
275 kV double-circuit transmission line between Woolooga Substation & new substation	2009/4840	Not Controlled Action	Completed	In feature area
Coolum Industrial Estate	2005/2162	Not Controlled Action	Completed	In buffer area only
Development of eco-tourism visitor accommodation	2004/1879	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Orchid transplant	2003/1113	Not Controlled Action	Completed	In buffer area only
Six Mile Creek Bridge Replacement	2021/9120	Not Controlled Action	Completed	In buffer area only
Referral decision				
14 km upgrade of the Bruce Highway	2010/5724	Referral Decision	Completed	In feature area
Bruce Highway 65 Klm Upgrade Project in Four Sections	2008/4452	Referral Decision	Completed	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 are 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

#### 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

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

### 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
- 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.

# Please feel free to provide feedback via the **Contact us** page.

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# Appendix 3

## Wildlife Online Database



## WildNet species list

Search Criteria: Species List for a Specified Point

> Species: All Type: Native

Queensland status: Rare and threatened species

Records: Confirmed Date: Since 1980 Latitude: -26.4300 Longitude: 152.9125

Distance: 10

Email: jacob.gack@greentapesolutions.com.au

Date submitted: Wednesday 17 Jan 2024 10:01:52 Date extracted: Wednesday 17 Jan 2024 10:10:09

The number of records retrieved = 41

#### **Disclaimer**

Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the State of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

The State of Queensland disclaims all responsibility for information contained in this product and all liability (including liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason. Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only. The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (https://www.qld.gov.au/environment/plants-animals/species-information/wildnet) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.gld.gov.au.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	Α	Records
animals	amphibians	Hylidae	Litoria olongburensis	wallum sedgefrog		V	V	1
animals	amphibians	Hylidae	Litoria pearsoniana	cascade treefrog		V		64/1
animals	amphibians	Limnodynastidae	Adelotus brevis	tusked frog		V		419
animals	amphibians	Myobatrachidae	Crinia tinnula	wallum froglet		V		29/1
animals	amphibians	Myobatrachidae	Mixophyes iteratus	giant barred frog		V	V	286/1
animals	birds	Apodidae	Hirundapus caudacutus	white-throated needletail		V	V	2
animals	birds	Cacatuidae	Calyptorhynchus lathami	glossy black-cockatoo		V		49
animals	birds	Cacatuidae	Calyptorhynchus lathami lathami	glossy black-cockatoo (eastern)		V	V	8
animals	birds	Podargidae	Podargus ocellatus plumiferus	plumed frogmouth		V		1
animals	birds	Strigidae	Ninox strenua	powerful owl		V		1
animals	insects	Papilionidae	Ornithoptera richmondia	Richmond birdwing		V		4
animals	malacostracans	Parastacidae	Tenuibranchiurus glypticus	swamp crayfish		Ε		1
animals	mammals	Phascolarctidae	Phascolarctos cinereus	koala		Ε	Е	291
animals	mammals	Pseudocheiridae	Petauroides volans volans	southern greater glider		Ε	Е	5
plants	land plants	Apocynaceae	Leichhardtia coronata			V		3/2
plants	land plants	Aristolochiaceae	Pararistolochia praevenosa			NT		31/5
plants	land plants	Asteraceae	Picris conyzoides			V		1
plants	land plants	Casuarinaceae	Allocasuarina rigida subsp. exsul			V		11/11
plants	land plants	Cucurbitaceae	Nothoalsomitra suberosa			NT		4/2
plants	land plants	Euphorbiaceae	Mallotus megadontus			Ε		8/7
plants	land plants	Euphorbiaceae	Ricinocarpos speciosus			V		8/5
plants	land plants	Lamiaceae	Coleus torrenticola			Ε	Е	1/1
plants	land plants	Lamiaceae	Prostanthera spathulata			V	V	7/7
plants	land plants	Lauraceae	Cryptocarya foetida	stinking cryptocarya		V	V	2/1
plants	land plants	Leguminosae	Archidendron lovelliae	bacon wood		V	V	1
plants	land plants	Leguminosae	Sophora fraseri	brush sophora		V	V	3
plants	land plants	Myrtaceae	Gossia hillii			CR		7/3
plants	land plants	Myrtaceae	Gossia inophloia			CR		5/3
plants	land plants	Myrtaceae	Lenwebbia sp. (Blackall Range P.R.Sharpe 5387)			Ε		1/1
plants	land plants	Myrtaceae	Rhodamnia dumicola	rib-fruited malletwood		Ε		6/2
plants	land plants	Myrtaceae	Rhodamnia rubescens	scrub turpentine		CR	CE	50/4
plants	land plants	Myrtaceae	Rhodomyrtus psidioides	native guava		CR	CE	20/5
plants	land plants	Myrtaceae	Xanthostemon oppositifolius	southern penda		V	V	28/9
plants	land plants	Orchidaceae	Phaius australis			Ε	Е	2/2
plants	land plants	Proteaceae	Floydia praealta	ball nut		V	V	2
plants	land plants	Proteaceae	Macadamia integrifolia	macadamia nut		V	V	2
plants	land plants	Proteaceae	Macadamia ternifolia	bopple nut		V	V	2/1
plants	land plants	Proteaceae	Triunia robusta			E	Е	19/12
plants	land plants	Rhamnaceae	Pomaderris crassifolia			V	_	1/1
plants	land plants	Sapotaceae	Planchonella eerwah			Ε_	Е	2/2
plants	land plants	Symplocaceae	Symplocos harroldii	hairy hazelwood		NT		112/17

#### **CODES**

- I Y indicates that the taxon is introduced to Queensland and has naturalised.
- Q Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.

  The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).
- A Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

  The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



## Appendix 4

## DOR Vegetation Management Report



# **Vegetation management report**

For Lot: 4 Plan: SP248479

17/01/2024



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## **Recent changes**

#### **Updated mapping**

Updated vegetation mapping was released on 22 November 2023 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, essential habitat, wetland and high-value regrowth mapping.

The Department of Environment and Science have also updated their koala protection mapping to align with the Queensland Herbarium scientific updates.

The latest version (v10) of the Protected Plants Flora Survey Trigger Map (trigger map) was released on 6 September 2023.

#### **Overview**

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

#### Vegetation management framework details for the specified Lot on Plan including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- · whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

• high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

#### Koala protection framework details for the specified Lot on Plan including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:
  - exempt clearing work;
  - accepted development vegetation clearing code;
  - an area management plan;
  - · a development approval;
- the protected plant framework, which may include:
  - the need to undertake a flora survey:
  - exempt clearing:
  - a protected plant clearing permit;
- the koala protection framework, which may include:
  - · exempted development;
  - a development approval;
  - the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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## 1. Property details

#### 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 4 Plan: SP248479, are listed in Table 1.

#### Table 1: Lot, plan, tenure and title area information for the property

Lot	Plan	Tenure	Property title area (sq metres)
4	SP248479	Freehold	66,650

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 4 Plan: SP248479, in relation to natural and administrative boundaries.

#### **Table 2: Property location details**

Local Government(s)
Noosa Shire

Bioregion(s)	Subregion(s)
Southeast Queensland	Sunshine Coast - Gold Coast Lowlands

Catchment(s)
Mary

# 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the Vegetation Management Regulation 2023, the *Planning Act 2016* and the Planning Regulation 2017, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem identified in the Vegetation Management Regional Ecosystem Description Database (VM REDD) as having a grassland structure; and
- a mangrove.

## 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

## 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

https://vegetation-apps.dnrm.qld.gov.au

### 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval. Information on how to apply for a development approval is available at

https://www.gld.gov.au/environment/land/management/vegetation/clearing-approvals/development

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

Phone 135VEG (135 834)

Email vegetation@resources.gld.gov.au

Visit <a href="https://www.resources.qld.gov.au/?contact=vegetation">https://www.resources.qld.gov.au/?contact=vegetation</a> to submit an online enquiry.

## 3. Vegetation management framework for Lot: 4 Plan: SP248479

## 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

Table 3: Vegetation categories for subject property. Total area: 6.66ha

Vegetation category	Area (ha)
Category X	6.7

Table 4: Description of vegetation categories

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
В	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
С	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

Reference number

2018/001186

### 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at <a href="https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/">https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/</a>

Table 5: Regional ecosystems present on subject property

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
non-rem	None	Х	6.66	None	None

#### Please note:

- 1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
- 2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- · exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

#### 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

#### 3.4 Wetlands

There are no vegetation management wetlands present on this property.

#### 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act* 1992 (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

Category A and/or Category B and/or Category C

Table 6: Essential habitat in Category A and/or Category B and/or Category C

No records

## 3.6 Area Management Plan(s)

Nil

#### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Coastal

\*See also Map 4.3

## 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?

Class A (with urban areas masked as per SPP): 4.85ha

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 4 Plan: SP248479.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at: https://www.resources.gld.gov.au/gld/environment/land/vegetation/vegetation-map-request-form

#### Regulated vegetation management map

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new <u>property maps of assessable vegetation (PMAV).</u>

#### Vegetation management supporting map

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

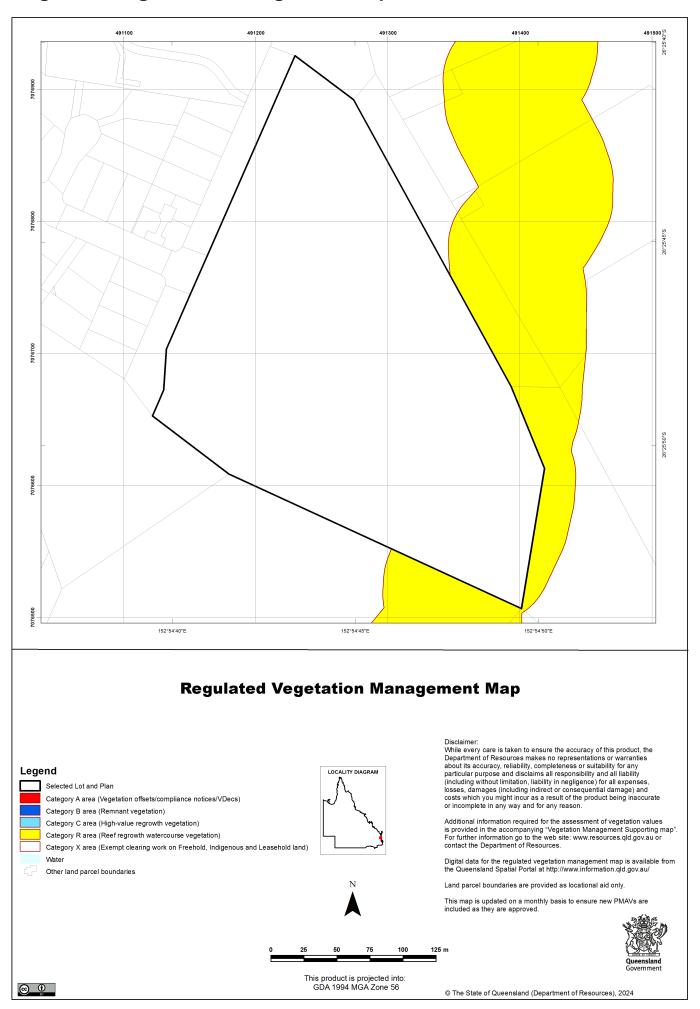
#### Coastal/non-coastal map

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

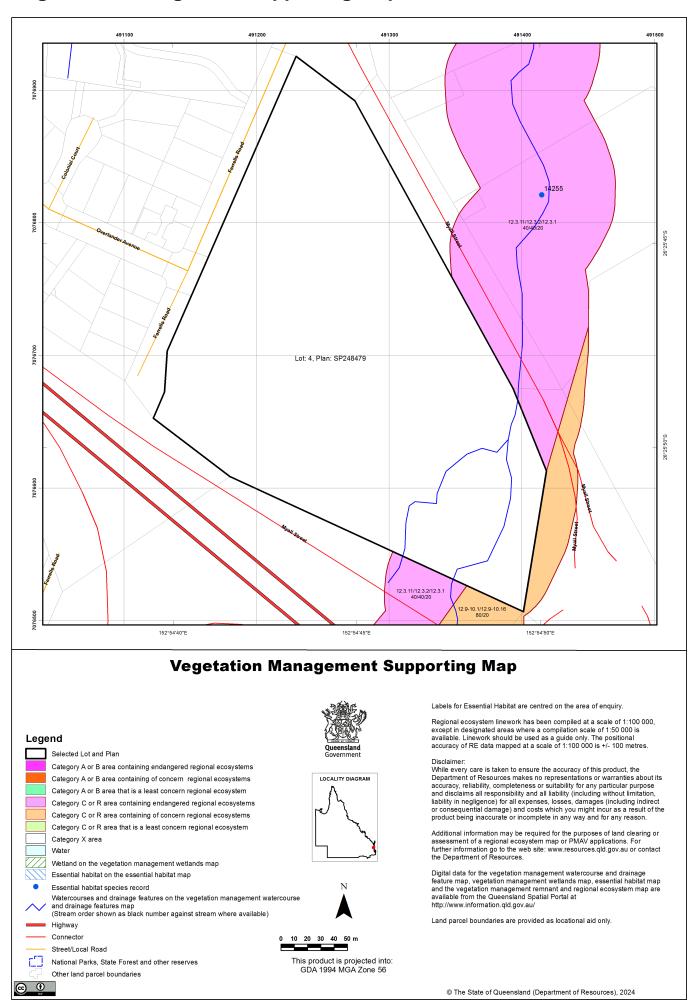
#### Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

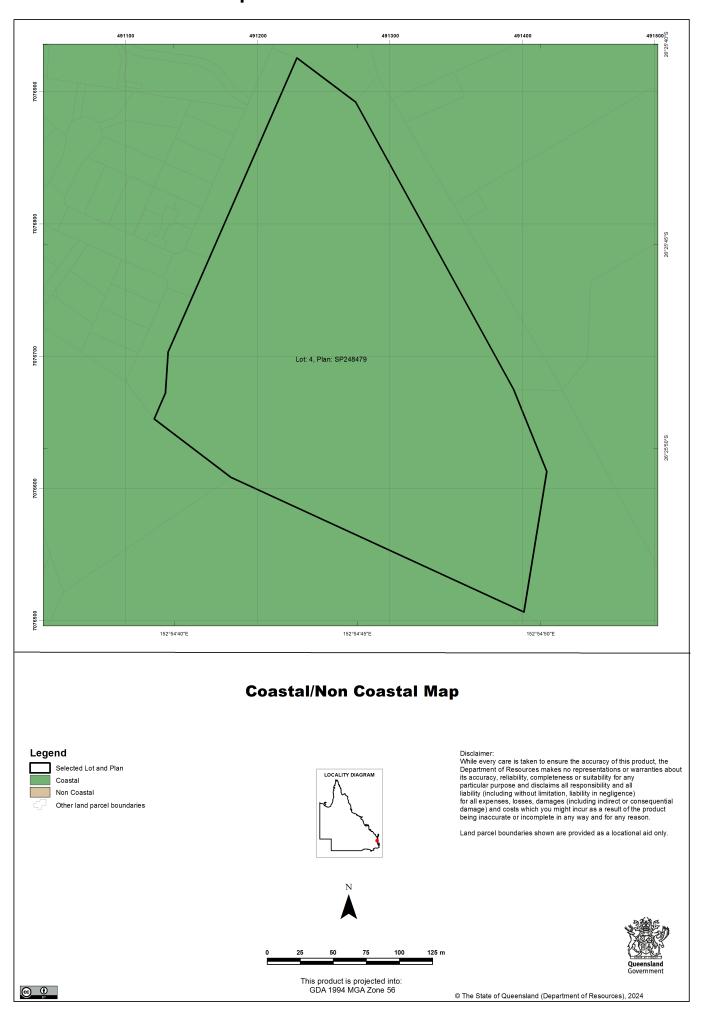
## 4.1 Regulated vegetation management map



## 4.2 Vegetation management supporting map



## 4.3 Coastal/non-coastal map



# 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



## **Agricultural Land Class A or B** as per State Planning Policy: State Interest for Agriculture Legend Selected Lot and Plan LOCALITY DIAGRAM Towns Rivers and creeks Freeways / motorways; Highways - Secondary roads: Streets Agricultural land class A or B \_\_\_\_ A В Not class A or B Disclaimer Whilst every care is taken to ensure the accuracy of these details all data custodians and/or the State of Queensland makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses damages (including indirect or consequential damage) and costs to which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason. © The State of Queensland, 2024 This product is projected into GDA 1994 MGA Zone 56

# 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the <u>Nature Conservation Act 1992</u> (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see <u>Operational policy: When a protected plant in Queensland is considered to be 'in the wild'</u>) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the <u>Flora survey guidelines</u>. The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An <u>exempt clearing notification form</u> must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the <u>clearing permit application form</u>.

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

## 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

#### 5.4 Contact information for DES

For further information on the protected plants framework:

Phone 1300 130 372 (and select option four)

Email palm@des.qld.gov.au

Visit <a href="https://www.qld.gov.au/environment/plants-animals/plants/protected-plants">https://www.qld.gov.au/environment/plants-animals/plants/protected-plants</a>

## 5.5 Protected plants flora survey trigger map

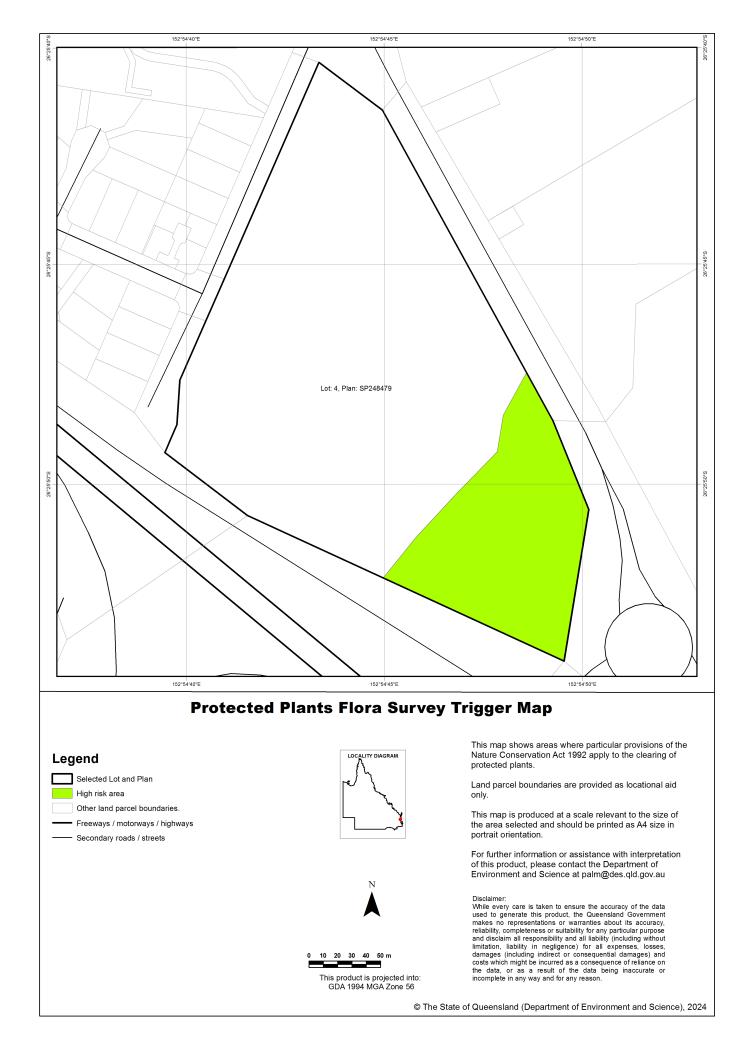
This map included may also be requested individually at: <a href="https://apps.des.gld.gov.au/map-request/flora-survey-trigger/">https://apps.des.gld.gov.au/map-request/flora-survey-trigger/</a>.

#### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

#### **Species information**

Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the <u>Queensland Spatial Catalogue</u>, the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the <u>clearing of protected plants</u> for more information.



# 6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document <a href="Spatial modelling in South East Queensland">Spatial modelling in South East Queensland</a>.

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document Guideline - Requests to make, amend or revoke a koala habitat area determination.

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

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <a href="https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps">https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps</a>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here: <a href="https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy">https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy</a>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

#### Interfering with koala habitat means:

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the <u>Planning Regulation 2017</u>. More information on exempted development can be found here: <a href="https://environment.des.gld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy">https://environment.des.gld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy</a>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The <u>Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks</u> outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the <u>Nature Conservation (Koala) Conservation Plan 2017</u> prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

#### 6.4 Contact information for DES

For further information on the koala protection framework:

Phone 13 QGOV (13 74 68)

Email koala.assessment@des.gld.gov.au

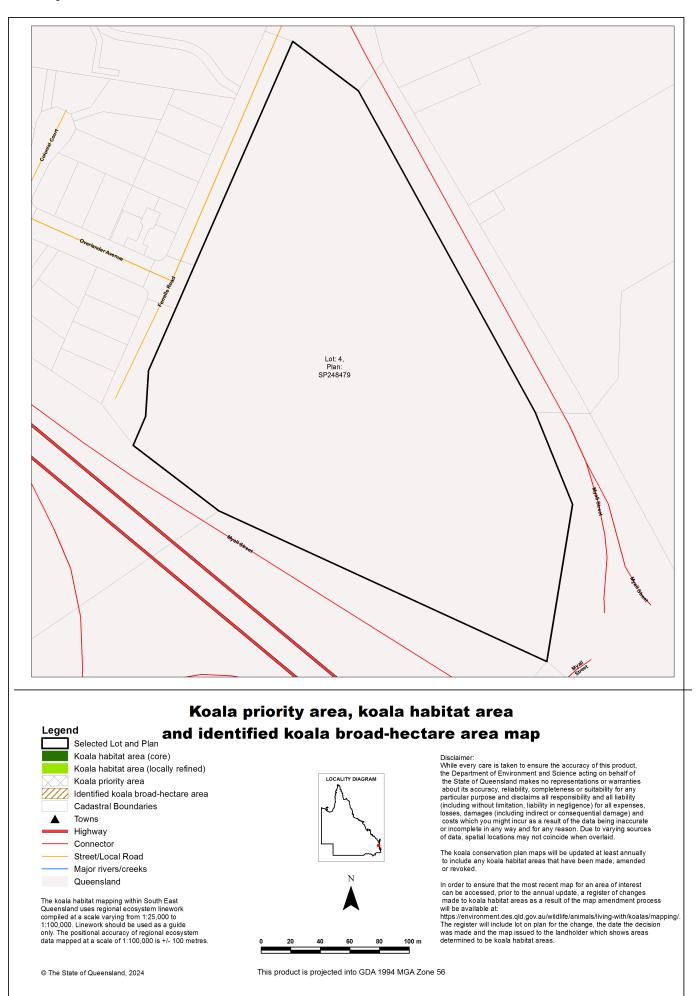
Visit https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping

## 7. Koala protection framework details for Lot: 4 Plan: SP248479

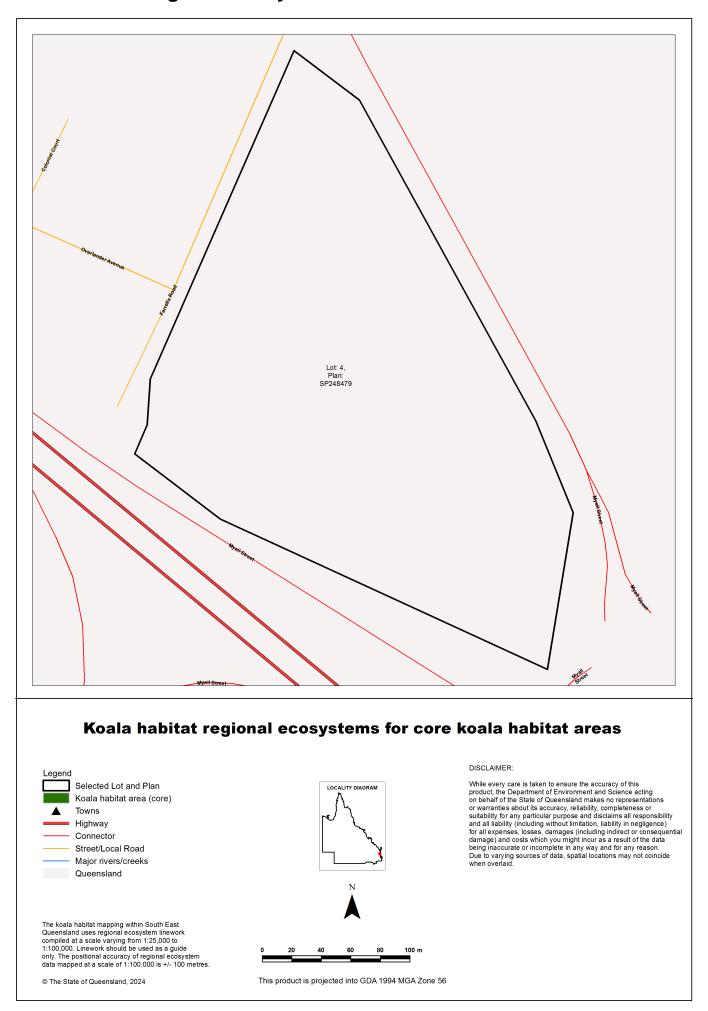
#### 7.1 Koala districts

Koala District A

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



## 7.3 Koala habitat regional ecosystems for core koala habitat areas



## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
Interference with overland flow     Earthworks, significant disturbance	Water Act 2000 Soil Conservation Act 1986	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) www.rdmw.qld.gov.au www.resources.qld.gov.au
Indigenous Cultural Heritage	Aboriginal Cultural Heritage Act 2003 Torres Strait Islander Cultural Heritage Act 2003	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) www.datsip.qld.gov.au
Mining and environmentally relevant activities     Infrastructure development (coastal)     Heritage issues	Environmental Protection Act 1994 Coastal Protection and Management Act 1995 Queensland Heritage Act 1992	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) www.des.qld.gov.au
Protected plants and protected areas	Nature Conservation Act 1992	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) palm@des.qld.gov.au www.des.qld.gov.au
Koala mapping and regulations	Nature Conservation Act 1992	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) Koala.assessment@des.qld.gov.au
<ul> <li>Interference with fish passage in a watercourse, mangroves</li> <li>Forestry activities on State land tenures</li> </ul>	Fisheries Act 1994 Forestry Act 1959	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) www.daf.qld.gov.au
Matters of National Environmental Significance including listed threatened species and ecological communities	Environment Protection and Biodiversity Conservation Act 1999	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 www.environment.gov.au
Development and planning processes	Planning Act 2016 State Development and Public Works Organisation Act 1971	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dsdmip.qld.gov.au
Local government requirements	Local Government Act 2009 Planning Act 2016	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
Harvesting timber in the Wet     Tropics of Qld World Heritage area	Wet Tropics World Heritage Protection and Management Act 1993	Wet Tropics Management Authority	Ph: (07) 4241 0500 www.wettropics.gov.au



Appendix 5

Species List



Table 8: Flora and Fauna Species List

Scientific Name	Common Name	Status
Flora Species		
Tree and Canopy Species		
Archontophoenix cunninghamiana	Bangalow Palm	LC
Brachychiton acerifolius	Flame Bottletree	LC
Cinnamomum camphora*	Camphor Laurel	Weed
Corymbia torelliana*	Cadaghi	Weed
Elaeocarpus grandis	Blue Quandong	LC
Erythrina sykesii*	Common Coral Tree	Weed
Eucalyptus grandis	Flooded Gum	LC
Eucalyptus microcorys	Tallowwood	LC
Eucalyptus tereticornis	Queensland Blue Gum	LC
Ficus obliqua	Small-Leaved Fig	LC
Glochidion ferdinandi	Cheese Tree	LC
Glochidion sumatranum	Umbrella Cheese Tree	LC
Grevillea robusta	Silky Oak	LC
Heptapleurum actinophyllum*	Australian Umbrella Tree	Weed
Hibiscus tiliaceus	Cotton Tree	LC
Jegera pseudorhus	Foam Bark	LC
Lophostemon suaveolens	Swamp Box	LC
Mangifera indica	Mango	LC
Melaleuca quinquenervia	Broad-Leaved Paperbark	LC
Pinus elliottii*	Slash Pine	Weed
Syncarpia glomulifera	Turpentine Tree	LC
Waterhousia floribunda	Weeping Lilly Pilly	LC
Mid - Storey and Shrub Layer Species		
Acacia concurrens	Black Wattle	LC
Acacia melanoxylon	Australian Blackwood	LC
Alphitonia excelsa	Soap Tree	LC
Cupaniopsis anacardioides	Tuckeroo	LC



Scientific Name	Common Name	Status
Lantana camara*	Lantana	Weed
Macaranga tanarius	Macaranga	LC
Ochna serrulata	Ochna	Weed
Schinus terebinthifolius*	Broad Leaved Pepper Tree	Weed
Senna pendula var. glabrata*	Easter Cassia	Weed
Solanum mauritianum*	Tobacco Tree	Weed
Ground Cover Species		
Ageratum houstonianum*	Blue Billygoat	Weed
Asparagus aethiopicus*	Basket Asparagus	Weed
Asparagus setaceus*	Asparagus Fern	Weed
Gomphocarpus physocarpus*	Balloon Cotton	Weed
Lomandra longifolia	Spiny-Head Mat-Rush	LC
Dolichandra unguis-cati*	Cat's Claw Creeper	Weed
Nephrolepis cordifolia*	Fishbone Fern	Weed
Sphagneticola trilobata*	Singapore Daisy	Weed
Grass Species		
Chloris gayana	Rhodes Grass	Weed
Imperata cylindrica	Blady Grass	LC
Melinis minutiflora	Molasses Grass	LC
Paspalum notatum*	Bahia Grass	Weed
Themeda quadrivalvis*	Grader Grass	Weed
Themeda triandra	Kangaroo Grass	LC
Fauna Species		
Avarian Species		
Accipiter novaehollandiae	Grey Goshawk	LC
Corvus orru	Torresian Crow	LC
Cracticus tibicen	Australian Magpie	LC
Lichmera indistincta	Brown Honeyeater	LC
Manorina melanocephala	Noisy Miner	LC



Scientific Name	Common Name	Status
Ocyphaps lophotes	Crested Pigeon	LC
Rhipidura leucophrys	Willie Wagtail	LC
Trichoglossus moluccanus	Rainbow Lorikeet	LC

<sup>\*</sup>Invasive species



## Appendix 6

# Council Planning Scheme Overlay Maps







## Appendix 7

# Biodiversity, Waterways and Wetlands Overlay Code



Table 9: Assessment Against the Noosa Councils' Biodiversity, Waterways and Wetlands Overlay Code.

Performance outcomes	Acceptable outcomes	Compliance	
Ecologically important areas			
PO1	AO1.1	Comlies with PO1	
Development is sited and designed to protect the physical and ecological integrity and biodiversity of ecologically important areas through protection of:  a. existing habitat areas and ecological linkages; and b. existing riparian vegetation, waterways and wetland habitat values.	Ecologically important areas are conserved or improved to ensure their ongoing contribution to the natural resources and biological diversity of Noosa Shire.  AND  AO1.2  Buildings, structures and associated works are located within existing cleared areas or areas of lowest ecological value.  AND  AO1.3  Where constructing a dwelling house or community residence, buildings and associated structures are not located on land identified as an area of biodiversity significance on a Biodiversity, Waterways and Wetlands Overlay Map.  OR  Clearing vegetation (other than for a driveway access) does not extend beyond—  a. 30 metres of a habitable building or 10 metres of a class 10 structure on lots greater than 10 hectares; or  b. 10 metres of a habitable building or class 10 structure on lots 10 hectares or less but more than 3,000m²; or	Whilst degraded, vegetation within the south-eastern corner of the site supports native vegetation and associated habitat values, including likely habitat for several listed threatened species and has been ground-truthed as non-remnant RE 12.3.2 (listed as Of concern under the VM Act). This vegetation meets (or is likely to meet) one or more of the criteria under the Noosa Plan 2020 definition of 'ecologically important area'. The development has been sited predominantly within existing cleared and disturbed areas to minimise vegetation clearing and impacts within this area. Retention of this vegetation shall ensure protection of the waterway, existing habitat values and ecological linkages.	



Performance outcomes	Acceptable outcomes	Compliance
	c. 3 metres of a habitable building or class 10 structure on lots 3,000m² or less.	
	AND	
	AO1.4	
	Clearing of vegetation for a boundary fence does not extend beyond 5 metres either side of the fence.	
Reconfiguring a lot		
PO2	AO2	Complies with PO2
New lots are only created if they maintain ecological linkages and minimise the clearing of vegetation.	Where clearing vegetation for the purpose of Reconfiguring a Lot:  a. new boundaries to lots do not transect and fragment existing native vegetation;  b. new lots are created to allow for suitable building envelopes for future buildings and works to be located within existing cleared areas or areas of low ecological value;  c. building envelopes are designated for each lot; and  d. ecological linkages and ecologically important areas are secured by environmental covenant or transferred to public ownership or through gazettal of a nature reserve.	The development shall maintain ecological linkages and minimises the clearing of vegetation. The development design consolidates the development footprint to the western and central portions of the site within the cleared area to minimise impact to the existing vegetation and ecological impacts as much as possible. The development shall require removal of 46 trees in total, comprising of 13 native trees and 33 exotic trees. Some regrowth vegetation and shrubs will also be removed.
Management of Impacts		
PO3	AO3.1	Complies with AO3.1 and AO3.2
Development is designed and sited to manage adverse impacts on ecologically important areas by:	Where clearing of vegetation cannot be practicably avoided, the development:	The development has been sited to minimise loss of native vegetation as much as possible.



Performance outcomes	Acceptable outcomes	Compliance
<ul> <li>a. minimising the total footprint within which all activities, buildings, structures driveways and other works are contained;</li> <li>b. locating development in existing cleared areas or areas of low ecological value over other areas to the greatest extent possible; and</li> <li>c. incorporating siting and design measures to protect and retain ecological values and ecosystem processes within or adjacent to the development site; and</li> <li>d. where adverse impacts have been minimised, any residual impacts on ecological values are compensated for through suitable habitat replacement and replanting on site in the first instance or in a way that results in a net gain and enhancement of the overall habitat values of Noosa Shire.</li> </ul>	<ul> <li>a. ensures the design and siting limits the loss of vegetation to the smallest extent possible;</li> <li>b. protects and retains ecological values and ecosystem processes to the greatest extent possible within and adjacent to the site;</li> <li>c. provides measures to allow for safe movement of fauna through the site; and</li> <li>d. provides suitable habitat replacement and replanting in accordance with PSP3 Ecological Assessment Guidelines.</li> <li>AO3.2</li> <li>Habitat trees, recruitment habitat trees, and roosting, breeding and feeding areas are protected for native fauna habitat.</li> </ul>	Retention of vegetation within the south-eastern corner shall retain and protect ecological values and ecosystem processes, waterway and existing habitat values and ecological linkages. Measures to allow for safe movement of fauna through the site shall include fauna-friendly fencing along interface between the development and retained vegetation to ensure that wildlife can move safely along existing corridors and prevent wildlife access to the premises. Habitat replacement and replanting shall be provided in accordance with  Retention of vegetation within the south-eastern corner will ensure that the development will not have a significant impact on habitat trees, recruitment habitat trees, roosting, breeding and feeding areas.
PO4  Development provides for effective measures during construction and operation to protect ecological values including:  a. avoiding disturbance to or clearing of vegetation in and within the vicinity of the site;  b. managing habitat disturbance and physical harm to fauna from noise, vibration, dust, light, dewatering or excavating; and  c. avoiding clearing in areas where erosion or slippage could occur.	Vegetation is protected from disturbance or damage from construction and operation activities by:  a. clearly marking trees to be retained with flagging tape; b. installing protective fencing around the dripline of the vegetation and avoid filling and excavating in these fenced areas; c. ensuring stockpiling, storage and vehicle parking occurs outside the identified vegetation areas; and d. using low impact construction techniques around vegetation.  AO4.2  Vegetation which is capable of forming or contributing to a buffer between different land uses or a buffer against pollution, light spillage or noise is retained.	Complies with AO1.1 – AO4.4  Measures to identify and protected trees to be retained shall be detailed in a Vegetation and Fauna Management Plan (VFMP) that will be prepared at operational works stage. The VFMP will provide detailed specifications flagging of vegetation to be retained, installation of temporary tree protection/No Go exclusion areas, requirements for works within retained areas and where required, low-impact construction techniques. Where required, works will be undertaken under the supervision of a suitably qualified and experienced arborist.  Landscaping shall be provided along the interface between the development and retained vegetation to provide a buffer for light spillage and noise mitigation. A site-based rehabilitation management plan shall guide rehabilitation activities within areas of retained vegetation including barrier plantings to mitigate edge



Performance outcomes	Acceptable outcomes	Compliance		
	AO4.3  Lighting associated with development:  a. does not contribute an unacceptable level of illuminance (greater than 1 lux) for light sensitive species within or at the boundary of an ecologically important area; and b. does not contribute to an unacceptable level of illuminance on landward horizons along coastal areas and known marine turtle nesting beaches.  AO4.4  Clearing of vegetation does not involve clearing that may cause or contribute to hillslope erosion, bank erosion, or slippage.	Directional lighting guards shall be installed to minimise light spill. Lighting will comply with the National Light Pollution Guidelines for Wildlife.  No vegetation clearing will be undertaken on creek banks or steep slopes.		
Connectivity	Connectivity			
PO5  Development is designed and operated to maintain and enhance connectivity between and across ecologically important areas and connecting habitat and support unimpeded and safe movement of terrestrial and aquatic fauna.	Development is designed and operated to maintain ecological linkages and maximise opportunity for connectivity and the movement of fauna by:  a. ensuring protection of wildlife refuges; b. maintaining vegetation in patches of the greatest possible size and within the smallest possible edge-to-area ratio; c. enhancing connectivity through planting and rehabilitation works, including across property boundaries, to areas of national park, state forest or reserve; d. avoiding the creation of physical barriers and safety hazards (such as roads,	Complies with PO5  The development has been sited to minimise encroachment into retained vegetation and will not cause any additional fragmentation nor compromise ecological connectivity. Clearing shall be undertaken along an existing edges and the development will not introduce new physical barriers such as new roads, instream structures within habitat areas The development layout and design shall supports unimpeded and safe movement of terrestrial and aquatic fauna through retention of site vegetation and provision of mitigation measures including fauna-friendly fencing. While the development encroaches into the mapped waterway corridor, the rehabilitation of the riparian area identified on a Biodiversity, Waterways and Wetlands Overlay Map will enhace the ecological values of the site		



ENVIRONMENTAL CONSULTING		
Performance outcomes	Acceptable outcomes	Compliance
	pedestrian access and instream structures) along and within the ecological linkage;  e. providing mitigation measures such as wildlife movement infrastructure, fauna exclusion and directional fencing, underpasses/overpasses and traffic calming devices, signage and lighting; and f. where offsets are necessary, delivering offsets that support and enhance ecological linkages.	and increase the quality of the vegetation, increasing fauna connectivity.
Wetlands and waterways		
PO6	AO6.1	Complies with AO6.2
The biodiversity and ecosystem values of waterways,	Development and clearing of vegetation does not occur	The development is located within the riparian buffer

wetlands and adjacent riparian zones are protected by:

- a. avoiding any new development in a riparian buffer area and wetland area;
- b. retaining aquatic and terrestrial habitat in riparian zones:
- c. maintaining and enhancing wildlife corridors and connectivity along watercourses and drainage lines for native fauna movement:
- d. avoiding edge effects and damage from adjacent land uses:
- e. maintaining stream integrity and bank stability by minimising bank erosion and slumping;
- f. maintaining water quality through filtering sediments, nutrients and other pollutants; and
- removing pest species and replacing them with local native species.

within:

- a. a riparian buffer area;
- b. a wetland area; or
- c. 10 metres either side of the centre line of other waterways identified on a Biodiversity, Waterways and Wetlands Overlay Map.

### AO6.2

Development provides for the rehabilitation of land within:

- a. a riparian buffer area;
- b. a wetland area: and
- c. 10 metres either side of the centre line of any other waterway identified on a Biodiversity, Waterways and Wetlands Overlay Map.

### AO6.3

Recreational facilities (e.g. playgrounds, pergolas, barbeques) are setback a minimum of 10 metres from the top of the bank of a waterway.

area and has been sited to minimise the impact of native vegetation. The development will minimise and protect the bank from erosion and slumping.

While the development encroaches into the mapped waterway corridor, the rehabilitation of the remaining riparian area identified on a Biodiversity, Waterways and Wetlands Overlay Map will be undertaken to improve the ecological values of the site.



Performance outcomes	Acceptable outcomes	Compliance
Water Hydrology  PO9  Development ensures that the natural surface water and ground water hydrologic regimes of waterways, wetlands and hydrologically-sensitive plant communities are not adversely impacted.  Editor's Note—Groundwater dependent ecosystems are identified on Queensland Government Wetland Info mapping	Editor's Note—Setbacks to waterways for certain uses and works are also specified in the relevant codes.  Editor's Note—Wetland areas are identified on the Queensland Wetland Program mapping.  Editor's Note—Any clearing of vegetation also needs to meet the outcomes of the Earthworks Code and the Water Quality and Drainage Code.  AO9.1  Development does not impact on the natural surface water or groundwater hydrologic regimes and this is facilitated by:  a. avoiding or minimising channelization, redirection or interruption of flow; b. avoiding groundwater extraction; c. maintaining groundwater recharge and discharge processes; d. maintaining natural groundwater fluctuations; e. avoiding causing ingress of saline water into freshwater aquifers of wetlands; and f. avoiding contaminants entering groundwater (e.g. from runoff, effluent disposal).	Complies with PO9  The development will ensure ensures that the natural surface water and ground water hydrologic regimes of the site are not adversely impacted by the development.
Rehabilitation of ecologically important areas		
PO10	AO10.1	Complies with PO10
Development provides for ecologically important areas to be restored and enhanced through:	Landscaping and rehabilitation complement and supports ecologically important areas by:  a. utilising local native species;	The development will provide for restoration of ecologically important areas through rehabilitation of the riparian corridor and removal of weed species including camphor loreals and slash pine.



Performance outcomes	Acceptable outcomes	Compliance
<ul> <li>a. designing landscaped areas to complement and enhance existing vegetation and ecological linkages;</li> <li>b. removing species likely to displace native flora species or degrade fauna habitat;</li> <li>c. replanting and rehabilitating degraded habitat;</li> <li>d. replacing any vegetation removed with suitable local native species;</li> <li>e. providing for fauna habitat; and</li> <li>f. avoiding the planting of pest plant species.</li> </ul>	<ul> <li>b. utilising suitable plant species identified in PSP2 Landscaping;</li> <li>c. restoring degraded ecosystems to achieve a functional ecosystem state that requires minimal human intervention;</li> <li>d. replicating adjacent remnant habitats of the same type, including the understorey vegetation;</li> <li>e. creating or enhancing linkages between existing habitats;</li> <li>f. avoiding the use of pest plant species listed in PSP2 - Landscaping;</li> <li>g. planting riparian zones to filter stormwater runoff, stabilise soil and provide for wildlife habitat; and</li> <li>h. providing ground and arboreal structures for fauna, which may include ground depressions, rocks, hollows, nesting boxes and in-stream habitat.</li> <li>AO10.2</li> <li>Vegetation cleared is replaced with:</li> <li>a. plantings of equivalent area that replicate the floristic structure of the vegetation removed; or</li> <li>b. where this is not possible due to the characteristics of the site and the development, plantings twice the number of the removed trees and plants.</li> <li>Editor's Note — Revegetation and rehabilitation works are to be carried out in accordance with an approved Revegetation and Rehabilitation Management Plan, as referred to in PSP3 Ecological assessment guidelines.</li> </ul>	Any rehabilitation will be compliant with local endemic species to further improve the integrity of the site.
Koala Habitat Protection and Enhancement		
PO11	AO11.1	Not applicable



Performance outcomes	Acceptable outcomes	Compliance
a. protect and enhance koalas and koala habitat and avoid adverse impacts; b. provide measures to assist the survival of koala populations in the area to mitigate any potential threats or risk to koalas; and c. provide for safe and appropriate koala movement across the landscape.  Editor's Note—Koala habitat mapping is in Schedule 2 Mapping.  Editor's Note—The Planning Regulation 2017, schedule 10 states that development that interferes with koala habitat, in an area that is both a koala priority area and a koala habitat area, is prohibited development (subject to the exceptions stated in schedule 10 of the Planning Regulation 2017).  Editor's Note - These performance outcomes and acceptable outcomes apply to: 1 development on land in a koala priority area, where the development does not interfere with koala habitat and where the benchmarks are additional to and not inconsistent with, the assessment benchmarks stated in schedule 11, part 2 of the Planning Regulations 2017; and development on land outside the koala priority area, where the development on land outside the koala priority area, where the development does not interfere with koala habitat areas.	Development design complies with the Koala-sensitive Design Guideline: A guide to koala sensitive design measures for planning and development activities.  AO11.2  Development incorporates revegetation and landscaping that provides food, shelter and movement opportunities for koalas.  AO11.3  Development is designed to maximise and enhance connectivity between koala habitat trees and ensure safe koala movement.  AO11.4  During construction, measures are incorporated to not increase the risk of death or injury to koalas, by including safe koala movement measures, as defined in the Planning Regulation 2017.	No part of the site is mapped as koala habitat under Schedule 2 mapping. In addition, the site is not mapped within a KPA nor is it mapped as containing KHA under the SEQ Koala Conservation plan map.
Bushfire Management		
PO12  Bushfire management measures are adopted based on ecological principles, which:	No acceptable outcome provided	Complies with PO12  Refer to separate bushfire hazard assessment prepared by Green Tape Solutions.



Performance outcomes	Acceptable outcomes	Compliance	
a. maintain and enhance biodiversity; b. minimise threat of fire to the natural environment, as well as life and property; and c. provide for effective use and maintenance of buildings and structures.  Editor's note—The performance outcome applies to properties in bushfire hazard areas and only where clearing is reasonably necessary for the control of bushfire risk to a building or structure. Bushfire hazard areas are shown on Bushfire Hazard Overlay maps in Schedule 2.		The site-based bushfire hazard assessment determined that vegetation within the assessment area can be excluded or downgraded in accordance with patch and filtering corridors rules in the State methodology - QFES BRC Technical Guidance material. Based on the patch and corridor filtering/downgrade, bushfire potential fireline intensity has been recalculated, which determined that all vegetation within the assessment area presents either low or no bushfire hazard and therefore no additional clearing is required for bushfire mitigation.	
Scenic amenity			
PO13	AO13.1	Complies with PO13	
The scenic amenity and vegetated character of the landscape is protected by retaining vegetation:  a. along and around watercourses and drainage lines; b. on steep slopes and ridgelines; c. along the major road network; and that forms coastal vistas to and from beaches.	Vegetation is retained:  a. on and within 30 metres of prominent ridgelines and on sloping sites; b. in gullies; c. along watercourses and drainage lines; d. within 10 metres of the major road network; and along the front coastal dune system.	The development has been sited to minimise the impact of clearing and removal of vegetation along creek lines and road network.  The development will retain the vegetation around the road corridor on the eastern portion of the site and will maximise the scenic amenity and vegetated character though landscape planning of the site.	