

# London Creek Environment Reserve Management Plan

2024 – 2034



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Cover photo: Gorge within London Creek Environment Reserve

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## Executive Summary

The steep slopes of the London Creek Environment Reserve rise towards Bald Knob and Mount Mellum at the southern end of the Blackall Range, within the traditional country of the Jinibara people. Major and minor tributaries of London Creek meander through the reserve from north to south, over waterfalls and rocky gullies, before gradually widening into a broad river flat area in the southwestern corner of the reserve.

The reserve spans three land parcels which were acquired through council's environment levy land acquisition program between 2004 and 2016 to protect high value ridgetop and riverine ecosystems and core habitat along the Boorobin/Upper Stanley to Mount Mellum corridor. Together, these acquisitions added 207 hectares of land to the region's conservation estate.

The reserve supports four distinct eucalypt and rainforest vegetation communities including two that are considered 'of concern' under the *Vegetation Management Act 1999* (Queensland Government, 1999): flooded gum tall open forest on alluvium and tall vine forest with hoop pine and fig emergents on sedimentary rocks. Remnant and high value regrowth vegetation covers 82% of the reserve; 18% is considered non-remnant (**Appendix 2g**).

The reserve contains 349 native plant species, including four listed as 'vulnerable' under the *Environment Protection and Biodiversity Act 1999* and one listed as 'near threatened' under the *Natural Conservation Act 1992*. The regionally uncommon and vulnerable romnalda is relatively common along the creeks and there is a healthy, actively regenerating population of birdwing butterfly vines which provide a larval food supply for Richmond birdwing butterflies.

The reserve boasts an incredible diversity of fauna, with a total of 153 native vertebrate species present, including 84 bird species, 33 mammal species, 20 reptile species, 12 frog species and four fish species. This richness is enhanced by the fact that a high proportion of

fauna species with restricted regional distribution are present.

Two of the frog species have conservation significance, the vulnerable giant-barred frog and vulnerable tusked frog. Given the size of the giant-barred frog population and the extent of occupied habitat, the reserve is considered a particularly valuable stronghold for this species.

Also present in the reserve are the marbled frogmouth, glossy black-cockatoo, koala and greater glider – which are listed as 'vulnerable' under the *Nature Conservation Act 1992*. The occurrence of the recently described buff-footed Antechinus; the iconic monotremes, platypus and echidna and an additional invertebrate species, the Blackall Range spiny crayfish have also conservation significance. In addition, the Blackall Range spiny crayfish has recently in September 2024 been declared as 'endangered' under the *Nature Conservation Act 1992*.

There are known and recorded Aboriginal cultural heritage sites scattered throughout and as such the reserve is of great cultural significance to the Jinibara people.

Direct habitat connections to nearby conservation reserves exist via remnant bushland on surrounding freehold properties and along riparian corridors.

The management intent for this reserve is to protect and preserve its inherent significant natural and cultural heritage values in perpetuity whilst providing opportunities for community enjoyment, education and research.

This Management Plan offers a comprehensive assessment of the reserve's ecological, social and economic values and describes management actions that will protect these values into the future. The plan will be reviewed in 5 years and management actions adapted where changes are required. The plan will be re-written after 10 years.

## Introduction

The South-East Queensland (SEQ) region is the most densely populated part of Queensland, experiencing rapid growth over the previous two decades (Ambrey & Fleming, 2011). The region has been identified at a critical threshold, where increased development throughout the urban footprint is likely to lead to increasing loss and degradation of remaining ecosystems and habitat for wildlife (Peterson, et al., 2007).

To address these challenges and protect the beauty and richness of natural areas, native plant and animal species will require the protection and restoration of important habitat corridors, catchments, and remnant vegetation. Therefore, reserve areas will play an important role in protecting ecological function and associated biodiversity for SEQ.

Sunshine Coast Council (SCC) has endorsed a range of strategic pathways and priorities for a healthy environment under the Sunshine Coast Environment and Liveability Strategy (ELS) 2023 (Sunshine Coast Council, 2023), which includes 'maintaining and expanding our natural assets'.

The ELS sets the strategic direction for the preservation and enhancement of the natural environment and the liveability of the region—ensuring native plants, animals and habitats are healthy, resilient and valued by the community. The Environment Levy Land Acquisition Program allowed the strategic acquisition of London Creek Environment Reserve to help protect identified core habitat areas of the Sunshine Coast and priority Regional Ecosystems (REs).

### 1.1. Purpose of the reserve

The purpose of the London Creek Environment Reserve (hereafter referred to as the reserve) is to:

- protect and restore the biodiversity values associated with the reserve,
- create, consolidate and protect future connectivity values to link the existing surrounding conservation estate, and
- facilitate nature-based recreation and education.

This Management Plan describes the reserve's ecological, cultural, social and economic values

and express the associated management actions required to maintain or enhance these values, which have been developed under nationally recognised guidelines and principles of protected area management (**Appendix 1**).



Emerald spotted tree frog (*Litoria peronii*) inhabits the reserve's riparian forests. Photo - Ed Meyer.

### 1.2. National Reserve System

The bioregional landscape descriptions, which have been included here, have been used to support any future recognition of this site as part of a national reserve system (Commonwealth of Australia, 2010). Under the Convention of Biological Diversity, Australia's target is to have 17% of the continent protected in the National Reserve System (National Reserve System Task Group, 2009).

#### 1.2.1. IBRA

Interim Biogeographic Regionalisation for Australia (IBRA) is endorsed by all levels of government as a key tool for identifying land for conservation. Australia's landscapes have been classified into 89 large geographically distinct bioregions based on common climate, geology, landform, native vegetation and species information.

London Creek Environment Reserve is within the SEQ bioregion (no. 74), which has a total area of 7,804,921 hectares (**Appendix 2a**). Close to 14% of the SEQ IBRA region and 20%



of the Burringbar-Conondale Ranges subregion (SEQ03) are protected in reserves, including this reserve (National Reserve System Task Group, 2009).

### 1.2.2. CAR Contribution

**Comprehensive:** There are four regional REs occurring within the reserve that are included in the SEQ bioregion and SEQ03- Burringbar-Conondale Ranges IBRA sub-region (**Appendix 2b, 2c**).

**Adequate:** the reserve comprises 114 hectares of remnant vegetation mostly in 'good' to excellent condition and 54 hectares of high-value regrowth. The reserve forms part of a semi-contiguous vegetated corridor that spans from Maleny in the north, Conondale Ranges in the west, Landsborough in the east and Beerburum in the south—providing ecological linkages between numerous protected areas and state forests (**Appendix 2c**).

**Representative:** The reserve encompasses a range of vegetation types that vary in composition and structure according to the different topographical and geological features of the property. Vegetation communities are broadly grouped into dry sclerophyll forests occurring on ridges and upper slopes; wet sclerophyll forests on lower slopes and notophyll vine forest on alluvial plains and in gullies.

The range of habitat opportunities, in conjunction with connectivity values, support threatened flora and fauna.

### 1.2.3. Catchment

The reserve is located within the Upper Stanley River sub-catchment at the north-east corner of the Stanley River catchment (See **Appendix 2b**). The London Creek catchment originates from the gully lines at the intersection of the Landsborough–Maleny Road and Bald Knob Road, and generally winds its way south-west

before discharging into the Stanley River and eventually Somerset Dam and Lake Wivenhoe (SEQ Catchments n.d.).

## 1.3. Local Reserve System

The local operational reserve management category for the London Creek Environment Reserve in accordance with the ELS is “Nature – B1”. Nature reserves have management plans that are reviewed every 5 years and re-written every 10 years.

Under this category the management intent is to **ensure that the significant ecological values are protected and enhanced** (Sunshine Coast Council(a), 2017). Nature reserves provide important habitat for threatened or locally significant species. They contain areas of remnant vegetation and may also contain areas of degraded habitat (cleared and non-remnant vegetation) that require rehabilitation to consolidate the reserve and build landscape connectivity. The natural and cultural assets of these reserves are typically highly sensitive to external impacts.

Secondary purposes include sustainable recreation, research, and education activities associated with the promotion and knowledge sharing of each site's ecological and cultural values.

### 1.3.1. Service Level

Reserve planning and annual management actions are guided by council's Environmental Reserves Service Level Framework (Sunshine Coast Council(b), 2017). The service level is based on scoring matrix criteria, which includes reserve size, connectivity, significant species, biodiversity and recreational use. While the reserve service level classification of this reserve is Nature – B1, the reserve type is 'district', for which there is no recreational service requirement and therefore no recreational score (**Table 1, Table 2**).

**Table 1:** Planning service level category – “Nature” and latest status

Category	MP	BOA	Flora Assessment	Fauna Assessment	FMP	RWP
Nature	✓	✓	✓	✓	✓	✓
Frequency	10 yr	10 yr	10 yr	10 yr	10 yr	5 yr
Latest status	Complete 2024	Complete 2016	Complete 2016	Complete 2024	Complete 2015	Complete 2016

MP = (this) Management Plan, BOA = Bushland Operational Assessment (a resilience-based condition assessment to guide management), FMP = Fire Management Plan; RWP = Regeneration Works Plan.

**Table 2:** Maintenance service levels

Category	Nature
Inspections	Monthly
Weed management	Monthly
Revegetation	As required
Prescribed burning – if required	as per FMP
Fire trail management drainage / surface maintenance	Annual
Fire trail slashing	1-6/yr
Fuel reduced zones vegetation management	1-6/yr
Tree management	Annual
Urgent & hazardous matter arising	24-48hrs

### 1.3.2. Management

The reserve is currently managed by council’s Natural Areas Planning Team, guided by this Management Plan and supporting technical documents. In addition to these, the Environmental Reserves Network Management Plan (Sunshine Coast Council(b), 2017) provides an overarching management framework to guide priorities and review schedules for management actions.

The status and priority for management actions to date are described in **Table 3**.



**Table 3:** Status of service level management action at London Creek Environment Reserve.

Management Action	Description	Status (priority)
Condition Assessment	Preparation of a resilience-based condition assessment – bushland operational assessment (BOA) to guide management.	BOA completed, 2011, 2012 and 2016.
Regeneration Works Plan	Commission the preparation of a Regeneration Works Plan (RWP) to guide management.	RWP completed, 2012 and 2016.
Weed Management	Weed management is currently being implemented in accordance with the RWP and BOA.	Annual works implemented.
Trail Maintenance	Maintenance of access and fire trails.	Trails upgraded and mapped on council open space layer for management and maintenance scheduling.
Sediment and Erosion Control	Monitor and mitigate bed and bank erosion. Restore creek crossings to minimise bed damage and facilitate fauna movement. Install bridge upstream on branch to main channel as an alternative route to second crossing at confluence.	Ongoing monitoring.  Bridge installed.
Access Gate	Install locked access gate and fencing at entrances.	Access gates and fences installed.
Revegetation	Revegetate open areas which have not been designated open space.	All revegetation complete, including offsets.
Signage and Fencing	Install reserve signage at access points.	Signage installed.
Tenure Protection	Protective mechanism over reserve such as formal conservation agreement (i.e. Nature Refuge under the <i>Nature Conservation Act 1992</i> ) between the State of Queensland and council.	No current tenure protection. Investigate the application of a property map of assessable vegetation over the offset areas ( <b>high</b> )
Values Assessment	Undertake values assessments for: <ul style="list-style-type: none"> <li>• Flora;</li> <li>• Fauna including birds, mammals, reptiles, frogs and invertebrates;</li> <li>• Freshwater invertebrates (crustaceans and water insects);</li> <li>• Cultural heritage.</li> </ul>	<ul style="list-style-type: none"> <li>• Flora survey completed, 2009, 2011, 2012 and 2016;</li> <li>• Fauna survey completed, 2000, 2013, 2020, and 2024; commission additional assessment for birds (<b>low</b>)</li> <li>• Commission additional assessment for freshwater invertebrates (<b>low</b>)</li> <li>• Cultural heritage search and survey completed, 2013 and 2014.</li> </ul>
Hazard Removal	Address potential hazards e.g., fallen tree limbs on trails	Ongoing

## 2. Description of the Reserve

### 2.2. Location

The London Creek Environment Reserve is in a steep-sided river valley that runs south-west in the foothills of the Blackall range, within the locality of Peachester, as shown in **Figure 1**.

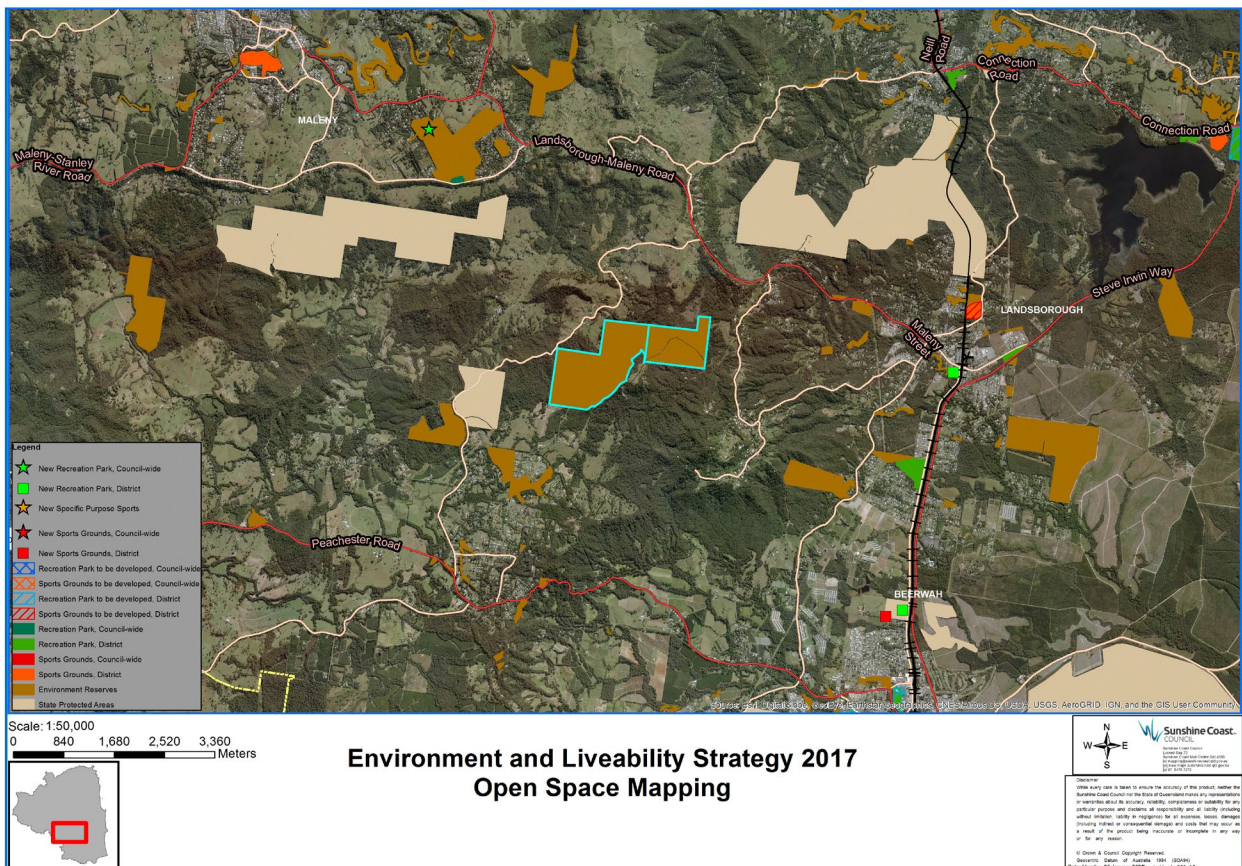
Lot 15 SP168935 (35.84 ha) was purchased by the old Caloundra City Council under the Environment Levy Acquisition Program in 2004. Adjacent allotments, Lot 17 SP251354 (106.93 ha) and Lot 736 C311476 (64.27 ha) were subsequently acquired by SCC in 2010 and 2016 respectively, bringing the total to 207 hectares. Hereafter, these areas will be referred to as Lot 15, 17, and 736. While Lot 736 is still zoned as a Rural zone, it will be change to an Environmental Management and Conservation zone, like Lots 15 and 17.

The main tributary flows in a north-east to south-west direction with numerous gullies entering from the east and west.

Shallow pools of permanent water persist during the dry season in the gorges and gullies, potentially seeping from the permeable sandstone outcrops, but it is during the wet season that the reserve comes to life, when flow resumes and the cycle of reproduction for many species begins.

Extensive excavations have been undertaken in the river flat area where three farm dams have been constructed.

Ecosystem health within the reserve ranges from 'poor' to 'excellent'. The more intact parts of the reserve, encompassing 170 hectares of remnant and high value regrowth vegetation, support a wealth of floristic diversity and provide habitat for a diverse range of mammals, reptiles and birds. The less intact parts, approximately 37 hectares, provide a receiving site for offsets, and a setting for experimentation and demonstration of restoration methods.



**Figure 1:** Location of the London Creek Environment Reserve



### 2.2.1. Catchment and Landscape Context

The reserve is situated within the upper catchment of London Creek. The catchment above the reserve is approximately 314 hectares of land, draining some 20 rural properties that are predominantly under cattle grazing and forestry uses (**Appendix 2d**).

The reserve features a third order stream and associated tributaries which flow towards the south-west corner of the reserve before heading south under Macdonalds Road, through Cahill's Scrub Bushland Reserve and eventually discharging into London Creek further downstream.

The London Creek catchment lies within the Upper Stanley River catchment and is estimated at approximately 2050 hectares in size. Council mapping suggests that London Creek originates from the gully lines at the junction of the Landsborough–Maleny Road and Bald Knob Road, and generally winds its way south-west for approximately eight kilometres before finally discharging into the Stanley River.

With large areas of the upper Stanley River catchment in protected areas, it is considered one of the healthiest catchments in SEQ, contributing good quality water with low levels of sediments, salinity or pathogens, to Somerset Dam and Lake Wivenhoe (Queensland Government, 2019).

The Upper Stanley River catchment receives some of the highest rainfall in SEQ and is the highest yielding sub-catchment of the Brisbane River system. Together with the upper catchment's basalt and sandstone geologies, it also has very good groundwater recharge potential.

Encircled by other protected areas including Annie Hehir Road Environment Reserve, Crohamhurst Ecological Reserve and Mary

Cairncross Scenic Reserve, and a number of state conservation areas, London Creek Environment Reserve provides a key ecological link between the lowland forest systems of the Stanley River valley and the higher elevation systems of the Maleny plateau and the Blackall Range.

### 2.2.2. Geology and Soils

The topography can be described as hilly with narrow alluvial valleys and ephemeral drainage gullies. The upper section of the reserve is dominated by steep slopes leading into the main creek line which gradually widens into a broader river flat area in the lower, south-west corner of the reserve. There are also steep sandstone ridges along the edges of the reserve (**Appendix 2e**).

The relief is high across the reserve, rising from approximately 150m above sea level in the south-western gullies on Lot 17 to a peak elevation of approximately 255m above sea level in the south-east corner of Lot 15 near Macdonalds Road.

The underlying geology of the reserve is broadly summarised in the Queensland Government's REs mapping and encompasses the following two land zones (Wilson & Taylor, 2012):

- i. Land zone 3 '*Quaternary alluvial systems, including floodplains, alluvial plains, alluvial fans, terraces, levees, swamps, channels, closed depressions and fine textured palaeo-estuarine deposits*'; and
- ii. Land Zone 9-10 '*Fine and coarse grained sedimentary rocks, generally with little or no deformation and usually forming undulating landscapes. Siltstones, mudstones, shales, calcareous sediments, and labile sandstones are typical rock types although minor interbedded volcanics may occur*'.

## 2.3. Land Use History

### 2.3.1. Indigenous

The reserve is in the foothills of the Blackall Range and is part of the traditional country of the Jinibara People. Jini means 'lawyer vine' and bara means 'people' in traditional Jinibara language. Traditional knowledge and cultural practices in land management prior to European settlement were responsible for shaping and maintaining the high biodiversity values of the region.

Scattered throughout the reserve are stone artefacts, grinding hollows and a rock shelter, confirming that significant Aboriginal cultural heritage is present. The grinding hollows are viewed by the Jinibara People as especially important as they document cultural practices such as food and pigment processing and confirm that the rock shelter was used by the 'Old People'.

Traditional owners today have custodial obligations to maintain land and sea resources for the protection of biodiversity.



Grinding grooves in the reserve.

### 2.3.2. Early Settlement and Recent History

European settlement on the Blackall Range began late 1870's. In an account by Mr W.P Harden (Harden, 1939):

*"this remarkable district in its early days was covered with impenetrable forests, where one walked through timber trails between forest giants rising 200 and 300 feet and creating a perpetual twilight."*

Like the rest of the catchment, most of the reserve was cleared or heavily logged when settlement title conversion from leasehold to freehold was contingent on land clearing "improvements" (Gregory, 1991). In the 1960s and 70s, the Australian Paper Mill bought up all the dairies and timber rights and harvested all remaining native forests. Approximately 10% of the area at the lower end of the reserve was cleared for slash pine plantation.

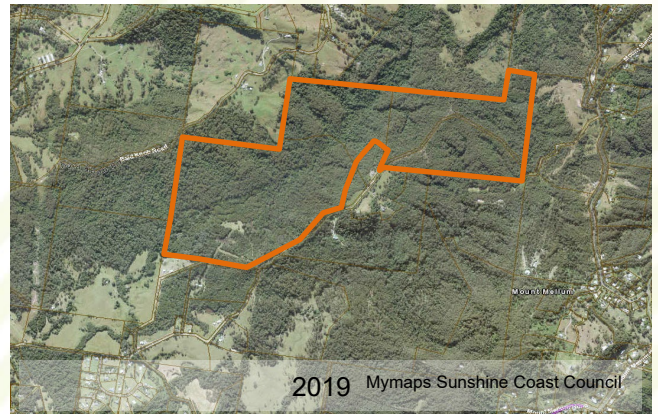
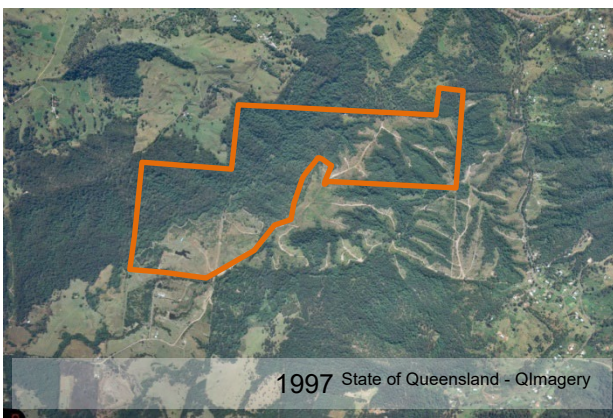
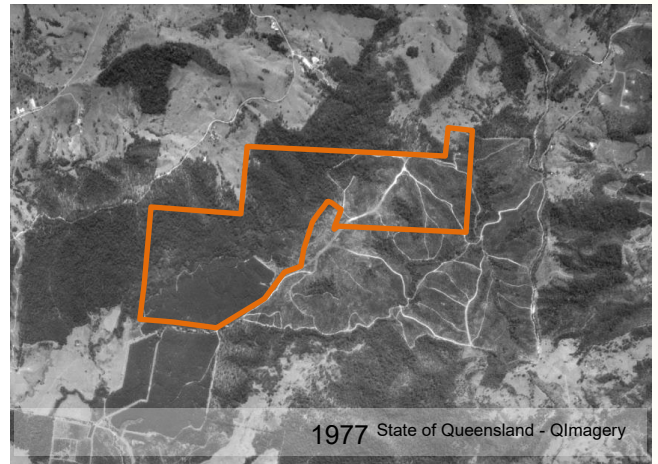
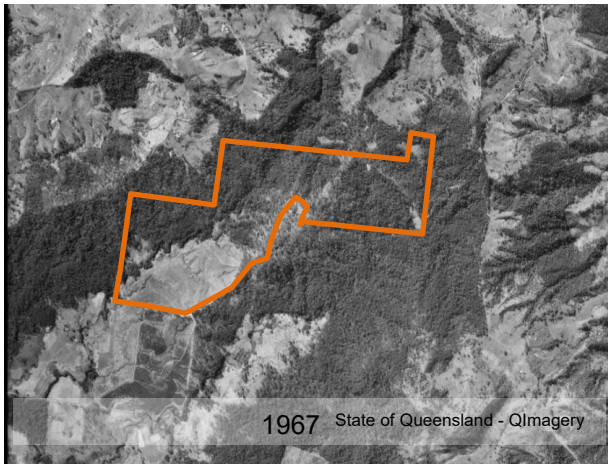
In the last 20 years, increasing rural and residential development has seen pockets of low density, rural residential settlements expand with significant natural areas reserved for conservation purposes.

Since 2004, progressive acquisition of the land parcels that make up the reserve, previously known as *MacDonalds Road Environment Levy Conservation Area, MacDonalds Road Ecological Reserve and Settree's*, has seen a shift towards conservation.

At the time of purchase, low levels of non-prescribed recreational use by dog owners and horse riders were observed.

Since 2013, the reserve has been used as an offset receiving site for the London Creek Energex Offset Stage 1 (May 2013 – May 2018) and Stage II (December 2013 – December 2018). The existing 20-metre-wide clearings for power lines along the southern boundaries are maintained for access and fire management purposes. The northern part of the reserve has remained consistently forested and highlights that the reserve has been providing habitat, refuge and preserving remnant vegetation for over 50 years.





**Figure 2:** Aerial imagery showing land use history (images courtesy of Queensland Government) (Department of Environment, Science, and Innovation, Queensland, 2013)

### 3. Reserve Values

#### 3.1. Ecological Values

Values of the reserve have been documented through assessments and reports:

- Flora assessments (ECO 9 Pty. Ltd., 2012; North Coast Environmental Services, 2016);
- Vegetation condition assessment – Bushland Operation Assessments (Brush Turkey Enterprises, 2011; North Coast Environmental Services, 2016)
- Ecological Restoration Plan (Stringybark Consulting, 2013) and Open Areas Management Plan (Stringybark Consulting, 2011);
- Fauna survey and habitat assessment mammals and reptiles (Forman & Ball, 2024; Aland, et al., 2013);
- Bird species list (BirdLife, 2013);
- Frog survey and habitat assessment (Meyer, 2013).

Flora and fauna data records are entered into a council database made available to the State WildNet database.

At national and state, several conservation significant flora and fauna have been found at London Creek Environment Reserve (**Table 5 and 6**). Recovery plans for Commonwealth-listed threatened species may have been developed under the *EPBC Act 1999*. Once a recovery plan is in place, responsible government agencies should act in accordance with that plan.

The following recovery plans are available relevant to the reserve:

- National Recovery Plan for Macadamia Species (Powell, et al., 2023).
- Conservation and Recovery of the Richmond Birdwing Butterfly, *Ornithoptera richmondia*, and its Lowland Food Plant, *Pararistolochia praevenosa* (Sands & Scott, 1998).

- National Recovery plan for Stream Frogs of South-East Queensland 2001-2005 (Hines & South-east Queensland Threatened Frogs Recovery Team, 2002).

Where a recovery plan has not been implemented, a conservation advice is provided based on best available information. The advice includes species threats, research priorities and priority actions to guide management activities.

For the giant-barred frog, the recovery process involves monitoring populations and disease outbreaks, investigating the role of disease in frog declines; collaborating with land care groups and local and state government agencies to effectively manage habitat on private land and collaborating with universities to carry out research into the ecology of, and threats to, the species.

Requirements for other significant fauna species include:

- maintaining or revegetating with suitable koala food trees (e.g., *Eucalyptus microcorys*, *E. tereticornis*),
- protecting old growth hollow-bearing trees from fire so they can be used by greater gliders and glossy black cockatoos,
- consolidating canopy cover and habitat connections downstream from the reserve for wet forest frog species, and
- including *Allocasuarina torulosa* and *A. littoralis* species in revegetation areas to augment foraging habitat for glossy black cockatoos.

### 3.1.1. Vegetation Communities

Of the 207 hectares contained within the reserve, remnant vegetation covers 55% of the reserve and 27% is considered high-value regrowth.

The reserve incorporates corridors of wet sclerophyll forest and notophyll rainforest fringing the tributaries to London Creek; open eucalypt forest on the sandstone ridgelines across the northern parts of the reserve, as well as regrowth vegetation and areas of former pine plantation in the south.

Flora surveys have identified four vegetation communities which are described in **Table 4** below. Their distribution is shown in **Figure 3**.

Whilst much of the floristic diversity is associated with the remnant rainforest and eucalypt forest types, there are large areas of non-remnant vegetation and native regrowth that provide ecotonal habitats and opportunities, through assisted regeneration, to build upon the reserve's large conservation potential.



**Table 4:** Field verified Regional Ecosystems (REs) at London Creek Environment Reserve<sup>1</sup>. Regional ecosystems and essential habitat are mapped in **Appendix 2b**, biodiversity status of REs is mapped in **Appendix 2c** and further information on the status of vegetation communities is provided in **Appendix 3**.

REs	Status VMA*		Description	Distribution in the reserve
	VM** Class	BD*** Status		
12.3.2	OC	OC	<i>Eucalyptus grandis</i> ± <i>E.microcorys</i> , <i>Lophostemon confertus</i> tall open-forest with vine forest understorey ('wet sclerophyll'). Patches of <i>Eucalyptus pilularis</i> sometimes present especially in vicinity of sedimentary rocks. Fringing streams and in narrow gullies in high rainfall areas.	Confined to riparian corridors along lowest parts of the reserve, on Lot 17.  Mapped Remnant - 5.73 ha Mapped High value regrowth – 1.78 ha
12.9-10.16	OC	OC	Microphyll to notophyll vine forest +/- <i>Araucaria cunninghamii</i> . Characteristic species include <i>Argyrodendron</i> sp. (Kin Kin W.D.Francis AQ81198), <i>Araucaria cunninghamii</i> , <i>Agathis robusta</i> , <i>Backhousia myrtifolia</i> , <i>Cupaniopsis parvifolia</i> , <i>Dendrocnide photinophylla</i> , <i>Rhodospaera rhodanthema</i> , <i>Flindersia australis</i> , <i>F. xanthoxyla</i> , <i>Drypetes deplanchei</i> , <i>Olea paniculata</i> , <i>Diospyros geminata</i> , <i>Gossia bidwillii</i> , <i>Excoecaria dallachyana</i> and <i>Vitex lignum-vitae</i> . Occurs on Cainozoic and Mesozoic sediments.	Riparian corridors along to main channel and smaller tributaries.  Mapped Remnant – 41.17 ha Mapped High value regrowth – 5.38 ha.
12.9-10.14	LC	NC	<i>Eucalyptus pilularis</i> tall open-forest with shrubby understorey. Other species include <i>Syncarpia glomulifera</i> , <i>S. verecunda</i> , <i>Corymbia intermedia</i> , <i>Angophora woodsiana</i> and <i>Eucalyptus microcorys</i> in coastal areas and species of RE 12.9-10.5 in drier subcoastal areas. <i>Eucalyptus pilularis</i> sometimes extends onto colluvial lower slopes. Occurs on Cainozoic and Mesozoic sediments especially sandstone.	Generally associated with upper, drier, north-facing slopes across reserve.  Mapped Remnant – 4.6 ha
12.9-10.14a	LC	NC	Open forest of <i>Eucalyptus grandis</i> , <i>Lophostemon confertus</i> , <i>E. microcorys</i> , <i>Syncarpia glomulifera</i> subsp. <i>glomulifera</i> +/- <i>E. pilularis</i> . Occurs on Cainozoic and Mesozoic sediments especially sandstone in wet gullies and southern slopes.	Generally associated with lower, south-facing slopes  Mapped Remnant – 1.3 ha

\*Vegetation Management Act 1999 (Queensland Government, 1999)

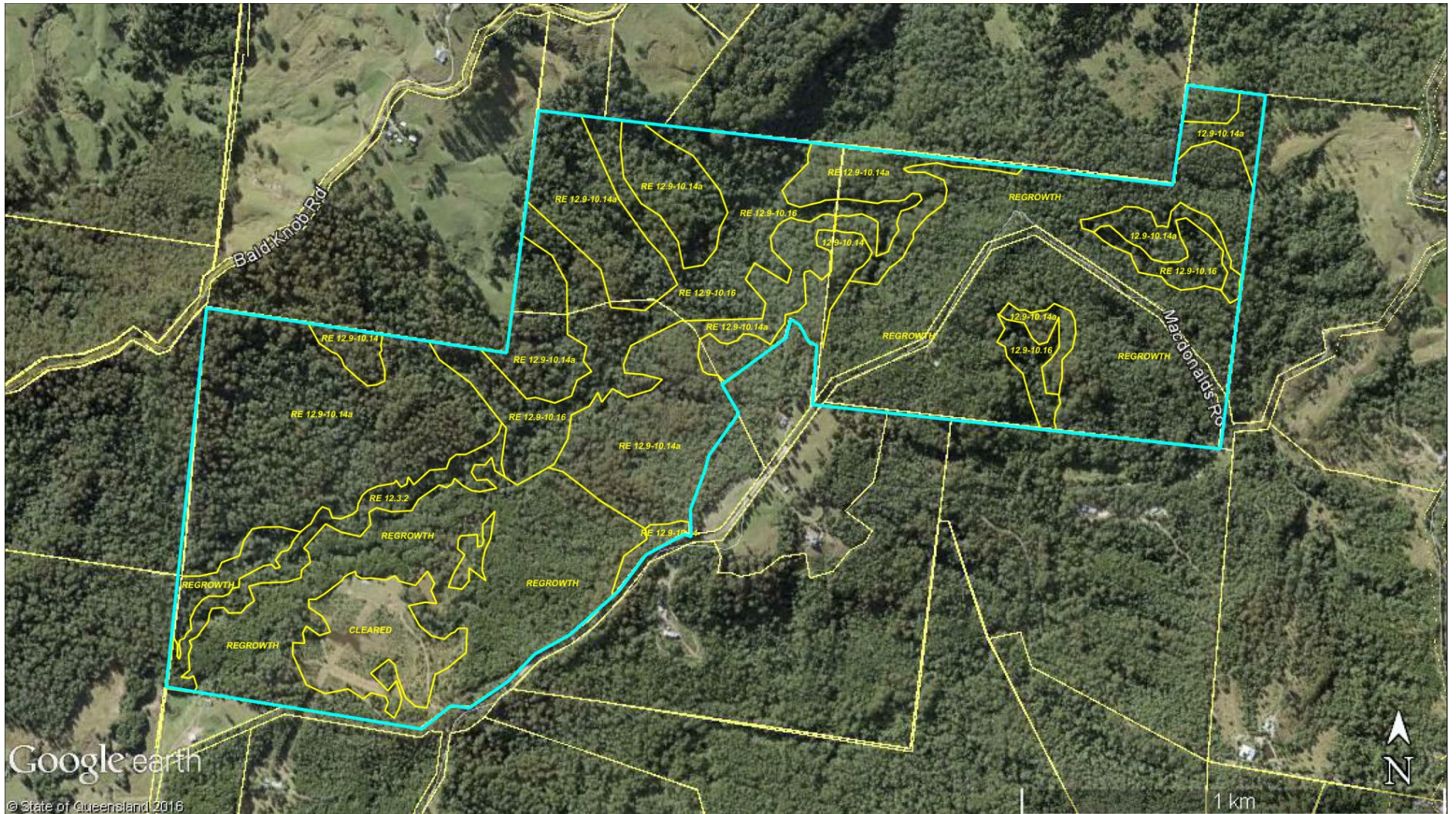
\*\*Vegetation Management Class: LC = least concern, NC = no concern, OC = of concern.

\*\*\*Biodiversity Status is based on an assessment of the condition of remnant vegetation in addition to the criteria to determine the VM class; this status is used for a range of planning and management applications: NC = no concern, OF = of concern, E = endangered

<sup>1</sup> Site-specific vegetation community descriptions and distributions are described in the Flora Assessment Report (North Coast Environmental Services, 2016).



Figure 3: Field verified Regional Ecosystems at London Creek Environment Reserve (North Coast Environmental Services, 2016)





### 3.1.2. Native Flora

In the reserve, 349 native plant species occur, including five 'endangered', 'vulnerable', or 'near threatened' (CREVNT) species listed under the Commonwealth Government's *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (Commonwealth of Australia, 1999) and the Queensland Government's *Nature Conservation (NC) Act 1992* (Queensland Government, 1992).

Three of the five CREVNT-listed plant species, birdwing butterfly vine (*Pararistolochia praevenosa*), romnalda (*Romnalda strobilacea*) and three-leaved Bosistoa (*Bosistoa transversa*), are locally common in the northern sections of Lot 15 and 17. **Table 4** lists the CREVNT-listed plant species recorded in the reserve and a comprehensive inventory is provided in **Appendix 4**.

In addition to the above CREVNT-listed plant species recorded within the reserve, the Sunshine Coast myrtle (*Lenwebbia* sp. Blackall Range P.R. Sharpe 5387), an undescribed species listed as 'endangered' under the *NC Act 1992*, has been planted to develop an ex-situ insurance population. This plant is a narrow endemic of the Sunshine Coast region, where it occurs in a small number of isolated patches of remnant rainforest and wet sclerophyll forest.

The Sunshine Coast Council and the Department of Environment and Science are working to conserve this species through the collection and propagation of vegetative material from populations with phenotypic tolerance to the impacts of myrtle rust (Makinson, et al., 2020). The propagation of this material is being used to consolidate the disjunct distribution of plants with higher tolerance to pathogens, like myrtle rust, into multiple ex-situ conservation sites, which aim

to encourage the positive selection of heritable traits.

Whilst the remnant vegetation has been repeatedly and heavily logged, there are a few remnant old-growth habitat trees on steep slopes and stream banks, including at least one large red lilly pilly (*Syzygium hodgkinsoniae*), which is listed as 'vulnerable' under the *EPBC Act 1999* and *NC Act 1992*.

Hollows in old-growth trees can be seen in the remnant sclerophyll forest and rainforest in some sections of the eastern end of the reserve.

In the southern part of the reserve (Lot 17), the regrowth is heavily dominated by black wattle (*Acacia melanoxyton*) and exotic pine wildlings. Cleared areas of mixed pasture also occur on Lot 17 and are frequently slashed. Many shallow holes and cavities are present in the cleared areas, the remains of slash pine stumps. Transitional wetland habitats with aquatic macrophytes and emergent native sedges are associated with the constructed dams on Lot 736.

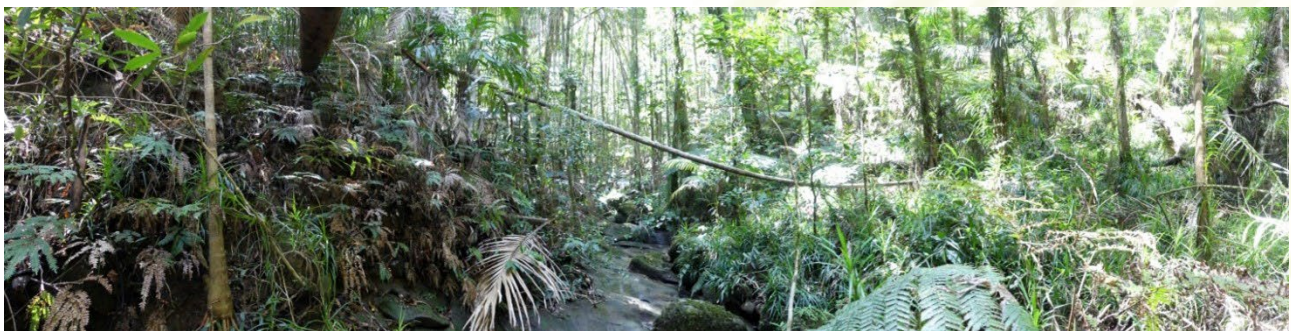
#### Management actions

- Record the location of all significant flora species at the reserve using GPS.
- Map CREVNT-listed species present to inform contractors.
- Use CREVNT-listed species in revegetation projects.
- Future flora surveys to target significant species potentially occurring in the reserve but missing from prior surveys.

**Table 5:** CREVNT-listed flora species found at London Creek Environment Reserve

Common name	Family	Scientific name	Status	
			EPBC Act 1999	NC Act 1992
birdwing butterfly vine	Aristolochiaceae	<i>Pararistolochia praevenosa</i>	-	NT
Maroochy nut	Myrtaceae	<i>Macadamia ternifolia</i>	V	V
red lilly pilly	Myrtaceae	<i>Syzygium hodgkinsoniae</i>	V	V
romnalda	Xanthorrhoeaceae	<i>Romnalda strobilacea</i>	V	V
three-leaved bosistoa	Rutaceae	<i>Bosistoa transversa</i>	V	LC

V = vulnerable, NT = near threatened, LC = least concern, - = not accessed



### 3.1.3. Native Fauna

Fauna surveys of the reserve have found a comparatively high richness of fauna occurring across the reserve’s different habitat types (BirdLife, 2013; Forman & Ball, 2024; Meyer, 2013), comprising the following numbers of species in each of the major terrestrial vertebrate fauna groups:

- 84 birds,
- 2 monotremes,
- 11 marsupial mammals,
- 5 placental mammals,
- 13 microbats and 2 megabats,
- 20 reptiles,
- 12 frogs, and
- 4 fish.

A comprehensive fauna inventory is provided in **Appendix 5**.

Of the 153 vertebrate species observed at this reserve, seven are listed ‘endangered’ or

‘vulnerable’ under the *EPBC 1999* and *NC Act 1992*, including 2 species of mammal, 2 species of bird and 2 frog species (**Table 6**). There is also a conservation significant freshwater invertebrate species, the Blackall Range spiny crayfish (*Euastacus urospinosus*), which has recently been listed in September 2024 as ‘endangered’ under the *NC Act 1992*.

The vulnerable greater glider was observed on one of the northern ridges of Lot 15 and koala scats were found within the reserve on the northeastern boundary and in adjacent reserves. The reserve’s hillslopes and ridgetops are covered with preferred koala food trees, including *Eucalyptus resinifera*, *E. robusta* and *Corymbia intermedia*, across a range of size classes. The high-quality habitat can support a resident koala population and of receiving transient individuals as they disperse from surrounding bushland.

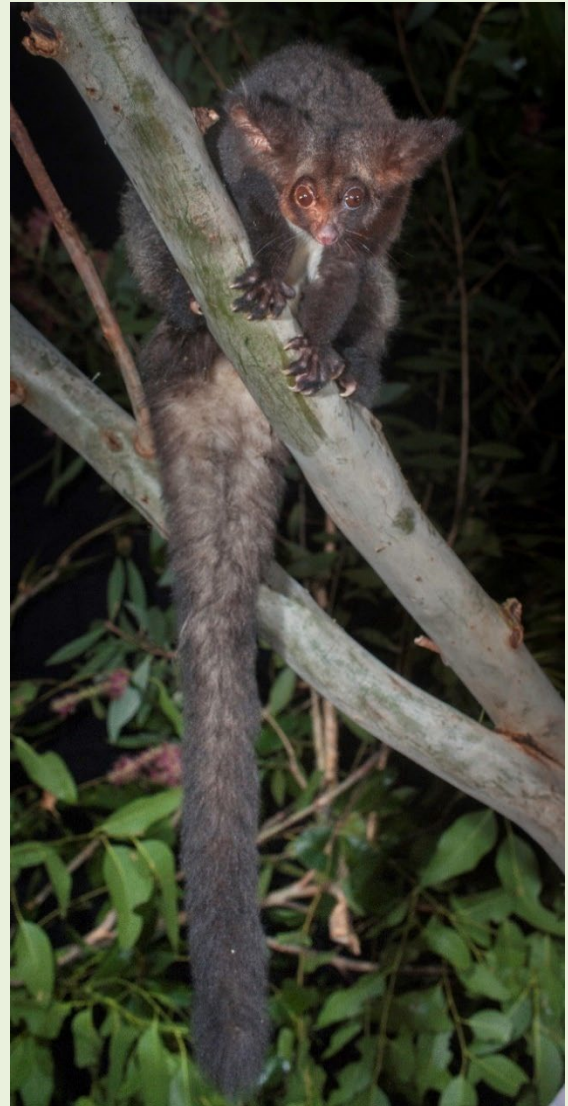


The plumed frogmouth (*Podargus ocellatus plumiferus*), listed as 'vulnerable' under the *NC Act 1992*, is known to utilise the palm forest habitats fringing the first order stream on the northeastern side of the reserve (Meyer, 2013). Distinctive feeding traces of the vulnerable glossy black cockatoo have also been identified within the reserve (Burnett, et al., 2010).

The giant barred frog and the tusked frog, both listed as 'vulnerable' under the *NC Act 1992*, are both widespread along the creek lines and seasonally wet gullies. It is estimated that the tributaries to London Creek traversing the reserve provide a near-continuous stretch of high-quality habitat occupied by approximately 1 to 8 individuals per 200m stretch of stream bank. The presence of recently hatched/early-stage tadpoles of both giant-barred frog and tusked frog confirms that they are breeding within the reserve during spring/summer months.



The Vulnerable giant barred frog (*Mixophyes iteratus*) is commonly found within the reserve.  
Photo - Ed Meyer.



The **greater glider** (*Petauroides volans*) feeds almost exclusively on eucalypt leaves and in local area, appears to prefer white mahogany (*Eucalyptus acmenoides*), pink bloodwood (*Corymbia intermedia*) and other eucalypts that have high nitrogen fibre. Access to plenty of nesting dens in large eucalypt tree hollows that are between 10m and 40m off the ground is critical to the survival of greater glider populations.

Photo – Steve Parish.

While Blackall Range spiny crayfish are abundant in the reserve, they have recently been declared an endangered species under the *NC Act 1992*. Their distribution in the reserve appears to be restricted to the upstream section of the main channel within an area of remnant rainforest in a deep valley. As major processors of organic matter, Blackall Range spiny crayfish assist in maintaining river health, and are an important source of food for frogs, fish and platypus.

The burrows used by the spiny crayfish may be symbiotically used by native bush rats (*Rattus fuscipes*), which were similarly abundant in the upper sections of the reserve. During the wet season, riparian areas become inundated, and the burrow networks become activated for use by crayfish. In the dry season, when the crayfish disappear to deeper depths near the water table, bush rats exploit the burrows for refuge and breeding.

Despite a low density of hollow-bearing trees, the high microbat richness in the reserve reflects the ability of these smaller mammals to utilise loose bark and splits in dead limbs as refugia (Aland, et al., 2013). Microbat richness also reflects use of various feeding niches in a forest environment and are evidence of

diverse vegetation structure, e.g., yellow-bellied sheath-tail bat (*Saccolaimus*



In the main gully on the forest floor, Blackall range spiny crayfish (*Euastacus urospinosus*) can sometimes be seen emerging from their burrows. Photo - K. Aland.

*flaviventris*) feeding above canopy, eastern forest bat (*Vespadelus pumilus*) feeding below canopy.

**Table 6:** CREVNT-listed and other significant fauna species known to occur at London Creek Environment Reserve.

Common name	Scientific name	Status	
		EPBC Act 1999	NC Act 1992
Blackall Range spiny crayfish	<i>Euastacus urospinosus</i>	-	E
giant barred frog	<i>Mixophyes iteratus</i>	V	V
glossy black cockatoo	<i>Calyptorhynchus lathami lathami</i>	V	V
greater glider	<i>Petauroides volans</i>	V	V
koala	<i>Phascolarctos cinereus</i>	E	E
marbled frogmouth	<i>Podargus ocellatus plumiferus</i>	-	V
tusked frog	<i>Adelotus brevis</i>	-	V

E = endangered; V = vulnerable; - = not accessed



### Management actions

- Future fauna surveys to target significant species potentially occurring in the reserve because they were not recorded in prior surveys or were not reliably identified, like the long-nosed potoroo, Richmond birdwing butterfly, and pink underwing moth.
- Undertake frog surveys at riparian habitat within the South-West revegetation areas to determine the effectiveness of rehabilitation works in providing habitat for CREVNT-listed species by using baseline data (Meyer, 2013).
- Encourage partnerships with a research institution interested in assessing macroinvertebrate populations as a measure of ecosystem health.



Belonging to a monotypic genus, the elf skink (*Eroticoscincus graciloides*) is endemic to Queensland. Photo – K. Aland



### 3.1.4. Habitat and Ecosystems

Most of the reserve is identified under the Sunshine Coast ELS as core habitat that spans from Maleny in the north, Landsborough in the east, Beerburrum in the south and west beyond Booroobin. Patches of connecting habitat surround the core habitat, providing tenuous links to other core habitats in the broader landscape (**Appendix 2c**).

Eastern parts of the reserve are situated within a state corridor and western parts fall within a regional corridor, which runs from Kenilworth in the west to Bellthorpe in the southwest through to Eudlo in the northeast (**Appendix 2a**).

The reserve also lies in a mapped Koala Priority Area, a designation which affords the highest protection to large tracts of prime koala habitat in SEQ under the local and regional planning schemes, and all areas of the reserve that contain 'Eucalypt Forest' are mapped as Koala Habitat Areas.

It is not only the remnant ecosystems in the reserve that contribute to its biodiversity, but also the high-value regrowth and the interfaces between the remnant and non-remnant areas that support species-rich assemblages.

Several endangered and vulnerable species are dependent on the reserve's preserved habitat characteristics. These include suitable food trees for koalas, remnant hollow-bearing trees for greater gliders and glossy black cockatoos and intact riparian vine forest with complex instream habitats for giant barred frogs. For example, black she-oaks (*Allocasuarina littoralis*) and forest she-oaks (*Allocasuarina torulosa*), scattered throughout the reserve, are an important food source for the vulnerable glossy black cockatoo.





Eucalypt covered ridges and valleys provide high quality koala habitat in northeastern part of reserve.

Despite past disturbance, in the form of logging and selective clearing, the remnant forest to the east of the reserve where greater gliders were recorded retains some hollow-bearing trees, estimated to be between 100 and 200 years old. A low abundance of hollow-bearing trees throughout the rest of the reserve, however, is associated with low abundance of arboreal mammals (e.g., sugar gliders, squirrel gliders and brush-tailed possums). Habitat supplementation efforts through the installation and ongoing monitoring of nest boxes is recommended.

Except for a short stretch of riparian habitat in the north of the reserve, nearly all the main creek appears suitable for breeding by giant barred frogs (Meyer, 2013). This near continuous stretch of breeding habitat is considered regionally significant for the species.

There are three man-made dams. Pools and seepages associated with these dams and the creeks provide suitable breeding grounds for habitat generalists, such as the vulnerable tusked frog. When the large eastern dam's wall burst, the escaping water in turn burst the next dam's wall. The downstream dam wall was not repaired and, as a result, the downstream dam now functions as a shallow stream/wetland habitat for native frogs, as well as introduced cane toads.

Some disconnection between the forested parts of the reserve and the downstream

habitats may be the cause of the apparent absence of frog species that despite the presence of suitable habitat in the reserve and extensive survey effort, have not been recorded to date. Cascade tree frog (*Litoria pearsoniana*) occurs further downstream in Cahills Scrub and marsupial frog (*Assa darlingtoni*) is common in similar habitats across the Blackall and Conondale ranges. Restoring connectivity to downstream areas is likely to provide movement corridors for these frog species, enabling recruitment upstream into the reserve.

Similarly, restoring upstream connectivity may see the return or recruitment of long-nosed potoroos to the reserve as the revegetation matures (K. Aland, pers. comm.).

The large number of birdwing butterfly vines (estimated to be around 100+ vines) suggests that the reserve may constitute core breeding habitat for the Richmond birdwing butterfly, with field verified populations of the vulnerable butterfly nearby on adjacent freehold land (T. Bright, pers. comm.) and within nearby reserves (e.g., Annie Hehir Road Environment Reserve and Mary Cairncross Scenic Reserve). Similarly, the presence of *Carronia multiseppalea*, the larval host plant for the pink underwing moth (*Phyllodes imperialis smithersi*), suggests that the reserve potentially could provide breeding habitat for this endangered and cryptic invertebrate.

Interestingly, the abundant cavities left from decomposed pine stumps in the cleared areas are providing refuge for many elf skinks (*Erotoscincus graciloides*), although this species is more typically associated with the natural eucalypt woodland areas elsewhere in the reserve.



### Management actions

- Continue revegetation efforts to provide food and habitat for significant fauna.
- Restore connectivity to downstream areas to encourage frog dispersal across the landscape.
- Continue to consolidate canopy cover through the removal of weeds to promote natural regeneration.
- Collaborate with neighbouring landowners to enhance native vegetation corridors through surrounding pastures (e.g., use landholder incentive programs).



An example of a core that would have been used as a tool or used to make tool fragments (flakes or blades) found in the reserve.

## 3.2. Cultural and Social Values

### 3.2.1. Indigenous

The reserve is located within the native title determined traditional country of the Jinibara People. Determination recognises a range of rights of the Jinibara People including the maintenance of “sites, objects, places and areas of significance to the native title holders under their traditional laws and customs and protect by lawful means those sites, objects, places and areas from physical harm or desecration”.

The natural vegetation of the reserve is of cultural significance to the Jinibara People, to the extent that it provides a context to Jinibara identity. The reserve contains known and recorded Aboriginal cultural heritage sites and lies within a larger 'Cultural Landscape' with traditional pathways, stone quarry sites, resource areas, ceremonial grounds and story places.

The reserve is under freehold land tenure and is, therefore, subject to the non-exclusive native title rights of the Jinibara People, including the right to hunt, fish, participate in ceremonies and be buried on the land.

The reserve is considered a Significant Aboriginal Area in accordance with section 9 of the *Aboriginal Cultural Heritage Act 2003* (Queensland Government, 2004). It is an uncommon cultural heritage site type in this region and therefore retains even greater cultural significance for the Jinibara people.

All significant Aboriginal cultural heritage in Queensland is protected (Queensland Government, 2004). Under the legislation a person carrying out an activity must take all reasonable and practical measures to ensure the activity does not harm Aboriginal cultural heritage.

### Management actions

- Consult Jinibara People prior to any works that may cause ground disturbance (e.g., trail or road building) in a previously undisturbed area.
- To ensure the protection of the rock shelter, a site-specific Management Plan should be developed for the site in conjunction with the Jinibara People.
- The Jinibara People will request an amendment to State's cultural heritage database that recognises the reserve in its entirety as a Significant Aboriginal Area.
- Consider a traditional land agreement or indigenous protected area agreement to manage the reserve's ecological, cultural and economic values.
- Support council's Reconciliation Action Plan (Sunshine Coast Council, 2021) commitment to build relationships with the local indigenous community to further reconciliation and include Welcome to Country at reserve events.

### 3.2.2. Ecological Restoration

Restoration activities at London Creek Environment Reserve aim to maintain and enhance existing biodiversity values and improve overall resilience of vegetation. The condition of remnant vegetation within the reserve ranges from 'poor' to 'excellent' with the over half the reserve falling within the 'very good' or 'excellent' category under council's Bushland Operation Assessments (BOAs) (**Figure 4**).

As part of establishment and operational works, contractors have been engaged to carry out natural area management. Contractors have been applying bush regeneration methods in disturbed areas to encourage the natural regeneration of native plant communities. A range of assisted regeneration trials over the past six years, which have benefitted from good rainfall, are showing vigorous growth and site capture.

Bushcare Sunshine Coast is a council community volunteer program working on restoring habitat in environment reserves. In 2015, the reserve hosted an ecological restoration training day for Bushcare volunteers and surrounding Land for Wildlife (LFW) members, hosting over 100 attendees. The event included guided walks through the reserve, workshops and social opportunities. Restoration works are also underway on private land neighbouring the reserve through LFW.

Ecological restoration includes retaining and/or supplementing dead standing timber and in-situ methods of culling unwanted tree species rather than removal will be of benefit to small mammals and reptile populations (especially skinks and snakes). For arboreal mammals and birds, installing nest boxes and implementing a nest box monitoring program throughout the reserve will help bridge the gap while trees mature to hollow-bearing stage.

To reinstate connectivity with riverine and ridgetop habitats, the focus will be on

continuing the already very successful efforts to restore degraded or cleared areas; maintaining offset sites and trialling new



Weed control trial sites are regenerating well following the removal of Lantana.

restoration methods as funding for long-term restoration projects becomes available.

#### Management actions

- Discuss options with neighbouring landholders to progress perpetual protection of target REs on their properties.
- Monitor weed growth and control in line with established service level.
- Maintain tree planting sites.
- Plant food trees for arboreal mammals in appropriate revegetation sites like *Eucalyptus acmenoides*; *Corymbia intermedia*, and other eucalypts that have high nitrogen fibre and are suitable for koalas and greater gliders.
- Install nest boxes for greater gliders at suitable sites 10-40m above ground and maintain nest boxes.
- Retain and protect from bushfire damage all remaining hollow-bearing trees.
- Manage fire frequency and intensity in the fire adapted eucalypt dominated communities, whilst excluding fire from the rainforest communities.
- Restore connectivity to upstream and downstream habitats through targeted restoration and acquisition of surrounding properties.

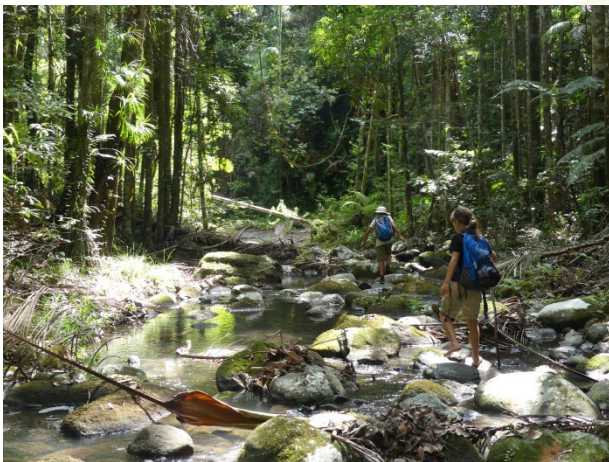


### 3.2.3. Recreation

The natural values of the site would be appealing to future nature-based recreational activities (i.e., eco-recreation). Existing disused trail networks may be considered for this purpose. Walking trails that provide a challenge for experienced bushwalkers, and that are kept open to allow for viewing of canopy birds, will attract experienced birdwatchers (e.g., Birdlife Southern Queensland) as well as other nature observation groups.

#### Management actions

- Promote partnerships with community groups such as Birdlife Southern Queensland.
- Maintain cleared areas and existing infrastructure so that the site can be used as an outdoor educational centre.



Bushwalking and exploring nature instil a sense of well-being and connection in our children.

### 3.2.4. Research and Education

There are significant potential research opportunities associated with the reserve's cultural and ecological values. The presence of power infrastructure and internet connectivity, a concrete slab and cleared area adjacent to the Energex offsets, provide an outdoor venue for shared training. For example, lessons learnt from restoration projects and new trials can be shared between council and parties interested in ecological restoration at such location. There is also

economic value in long-term monitoring data sets of restoration sites that can be realised through education and research.

#### Management actions

- Create opportunities for field-based research and education within the reserve.
- Conduct ongoing maintenance and monitoring of bush regeneration plots.
- Investigate opportunity for a biannual training day for ecological restoration practitioners.
- Promote partnerships with research institutions for monitoring, data collection and scientific research.
- Continue to support community partnerships.

### 3.3. Economic Values

Conservation of natural values at the reserve may contribute to the local and broader economy through nature-based tourism, research partnerships and cultural heritage. In addition, the site offers an excellent platform for field-based activities, including outdoor recreation skills, cultural heritage learning and ecological restoration.

This site is suitable for ecological/cultural training events or creative arts events that showcase nature. The site already contains restoration trial plots of different methods of ecological restoration and has hosted a public event with conservation land management workshops, a Jinibara cultural workshop, and guided walks. Over 100 participants from nearby and across the region attended this event in 2014.

The reserve has also been an offset receiving site for Energex Limited. Stage 1 (9 hectares) of reference Regional Ecosystem revegetation and Stage II (29 hectares) of assisted regeneration of previously cleared land across the reserve were completed in 2013.

The reserve may enhance tourism values at nearby reserves and national parks by helping to maintain healthy, viable populations of flora and fauna, particularly of long-ranging species.

Sustainable land management practices at the reserve also contribute to the health and integrity of waters occurring in the lower catchment. In doing so, the reserve supports aquatic and terrestrial flora and fauna and associated ecosystems that provide for tourism, recreation and commercial operations. Furthermore, the reserve is in the watershed of Somerset and Wivenhoe dams—the main water supply for Brisbane and the greater Ipswich area.

#### Management actions

- Maintain existing offsets in perpetuity and continue using new offset initiatives to rehabilitate cleared and/or degraded areas.
- Manage visitor use for inspirational, educational, cultural and recreational purposes at a level that will not cause significant ecological degradation to the natural resources and cultural degradation.
- Investigate opportunities for eco-cultural events partnering with Horizon, showcasing the natural and cultural history and existing flora and fauna (e.g., opera under the stars, light show of what once was—Jinibara soundscape and endangered song).
- Investigate future partnerships through research and education to contribute to local economies.
- Investigate opportunities for co-management with Jinibara by considering a business model where opportunities for training in cultural heritage, environmental surveys and restoration are provided in the Indigenous Protected Area.

### 3.4. Condition of Values

Council's BOA is a best practice tool used to measure and monitor the condition of vegetation across the reserve and guide bush restoration activities. Three BOAs have been completed for the reserve (**Figure 4**). The most recent BOA can be summarised as follows:

- Approximately 60% of the reserve is 'good', 'very good' or 'excellent', with large patches of remnant notophyll vine forest and eucalypt communities exhibiting a high degree of ecological integrity, minimal occurrences of weeds and little other disturbance.
- Approximately 30% of the reserve is 'moderate'. These are the less resilient and structurally diverse areas of regrowth vegetation and former pine plantations that suffer from a high degree of weed incursion and occur near the access trails and the previous dwelling sites.
- Scattered patches (approximately 10% of the reserve) are 'poor.'

Closure of some access trails has been undertaken to minimise canopy openings that



favour weeds, whilst other trails are being maintained for vehicle access or as walking trails.

Reconnecting the forested parts of the reserve with the downstream riparian habitats will be valuable in terms of facilitating dispersal and recruitment of species, particularly wet forest frogs, back into the reserve.

Influences from surrounding grazing lands and timber plantations, including pine regrowth, weeds and other edge effects will need to be managed into the future.

Weeds currently being addressed require ongoing vigilance to maintain the current trajectory toward full ecosystem recovery. None of the CREVNT-listed frog species observed during surveys showed obvious signs of disease, such as those associated with chytridiomycosis or the chytrid fungus.

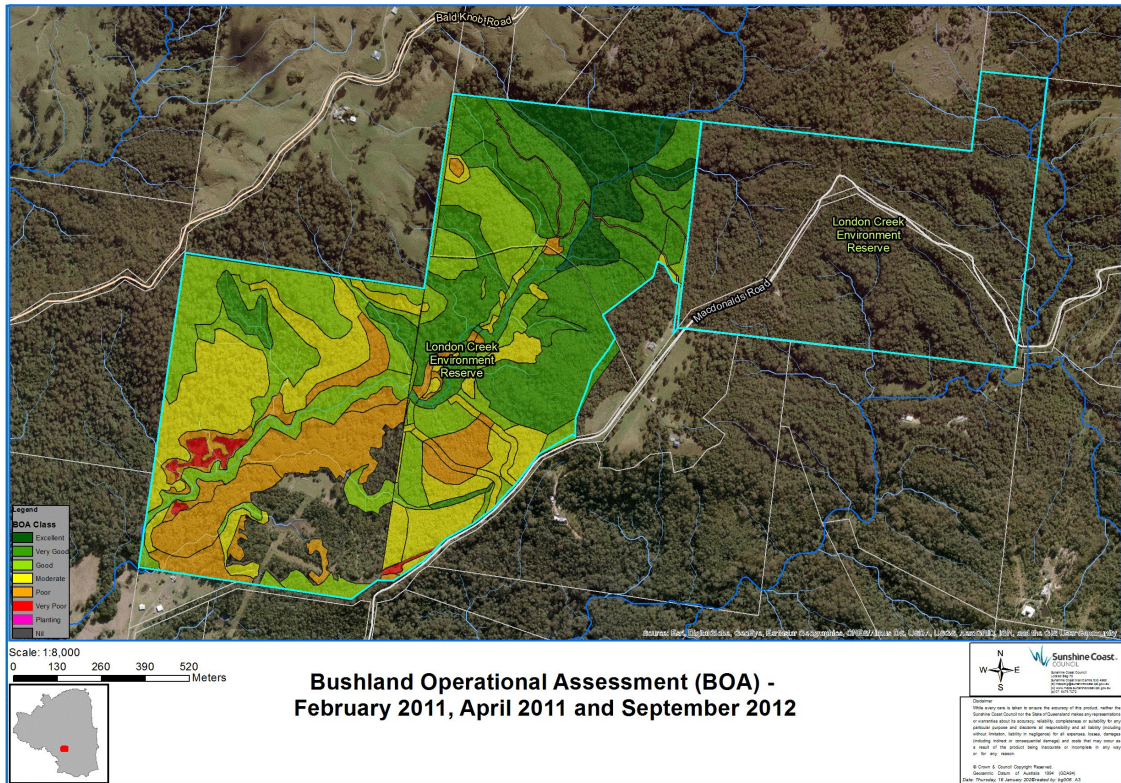
#### Management actions

- Undertake a BOA every five to ten years to determine changes in vegetation condition and to measure success of restoration works.
- Undertake a water quality assessment and macroinvertebrate analysis to determine general stream health and identify sources of pollutants from the surrounding landscape.
- Consider options to create native vegetation corridors through surrounding pine plantations.
- Collaborate with adjacent property owners to facilitate coordinated weed and fire management.
- Mow all existing open slashed areas, except forest edges, by keeping blades high above ground and by balancing the frequency to allow grasses to flower and seed, providing food for small mammals, birds and moths.
- Build upon the reserve's large conservation potential by assisting with regeneration of the less intact portions of the reserve.
- Reconnect riparian areas with downstream habitats and refugia.

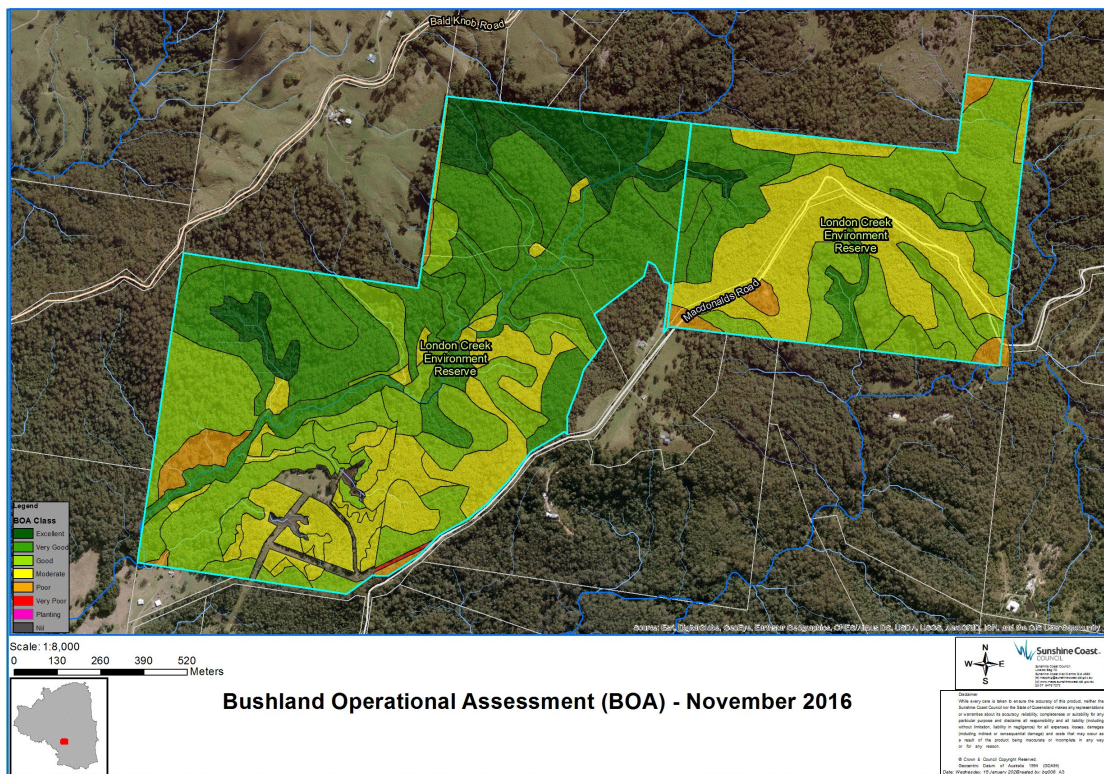




**Figure 4: Bushland Operational Assessment (BOA)**



**(a) February and April 2011 and September 2012**



**(b) November 2016**



## 4. Management Issues

### 4.1. Preliminary Risk Analysis

Throughout the establishment phase of works undertaken on this reserve, a range of risks have been identified which may affect

council's capacity to protect and restore biodiversity values of this site.

**Table 8** below highlights identified risks and corresponding opportunities proposed to address each of the risks. These opportunities are captured in the management actions included in this plan, which are consolidated in **Table 9**.

**Table 8:** Summary of reserve management risks and opportunities.

Risks	Opportunities
Decline in CREVNT-listed species and their populations	<ul style="list-style-type: none"> <li>• Protection of existing hollow-bearing trees from fire for greater gliders and black cockatoos.</li> <li>• Installing nest boxes in strategic locations to compensate for loss of tree hollows.</li> <li>• Enrichment plantings of preferred koala food trees.</li> <li>• Restoration of breaks in riparian habitat connectivity for frogs.</li> <li>• Encourage neighbouring landholders to register for LFW and other incentive programs that provide support to landowners managing threatened species and associated threats on their properties (e.g., offer to undertake CREVNT-listed species searches on their properties).</li> <li>• Partnerships with research institutions by presenting research interests that align with management priorities.</li> </ul>
Degradation of threatened REs	<ul style="list-style-type: none"> <li>• Continue to consolidate rainforest by managing weeds and facilitating natural regeneration.</li> <li>• Monitor the condition of vegetation communities to inform future priorities for restoration works.</li> </ul>
Invasive fauna – occurring and potential	<ul style="list-style-type: none"> <li>• Ongoing management with council's Healthy Places Unit.</li> <li>• Monitor cultural heritage sites for evidence of invasive animal presence.</li> </ul>
Invasive flora	<ul style="list-style-type: none"> <li>• Restricted invasive plants listed under the <i>Biosecurity Act 2014</i> (Queensland Government, 2016) are currently managed.</li> <li>• Coordinate weed management with adjoining landowners.</li> <li>• Ongoing management to monitor, control and progressively remove all invasive environmental weeds from the reserve.</li> <li>• Test innovative methods for woody weeds.</li> </ul>
Vegetation canopy decline	<ul style="list-style-type: none"> <li>• Facilitate natural regeneration of woody species by continuing weed management in accordance with RWP and BOA.</li> </ul>
Patch isolation	<ul style="list-style-type: none"> <li>• Enhance connectivity of native vegetation by revegetating and restoring areas degraded by weeds and previous land management practices.</li> <li>• Enhance connectivity values in broader landscape by providing support to landowners through Land for Wildlife and other incentives programs, and through further land acquisition.</li> </ul>

	<ul style="list-style-type: none"> <li>Enhance connectivity downstream between the reserve and nearby drought refuge habitat at Cahills Scrub Environmental Reserve, to facilitate frog dispersal.</li> </ul>
Costs associated with maintaining trail networks	<ul style="list-style-type: none"> <li>Recreational partnerships with, for example, Sunshine Coast bushwalkers; Birdlife Southern Queensland.</li> <li>Opportunities for Jinibara cultural tours, cultural heritage awareness training and education.</li> <li>Maintain environment levy establishment investment to build long term resilience and reduce future maintenance costs.</li> <li>Vegetation offset projects.</li> <li>Community Conservation Partnerships – bushland restoration and revegetation (e.g., Bushcare Sunshine Coast)</li> <li>Partnerships with QPWS and neighbours to facilitate coordinated weed and fire management and expand on conservation</li> </ul>
Tenure does not guarantee long-term protection	<ul style="list-style-type: none"> <li>Progress legal mechanism to protect conservation values in perpetuity (e.g., nature refuge).</li> <li>Ensure conservation status is captured in the SCC Planning scheme.</li> <li>Explore opportunities for the reserve to be transferred to Indigenous Protected Area status.</li> <li>Investigate the application of a property map of assessable vegetation over the offset areas.</li> </ul>
Increased vehicular traffic, dust and potentially roadkill	<ul style="list-style-type: none"> <li>Car parking near the road would be required to facilitate trail utilisation, research and educational use of this reserve, however, increased motor vehicle traffic on Macdonalds Road will increase dust and noise possibly requiring management.</li> <li>Shoulders (or pull over areas) may be required in parts that have heavily forested road verges.</li> </ul>
Waterways and Dams – water quality and public safety	<ul style="list-style-type: none"> <li>Potential risks to the public can be managed through signage.</li> <li>Waterways and dams are useful for fire-fighting purposes.</li> <li>Revegetating upper catchment areas cleared for grazing to reduce upstream source of sediment and nutrients.</li> </ul>
Fire	<ul style="list-style-type: none"> <li>Controlled burns to serve dual purpose for weed and fuel management.</li> <li>Controlled burns will ensure survival and reproduction of fire-adapted sclerophyll communities; however, exclude fire from all rainforest areas and areas with old growth hollow-bearing trees.</li> <li>Recreational trails used simultaneously as fire breaks to facilitate prescribed mosaic burns.</li> </ul>
Pathogens	<ul style="list-style-type: none"> <li>Partnerships with research institutions.</li> </ul>
Loss of grassland habitat	<ul style="list-style-type: none"> <li>Reduce mowing frequency in areas dominated by native grasses and herbs to allow plants to flower and seed, providing food for small mammals, birds and moths.</li> </ul>



## 4.2. Invasive Flora and Fauna

### 4.2.1. Invasive Flora

Sixty-five introduced species occur throughout the reserve, of which 7 are listed as 'restricted invasive' plants under Queensland's *Biosecurity Act 2014* and 13 species are listed as 'other invasive' plants. The highest density of weeds occurs in the regrowth areas and ex-pine areas on Lot 17, with outbreaks of the following species:

- Lantana (*Lantana camara*) - abundant on the old logging trails, around the northern dam and along the creek in Lot 17 where it has formed dense, impenetrable thickets.
- Camphor laurel (*Cinnamomum camphora*) - common, particularly in the regrowth, disturbed and exotic pine areas in Lot 17 and along the steep access trail in Lot 15.
- Occasional large leaved privet (*Ligustrum lucidum*) - occurs along the main creek line.
- Occasional Blackberry (*Rubus anglocandicans*, *Rubus fruticosus* agg) - infestations along the access to Lot 17 and in the disturbed areas.

Much of the disturbed areas at the southern end of the reserve are managed, in the short term, through slashing. Despite potentially contributing to the distribution of groundcover and pasture grass seeds throughout the reserve, slashing does maintain these areas relatively free of woody and canopy weeds.

Weed populations that are a concern to the reserve's overall biodiversity values are mainly associated with regrowth areas and areas that are too steep to mow, as well as the interfaces between gullies in 'excellent' condition and downstream areas in 'moderate' condition (Oliver, 2016). These include groundsel (*Baccharis halmifolia*), lantana and large-leaved privet (*Ligustrum lucidum*).

Other of concern weeds such as duranta (*Duranta repens*) and mist flower (*Ageratina riparia*) occur in small pockets of regrowth and in gullies.

Given the historical use of the land for exotic pine forestry, recruitment of pine wildlings (*Pinus* spp.) is an ongoing management issue with isolated individuals and small, multi-aged stands of pines scattered throughout the reserve.

The long-term weed management objectives for the reserve are to suppress weed species and encourage natural regeneration; and to restore, through revegetation, the cleared or degraded areas to as close as possible a "pre-clear" state.

All invasive plant species recorded from the flora surveys are listed in **Appendix 6**.

#### Management actions

- Facilitate natural regeneration through monitoring and controlling weed growth as per London Creek Environment Reserve Regeneration Works Plan (SELR, 2016).
- Seasonal and pre-emptive weed control, based upon specific species lifecycle.
- Scout areas of 'very good' bush for fruiting camphor laurel and large-leaf privet.
- Develop ongoing community education aimed at preventing threats to biodiversity values by invasive plants from neighbouring properties.

### 4.2.2. Invasive Fauna

Six introduced fauna species have been recorded within the reserve, including foxes, cows, roaming domestic dogs, cats and mice. Three of these are listed under the *Biosecurity Act 2014* (Queensland Government, 2016) as 'restricted invasive' animals (see **Appendix 7**).

Other invasive animals that are anticipated to occur include European hare (*Lepus europaeus*) and wild pig (*Sus scrofa*).

Roaming domestic dogs and feral cats are generalist predators that hunt a wide range of native fauna, including koalas (*Phascolarctos cinereus*) and long-nosed potoroos (*Potorous tridactylus*). The European fox (*Vulpes vulpes*) is also a known predator of the long-nosed potaroo. Council manages dingo, roaming

domestic dog and fox populations through its Healthy Places – Feral Animal Education and Control Team and has an endorsed feral animal prevention and control program that includes the reserve.

Feral pigs may negatively impact biodiversity values by feeding and digging up native plants, causing soil erosion, eating native frogs, reptiles and small mammals and by spreading weeds (Department of Environment, Science and Innovation, Queensland, 2021). Monitoring is required to ensure feral pigs do not disturb the aboriginal tool scatters and the giant barred frog habitat in the northern section of the reserve.

Council manages invasive animal populations in accordance with the SCC Local Government Area Biosecurity Plan 2017 (Sunshine Coast Council(c), 2017). Invasive animal monitoring and control by this team has been ongoing in this reserve.

#### Management actions

- Implement invasive animal prevention and control activities in line with RWP (SELR, 2016) and Sunshine Coast Council Local Government Area Biosecurity Plan 2017 - focusing on roaming domestic dogs, feral cats, foxes, and cane toads.
- Maintain fence lines to prevent livestock access to the reserve – particularly degraded north-western boundary of Lot 736.
- Avoid using pesticides and wetting agents in close proximity to riparian frog breeding habitat, and other important habitat areas (Meyer, 2014).

### 4.3. Pathogens

Myrtle rust is a plant disease caused by the exotic fungus *Austropuccinia psidii* (Makinson, et al., 2020). Myrtle rust has been found throughout the Sunshine Coast on trees and shrubs in the Myrtaceae family of which numerous species can be found within this reserve.

Symptoms include defoliation, leaf deformity, reduced fertility, stunted growth and plant death. Infected plants left untreated will

continue to produce spores and increase the chances of other myrtaceous plants nearby becoming infected.

Brown root rot is a plant disease caused by *Phellinus noxius*, which is a naturally occurring rainforest fungus that can negatively impact some native plant species. It is anticipated that the risk of introducing this disease into the reserve is low because of the reserve category 'Nature' — access is restricted and managed through research permits and supervision.

The Department of Agriculture and Fisheries provides information on the identification and management of brown root rot fungus and myrtle rust (Department of Agriculture and Fisheries, 2022).

#### Management actions

- Surveillance for myrtle rust and brown root rot within the reserve.
- Maintain reserve category to reduce pathogen impacts.

### 4.4. Fire

Anecdotal evidence from the local Fire Warden is that fire was excluded from much of the reserve whilst in private ownership (approx. 20 to 25 years). Since council has managed the reserve, fire has been reintroduced for management purposes in 2013 and 2016.

A detailed Fire Management Plan (FMP) for the reserve was prepared in 2015 to provide guidance for asset protection and ecological processes. The FMP aims to 'address community safety and the maintenance of ecological values' in accordance with the relevant state and local laws (Reif, 2015). It does not currently incorporate Lot 736.

A network of existing maintained trails throughout the reserve provide access for fire management purposes. Access is limited to authorised vehicles through a series of locked gates.



The FMP considers the increased potential for fire at the reserve given the surrounding vegetated landscape and steep terrain. The plan also considers findings and recommendations from flora and fauna assessments, with respect to the ecological requirements of significant species and vegetation communities present including:

- i. managing fuel loads in adjoining dry forest to reduce the risk of wildfire entering riparian rainforest, particularly for important threatened frog habitat in the north and far west;
- ii. undertaking patch burning to maintain a range of successional stages;
- iii. maintaining a range of habitat types for the diversity of species and vegetation communities present;
- iv. undertaking cool/cultural burns to maintain ecosystem resilience and biodiversity, as well as reduce wildfire risks.

Where it is possible to burn, fire should be used to promote open forest diversity, with a native grass and herb understorey or a diverse mixture of open forest native grasses, herbs and shrubs. Outcomes will be dependent on previous forest successional processes and burn seasonality.

For areas where it is not possible to contain a burn, burning will not be undertaken. This will result in a thickening of understorey plants (rainforest and open forest species) over time, or a diminished native grass and herb cover in the understorey.

The FMP highlights the need for cooperation with neighbouring landowners to facilitate controlled burns in the northeast and eastern portions of the reserve.



A controlled burn was conducted in 2016 to encourage germination of open sclerophyll forest species.

#### Management actions

- Continue to coordinate fire management with the Bushfire Management team in accordance with the FMP.
- Fire management of this reserve must consider the ecological requirements of significant flora and fauna, and the different vegetation communities present.
- Retain and protect from bushfire damage all remaining stag trees (dead trees) and all trees bearing hollows.
- Avoid too frequent fires that may affect regeneration of *Casuarina* / *Allocasuarina* species.
- Undertake patch burning to maintain a mosaic of vegetation communities of different age classes.
- Monitor burnt area frequently to control any regenerating weeds before they have an opportunity to colonise.
- Investigate opportunities for cultural burns with Jinibara peoples.

## 4.5. Erosion

Water quality is an important issue in this reserve, especially for frog breeding habitat. The surrounding land uses in the headwaters of London Creek are impacting water quality and instream habitat values. This includes logging, grazing and riparian clearing for pasture. Gully erosion is occurring in the upper catchment. These impacts vary seasonally and are particularly noticeable during spates of high run-off events following prolonged dry seasons.

Several trails at the reserve are susceptible to erosion where they occur on steep terrain or where they are intersected by a watercourse or drainage feature. Erosion on trails can create unsafe driving conditions and degrade aquatic ecosystems by raising sedimentation levels. Primary trails have been upgraded to include water diversion devices (e.g., whoa boys) and rock swale drains in erosion-prone areas. Unused and erosion-prone logging trails have been closed to minimise erosion caused by vehicles and to facilitate natural regeneration.

### Management actions

- Regular erosion monitoring, especially following extreme wet weather conditions.
- Encourage and/or plant natives around eroding bank north of bridge.
- Continue to engage neighbouring landowners to encourage good land management practices that minimise soil erosion. This includes fencing to restrict cattle access to watercourses and off-stream watering points.

## 4.6. Vegetation Clearing

Most of the remnant native vegetation has been repeatedly and heavily logged. The open areas in the southern part of the reserve, which have historically been under agricultural use, were delineated by numerous fences and gate access points. The process of converting these areas to a reserve has seen the gradual removal of these internal fences and retention of posts for historical reference. The fence line

removal process has also minimised the potential for wildlife injuries.

The boundary fence and gated access trail will require regular monitoring and maintenance. Appropriate service levels are assigned to the reserve to allow for the vehicle access trails to be maintained, whilst other trails have been downgraded to walking trails or closed completely.



A rock swale drain in an erosion-prone area.

## 4.7. Stock Grazing

Properties to the north and west of the reserve are under grazing by livestock. Reserve boundaries are fenced to exclude livestock, however despite this, cattle incursion is an ongoing threat, particularly on the northwestern boundary of Lot 736 (South East Land Repair, 2016).

### Management actions

- Undertake condition assessment of boundary fencing, where present, to identify repairs/ replacement new construction requirements, preferably using wildlife-friendly designs.
- Retain fence posts in situ for historical reference.
- Check flow paths or disturbed areas (e.g., exposed soil, trails, etc.) for soil erosion, and scouring.



## 4.8. Hydrological Modification

Three dams have been constructed at the southern end of the reserve, one of which has breached the dam wall and now only exists as a ponded area. All these sites have now established vegetation cover and provide habitat for a diverse range of fauna including bats, water birds, platypus, frogs and freshwater turtles.

### Management actions

- Maintain existing dams for identified fauna values.
- Record the location of platypus burrows adjacent to farm dams and ensure there are no earthworks near dams where burrows may occur.
- Maintain fire access trails.

## 4.9. Visitor Use and Impact

The impact from visitor use is negligible, as public access is not available and contractor access is supervised and managed through permits. While public access is not currently promoted, this will be reviewed within the broader context of the Sunshine Coast's Environmental Reserves Network Management Plan and the recreation strategy.

### Management actions

- Gate and fencing installed to control access into the area.
- Installation of signs that identify the area as part of council's Environment Reserve network.
- Any visitor use must be informed by this Management Plan and consider cultural heritage and threatened species values and sensitivities.

## 5. Climate Change

Research to date indicates that climate change will threaten ecosystems through loss of flora and fauna, loss of habitat, proliferation of weed species, and increased wild bushfire

risks. Stream processes may also be impacted by increased flood events.

The ELS recognises that climate change is a significant long-term threat to the area's biodiversity. Strategies such as protecting habitat, rehabilitating areas, enhancing wildlife corridors and reducing invasive species are suggested to help wildlife adapt to changing conditions and provide the potential to sequester carbon.

Appropriate management responses to extreme events – such as fires, extended droughts and cyclones – are required, with the reserve being particularly susceptible to wild bushfires with its steep terrain and a predominance of fire-adapted sclerophyllous vegetation. The maintenance of fire trails, access roads and dams are critical to providing a water source for fire management for the reserve.

### Management actions

- Build fauna resilience through habitat connectivity and preservation of hollow-bearing trees.
- Build resilience in stream ecosystems to bed and bank erosion by managing upstream lands.
- Build resilience to hydrological changes through protecting natural surface and groundwater flows.
- Encourage uptake of sustainable practices that reduce carbon emissions across the community (e.g. composting), and promote carbon capture (e.g., soil health improvements).
- Manage fire regimes to ensure a mosaic of age classes of important feed species, with a bias toward older age classes (which provide abundant food resources).
- At a landscape-scale, identify, enhance and restore regional corridors that connect inland fauna populations with those along the Great Dividing Range and coast.

## 6. Management Actions

All the management actions noted throughout this Plan are compiled below in **Table 9**. This provides a separable consolidated management implementation plan for the reserve.

**Table 9:** Management Implementation Plan for London Creek Environment Reserve.

MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<b>3.1.2. Native Flora</b>			
<ul style="list-style-type: none"> <li>Record the location of all significant plant species at the reserve using GPS.</li> </ul>	<b>3.1.1.</b> <b>3.1.4.</b> <b>3.2.2.</b> <b>4.2.1.</b> <b>4.6.</b>	Underway	Ongoing
<ul style="list-style-type: none"> <li>Map CREVNT-listed species present to inform contractors.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Use CREVNT-listed species in revegetation projects.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Future flora surveys to target significant species potentially occurring in the reserve because they were not recorded in prior surveys.</li> </ul>		Not started	Medium
<b>3.1.3. Native Fauna</b>			
<ul style="list-style-type: none"> <li>Future fauna surveys to target significant species potentially occurring in the reserve because they were not recorded in prior surveys or were not reliably identified, like the long-nosed potoroo, Richmond birdwing butterfly, and pink underwing moth.</li> </ul>	<b>3.1.2.</b> <b>3.1.4.</b> <b>3.2.2.</b> <b>4.8.</b>	Not started	Medium
<ul style="list-style-type: none"> <li>Undertake frog surveys at riparian habitat within the South-West revegetation areas to determine the effectiveness of rehabilitation works in providing habitat for CREVNT-listed species by using baseline data (Meyer, 2013).</li> </ul>		Not started	Medium
<ul style="list-style-type: none"> <li>Encourage partnerships with a research institution interested in assessing macroinvertebrate populations as a measure of ecosystem health.</li> </ul>		Not started	Low
<b>3.1.4. Habitat and Ecosystems</b>			
<ul style="list-style-type: none"> <li>Continue revegetation efforts to provide food and habitat for significant fauna.</li> </ul>	<b>3.1.2.</b> <b>3.1.3.</b>	Completed	Low
<ul style="list-style-type: none"> <li>Restore connectivity to downstream areas to encourage frog dispersal across the landscape.</li> </ul>		Underway	Ongoing



MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<ul style="list-style-type: none"> <li>Continue to consolidate canopy cover through the removal of weeds to promote natural regeneration.</li> </ul>	3.2.2.	Underway	Ongoing
<ul style="list-style-type: none"> <li>Collaborate with neighbouring landowners to enhance native vegetation corridors through surrounding pastures (e.g., use landholder incentive programs).</li> </ul>		Underway	Ongoing
3.2.1. Indigenous			
<ul style="list-style-type: none"> <li>Consult Jinibara People prior to any works that may cause ground disturbance (e.g., trail or road building) in a previously undisturbed area.</li> </ul>	2.3.1. 4.9.	Underway	Ongoing
<ul style="list-style-type: none"> <li>To ensure the protection of the rock shelter, a site-specific Management Plan should be developed for the site in conjunction with the Jinibara People.</li> </ul>		Not started	High
<ul style="list-style-type: none"> <li>The Jinibara People will request an amendment to State's cultural heritage database that recognises the reserve in its entirety as a Significant Aboriginal Area.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Consider a traditional land agreement or indigenous protected area agreement to manage the reserve's ecological, cultural and economic values.</li> </ul>		Not started	Medium
<ul style="list-style-type: none"> <li>Support council's Reconciliation Action Plan (Sunshine Coast Council, 2021) commitment to build relationships with the local indigenous community to further reconciliation and include Welcome to Country at reserve events</li> </ul>		Completed	Ongoing
3.2.2. Ecological Restoration			
<ul style="list-style-type: none"> <li>Discuss options with neighbouring landholders to progress perpetual protection of target REs on their properties.</li> </ul>	3.1.1. 3.1.2. 3.1.3. 4.4. 7.2.	Underway	Medium
<ul style="list-style-type: none"> <li>Monitor weed growth and control in line with established service level.</li> </ul>		Underway	Medium
<ul style="list-style-type: none"> <li>Maintain tree planting sites.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Plant food trees for arboreal mammals in appropriate revegetation sites like <i>Eucalyptus acmenoides</i>; <i>Corymbia intermedia</i>, and other eucalypts that have high nitrogen fibre and are suitable for koalas and greater gliders.</li> </ul>		Underway	Medium
<ul style="list-style-type: none"> <li>Install nest boxes for greater gliders at suitable sites 10-40m above ground and maintain nest boxes.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Retain and protect all remaining hollow-bearing trees from bushfire damage.</li> </ul>		Underway	Ongoing

MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<ul style="list-style-type: none"> <li>Manage fire frequency and intensity in the fire adapted eucalypt dominated communities, whilst excluding fire from the rainforest communities.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Restore connectivity to upstream and downstream habitats through targeted restoration and acquisition of surrounding properties.</li> </ul>		Underway	Medium
<b>3.2.3. Recreation</b>			
<ul style="list-style-type: none"> <li>Promote partnerships with community groups such as Birdlife Southern Queensland.</li> </ul>	<b>3.1.3.</b> <b>4.6.</b> <b>4.9.</b>	Not started	Medium
<ul style="list-style-type: none"> <li>Maintain cleared areas and existing infrastructure so that the site can be used as an outdoor educational centre.</li> </ul>		Underway	Ongoing
<b>3.2.4. Research and Education</b>			
<ul style="list-style-type: none"> <li>Create opportunities for field-based research and education within the reserve.</li> </ul>	<b>3.2.2.</b> <b>3.3.</b> <b>4.9.</b> <b>7.2.</b>	Underway	Medium
<ul style="list-style-type: none"> <li>Conduct ongoing maintenance and monitoring of bush regeneration plots.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Investigate opportunity for a biannual training day for ecological restoration practitioners.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Promote partnerships with research institutions for monitoring, data collection and scientific research.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Continue to support community partnerships.</li> </ul>		Underway	Ongoing
<b>3.3. Economic Values</b>			
<ul style="list-style-type: none"> <li>Maintain existing offsets in perpetuity and continue using new offset initiatives to rehabilitate cleared and/or degraded areas.</li> </ul>	<b>2.3.1.</b> <b>3.1.2.</b> <b>3.1.3.</b> <b>3.2.1.</b> <b>3.2.2.</b> <b>3.3.3.</b> <b>3.2.4.</b>	Underway	Ongoing
<ul style="list-style-type: none"> <li>Manage visitor use for inspirational, educational, cultural and recreational purposes at a level that will not cause significant ecological degradation to the natural resources and cultural degradation.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Investigate opportunities for eco-cultural events partnering with Horlzon, showcasing the natural and cultural history and existing fauna and flora. (e.g., opera under the stars, light show of what once was—Jinibara soundscape and endangered song).</li> </ul>		Underway	Ongoing



MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<ul style="list-style-type: none"> <li>Investigate future partnerships through research and education to contribute to local economies.</li> </ul>	7.2.	Underway	Ongoing
<ul style="list-style-type: none"> <li>Investigate opportunities for co-management with Jinibara by considering a business model where opportunities for training in cultural heritage, environmental surveys and restoration are provided in the Indigenous Protected Area.</li> </ul>		Not started	Medium
<b>3.4. Conditions of Values</b>			
<ul style="list-style-type: none"> <li>Undertake a BOA every five years to determine changes in vegetation condition and to measure success of restoration works.</li> </ul>	3.1. 4.2. 4.4. 4.5. 4.6. 4.8.	Requires action	Medium
<ul style="list-style-type: none"> <li>Undertake a water quality assessment and macroinvertebrate analysis to determine general stream health and identify sources of pollutants from the surrounding landscape.</li> </ul>		Not started	Low
<ul style="list-style-type: none"> <li>Consider options to create native vegetation corridors through surrounding pine plantations.</li> </ul>		Requires action	High
<ul style="list-style-type: none"> <li>Collaborate with adjacent property owners to facilitate coordinated weed and fire management.</li> </ul>		Requires action	Medium
<ul style="list-style-type: none"> <li>Mow all existing open slashed areas, except forest edges, by keeping blades high above ground and by balancing the frequency to allow grasses to flower and seed, providing food for small mammals, birds and moths.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Build upon the reserve's large conservation potential by assisting with regeneration of the less intact portions of the reserve.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Reconnect riparian areas with downstream habitats and refugia.</li> </ul>		Underway	Medium
<b>4.2.1. Invasive Flora</b>			
<ul style="list-style-type: none"> <li>Facilitate natural regeneration through monitoring and controlling weed growth as per London Creek Environment Reserve Regeneration Works Plan (SELR, 2016).</li> </ul>	3.2.2. 3.4.	Underway	Ongoing
<ul style="list-style-type: none"> <li>Seasonal and pre-emptive weed control, based upon specific species lifecycle.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Scout areas of 'very good' bush for fruiting camphor laurel and large-leaf privet.</li> </ul>		Underway	Medium
<ul style="list-style-type: none"> <li>Develop ongoing community education aimed at preventing threats to biodiversity values by invasive plants from neighbouring properties.</li> </ul>		Underway	Ongoing

MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<b>4.2.2. Invasive Fauna</b>			
<ul style="list-style-type: none"> <li>Implement invasive animal prevention and control activities in line with RWP (SELR, 2016) and Sunshine Coast Council Local Government Area Biosecurity Plan 2017 - focusing on roaming domestic dogs, feral cats, foxes, and cane toads.</li> </ul>	<b>3.2.2.</b> <b>3.4.</b>	Underway	High
<ul style="list-style-type: none"> <li>Maintain fence lines to prevent livestock access to the reserve – particularly degraded north-western boundary of Lot 736. Liaise with neighbour to discuss issues of cattle incursion.</li> </ul>		Underway	High
<ul style="list-style-type: none"> <li>Avoid using pesticides and wetting agents near riparian frog breeding habitat, and other important habitat areas (Meyer, 2014).</li> </ul>		Underway	Ongoing
<b>4.3. Pathogens</b>			
<ul style="list-style-type: none"> <li>Surveillance for myrtle rust and brown root rot within the reserve.</li> </ul>	<b>3.1.2.</b>	Underway	Ongoing
<ul style="list-style-type: none"> <li>Maintain reserve category to reduce pathogen impacts.</li> </ul>	<b>3.2.2.</b>	Underway	Ongoing
<b>4.4. Fire</b>			
<ul style="list-style-type: none"> <li>Continue to coordinate fire management with the Bushfire Management team in accordance with the FMP for this reserve.</li> </ul>	<b>3.1.2.</b> <b>3.1.3.</b> <b>3.2.1.</b> <b>3.4.</b>	Underway	Ongoing
<ul style="list-style-type: none"> <li>Fire management of this reserve must consider the ecological requirements of significant fauna plant and animal species, and the different vegetation communities present.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Retain and protect from bush fire damage all remaining stag trees (dead trees) and all, small trees bearing large hollows. and large hollow-bearing trees.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Avoid too frequent fires that may affect regeneration of <i>Casuarina / Allocasuarina</i> species.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Undertake patch burning to maintain a mosaic of vegetation communities of different age classes.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Monitor burnt area frequently to control any regenerating weeds before they have an opportunity to colonise.</li> </ul>		Underway	Ongoing



MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<ul style="list-style-type: none"> <li>Investigate opportunities for cultural burns with Jinibara peoples.</li> </ul>		Not started	Low
<b>4.5. Erosion</b>			
<ul style="list-style-type: none"> <li>Regularly erosion monitoring, especially following extreme wet weather conditions.</li> </ul>	<b>3.1.2.</b>	Underway	Ongoing
<ul style="list-style-type: none"> <li>Encourage and/or plant natives around eroding bank north of bridge.</li> </ul>	<b>3.1.4.</b> <b>3.4.</b>	Requires action	Medium
<ul style="list-style-type: none"> <li>Continue to engage neighbouring landowners to encourage good land management practices that minimise soil erosion. This includes fencing to restrict cattle access to watercourses and off-stream watering points.</li> </ul>	<b>4.7.</b> <b>4.8.</b>	Requires action	High
<b>4.7. Stock Grazing</b>			
<ul style="list-style-type: none"> <li>Undertake condition assessment of boundary fencing, where present, to identify repairs/ replacement new construction requirements, preferably using wildlife-friendly designs.</li> </ul>	<b>3.3.</b>	Requires action	High
<ul style="list-style-type: none"> <li>Retain fence posts in situ for historical reference.</li> </ul>	<b>4.5.</b>	Completed	Ongoing
<ul style="list-style-type: none"> <li>Check flow paths or disturbed areas (e.g., exposed soil, trails, etc.) for soil erosion, and scouring.</li> </ul>	<b>4.9.</b>	Underway	Ongoing
<b>4.8. Hydrological Modification</b>			
<ul style="list-style-type: none"> <li>Maintain existing dams for identified fauna values.</li> </ul>	<b>3.1.3.</b> <b>4.4.</b>	Completed	Ongoing
<ul style="list-style-type: none"> <li>Record the location of platypus burrows adjacent to farm dams and ensure there are no earthworks near dams where burrows may occur.</li> </ul>		Not started	Ongoing
<ul style="list-style-type: none"> <li>Maintain fire access trails.</li> </ul>		Underway	Ongoing
<b>4.9. Visitor Use and Impact</b>			
<ul style="list-style-type: none"> <li>Gate and fencing installed to control access into the area.</li> </ul>	<b>3.2.2.</b> <b>3.2.3.</b> <b>3.2.4.</b>	Completed	Medium
<ul style="list-style-type: none"> <li>Installation of signs that identify the area as part of council's Environment Reserve network.</li> </ul>		Completed	Medium

MANAGEMENT ACTIONS FOR	RELEVANT SECTIONS	STATUS	PRIORITY
<ul style="list-style-type: none"> <li>Any visitor use must be informed by this Management Plan and consider cultural heritage and threatened species values and sensitivities.</li> </ul>		Underway	Ongoing
<b>5. Climate Change</b>			
<ul style="list-style-type: none"> <li>Build fauna resilience through habitat connectivity and preservation of hollow-bearing trees.</li> </ul>	<b>3.1.2.</b> <b>3.2.2.</b> <b>3.2.3.</b> <b>3.2.4.</b> <b>4.3.</b> <b>4.4.</b> <b>4.5.</b> <b>4.7.</b> <b>4.8.</b>	Underway	Ongoing
<ul style="list-style-type: none"> <li>Build resilience in stream ecosystems to bed and bank erosion by managing upstream lands.</li> </ul>		Underway	Ongoing
<ul style="list-style-type: none"> <li>Build resilience to hydrological changes through protecting natural surface and groundwater flows.</li> </ul>		Not started	Medium
<ul style="list-style-type: none"> <li>Encourage uptake of sustainable practices that reduce carbon emissions across the community (e.g., composting), and promote carbon capture (e.g., soil health improvements).</li> </ul>		Not started	Medium
<ul style="list-style-type: none"> <li>Manage fire regimes to ensure a mosaic of age classes of important feed species, with a bias toward older age classes (which provide abundant food resources).</li> </ul>		Underway	High
<ul style="list-style-type: none"> <li>At a landscape-scale, identify, enhance and restore regional corridors that connect inland fauna populations with those along the Great Dividing Range and coast.</li> </ul>		Underway	Medium



## 7. Finance and Resourcing

The Natural Area Operational Management program delivers the restoration, maintenance and development of council's environmental reserve network.

An annual operational budget is determined by the service level classification for each reserve which is based on several factors including:

- biodiversity values and risks,
- reserve condition, function and size,
- recreation and educational opportunities, and
- minimum community expectations.

### 7.1. Establishment

Establishment activities are funded under council's Environment Levy Establishment Program which applies to each new reserve for a period of approximately three to five years when all major planning reports and establishment works are implemented.

### 7.2. Community Conservation: BushCare Sunshine Coast

BushCare Sunshine Coast program supports council's reserve management and maintenance—engaging and supporting community volunteers in actively protecting and rehabilitating the region's environmental assets on public lands and includes over 1,000 volunteers. This unit has helped coordinate tree planting and environmental education activities in the reserve involving a local school.

### 7.3. Healthy Places Unit

In conjunction with the Natural Areas team, the Healthy Places - Animal Education and Control team fulfils and delivers council's statutory responsibility to manage impacts of flora and fauna within council reserves.

## 8. Monitoring

The SEQ Natural Resource Management Plan uses the Monitoring, Evaluation, Reporting and Improvement (MERI) framework. **Figure 5** shows the MERI program logic, including timeframes and outcomes linked to the objectives of this Management Plan.

The MERI framework provides for:

- evaluating the contribution of the reserve to the overall Sunshine Coast reserve network,
- evaluating the effectiveness of the methodology and approach used, and
- incorporating lessons learned into future work in land purchased for inclusion in council's reserve estate.

## 9. Communication Plan

Preliminary consultation for this Management Plan has been based on input from stakeholders within council. This includes recreational, conservation and community partnerships.

Public and external stakeholder groups were then invited to comment on the first draft through the council web site and specific targeted notifications.

Council will continue to provide information to the public via reports, publications, newsletters, and webpages and through media outlets as and when suitable opportunities present.

**Figure 5:** MERI Program Logic – based on the National Reserve System and SEQ NRM PI

Outcomes	Council owned/managed Environmental Reserve
Long-term outcomes (20 years)	This site will contribute to a well-managed, comprehensive reserve network protecting in perpetuity examples of at least 80% of the extant native ecosystems present in the Sunshine Coast Region
Environment outcomes (5 years)	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 15%;">Reduced threat from invasive species</div> <div style="width: 15%;">Thematic Links MERI</div> <div style="width: 15%;">Improved ecological connectivity</div> <div style="width: 15%;">Increased representativeness of REs</div> <div style="width: 15%;">Increased protection of under-represented REs</div> <div style="width: 15%;">Enhanced resilience of the protected areas to disturbance</div> <div style="width: 15%;">Protected native habitat</div> <div style="width: 15%;">Address Matters of National Environmental Significance</div> </div>
Protection and management outcomes (5 years)	Managers are effectively implementing management actions of the Management Plan
Engagement and capacity outcomes (5 years)	Managers have the capacity for effective management planning
Immediate outcomes (biophysical and non-biophysical outcomes)	High value areas (including those within under-represented bioregions) are prioritised for acquisition and managed for nature conservation
Proponent influence activities	Partnership purchases (Discretionary grants)



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## Appendices

### Appendix 1: National Reserve System Principles of Protected Area Management

#### Interconnectedness of Values and Places

Protected area management aims to incorporate and integrate biodiversity values, Indigenous cultural values and broader community and historic heritage values.

Protected areas are also part of broader bioregional, social, cultural and economic landscape and they should be managed in this context.

#### Good Neighbour

Protected area managers are economically and socially part of local and regional communities and recognise the need to be valued, responsible, and active local and regional community participants and members.

#### Community Participation and Collaboration

Protected areas are conserved for the benefit of and with the support of the community and this is best achieved through awareness, understanding and involvement.

#### Environmental Stewardship

Responsibility for protecting and conserving protected area values extends beyond the management body to include lessees, licensees, relevant public and private authorities, visitors, neighbours and the wider community.

#### Transparent Decision Making

The framework and processes for decision-making should be open and transparent. The reasons for making decisions should be publicly available, except to the extent that

information, including information that is culturally sensitive or commercial-in-confidence, needs to be treated as confidential.

#### Effective and Adaptive Management

Protected area management should apply an adaptive management approach to support continuous improvement in management. This includes monitoring the outcomes of management and taking account of the findings of monitoring and other research to improve management effectiveness. Management decisions should have a firm scientific basis or be supported by relevant experience. Management bodies need to maintain and improve their capacity to learn from experience, to value and build staff expertise and draw on input from other stakeholders.

#### Appropriate Use

Access to and use of protected areas must be consistent with the long term protection of their values, the maintenance of physical and ecological processes and agreed management objectives.

#### Indigenous People's Knowledge and Role

Protected areas are part of landscapes that have supported and continue to give identity to Indigenous people who have traditional and historical connections to and knowledge of the land. Indigenous people are recognised and respected as the original custodians of the lands, waters, animals and plants within protected areas. Their living and spiritual connections with the land through traditional laws, customs and beliefs passed on from their ancestors are also recognised. The role of Indigenous organisations in the protection and management of country is acknowledged.

#### Applying the "Precautionary Principle"

Protection of the natural and cultural heritage of the National Reserve System should include identifying and taking appropriate actions to avert and actively manage

emerging threats and risks. Effective management must be based on the best available information. However, where there are threats or potential threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation or harmful disturbance to natural and cultural places.

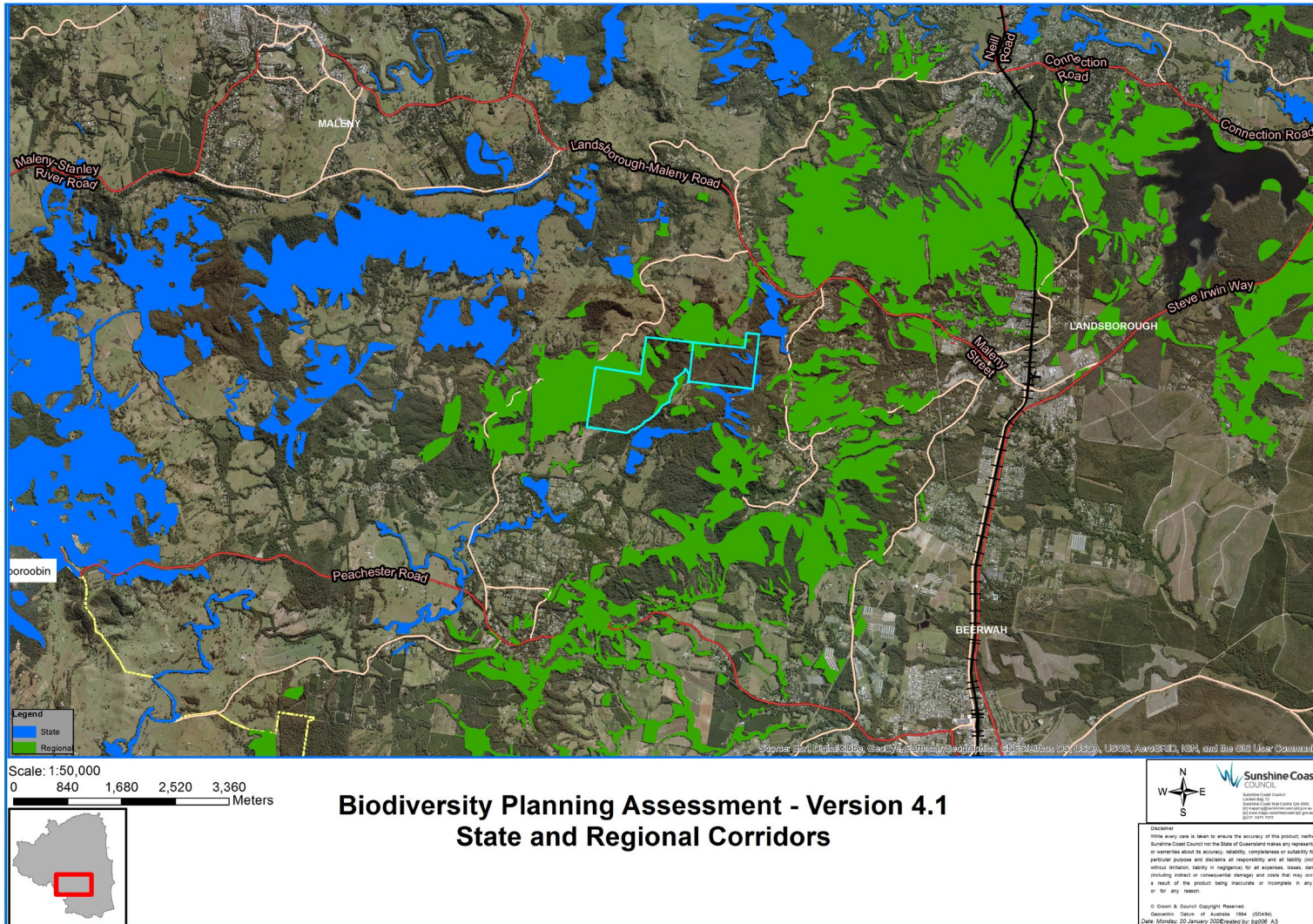
### Inter-generational and Intra-generational Equity

Management seeks to ensure that the health, diversity and productivity of the environment and the integrity and significance of cultural places are maintained or enhanced for the benefit of future generations and that decisions affecting current generations are socially equitable.



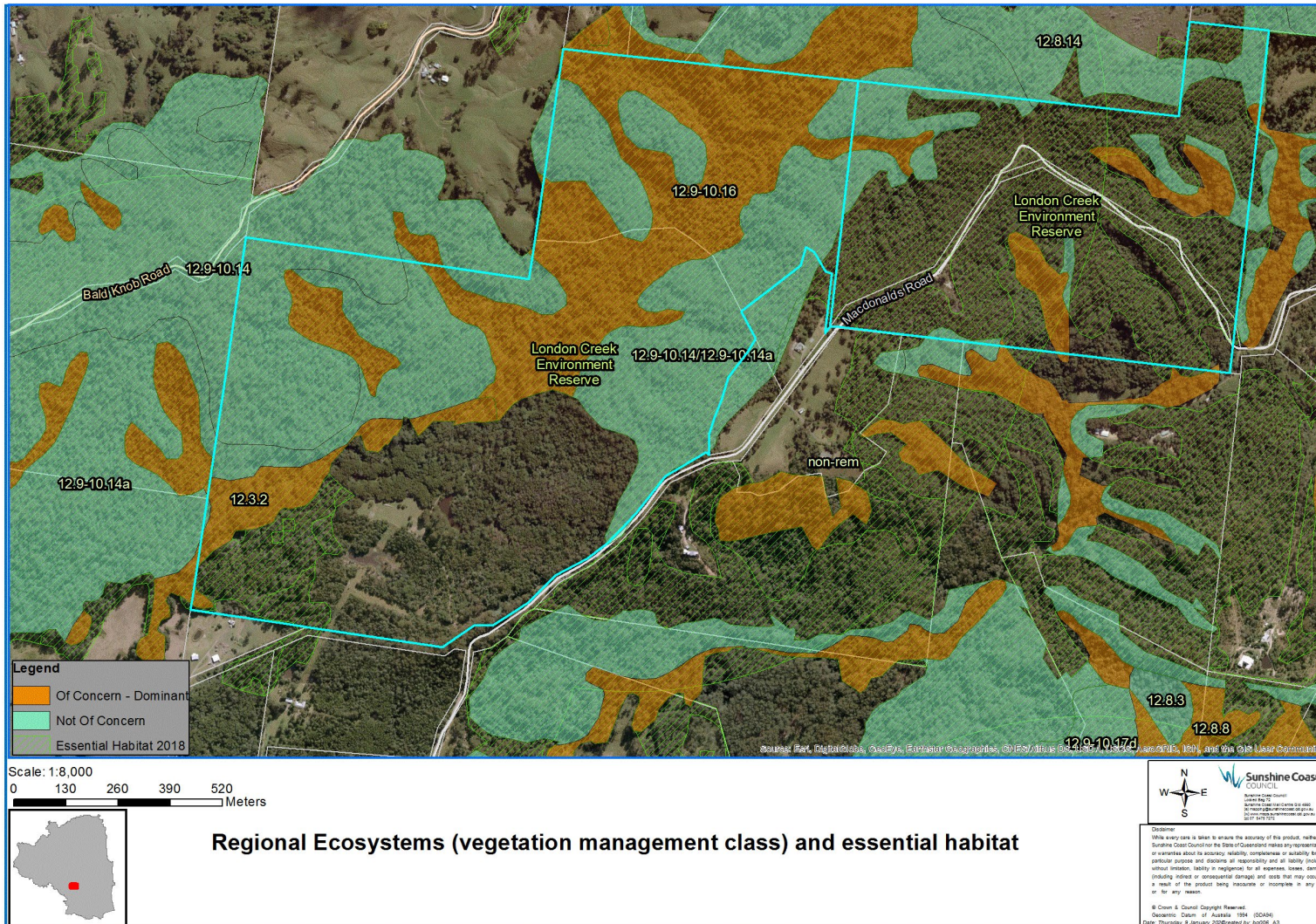
## Appendix 2: Terrain, Catchment, Vegetation and Habitat Connectivity Mapping

### 2a. State and Regional Corridors



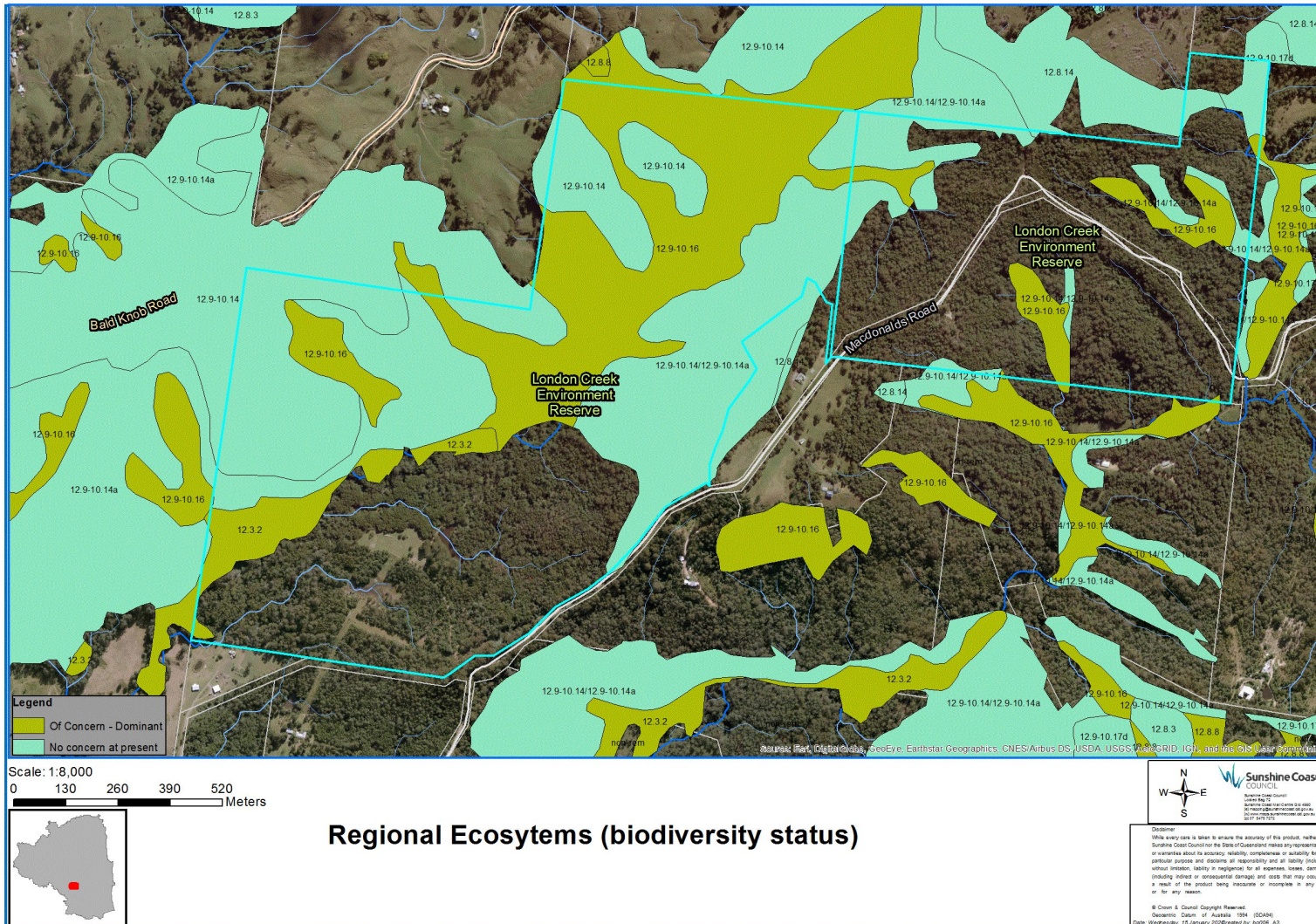


## 2b. Regional Ecosystems (Vegetation Management Class) and Essential Habitat



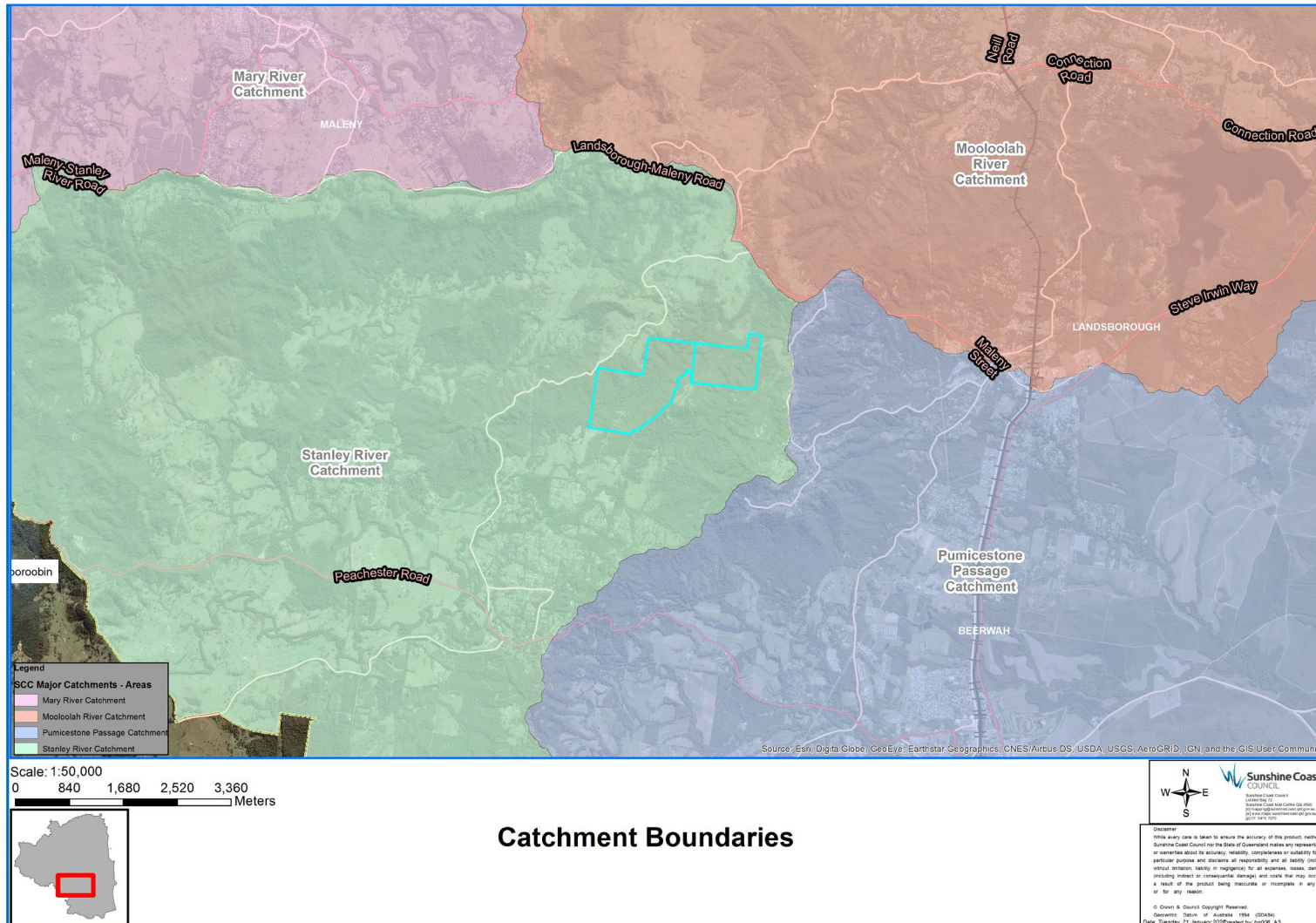


## 2c. Regional Ecosystems (Biodiversity Status)



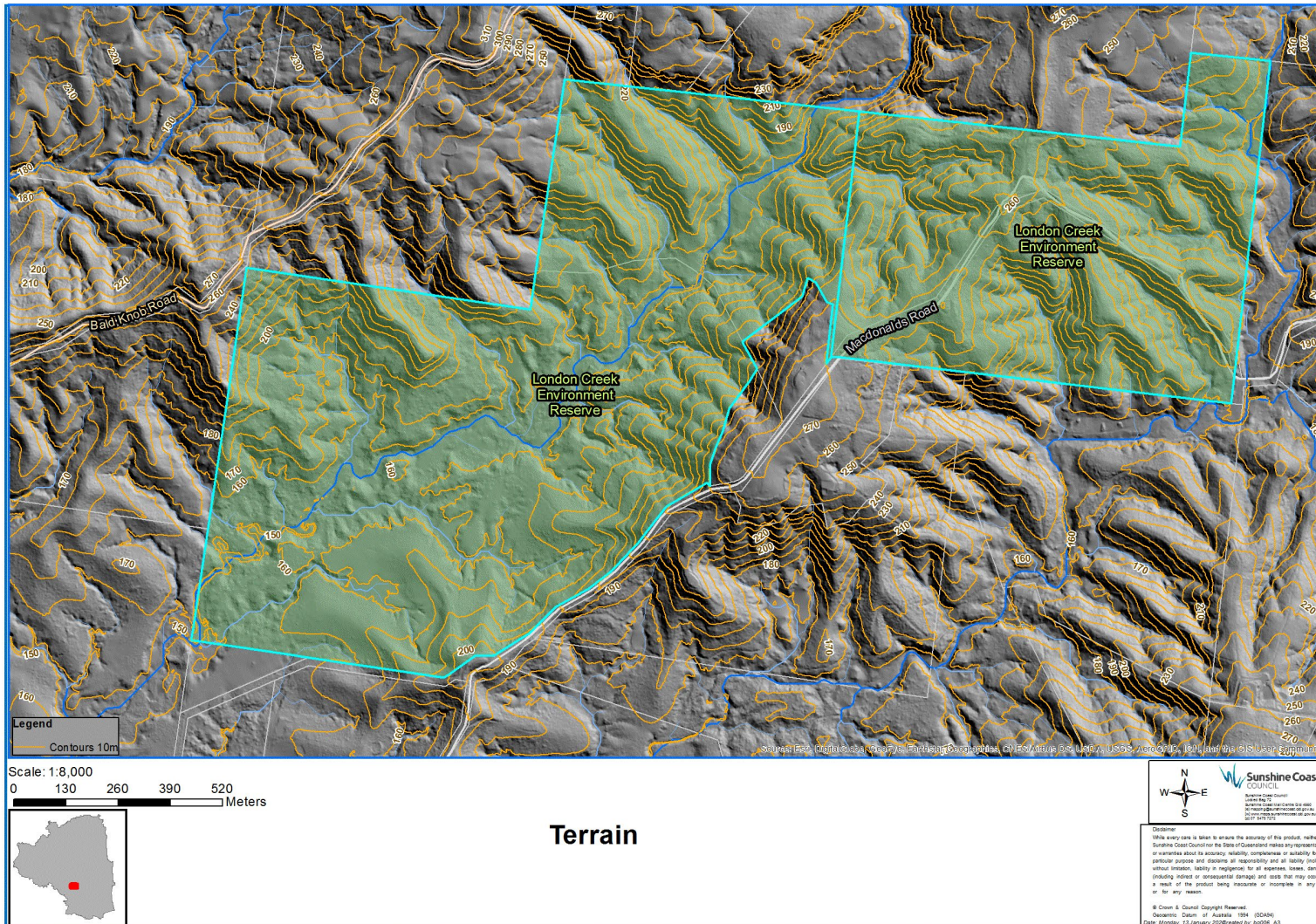


## 2d. Catchment Boundaries



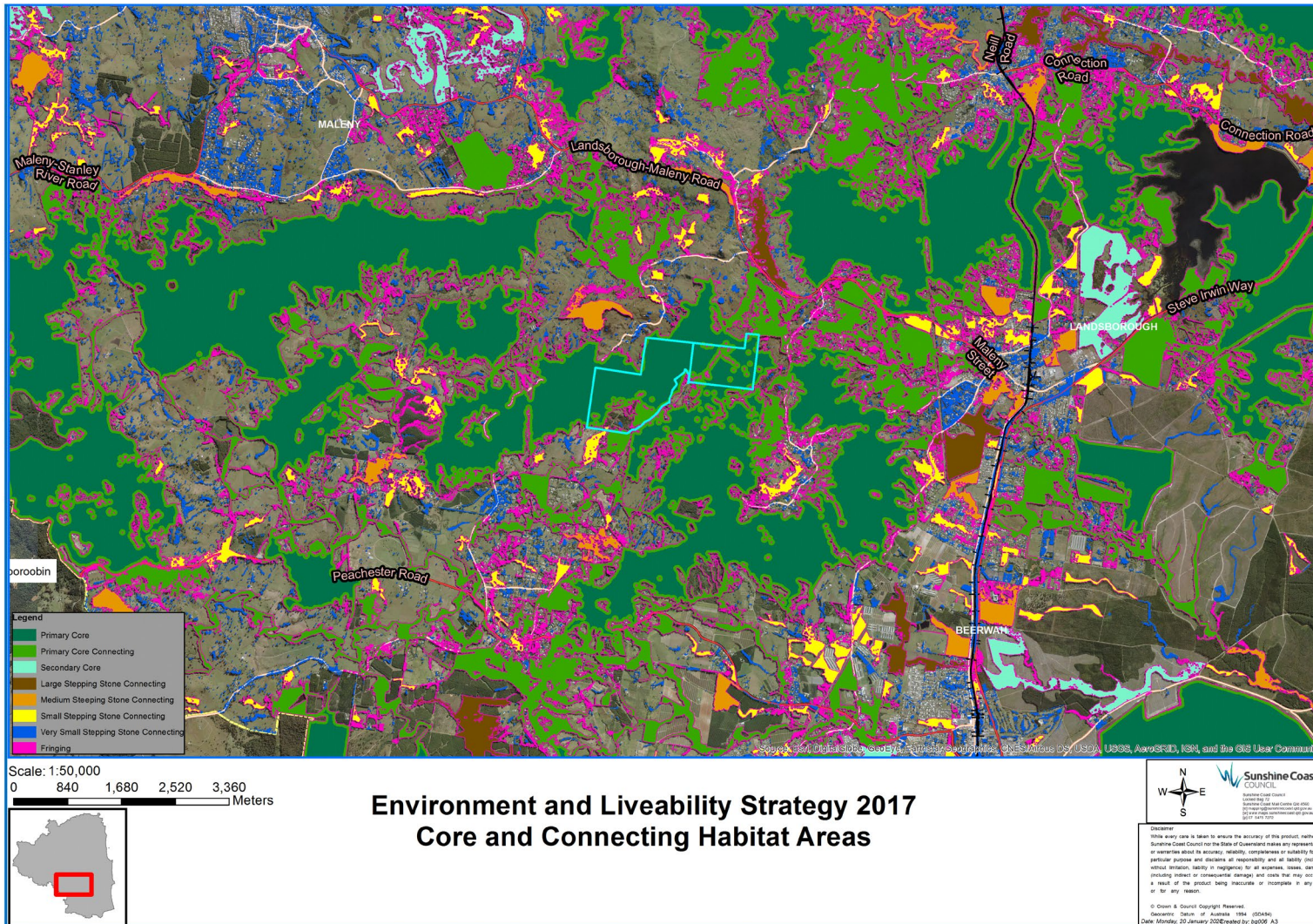


## 2e. Terrain



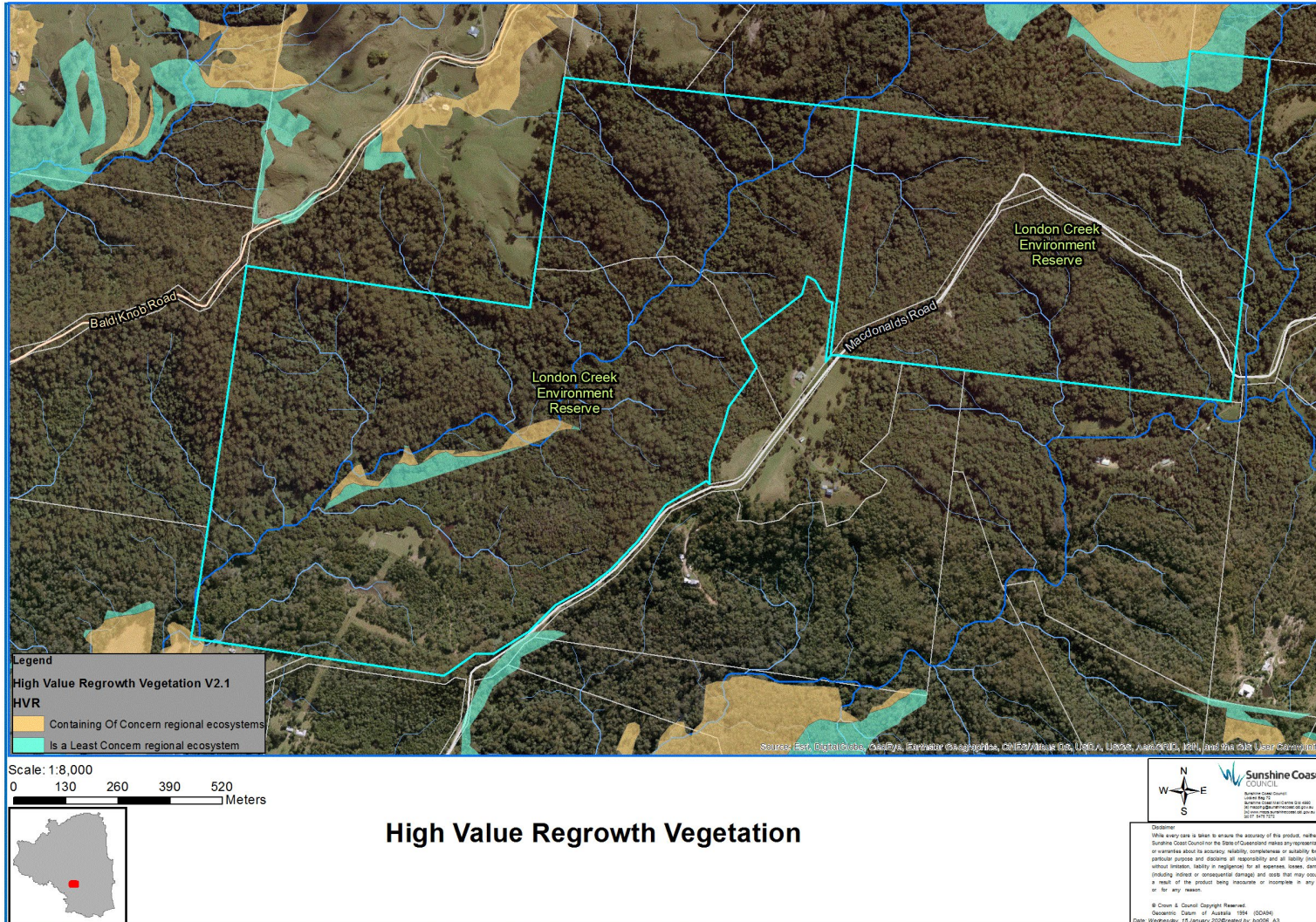


## 2f. Core and Connecting Habitat Areas





## 2g. High Value Regrowth



### Appendix 3: Status of Vegetation Communities on the Sunshine Coast Council Local Government Area

RE	Conservation status (VMA 1999)	V13 pre-clearing extent (ha)	V13 remnant extent (ha)	V13 remnant loss (ha)	V13 remnant loss %	Non-remnant vegetation attributed with pre-clearing extent classification (ha)
12.3.2	Of Concern	9,164	2,936	6,228	68	1,950
12.9-10.14	Least Concern	17,195	6,904	10,290	60	3,870
12.9-10.14a	Least Concern	3,819	1,385	2,434	64	838
12.12.16	Least Concern	3,921	1,559	2,362	60	988

A regional ecosystem (RE) is considered to be a 'target' based on one or more of the following factors: 1) VMA *endangered* conservation status; 2) vulnerable at a SCC LGA scale having lost more than 70% of its Sunshine Coast pre-clearing extent; 3) Poorly conserved at a SCC LGA scale (<10% of SC pre-clearing extent protected); 4) Critically endangered ecosystems (Lowland sub-tropical rainforest) listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth of Australia, 1999).



## Appendix 4: Plant Species List

EPBC Act 1999 = Commonwealth Environment Protection and Biodiversity Conservation Act 1999; NC Act 1992 = Queensland Nature Conservation Act 1992

E = endangered; V = vulnerable; NT = near threatened; LC = least concern; - = not assessed

Scientific Name	Family	Common Name	Status	
			EPBC Act 1999	NC Act 1992
<i>Abrophyllum ornans</i>	CARPODEACEAE	native hydrangea	-	LC
<i>Acacia bakeri</i>	MIMOSACEAE	marblewood	-	LC
<i>Acacia disparrima</i>	MIMOSACEAE	hickory wattle	-	LC
<i>Acacia falcata</i>	MIMOSACEAE	sickle wattle	-	LC
<i>Acacia longissima</i>	MIMOSACEAE	narrow-leaf wattle	-	LC
<i>Acacia maidenii</i>	MIMOSACEAE	maiden's wattle	-	LC
<i>Acacia melanoxylon</i>	MIMOSACEAE	blackwood	-	LC
<i>Acacia oshanesii</i>	MIMOSACEAE	feather wattle	-	LC
<i>Ackama paniculosa</i>	CUNONIACEAE	soft corkwood	-	LC
<i>Acmena ingens</i>	MYRTACEAE	red apple	-	LC
<i>Acmena smithii</i>	MYRTACEAE	creek lilly pilly	-	LC
<i>Acronychia laevis</i>	RUTACEAE	glossy acronychia	-	LC
<i>Acronychia octandra</i>	RUTACEAE	doughwood	-	LC
<i>Acronychia pubescens</i>	RUTACEAE	hairy acronychia	-	LC
<i>Acronychia suberosa</i>	RUTACEAE	corky acronychia	-	LC
<i>Acronychia wilcoxiana</i>	RUTACEAE	silver aspen	-	LC
<i>Acrotriche aggregata</i>	ERICACEAE	red cluster heath	-	LC
<i>Adiantum diaphanum</i>	ADIANTACEAE	filmy maidenhair	-	LC
<i>Adiantum formosum</i>	ADIANTACEAE	black stem maidenhair	-	LC
<i>Adiantum hispidulum</i>	ADIANTACEAE	rough maidenhair	-	LC
<i>Akania bidwillii</i>	AKANIACEAE	turnip wood	-	LC
<i>Allocasuarina littoralis</i>	CASUARINACEAE	black she-oak	-	LC
<i>Allocasuarina torulosa</i>	CASUARINACEAE	forest oak	-	LC
<i>Alocasia brisbanensis</i>	ARACEAE	elephant's ears	-	LC
<i>Alphitonia excelsa</i>	RHAMNACEAE	red ash	-	LC
<i>Alphitonia petriei</i>	RHAMNACEAE	pink ash	-	LC
<i>Alpinia arundelliana</i>	ZINGIBERACEAE	small native ginger	-	LC
<i>Alpinia caerulea</i>	ZINGIBERACEAE	native ginger	-	LC
<i>Alyxia magnifolia</i>	APOCYNACEAE	broad leaved chain fruit	-	LC
<i>Aneilema acuminata</i>	COMMELINACEAE	slug herb	-	LC
<i>Anthocarapa nitidula</i>	MELIACEAE	incense cedar	-	LC
<i>Aphananthe philippinensis</i>	ULMACEAE	rough leaved elm	-	LC
<i>Arachniodes aristata</i>	ADIANTACEAE	prickly shield fern	-	LC
<i>Araucaria cunninghamii</i>	ARAUCARIACEAE	hoop pine	-	LC
<i>Archidendron grandiflorum</i>	MIMOSACEAE	lace flower tree	-	LC
<i>Archirhodomertus beckleri</i>	MYRTACEAE	rose myrtle	-	LC
<i>Archontophoenix cunninghamiana</i>	ARECACEAE	piccabeen palm	-	LC
<i>Argyrodendron trifoliolatum</i>	STERCULIACEAE	white booyong	-	LC
<i>Arthropteris beckleri</i>	NEPHROLEPIDACEAE	climbing fishbone fern	-	LC

Scientific Name	Family	Common Name	Status	
			EPBC Act 1999	NC Act 1992
<i>Arytera divaricata</i>	SAPINDACEAE	coogera	-	LC
<i>Asplenium attenuatum v. indivisum</i>	ASPLENIACEAE	attenuate asplenium	-	LC
<i>Asplenium australasicum</i>	ASPLENIACEAE	bird's nest fern	-	LC
<i>Astrotricha latifolia</i>	ARALIACEAE	broad leaf star hair	-	LC
<i>Atractocarpus chartacea</i>	RUBIACEAE	narrow-leaved gardenia	-	LC
<i>Austrosteenisia glabristyla</i>	FABACEAE	giant blood vine	-	LC
<i>Backhousia myrtifolia</i>	MYRTACEAE	grey myrtle	-	LC
<i>Baloghia inophylla</i>	EUPHORBIACEAE	scrub bloodwood	-	LC
<i>Banksia integrifolia</i>	PROTEACEAE	coast banksia	-	LC
<i>Beilschmiedia elliptica</i>	LAURACEAE	grey walnut	-	LC
<i>Beilschmiedia obtusifolia</i>	LAURACEAE	blush walnut	-	LC
<i>Billardiera scandens</i>	PITTOSPORACEAE	appleberry	-	LC
<i>Blechnum cartilagineum</i>	BLECHNACEAE	gristle fern	-	LC
<i>Blechnum nudum</i>	BLECHNACEAE	fishbone water fern	-	LC
<i>Blechnum patersonii</i>	BLECHNACEAE	strap water fern	-	LC
<i>Bosistoa transversa</i>	RUTACEAE	three-leaved bosistoa	V	LC
<i>Brachychiton acerifolius</i>	STERCULIACEAE	flame tree	-	LC
<i>Breynia oblongifolia</i>	PHYLLANTHACEAE	coffee bush	-	LC
<i>Brunoniella spiciflora</i>	GOODENIACEAE	white brunoniella	-	LC
<i>Caesalpinia scortechinii</i>	CAESALPINIACEAE	wait-a-while	-	LC
<i>Calamus muelleri</i>	ARECACEAE	lawyer vine	-	LC
<i>Calanthe triplicata</i>	ORCHIDACEAE	Christmas orchid	-	LC
<i>Callerya megasperma</i>	FABACEAE	native wisteria	-	LC
<i>Callicarpa pedunculata</i>	VERBENACEAE	callicarpa	-	LC
<i>Calochlaena dubia</i>	DICKSONIACEAE	false bracken	-	LC
<i>Canarium australasicum</i>	BURSERACEAE	mango bark	-	LC
<i>Capillipedium spicigerum</i>	POACEAE	scented top	-	LC
<i>Capparis velutina</i>	CAPPARACEAE	hairy' form arborea	-	LC
<i>Carex appressa</i>	CYPERACEAE	tall sedge	-	LC
<i>Carex brunnea</i>	CYPERACEAE	greater brown sedge	-	LC
<i>Carex horsfieldii</i>	CYPERACEAE		-	LC
<i>Carex maculata</i>	CYPERACEAE		-	LC
<i>Carronia multisepelea</i>	MENISPERMACEAE	carronia	-	LC
<i>Cassytha pubescens</i>	LAURACEAE	dodder vine	-	LC
<i>Castanospermum australe</i>	FABACEAE	black bean	-	LC
<i>Cayratia clematidea</i>	VITACEAE	slender grape	-	LC
<i>Cephalalaria cephalobotrys</i>	ARALIACEAE	climbing panax	-	LC
<i>Cheilanthes sieberi</i>	ADIANTACEAE	mulga fern	-	LC
<i>Christella dentata</i>	THELYPTERIDACEAE	binung	-	LC
<i>Cinnamomum oliveri</i>	LAURACEAE	oliver's sassafras	-	LC
<i>Cissus antarctica</i>	VITACEAE	water vine	-	LC
<i>Cissus hypoglauca</i>	VITACEAE	five leaf water vine	-	LC
<i>Cissus sterculiifolia</i>	VITACEAE	long-leaf water vine	-	LC
<i>Claoxylon australe</i>	EUPHORBIACEAE	brittle wood	-	LC
<i>Cleistanthus cunninghamii</i>	PHYLLANTHACEAE	cleistanthus	-	LC



Scientific Name	Family	Common Name	Status	
			EPBC Act 1999	NC Act 1992
<i>Clerodendron floribundum</i>	VERBENACEAE	smooth clerodendron	-	LC
<i>Coelospermum paniculatum</i>	RUBIACEAE	coelospermum	-	LC
<i>Commelina diffusa</i>	COMMELINACEAE	native wandering Jew	-	LC
<i>Commersonia bartramia</i>	BYTTNERIACEAE	brown kurrajong	-	LC
<i>Cordyline petiolaris</i>	LAXMANNIACEAE	broad Leaf palm lilly	-	LC
<i>Cordyline rubra</i>	LAXMANNIACEAE	red fruit palm lilly	-	LC
<i>Corymbia intermedia</i>	MYRTACEAE	pink bloodwood	-	LC
<i>Croton verreauxii</i>	EUPHORBIACEAE	green native cascarilla	-	LC
<i>Cryptocarya glaucescens</i>	LAURACEAE	jack wood	-	LC
<i>Cryptocarya laevigata</i>	LAURACEAE	red fruited laurel	-	LC
<i>Cryptocarya macdonaldii</i>	LAURACEAE	cryptocarya	-	LC
<i>Cryptocarya microneura</i>	LAURACEAE	murrogon	-	LC
<i>Cryptocarya obovata</i>	LAURACEAE	pepperberry tree	-	LC
<i>Cryptocarya sclerophylla</i>	LAURACEAE	cryptocarya	-	LC
<i>Cryptocarya triplinervis</i>	LAURACEAE	three-veined cryptocarya	-	LC
<i>Cupaniopsis serrata</i>	SAPINDACEAE	smooth tuckeroo	-	LC
<i>Cyanthillium cinerea</i>	ASTERACEAE	little ironweed	-	LC
<i>Cyathea cooperi</i>	CYATHEACEAE	scaly tree fern	-	LC
<i>Cyathea leichhardtiana</i>	CYATHEACEAE	prickly tree fern	-	LC
<i>Cyclophyllum coprosmoides</i>	RUBIACEAE	coast canthium	-	LC
<i>Cymbidium madidum</i>	ORCHIDACEAE	native cymbidium	-	LC
<i>Cymbidium suave</i>	ORCHIDACEAE	sweet cymbidium	-	LC
<i>Cymbopogon refractus</i>	POACEAE	barbed wire grass	-	LC
<i>Cyperus polystachyos</i>	CYPERACEAE	bunchy sedge	-	LC
<i>Cyperus tetraphyllus</i>	CYPERACEAE	black-fruited flatsedge	-	LC
<i>Daviesia ulicifolia</i>	FABACEAE	native gorse	-	LC
<i>Daviesia umbellulata</i>	FABACEAE	bitter pea	-	LC
<i>Decaspermum humile</i>	MYRTACEAE	silky myrtle	-	LC
<i>Dendrocnide moroides</i>	URTICACEAE	gympie stinger	-	LC
<i>Denhamia celastroides</i>	CELASTRACEAE	denhamia	-	LC
<i>Derris involuta</i>	FABACEAE	native derris	-	LC
<i>Dianella caerulea</i>	LAXMANNIACEAE	blue flax lilly	-	LC
<i>Dichondra repens</i>	CONVOLVULACEAE	dichondra	-	LC
<i>Digitaria parviflora</i>	POACEAE	small flower finger grass	-	LC
<i>Dioscorea transversa</i>	DIOSCOREACEAE	native yam	-	LC
<i>Diospyros australis</i>	EBENACEAE	black plum	-	LC
<i>Diospyros pentamera</i>	EBENACEAE	myrtle ebony	-	LC
<i>Diplocyclos palmatus</i>	CUCURBITACEAE	triped cucumber	-	LC
<i>Diploglottis australis</i>	SAPINDACEAE	native tamarind	-	LC
<i>Dissiliaria baloghioides</i>	PICRODENRACEAE	lancewood	-	LC
<i>Dodonaea triquetra</i>	SAPINDACEAE	large-leaved hop bush	-	LC
<i>Doodia aspera</i>	BLECHNACEAE	prickly rasp fern	-	LC
<i>Doodia caudata v. caudata</i>	BLECHNACEAE	small rasp fern	-	LC
<i>Doodia heterophylla</i>	BLECHNACEAE	rasp fern	-	LC
<i>Drymaria cordata</i>	CARYOPHYLLACEAE	tropical chickweed	-	LC

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			EPBC Act 1999	NC Act 1992
<i>Drypetes deplanchei</i>	PUTRANJIVACEAE	yellow tulip	-	LC
<i>Dysoxylum mollissimum</i> ssp.	MELIACEAE	red bean	-	LC
<i>Dysoxylum rufum</i>	MELIACEAE	hairy rosewood	-	LC
<i>Elaeocarpus eumundi</i>	ELAEOCARPACEAE	Eumundi quandong	-	LC
<i>Elaeocarpus grandis</i>	ELAEOCARPACEAE	blue quandong	-	LC
<i>Elaeocarpus obovatus</i>	ELAEOCARPACEAE	hard quandong	-	LC
<i>Elaeocarpus reticulatus</i>	ELAEOCARPACEAE	blueberry ash	-	LC
<i>Elatostema reticulatum</i>	URTICACEAE	rainforest spinach	-	LC
<i>Elatostema stipitatum</i>	URTICACEAE	small soft nettle	-	LC
<i>Embelia australiana</i>	MYRSINACEAE	embelia	-	LC
<i>Emilia sonchifolia</i>	ASTERACEAE	emilia	-	LC
<i>Endiandra compressa</i>	LAURACEAE	white bark	-	LC
<i>Endiandra discolor</i>	LAURACEAE	rose walnut	-	LC
<i>Endiandra muelleri</i> ssp.	LAURACEAE	green-leaved rose walnut	-	LC
<i>Endiandra pubens</i>	LAURACEAE	hairy walnut	-	LC
<i>Entolasia stricta</i>	POACEAE	wiry panic	-	LC
<i>Eriachne pallescens</i>	POACEAE	a wanderie grass	-	LC
<i>Eucalyptus grandis</i>	MYRTACEAE	rose gum	-	LC
<i>Eucalyptus microcorys</i>	MYRTACEAE	tallowwood	-	LC
<i>Eucalyptus pilularis</i>	MYRTACEAE	black butt	-	LC
<i>Eucalyptus propinqua</i>	MYRTACEAE	grey gum	-	LC
<i>Eucalyptus resinifera</i>	MYRTACEAE	red mahogany	-	LC
<i>Eucalyptus tereticornis</i>	MYRTACEAE	Queensland blue gum	-	LC
<i>Eupomatia bennettii</i>	EUPOMATIACEAE	small bolwarra	-	LC
<i>Eupomatia laurina</i>	EUPOMATIACEAE	bolwarra	-	LC
<i>Euroschinus falcata</i>	ANACARDIACEAE	ribbonwood	-	LC
<i>Eustrephus latifolius</i>	LAXMANNIACEAE	wombat berry	-	LC
<i>Exocarya scleroides</i>	CYPERACEAE		-	LC
<i>Ficus coronata</i>	MORACEAE	creek sandpaper fig	-	LC
<i>Ficus fraseri</i>	MORACEAE	sandpaper fig	-	LC
<i>Ficus obliqua</i>	MORACEAE	small-leaved fig	-	LC
<i>Ficus watkinsiana</i>	MORACEAE	nipple fig, a strangler fig	-	LC
<i>Fimbristylis dichotoma</i>	CYPERACEAE	common finger rush	-	LC
<i>Flagellaria indica</i>	FLAGELLARIACEAE	flagellaria	-	LC
<i>Flindersia bennettiana</i>	RUTACEAE	Bennett's ash	-	LC
<i>Flindersia schottiana</i>	RUTACEAE	bumpy ash	-	LC
<i>Freycinetia excelsa</i>	PANDANACEAE	narrow-leaved climbing pandanus	-	LC
<i>Freycinetia scandens</i>	PANDANACEAE	broad-leaved climbing pandanus	-	LC
<i>Gahnia aspera</i>	CYPERACEAE	saw sedge	-	LC
<i>Geitonoplesium cymosum</i>	HEMEROCALLIDACEAE	scrambling lilly	-	LC
<i>Glochidion ferdinandi</i> v. <i>ferdinandi</i>	PHYLLANTHACEAE	cheese tree	-	LC
<i>Glycine clandestina</i> v. <i>clandestina</i>	FABACEAE	twining glycine	-	LC
<i>Glycine tabacina</i>	FABACEAE	glycine pea	-	LC



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<i>Glycine tomentella</i>	FABACEAE	wooly glycine	-	LC
<i>Gmelina leichhardtii</i>	VERBENACEAE	white beech	-	LC
<i>Gonocarpus chinensis</i> v. <i>verrucosus</i>	HALORAGACEAE	Chinese raspwort	-	LC
<i>Goodenia rotundifolia</i>	GOODENIACEAE	star goodenia	-	LC
<i>Gossia acmenoides</i>	MYRTACEAE	scrub ironwood	-	LC
<i>Gossia bidwillii</i>	MYRTACEAE	python tree	-	LC
<i>Gossia hillii</i>	MYRTACEAE	scaly myrtle	-	LC
<i>Grevillea hilliana</i>	PROTEACEAE	white yiel yiel	-	LC
<i>Guilfoylia monostylis</i>	SIMAROUFACEAE	native plum	-	LC
<i>Guioa acutifolia</i>	SAPINDACEAE	northern guioa	-	LC
<i>Guioa semiglauca</i>	SAPINDACEAE	guioa	-	LC
<i>Gymnostachys anceps</i>	ARACEAE	settler's flax	-	LC
<i>Gynochthodes jasminoides</i>	RUBIACEAE	native jasmine	-	LC
<i>Halfordia kendack</i>	RUTACEAE	saffron heart	-	LC
<i>Hardenbergia violacea</i>	FABACEAE	native sarsaparilla	-	LC
<i>Hedraianthera porphyropetala</i>	CELASTRACEAE	hedraianthera	-	LC
<i>Helicia glabriflora</i>	PROTEACEAE	smooth helicia	-	LC
<i>Hibbertia vestita</i>	DILLENIACEAE	hairy guinea flower	-	LC
<i>Hibiscus heterophyllus</i>	MALVACEAE	native rosella	-	LC
<i>Hippocratea barbata</i>	CELASTRACEAE	knot vine	-	LC
<i>Hodgkinsonia ovatiflora</i>	RUBIACEAE	hodgkinsonia	-	LC
<i>Homalanthus nutans</i>	EUPHORBIACEAE	bleeding heart	-	LC
<i>Hovea acutifolia</i>	FABACEAE	pointed-leaf hovea	-	LC
<i>Hymenosporum flavum</i>	PITTOSPORACEAE	native frangipani	-	LC
<i>Hypericum gramineum</i>	CLUSIACEAE	small St. John's wort	-	LC
<i>Hypolepis muelleri</i>	DENNSTAEDTIACEAE	harsh ground fern	-	LC
<i>Hypserpa decumbens</i>	MENISPERMACEAE	hypserpa	-	LC
<i>Imperata cylindrica</i>	POACEAE	blady grass	-	LC
<i>Indigofera australis</i>	FABACEAE	Australian indigo	-	LC
<i>Ixora beckleri</i>	RUBIACEAE	ixora	-	LC
<i>Jacksonia scoparia</i>	FABACEAE	winged broom pea	-	LC
<i>Jagera pseudorhus</i>	SAPINDACEAE	foam bark	-	LC
<i>Juncus continuus</i>	JUNCACEAE	pithy rush	-	LC
<i>Juncus polyanthemus</i>	JUNCACEAE	striated rush	-	LC
<i>Kennedia rubicunda</i>	FABACEAE	dusky coral pea	-	LC
<i>Lastreopsis acuminata</i>	DRYOPTERIDACEAE	shiny shield fern	-	LC
<i>Lastreopsis microsora</i>	DRYOPTERIDACEAE	creeping shield fern	-	LC
<i>Lastreopsis minuta</i>	DRYOPTERIDACEAE	small shield fern	-	LC
<i>Legnephora moorei</i>	MENISPERMACEAE	round leaf vine	-	LC
<i>Lepidosperma laterale</i>	CYPERACEAE	variable sawsedge	-	LC
<i>Leucopogon juniperinus</i>	ERICACEAE	prickly beard-heath	-	LC
<i>Lindsaea microphylla</i>	LINDSAEACEAE	lacy wedge fern	-	LC
<i>Linospadix monostachya</i>	ARECACEAE	walking stick palm	-	LC
<i>Litsea australis</i>	LAURACEAE	southern bolly gum	-	LC
<i>Litsea leefeana</i>	LAURACEAE	northern bolly gum	-	LC

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<i>Litsea reticulata</i>	LAURACEAE	bolly gum	-	LC
<i>Livistona australis</i>	ARECACEAE	cabbage palm	-	LC
<i>Lobelia purpurascens</i>	CAMPANULACEAE	white root	-	LC
<i>Lomandra confertifolia</i> subsp. <i>pallida</i>	LAXMANNIACEAE	pale-leaved matrush	-	LC
<i>Lomandra hystrix</i>	LAXMANNIACEAE	mat rush	-	LC
<i>Lomandra longifolia</i>	LAXMANNIACEAE	spinyhead Mat rush	-	LC
<i>Lomandra spicata</i>	LAXMANNIACEAE	forest lomandra	-	LC
<i>Lomatia silaifolia</i>	PROTACEAE	crinkle bush	-	LC
<i>Lophostemon confertus</i>	MYRTACEAE	brush box	-	LC
<i>Macadamia ternifolia</i>	PROTEACEAE	Maroochy nut	V	V
<i>Macaranga tanarius</i>	EUPHORBIACEAE	macaranga	-	LC
<i>Maclura cochinchinensis</i>	MORACEAE	cockspur thorn	-	LC
<i>Macrozamia lucida</i>	ZAMIACEAE	pineapple zamia	-	LC
<i>Mallotus philippensis</i>	EUPHORBIACEAE	red kamala	-	LC
<i>Marsdenia lloydii</i>	APOCYNACEAE	corky milk vine	-	LC
<i>Marsdenia rostrata</i>	APOCYNACEAE	common milk vine	-	LC
<i>Medicosma</i> sp. 'Mt Mellum'	RUTACEAE	Mt Mellum medicosma	-	LC
<i>Melaleuca salicina</i>	MYRTACEAE	pink tips	-	LC
<i>Melastoma malabathricum</i>	MELASTOMATACEAE	blue tongue	-	LC
<i>Melia azedarach</i>	MELIACEAE	white cedar	-	LC
<i>Melicope elleryana</i>	RUTACEAE	pink euodia	-	LC
<i>Melodinus australis</i>	APOCYNACEAE	melodinus	-	LC
<i>Melodorum leichhardtii</i>	ANNONACEAE	zig-zag vine	-	LC
<i>Microsorium scandens</i>	POLYPODIACEAE	fragrant fern	-	LC
<i>Mischarytera lautereriana</i>	SAPINDACEAE	corduroy tamarind	-	LC
<i>Mischocarpus anodontus</i>	SAPINDACEAE	veiny pear fruit	-	LC
<i>Mischocarpus australis</i>	SAPINDACEAE	red pear fruit	-	LC
<i>Mischocarpus pyriformis</i>	SAPINDACEAE	yellow pear fruit	-	LC
<i>Morinda jasminoides</i>	RUBIACEAE	jasmine morinda	-	LC
<i>Myrsine subsessilis</i> ssp.	MYRSINACEAE	red muttonwood	-	LC
<i>Myrsine variabilis</i>	MYRSINACEAE	muttonwood	-	LC
<i>Neisosperma poweri</i>	APOCYNACEAE	milk bush	-	LC
<i>Neolitsea australiensis</i>	LAURACEAE	green bolly gum	-	LC
<i>Neolitsea dealbata</i>	LAURACEAE	grey bollywood	-	LC
<i>Nephrolepis cordifolia</i>	NEPHROLEPIDACEAE	fishbone fern	-	LC
<i>Notelaea longifolia</i>	OLEACEAE	mock olive	-	LC
<i>Olea paniculata</i>	OLEACEAE	native olive	-	LC
<i>Oplismenus aemulus</i>	POACEAE	basket grass	-	LC
<i>Oplismenus hirtellus</i> ssp.	POACEAE	slender panic grass	-	LC
<i>Ottochloa gracillima</i>	POACEAE	shade grass	-	LC
<i>Ozothamnus diosmifolius</i>	ASTERACEAE	white dogwood	-	LC
<i>Palmeria scandens</i>	MONIMIACEAE	arch vine	-	LC
<i>Pandorea pandorana</i>	BIGNONIACEAE	wonga vine	-	LC
<i>Panicum effusum</i> v <i>simile</i>	POACEAE	hairy panic	-	LC
<i>Pararchidendron pruinosum</i>	MIMOSACEAE	snow wood	-	LC



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			EPBC Act 1999	NC Act 1992
<i>Pararistolochia praevenosa</i>	ARISTOLOCHACEAE	birdwing butterfly vine	-	NT
<i>Parsonsia straminea</i>	APOCYNACEAE	monkey vine	-	LC
<i>Parsonsia velutina</i>	APOCYNACEAE	hairy silkpod	-	LC
<i>Paspalidium distans</i>	POACEAE	bent summer grass	-	LC
<i>Pellaea nana</i>	ADIANTACEAE	small sickle fern	-	LC
<i>Persicaria strigosa</i>	POLYGONACEAE	spotted knotweed	-	LC
<i>Persoonia stradbrokeensis</i>	PROTEACEAE	broad-leaf Geebung	-	LC
<i>Philydrum lanuginosum</i>	PHILYDRACEAE	frog's mouth	-	LC
<i>Pilidiostigma glabrum</i>	MYRTACEAE	plum myrtle	-	LC
<i>Pilidiostigma rhytispermum</i>	MYRTACEAE	small leaf plum myrtle	-	LC
<i>Pimelea latifolia subsp. latifolia</i>	THYMELAEACEAE	hairy riceflower	-	LC
<i>Piper hederaceum</i>	PIPERACEAE	New Holland pepper	-	LC
<i>Pittosporum multiflorum</i>	PITTOSPORACEAE	orange thorn	-	LC
<i>Pittosporum revolutum</i>	PITTOSPORACEAE	yellow pittosporum	-	LC
<i>Planchonella chartacea</i>	SAPOTACEAE	thin-leaved coondoo	-	LC
<i>Planchonella myrsinoides</i>	SAPOTACEAE	blunt-leaved Coondoo	-	LC
<i>Platynerium bifurcatum</i>	POLYPODIACEAE	elkhorn fern	-	LC
<i>Platynerium superbum</i>	POLYPODIACEAE	staghorn fern	-	LC
<i>Plectranthus suaveolens</i>	LAMIACEAE	plectranthus	-	LC
<i>Pleioluma queenslandica</i>	SAPOTACEAE	blush coondoo	-	LC
<i>Podocarpus elatus</i>	PODOCARPACEAE	brown pine	-	LC
<i>Pollia crispata</i>	COMMELINACEAE	pollia	-	LC
<i>Pollia macrophylla</i>	COMMELINACEAE	large-leaved pollia	-	LC
<i>Polyosma cunninghamii</i>	GROSSULARIACEAE	featherwood	-	LC
<i>Polyscias elegans</i>	ARALIACEAE	celery wood	-	LC
<i>Pomax umbellata</i>	RUBIACEAE	pomax	-	LC
<i>Pothos longipes</i>	ARACEAE	pothos	-	LC
<i>Psychotria loniceroides</i>	RUBIACEAE	rusty psychotria	-	LC
<i>Psychotria simmondsiana</i>	RUBIACEAE	small psychotria	-	LC
<i>Psydrax lamprophyllum forma lamprophylla</i>	RUBIACEAE	large leaved canthium	-	LC
<i>Pteridium esculentum</i>	DENNSTAEDTIACEAE	common bracken fern	-	LC
<i>Pultenaea euchila</i>	FABACEAE	orange pultenaea	-	LC
<i>Pultenaea retusa</i>	FABACEAE		-	LC
<i>Pyrrosia confluens</i>	POLYPODIACEAE	robber fern	-	LC
<i>Pyrrosia rupestris</i>	POLYPODIACEAE	rock felt fern	-	LC
<i>Quintinia verdonii</i>	GROSSULARIACEAE	grey possumwood	-	LC
<i>Rhodamnia rubescens</i>	MYRTACEAE	scrub turpentine	-	LC
<i>Ripogonum album</i>	RIPOGANACEAE	white supplejack	-	LC
<i>Ripogonum brevifolium</i>	RIPOGANACEAE	small-leaved supplejack	-	LC
<i>Ripogonum elseyanum</i>	RIPOGANACEAE	hairy supplejack	-	LC
<i>Romnalda strobilacea</i>	LAXMANNIACEAE	romnalda	V	V
<i>Rubus moluccanus v. moluccanus</i>	ROSACEAE	molucca bramble	-	LC

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			EPBC Act 1999	NC Act 1992
<i>Rubus rosifolius</i> var. <i>rosifolius</i>	ROSACEAE	native raspberry	-	LC
<i>Sarcomelicope simplicifolia</i>	RUTACEAE	bauerella	-	LC
<i>Sarcopetalum harveyanum</i>	MENISPERMACEAE	big-leaf vine, pearl vine	-	LC
<i>Sarcopteryx stipata</i>	SAPINDACEAE	steelwood	-	LC
<i>Sauropus albiflorus</i>	PHYLLANTHACEAE	white phyllanthus	-	LC
<i>Schizaea dichotoma</i>	SCHIZAEACEAE	branched comb fern	-	LC
<i>Schizomeria ovata</i>	CUNONIACEAE	crab apple	-	LC
<i>Scleria levis</i>	CYPERACEAE	nut rush	-	LC
<i>Scleria sphacelata</i>	CYPERACEAE	wasted nut rush	-	LC
<i>Scolopia braunii</i>	FLACOURTIACEAE	flint wood	-	LC
<i>Sigesbeckia orientalis</i>	ASTERACEAE	Indian weed	-	LC
<i>Sloanea australis</i>	ELAEOCARPACEAE	maiden's blush	-	LC
<i>Sloanea woollsii</i>	ELAEOCARPACEAE	yellow carrabeen	-	LC
<i>Smilax australis</i>	SMILACACEAE	Austral smilax	-	LC
<i>Smilax glycyphylla</i>	SMILACACEAE	sarsaparilla	-	LC
<i>Solanum stelligerum</i> v. <i>stelligerum</i>	SOLANACEAE	star nightshade	-	LC
<i>Stenocarpus sinuatus</i>	PROTEACEAE	firewheel tree	-	LC
<i>Stephania japonica</i>	MENISPERMACEAE	snake vine	-	LC
<i>Sterculia quadrifida</i>	STERCULIACEAE	peanut tree	-	LC
<i>Sticherus lobatus</i>	GLEICHENIACEAE	umbrella fern	-	LC
<i>Streblus brunonianus</i>	MORACEAE	whalebone	-	LC
<i>Symplocos thwaitesii</i>	SYMPLOCACEAE	buff hazelwood	-	LC
<i>Synoum glandulosum</i>	MELIACEAE	scentless rosewood	-	LC
<i>Syzygium australe</i>	MYRTACEAE	brush cherry	-	LC
<i>Syzygium francisii</i>	MYRTACEAE	giant water gum	-	LC
<i>Syzygium hodgkinsoniae</i>	MYRTACEAE	red lilly pilly	V	V
<i>Syzygium luehmannii</i>	MYRTACEAE	riberry	-	LC
<i>Syzygium oleosum</i>	MYRTACEAE	blue lillypilly	-	LC
<i>Tabernaemontana pandacaqui</i>	APOCYNACEAE	banana bush	-	LC
<i>Tapeinosperma pseudojambosa</i>	MYRSINACEAE	tapeinosperma	-	LC
<i>Tasmannia insipida</i>	WINTERACEAE	brush pepper bush	-	LC
<i>Tetrastigma nitens</i>	VITACEAE	three-leaved water vine	-	LC
<i>Themeda triandra</i>	POACEAE	kangaroo grass	-	LC
<i>Toona ciliata</i>	MELIACEAE	red cedar	-	LC
<i>Trema tomentosa</i>	ULMACEAE	native peach	-	LC
<i>Trochocarpa laurina</i>	EPACRIDACEAE	tree heath	-	LC
<i>Trophis scandens</i>	MORACEAE	burny vine	-	LC
<i>Waterhousea floribunda</i>	MYRTACEAE	weeping lilly pilly	-	LC
<i>Wikstroemia indica</i>	THYMELAEACEAE	tie bush	-	LC
<i>Wilkiea huegeliana</i>	MONIMIACEAE	veiny wilkiea	-	LC
<i>Wilkiea macrophylla</i>	MONIMIACEAE	large-leaved wilkiea	-	LC
<i>Xanthorrhoea johnsonii</i>	XANTHORRHOEACEAE	forest grass tree	-	LC



Scientific Name	Family	Common Name	Status	
			EPBC Act 1999	NC Act 1992
<i>Xanthorrhoea macronema</i>	XANTHORRHOEACEAE	saw-edged grasstree	-	LC
<i>Zieria minutiflora</i>	RUTACEAE	small flowered zieria	-	LC
<i>Zieria smithii</i>	RUTACEAE	sandfly zieria	-	LC

## Appendix 5: Fauna Species List

All fauna records are now captured in Sunshine Coast Council's Fauna Record Information Database (FRIDA).

EPBC Act 1999 = Commonwealth Environment Protection and Biodiversity Conservation Act 1999; NC Act 1992 = Queensland Nature Conservation Act 1992

E = endangered; V = vulnerable; NT = near threatened; LC = least concern; SLC = special least concern; - = not assessed

Group	Scientific Classification	Scientific Name	Common Name	Status	
				EPBC Act 1999	NC Act 1992
<b>BIRDS</b>					
		<i>Acanthiza lineata</i>	striated thornbill	-	-
		<i>Acanthiza pusilla</i>	brown thornbill	-	-
		<i>Acanthorhynchus tenuirostris</i>	eastern spinebill	-	-
		<i>Accipiter novaehollandiae</i>	grey goshawk		
		<i>Aegotheles cristatus</i>	Australian owl nightjar	-	-
		<i>Ailuroedus crassirostris</i>	green catbird	-	-
		<i>Alisterus scapularis</i>	king parrot	-	-
		<i>Anas superciliosa</i>	Pacific black duck	-	-
		<i>Aythya australis</i>	hardhead	-	-
		<i>Cacatua galerita</i>	sulphur-crested cockatoo	-	-
		<i>Cacomantis flabelliformis</i>	fan-tailed cuckoo	-	-
		<i>Calyptorhynchus funereus</i>	yellow-tailed black-cockatoo	-	-
		<i>Calyptorhynchus lathami</i> subsp. <i>lathami</i>	glossy black cockatoo	V	V
		<i>Chalcites lucidus</i>	shining bronze-cuckoo	-	-
		<i>Centropus phasianus</i>	pheasant coucal	-	-
		<i>Ceyx azureus</i>	azure kingfisher	-	-
		<i>Chenonetta jubata</i>	Australian wood duck	-	-
		<i>Cisticola exilis</i>	golden-headed cisticola	-	-
		<i>Colluricincla harmonica</i>	grey shrike-thrush	-	-
		<i>Colluricincla megarhyncha</i>	little shrike-thrush	-	-
		<i>Columba leucomela</i>	white-headed pigeon	-	-
		<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike	-	-
		<i>Coracina tenuirostris</i>	cicadabird	-	-
		<i>Cormobates leucophaea</i>	white-throated treecreeper	-	-
		<i>Corvus orru</i>	Torresian crow	-	-
		<i>Coturnix ypsilophora</i>	brown quail	-	-
		<i>Cracticus nigrogularis</i>	piebald butcherbird	-	-
		<i>Cracticus tibicen</i>	Australian magpie	-	-
		<i>Cracticus torquatus</i>	grey butcherbird	-	-
		<i>Dacelo novaeguineae</i>	laughing kookaburra	-	-
		<i>Dicaeum hirundinaceum</i>	mistletoebird	-	-
		<i>Dicrurus bracteatus</i>	spangled drongo	-	-
		<i>Eopsaltria australis</i>	eastern yellow robin	-	-
		<i>Eudynamis scolopacea</i>	common koel	-	-
		<i>Eurostopodus mystacalis</i>	white-throated nightjar	-	-
		<i>Falcunculus frontatus</i>	crested shrike-tit	-	-
		<i>Fulica atra</i>	Eurasian coot	-	-
		<i>Gallinula tenebrosa</i>	dusky moorhen	-	-



Group	Scientific Classification	Scientific Name	Common Name	Status	
				EPBC Act 1999	NC Act 1992
		<i>Geopelia humeralis</i>	bar-shouldered dove	-	-
		<i>Gerygone mouki</i>	brown gerygone	-	-
		<i>Gerygone olivacea</i>	white-throated gerygone	-	-
		<i>Hirundo neoxena</i>	welcome swallow	-	-
		<i>Lalage leucomela</i>	varied triller	-	-
		<i>Lopholaimus antarcticus</i>	topknot pigeon	-	-
		<i>Macropygia amboinensis</i>	brown cuckoo-dove	-	-
		<i>Malurus lamberti</i>	variegated fairy-wren	-	-
		<i>Malurus melanocephalus</i>	red-backed fairy-wren	-	-
		<i>Manorina melanocephala</i>	noisy miner	-	-
		<i>Meliphaga lewinii</i>	Lewin's honeyeater	-	-
		<i>Melithreptus albogularis</i>	white-throated honeyeater	-	-
		<i>Merops ornatus</i>	rainbow bee-eater	-	-
		<i>Myiagra inquieta</i>	restless flycatcher	-	-
		<i>Myiagra rubecula</i>	leaden flycatcher	-	-
		<i>Myzomela sanguinolenta</i>	scarlet honeyeater	-	-
		<i>Neochmia temporalis</i>	red-browed finch	-	-
		<i>Ninox novaeseelandiae</i>	southern boobook owl	-	-
		<i>Orthonyx temminckii</i>	logrunner	-	-
		<i>Pachycephala pectoralis</i>	golden whistler	-	-
		<i>Pardalotus punctatus</i>	spotted pardalote	-	-
		<i>Pardalotus striatus</i>	striated pardalote	-	-
		<i>Petrochelidon ariel</i>	fairy martin	-	-
		<i>Petroica rosea</i>	rose robin	-	-
		<i>Podargus ocellatus plumiferus</i>	marbled frogmouth	-	V
		<i>Porphyrio porphyrio</i>	purple swamphen	-	-
		<i>Psophodes olivaceus</i>	eastern whipbird	-	-
		<i>Ptilinopus magnificus</i>	wompoo pigeon	-	-
		<i>Ptilinopus regina</i>	rose-crowned fruit dove	-	-
		<i>Ptilonorhynchus violaceus</i>	satin bowerbird	-	-
		<i>Rhipidura albiscapa</i>	grey fantail	-	-
		<i>Rhipidura leucophrys</i>	willie wagtail	-	-
		<i>Rhipidura rufifrons</i>	rufous fantail	-	-
		<i>Sericornis frontalis</i>	white-browed scrubwren	-	-
		<i>Sericornis magnirostra</i>	large-billed scrubwren	-	-
		<i>Sericulus chrysocephalus</i>	regent bowerbird	-	-
		<i>Strepera graculina</i>	pied currawong	-	-
		<i>Symposiachrus trivirgatus</i>	spectacled monarch	-	SLC
		<i>Tachybaptus novaehollandiae</i>	Australasian grebe	-	-
		<i>Taeniopygia bichenovii</i>	double-barred finch	-	-
		<i>Threskiornis spinicollis</i>	straw-necked ibis	-	-
		<i>Tregellasia capito</i>	pale yellow robin	-	-
		<i>Trichoglossus moluccanus</i>	rainbow lorikeet	-	-
		<i>Tyto novaehollandiae</i>	masked owl	-	-
		<i>Zoothera heinei</i>	russet-tailed thrush	-	-

Group	Scientific Classification	Scientific Name	Common Name	Status	
				EPBC Act 1999	NC Act 1992
		<i>Zosterops lateralis</i>	silveryeye	-	-
<b>FROGS</b>					
	Family: MYOBATHACHIDAE	<i>Adelotus brevis</i>	tusked frog	-	V
		<i>Limnodynastes peronii</i>	striped marshfrog	-	-
		<i>Mixophyes fasciolatus</i>	great barred frog	-	-
		<i>Mixophyes iteratus</i>	giant barred frog	V	V
		<i>Pseudophryne raveni</i>	copper backed broodfrog	-	LC
	Family: HYLIDAE	<i>Litoria chloris</i>	orange eyed treefrog	-	-
		<i>Litoria fallax</i>	eastern sedgefrog	-	-
		<i>Litoria gracilentia</i>	graceful treefrog	-	-
		<i>Litoria nasuta</i>	striped rocketfrog	-	-
		<i>Litoria peronii</i>	emerald spotted treefrog	-	-
		<i>Litoria tyleri</i>	southern laughing treefrog	-	-
		<i>Litoria wilcoxii</i>	stony creek frog	-	-
	<b>MAMMALS</b>				
<b>Monotremes</b>	Subclass: PROTOTHERIA	<i>Ornithorhynchus anatinus</i>	platypus	-	SLC
		<i>Tachyglossus aculeatus</i>	echidna	-	SLC
<b>Marsupials</b>	Infraclass: MARSUPIALIA	<i>Antechinus flavipes</i>	yellow-footed antechinus	-	-
		<i>Antechinus mysticus</i>	antechinus, newly described sp.	-	-
		<i>Isodon macrourus</i>	northern brown bandicoot	-	-
		<i>Macropus rufogriseus</i>	red-necked wallaby	-	-
		<i>Perameles nasuta</i>	long-nosed bandicoot	-	-
		<i>Petaurus norfolcensis</i>	squirrel glider	-	-
		<i>Petauroides volans</i>	greater glider	V	V
		<i>Petaurus breviceps</i>	sugar glider	-	-
		<i>Phascolarctos cinereus</i>	koala (SEQ region)	-	V
		<i>Trichosurus sp.</i>	brush-tailed possum	-	-
		<i>Trichosurus caninus</i>	mountain brushtail possum	-	-
<b>Microbats</b>	Family: VESPERTILIONIDAE	<i>Chalinolobus gouldii</i>	Gould's wattled bat	-	-
		<i>Myotis macropus</i>	large-eared fishing bat	-	-
		<i>Nyctophilus bifax</i>	northern long-eared bat	-	-
		<i>Vespadelus pumilus</i>	eastern forest bat	-	-
		<i>Vespadelus troughtoni</i>	eastern cave Bat	-	-
	Family: MINIOPTERIDAE	<i>Miniopterus australis</i>	little bent-wing bat	-	-
		<i>Miniopterus oceanensis</i>	common bent-wing bat	-	-
	Family: MOLOSSIDAE	<i>Austronomus australis</i>	white-striped mastiff bat	-	-
		<i>Micronomus norfolkensis</i>	East Coast freetail bat	-	-
		<i>Mormopterus sp.</i>	East coast freetail bat	-	-
		<i>Ozimops beccarii</i>	Beccari's freetail bat	-	-
	Family: RHINOLOPHIDAE	<i>Rhinolophus megaphyllus</i>	eastern horsehoe bat	-	-
	Family: EMBALLONURIDAE	<i>Saccolaimus flaviventris</i>	yellow-bellied sheath-tailed bat	-	-
	<b>Megabats</b>	Family: PTEROPODIDAE	<i>Nyctimene robinsoni</i>	eastern tube-nosed bat	-
<i>Pteropus alecto</i>			black flying fox	-	-



Group	Scientific Classification	Scientific Name	Common Name	Status	
				EPBC Act 1999	NC Act 1992
Other placental mammals	Family: MURIDAE	<i>Rattus fuscipes</i>	bush rat	-	-
		<i>Rattus lutreolus</i>	swamp rat	-	-
		<i>Hydromys chrysogaster</i>	water rat	-	-
		<i>Melomys cervinipes</i>	fawn-footed melomys	-	-
		<i>Melomys burtoni</i>	grassland melomys	-	-
<b>REPTILES</b>					
Turtle	Family: CHELIDAE	<i>Chelodina expansa</i>	broad-shelled turtle	-	-
Skinks	Family: SCINCIDAE	<i>Carlia foliorum</i>	tree-base litter-skink	-	-
		<i>Concinnia martini</i>	dark bar-sided skink	-	-
		<i>Concinnia murrayi</i>	Murray's skink or blue speckled forest skink	-	-
		<i>Concinnia tenuis</i>	barred-sided skink	-	-
		<i>Eroticoscincus graciloides</i>	elf skink	-	-
		<i>Lampropholis amricula</i>	friendly sunskink	-	-
		<i>Lampropholis couperi</i>	plain-backed sunskink	-	-
		<i>Saproscincus rosei</i>	Roses shadeskink	-	-
Monitor	Family: VARANIDAE	<i>Varanus varius</i>	lace monitor	-	-
Dragon	Family: AGAMIDAE	<i>Intellagama lesueurii</i>	eastern water dragon	-	-
Snakes	Family: COLUBRIDAE	<i>Boiga irregularis</i>	brown tree snake	-	-
		<i>Dendrelaphis punctulata</i>	green tree snake	-	-
		<i>Morelia spilota Mcdowelli</i>	carpet python	-	-
		<i>Tropidonophis mairii</i>	freshwater snake/ keelback	-	-
	Family: ELAPIDAE	<i>Cacophis squamulosus</i>	gold-crowned snake	-	-
		<i>Cacophis krefftii</i>	dwarf-crowned snake (Southern)	-	-
		<i>Vermicella annulata</i>	bandy-bandy	-	-
		<i>Tropidechis carinatus</i>	rough-scaled snake	-	-
		<i>Cryptophis nigrescens</i>	small-eyed snake	-	-
		<i>Pseudechis porphyriacus</i>	red-bellied black snake	-	-
<b>CRUSTACEANS</b>					
Crayfish	Family: PARASTACIDAE	<i>Cherax depressus</i>	orange-fingered yabby	-	-
		<i>Euastacus urospinosus</i>	Blackall Range spiny crayfish	-	E
<b>FISH</b>					
		<i>Hypseleotris galii</i>	fire-tailed gudgeon	-	-
		<i>Melanotaenia duboulayi</i>	crimson-spot rainbowfish	-	-
		<i>Mogurnda adspersa</i>	purple-spotted gudgeon	-	-
		<i>Retropinna semoni</i>	Australian smelt	-	-
<b>INSECTS</b>					
	Family: IDIOPIDAE	<i>Unknown species</i>	trap door spider	-	-
	Family: ATRACIDAE	<i>Hadronyche infensa</i>	funnel-web spider	-	-
	Family: CALAMOCERATIDAE	<i>Anisocentropus sp.</i>	caddisfly (larvae)	-	-

## Appendix 6: Invasive Flora Inventory

Invasive plant species in this inventory are classified as Weeds of National Significance by the *Biosecurity Act 2014* (Queensland Government, 2016) and priority invasive flora in the SCC Local Government Biosecurity Plan 2017 (Sunshine Coast Council(c), 2017).

Categories: C3 = Category 3 for restricted invasive plant; LSI = Locally Significant Invasive plant; - = not been assessed.

Form: T = tree; ST = small tree; SH = shrub; H = herb; G = grass; V = vine; A = aquatic

Scientific Name	Family	Common Name	Form	Status
<i>Ageratina adenophora</i>	ASTERACEAE	crofton weed	H	LSI
<i>Ageratina riparia</i>	ASTERACEAE	mist flower	H	LSI
<i>Ageratum houstonianum</i>	ASTERACEAE	blue top	H	-
<i>Anagallis arvensis</i>	PRIMULACEAE	scarlet pimpernel	H	-
<i>Andropogon virginicus</i>	POACEAE	whiskey grass	G	-
<i>Araujia sericifera</i>	APOCYNACEAE	moth vine	V	LSI
<i>Ardisia crenata</i>	MYRSINACEAE	coral berry	SH	-
<i>Asclepias curassavica</i>	APOCYNACEAE	redhead cottonbush	H	-
<i>Baccharis halimifolia</i>	ASTERACEAE	groundsel	ST	C3
<i>Bambusa sp.</i>	POACEAE	giant bamboo	G	-
<i>Bidens pilosa</i>	ASTERACEAE	cobbler's pegs	H	-
<i>Chamaecrista rotundifolia</i>	CAESALPINIACEAE	wynn's cassia	H	-
<i>Chloris gayana</i>	POACEAE	rhodes grass	G	-
<i>Cinnamomum camphora</i>	LAURACEAE	camphor laurel	T	C3
<i>Cirsium vulgare</i>	ASTERACEAE	scotch thistle	H	-
<i>Conyza canadensis</i>	ASTERACEAE	canadian fleabane	H	-
<i>Crassocephalum crepidioides</i>	ASTERACEAE	thickhead	H	-
<i>Cyperus brevifolius</i>	CYPERACEAE	Mullumbimby couch	S	-
<i>Desmodium uncinatum</i>	FABACEAE	silver-leaved desmodium	V	-
<i>Digitaria didactyla</i>	POACEAE	Queensland blue couch	G	-
<i>Eragrostis tenuifolia</i>	POACEAE	elastic grass	G	-
<i>Gamochaeta americanum</i>	ASTERACEAE	cud weed	H	-
<i>Gomphocarpus physocarpus</i>	APOCYNACEAE	balloon cotton bush	H	-
<i>Hypochaeris radicata</i>	ASTERACEAE	cat's ears	H	-
<i>Inga edulis</i>	FABACEAE	ice cream bean	T	-
<i>Ipomoea indica</i>	CONVOLVULACEAE	blue morning glory	SH	LSI
<i>Lantana camara</i>	VERBENACEAE	Lantana	SH	C3
<i>Ligustrum lucidum</i>	OLEACEAE	broad-leaved privet	ST	C3
<i>Ligustrum sinense</i>	OLEACEAE	small-leaved privet	ST	C3
<i>Macrotyloma axillaris</i>	FABACEAE	a cow pea	H	-
<i>Megathyrsus maximus var. pubiglumis</i>	POACEAE	green panic	G	LSI
<i>Neonotonia wightii</i>	FABACEAE	glycine	H	-
<i>Nymphaea capensis</i>	NYMPHAEACEAE	Cape blue water lilly	A	-
<i>Ochna serrulata</i>	OCHNACEAE	Mickey mouse bush	SH	-
<i>Oxalis corniculata</i>	OXALIDACEAE	oxalis	H	-
<i>Paspalum scrobiculatum</i>	POACEAE	scrobic	G	-
<i>Paspalum mandiocanum</i>	POACEAE	broad leaf paspalum	G	-
<i>Paspalum urvillei</i>	POACEAE	vasey grass	G	-
<i>Passiflora edulis</i>	PASSIFLORACEAE	black passionfruit	V	-
<i>Passiflora foetida</i>	PASSIFLORACEAE	foetid passion flower	V	-
<i>Passiflora suberosa</i>	PASSIFLORACEAE	small passion flower	V	-



<i>Passiflora subpeltata</i>	PASSIFLORACEAE	white passionflower	V	-
<i>Pinus elliotii</i>	PINACEAE	slash pine	T	-
<i>Polygala paniculata</i>	POLYGALACEAE	milkwort	H	-
<i>Psidium guajava</i>	MYRTACEAE	wild guava	ST	-
<i>Richardia brasiliensis</i>	RUBIACEAE	Mexican clover	H	-
<i>Rubus anglocandicans</i>	ROSACEAE	blackberry	SH	-
<i>Rubus ellipticus</i>	ROSACEAE	yellow raspberry	SH	-
<i>Rumex crispus</i>	POLYGONACEAE	curly dock	H	-
<i>Schefflera actinophylla</i>	ARALIACEAE	umbrella Tree	T	-
<i>Rubus anglocandicans</i>	ROSACEAE	blackberry	SH	-
<i>Schinus terebinthifolius</i>	ANACARDIACEAE	broad-leaved peppertree	T	C3
<i>Scoparia dulcis</i>	SCROPHULARIACEAE	scoparia	H	-
<i>Senna pendula</i> v. <i>glabrata</i>	CAESALPINIACEAE	winter senna	SH	-
<i>Setaria sphacelata</i>	POACEAE	South African pigeon grass	G	-
<i>Sida rhombifolia</i>	MALVACEAE	sida	H	-
<i>Solanum americanum</i>	SOLANACEAE	glossy nightshade	H	-
<i>Solanum capsicoides</i>	SOLANACEAE	soda apple	SH	-
<i>Solanum chrysotrichum</i>	SOLANACEAE	devil's fig	SH	LSI
<i>Solanum mauritianum</i>	SOLANACEAE	wild tobacco	ST	-
<i>Solanum torvum</i>	SOLANACEAE	devil's fig	SH	-
<i>Sporobolus africanus</i>	POACEAE	arramatta grass	G	-
<i>Tradescantia fluminensis</i>	COMMELINACEAE	green wandering Jew	H	LSI
<i>Tagetes minuta</i>	ASTERACEAE	stinking roger	H	-
<i>Urochloa decumbens</i>	POACEAE	signal grass	G	-
<i>Verbena officinalis</i>	VERBENACEAE	common verbena	H	-

## Appendix 7: Invasive Fauna Inventory

Group	Family	Scientific Name	Common Name	Status under <i>Biosecurity Act 2014</i>
<b>FROGS</b>				
	Bufonidae	<i>Rhinella marina</i>	cane toad	Invasive
<b>MAMMALS</b>				
	Bovidae	<i>Bos taurus</i>	cow	Not assessed
	Canidae	<i>Canis familiaris/spp.</i>	roaming domestic dog	Restricted invasive
	-	<i>Canis lupus dingo/familiaris</i>	dingo	Not assessed
	Felidae	<i>Felis catus</i>	feral cat	Restricted invasive
	Muridae	<i>Mus musculus</i>	house mouse	Invasive
	Canidae	<i>Vulpes vulpes</i>	European fox	Restricted invasive



## Glossary and Abbreviations

### BOA

Bushland Operational Assessment

### CAR system

**Comprehensive:** examples of all types of regional-scale ecosystems in each IBRA region should be included in the National reserve System.

**Adequate:** sufficient levels of each ecosystem should be included within the protected area network to provide ecological viability and to maintain the integrity of populations, species and communities.

**Representative:** the inclusion of areas at a finer scale, to encompass the variability of habitat within ecosystems.

### Council

Sunshine Coast Council

### E

Endangered

### Ecotone

The transition zone between two plant communities, as that between rainforest and sclerophyll forest.

### ELS

Environment and Liveability Strategy

### EPBC Act 1999

*Environment Protection and Biodiversity Conservation Act 1999*

### FMP

Fire Management Plan

### IBRA

Interim biogeographical Regionalisation of Australia

### LGA

Local Government Area

### MERI

Monitoring, Evaluation, Reporting, and Improvement

### MP

Management Plan

### NC Act 1992

*Nature Conservation Act 1992*

### NT

Near threatened

### NRM

Natural Resource Management

### OC

Of concern

### REs/RE

Regional Ecosystem(s)

### RWP

Regeneration Works Plan

### SCC

Sunshine Coast Council

### SEQ

Southeast Queensland

### Significant flora and fauna

Flora or fauna species listed as threatened under the EPBC Act; critically endangered,

..

endangered, vulnerable or near threatened (CREVNT) or special least concern under the *Nature Conservation Act 1992*.

### SLC

special least concern

### V

Vulnerable

### VM Act 1999

*Vegetation Management Act 1999*

### Weeds of National Significance (WoNS)

Weeds identified by Commonwealth governments based on their invasiveness, potential for spread and environmental, social and economic impacts.





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