

Executive Summary

Redland City, situated on Moreton Bay in South-East Queensland, is an area of contrasts from sub-tropical woodland forests to coastal bay islands. It has a wealth of stunning biodiversity, with an immense array of plants and animals present in a small geographic area.

Redlands is home to many immediately recognisable animals and plants such as koalas, migratory shorebirds, scribbly gum forests and flying foxes. However, it is also the home of over 1700 other recorded native species of plants and animals, many of which are now under threat. Protection and conservation management is required immediately.

Like South-East Queensland, the area is experiencing rapid population growth, and this is predicted to continue into the future. Population growth and its associated effects such as habitat clearing and fragmentation, roads, pollution and expanding industrial development, coupled with climate change and drought, all threaten the biodiversity.

The protection against the threatening processes, effective management and rehabilitation of the environment will be a significant on-going challenge for all stakeholders of the Redlands (including Redland City Council, State and Federal Governments, private landowners and commercial industry, non-government organisations and surrounding local governments – Brisbane City Council and Logan City Council). It will require effective long-term planning and legislation, and strong commitment by council and private landowners to respond to change to reverse biodiversity loss.

The biodiversity strategy highlights the immense quantities of the local biodiversity and threatening processes, and outlines key actions to address the long-term protection and enhancement.

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1. Introduction

1.1 Overview

Redland City in South-East Queensland is made up of the mainland, North Stradbroke Island, Coochiemudlo Island and Southern Moreton Bay Islands. It is located on Moreton Bay and borders Brisbane City, Logan City and the Gold Coast. Redland City covers large areas of natural coastline, the coastal islands of Moreton Bay, remnant bushland, and developed urban and rural areas. It is well recognised as one of the most biologically diverse areas of Queensland with an abundance of sub-tropical plants and animals. The wildlife habitats are diverse – ranging from tall eucalypt forest, to fresh and saltwater wetlands and island ecosystems.

Despite the immense biodiversity, natural and man-made processes are threatening the survival of many species. Currently there are sixty-two animal species and twenty plant species that are listed as critically endangered, endangered or vulnerable (Wilson, 2006). These are the known species, however many species remain undiscovered or lesser known that are fundamental to ecological processes. The major threats to the survival of these animal and plant species include land clearing, habitat alteration, introduced pest species, and on-going human activities.



Endangered Swamp Orchid Phaius australis on North Stradbroke Island (source: Ross Allen).

Protection and enhancement of the Redlands biodiversity will need to be a collaborative effort from all stakeholders – private, commercial, Local, State and Federal Government. All have a duty to care and responsibility to protect the environment. This strategy will highlight the immense biodiversity values within the Redlands, the threatening processes and develop an action plan to guide Council on how it can protect biodiversity.

1.2 Redland Shire Council Corporate Plan

Redland Shire Council adopted the Corporate Plan 2006 – 2010, which outlines the Council strategic direction and priorities. The strategic priority for the environment states:

Ensure the enhancement of biodiversity including koala habitat, bushland, green-scape, waterways, catchments, air and coastal ecosystems in recognition of our unique location on Moreton Bay

The biodiversity strategy supports Council's Corporate Plan 2006-2010:

- (1) Objective 1.1 "To protect, maintain and rehabilitate environmental values and biodiversity"
- (2) Objective 1.2 "To ensure the sustainability of the Shire's koala population and native wildlife"

The Council program for biodiversity outlines to plan, design, deliver and regulate activities to protect and restore the quality and quantity of our biodiversity. Long term objectives include protecting, maintaining and enhancing the health of bushland, vegetation, koalas and native wildlife.

Council strategies outlined in the Corporate Plan that contribute to protecting and managing biodiversity include:

- Manage healthy, safe and appropriate vegetation on public spaces
- Take appropriate steps to stop the decline of biodiversity and revive the health of all ecosystems
- Implement the Pest Management Plan through the pest and fire management activities
- Strengthen stewardship of the natural environment through education and promotional activities, including Land for Wildlife, Bushcare and Indigiscapes.

1.3 Vision for the Future

Council's vision for a sustainable future for biodiversity is:

To protect what we have, to rehabilitate what has been degraded and better our understanding of the unknown

To achieve the objectives stated in the Corporate Plan so that future generations can enjoy and appreciate the stunning wildlife and scenery, all stakeholders including Council, Local, State and Federal Government, and private landowners must take collective responsibility for protection and effective management. However, Council can provide direction and leadership for local biodiversity protection.

In particular, the extent of native vegetation remaining on the mainland is at an ecologically functional crossroads (at 30 percent remnant vegetation cover). Population growth has significantly reduced native vegetation and what remains is highly fragmented by roads. Council can now choose to adopt different directions for biodiversity protection and maintenance by:

• Habitat clearance and modification which will lead to inevitable biodiversity loss and possible extinctions, and to an entire City that resembles a fragmented urban landscape <u>or</u>

• Protect and increase extent of native vegetation, rehabilitate aquatic ecosystems, embrace the rural and peri-urban way of life, and accommodate future population growth in a sustainable and innovative manner.

Fundamental to the strategy is to prevent clearing of remnant and non-remnant vegetation immediately, and to rehabilitate degraded and disturbed terrestrial and aquatic ecosystems. This will ensure that biodiversity will be protected.

1.4 Key Objectives

The biodiversity strategy will address three main objectives to protect biodiversity as outlined in the Corporate Plan:

- a) Protection & Management Protect and effectively manage bushland habitat, core species and ecological communities of plants and animals native to Redlands for future generations to enjoy.
- b) **Rehabilitate** Regenerate and restore native vegetation, wildlife corridors, and terrestrial and aquatic ecosystems that have been degraded or lost ecological function back to a condition of good health.
- c) Research & Education To encourage, co-ordinate and integrate the collection, management and dissemination of information about biodiversity to provide an improved basis for planning within Redlands. Educate, promote and market biodiversity issues to facilitate community and stakeholder responsibility and support for biodiversity conservation and management.

1.5 Guiding Principles

There are nine principles that guide the development and implementation of the biodiversity strategy, and must be considered when assessing land use proposals and Council activities. They are inter-related and have equal importance:

- a) Precautionary principle to ensure, where there is a threat of significant reduction or loss of biological diversity, that lack of full scientific certainty should not be used as a reason for postponing measures to minimise or avoid such a threat. Decisions are to be guided by careful evaluation to avoid, wherever possible, serious or irreversible damage to biodiversity, including Indigenous Traditional Owner cultural resources.
- b) Conserving nature to maintain, restore and manage the City's biodiversity values in their natural environment, and at all levels – regional, ecosystems, species and genetic – so that ecological processes, opportunities for survival, and potential for continuing evolutionary adaptation are maintained and restored.
- c) In-situ conservation biodiversity is best conserved in its natural environment at the genetic, species and ecological community levels.
- d) Understanding threatening processes the effective protection of biodiversity requires the identification, prevention and amelioration of threatening processes that are impacting on biodiversity. Further loss or degradation of biodiversity in areas of nature conservation significance is to be avoided.
- e) Sustainable human use of areas of nature conservation significance to ensure human use of areas with high biodiversity value improves the total quality of life now and in the future, in a way that maintains the ecological processes on which life depends and does not deplete natural capital. This approach recognises that much biodiversity remains within the care of private landowners and that its survival depends on their day-to-day management approaches.
- f) Research and information to encourage, co-ordinate and integrate the collection, management and dissemination of information about biodiversity to provide an improved basis for planning within the region and adaptation to climate change.

- g) Collective responsibility to achieve the conservation and management of biodiversity is everybody's responsibility.
- h) Effective community participation to ensure the community is effectively consulted and included in the development and on-going implementation of the strategy and its actions.
- i) Transparent and equitable processes to establish processes related to the allocation of resources (human, technical and financial), environmental management and planning, and monitoring and evaluation that are adequate, efficient, equitable and transparent.

1.6 Framework of Strategy

The framework will guide the readers through the process for developing and understanding the principles behind addressing the objectives of the strategy, including as outlined in Figure 1.

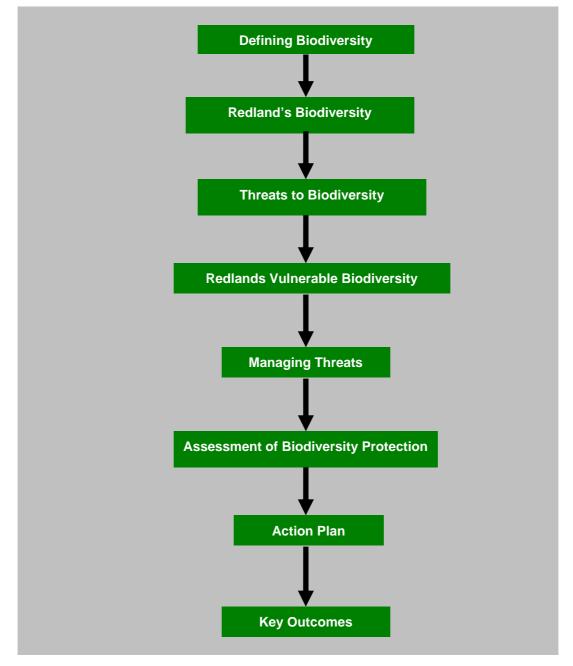


Figure 1. Outline of the process of the Redland City Council's biodiversity strategy.

2. Defining Biodiversity

2.1 What is Biodiversity?

Biodiversity is defined by the National Strategy for the Conservation of Australia's Biological Diversity as the "variety of all life forms – the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they form a part "(DEH, 2005).

Biodiversity is not static, but constantly changing; it is vulnerable to habitat degradation, population decline and potentially extinction from threatening processes such as development, changes in fire regimes and introduced species. It is increased by genetic change and evolutionary processes (EPA, 2004).

There are four levels of biodiversity recognised in Regional Nature Conservation Strategy for South-East Queensland 2003 – 2008:

- Regional diversity the diversity of the landscape components of a region, and the functional relationships that affect environmental conditions within ecosystems
- Genetic diversity the diversity of genes within each species
- Species diversity the diversity of species (both plant and animal)
- Ecosystem diversity the diversity of the different types of communities formed by living organisms and the relations between them.

Other important biodiversity components, which are generally less well understood, include the interactions between genes, life forms and the environment, and recognition of the biodiversity conservation at the landscape level.

In assessing biodiversity it is essential to account for the full range of living and non-living processes and ecosystem functions responsible for maintaining biodiversity. It is also important to understand what activities can lead to the losses of essential elements within the system and thus impact on biodiversity as this knowledge can help to redress the impacts before they arise.

Living and non-living processes, functions and elements that affect biodiversity include: geology / soils, landform, topography and landscapes, climate and rainfall, fire regimes, disturbances, complex biological relationships, invasions by exotic species and the range of pressures associated with human land use and settlement.

The maintenance of biodiversity relates to the sustainable use and management of biological resources such as land, air, water, which ensure that the earth's life support systems are maintained and enhanced for today's and future generations.

2.2 Why Conserve Biodiversity?

Biodiversity loss is amongst the most serious international environmental problems, and one that is accelerating at an alarming rate. Habitat modification resulting from habitat clearance and drainage of wetland systems, human disturbances associated with development, inappropriate burning frequencies, pressures from pest species and pollution all result in declines to biodiversity through loss of genes, species, habitats and ecosystems.

Biodiversity provides society with a wide range of ancillary benefits and ecosystem goods and services, of which many are difficult to value monetarily. CSIRO has calculated that ecosystems across Australia provide goods and services that equates up to \$1,300 billion per year, which is over four times our Gross National Product (Bateson, 2001).

Subsequently, losses to biodiversity can directly relate to economic losses, particularly to those industries that rely on natural resources provided by biodiversity values such as fisheries, forestry, agriculture and tourism. Biodiversity also provides a range of non-use

values, which primarily relates to value derived from knowing that a species simply exists, rather than a financial benefit obtained through their use.



Coastal melaleuca swamp wetlands (Photo: EPA)

Maintaining and restoring South-East Queensland's biodiversity is important for several reasons (EPA, 2003). All the people in the region are dependent upon the sustenance, health, well-being and enjoyment on fundamental biological systems and processes.

The values of biodiversity can be summarised as follows (EPA, 2003):

- Production services food, pharmaceuticals, genetic sources, durable materials (timber / natural fibre), energy, ornamental plants, industrial products, ecotourism, biological control
- Ecological and ecosystem services cycling and filtration processes (breakdown of wastes, soil formation and protection, clean air / water, nutrient storage and cycling), translocation processes (seed dispersal, pollination), stabilising processes (weather / climate, geomorphic processes, hydrologic regulation, salinity control, control pest species)
- Preservation of options future resources (genetic and natural capital), intergenerational value and obligations, evolutionary capital
- Cultural traditional owner values, other cultural heritage values
- Social benefits intellectual and spiritual inspiration, ethical / existence values, aesthetic beauty, scientific value, educational value, open space, local character, lifestyle enhancement, recreation, historical.

Redlands is part of a unique area on the eastern seaboard having tropical northern species and temperate southern species overlapping at the limit of their respective distributions. A total of 2153 known species of animals and plants (representing 335 families) have been recorded in the Redlands, including species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) and *Nature Conservation Act 1992* (NCA). Of these, 1755 are native and 389 are introduced.

The EPBC is the Australian Government's principal piece of environmental legislation that protects native species and ecological communities by providing identification and listing of species, offers conservation advice and recovery plans and recognition of key threatening processes. The NCA is state legislation that is based on principles to conserve biological diversity, ecologically sustainable use of wildlife, ecologically sustainable development and international criteria developed by World Conservation Union for establishing and managing protected areas. The NCA's object is the conservation of nature.

Animals and plants listed are those that have been "officially" recorded within City (EPA Wildnet), but there may be many more species that have not been officially listed. Similarily, some species listed have only been sighted or confirmed once, and although listed as "present in the Redlands" they are not considered locally significant. Developing an accurate and complete database of recorded and correctly identified for the City is fundamental to understanding where and how to protect individual species and ecosystems. However, these figures indicate that the City has an extremely high biodiversity within a small geographical area, and protecting the ecosystems that these plants and animals rely upon will be a major challenge that will be addressed in the Biodiversity Strategy.

3.1 Fauna

There are 598 species of animals recorded in the Redlands, of which a breakdown is shown in Figure 2. Of this, 568 are native (130 Families) and 21 introduced. This indicates that birds are the most diverse in terms of families and species richness, whilst fish and amphibians are the least common. The majority of fish listed are freshwater species, with only three marine species listed, but many more marine species would use the mangrove inter-tidal areas as nurseries. A comprehensive list is presented in Appendix 1.

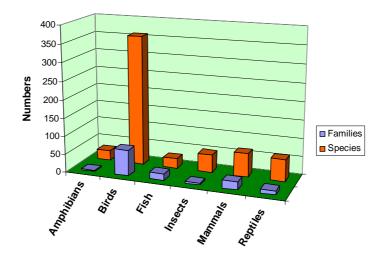


Figure 2. Number of fauna families and species listed in the Redlands.

This listing also highlights the lack of information available on the presence of aquatic and terrestrial invertebrates within the region. There are possibly thousands of unreported invertebrate species that have an extremely important ecological role as consumers,

producers and decomposers. There is also no official recordings of marine invertebrates such as prawns and crabs that are found in the estuarine reaches of the waterways.

3.2 Flora

There are 1555 species of plants (205 Families) listed in the Redlands (Figure 3). Of this, 1187 are native and 368 are introduced. Higher and lower flowering plants (dicots) have the highest species richness, whilst mosses, conifers and whisk ferns are least common in terms of species richness. A comprehensive list is presented in Appendix 2.

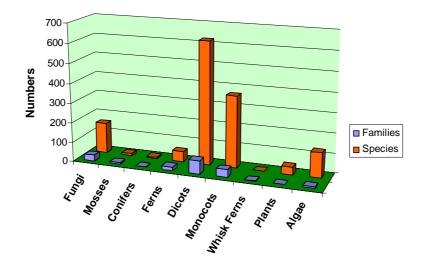


Figure 3. Number of flora families and species listed in the Redlands.

3.3 Regional Ecosystems

Regional Ecosystems (REs) are defined as "vegetation communities that are consistently associated with a particular combination of geology, landform and soil in a bioregion" (DNR&W, 2006a). The designation of a regional ecosystem to a plant community utilises three concepts – bioregion, land zone and vegetation type (therefore three numbers are donated within the RE number i.e. 12.1.1).

Bioregion refers to a biogeographical region that the regional ecosystem is found. There are 13 bioregions recognised in Queensland, of which Redland City is in bioregion 12 (first number). A landzone refers to the geology / substrate-landform that the RE is found on. There are seven landzones in Redlands (second number). Vegetation type is usually determined by the pre-dominant species and structure of the plants composing the ecosystem (third number).

There are 39 REs and sub-groups listed in the City. Currently Redland City has approximately 29,000 ha of intact remnant vegetation, which is about 57 percent of the estimated original area and one of the highest remnant areas of any area of South East Queensland (Chenoweth, 2006). However, approximately 80 percent of the original pre-clear vegetation is on North Stradbroke Island. Overall, 43 percent of the City's original vegetation has been lost (mostly from the mainland), and this has contributed to a number of regional ecosystems becoming endangered or of-concern locally. Redland City Council manages approximately 33 percent of all remnant vegetation communities within the City, most as part of the conservation estate (breakdown of area is shown in section 6.4.4).

3.4 Waterways

There are 22 freshwater creek catchments in the Redlands, 12 of which are on the mainland (total of 815 km) and 10 on the islands (total of 234 km). Nineteen flow directly into Moreton Bay and three (California Creek, Native Dog Creek and Serpentine Creek) reach the Bay via the Logan River. Most creeks are intermittent and receive most of their flows as rainfall in summer storm events. A few creeks such as Myora Springs on North Stradbroke Island flow permanently. Although, the waterways health have been adversely impacted by human activities and climatic conditions such as the drought, they are immensely important to the City's biodiversity.

Recent aquatic surveys have discovered unusual and rare species in both the mainland and North Stradbroke Island waterways, as well as healthy fish populations residing in very low pH waters in Serpentine Creek. The City's waterways are home to rare species such as ornate sunfish, pygmy perch, platypus and acid frogs. Many aspects of the City's waterways and their ecological interactions remain unknown, and require further research to protect and enhance.



Endangered: Oxleyan pygmy perch (Nannoperca oxleyana)

3.5 Wetlands

Numerous wetlands are located within Redlands, each having significant environmental, economic, cultural, historical and community importance. Moreton Bay Marine Park is a Ramsar listed wetland, and Redland City Council has responsibility of managing large portions of bordering coast-line, the Southern Moreton Bay Islands (SMBI) and North Stradbroke Island (NSI). Protection and enhancement of wetlands is extremely important to the maintenance of the high biodiversity values, and the contribution to maintaining healthy waterways. Progressive reduction in size and decline in quality of wetlands is a major threat to biodiversity that needs to be addressed. There is currently only 480 ha of wetlands remaining. Wetlands within the City can be separated into freshwater and coastal / marine habitats.

3.5.1 Freshwater Wetlands

Freshwater wetlands perform many functions, including to contribute to waterway health by naturally processing bio-available nutrients, providing habitat for aquatic fauna (including acting as a refuge during drought), providing a buffer between freshwater inflows and estuaries; recharging ground water aquifers; and contributing to flood mitigation by absorbing and dissipating flood flows.

Some significant freshwater wetlands include:

- Black Swamp Wetland, Shore Street, Cleveland
- Egret Colony Wetland, Egret Drive, Victoria Point (Ramsar)
- Tarradarrapin Wetland, Collingwood Road, Birkdale (Ramsar)
- Tim Shea's Waterhole, Macleay Island
- Eighteen Mile Swamp, NSI (Ramsar)
- Brown Lake, NSI

- Blue Lake, NSI
- The Keyholes, NSI
- Flinders Swamp, NSI (Ramsar)
- Leslie Harrison Dam, Capalaba.

A constructed wetland is located at Wellington Point and there are also other smaller water bodies throughout the City. Each of these wetlands provides a riparian habitat for a wide range of species. There are a number of unique wetlands and water bodies on North Stradbroke Island. Blue Lake (the Indigenous name is *Lake Kaboora*) and Brown Lake (Indigenous name is *Bummeira*) are east of Dunwich. Blue Lake is a 'window' in the ground water table – where the ground water surface level sits above the surrounding natural ground surface level (DNR&W, 2006b), whilst Brown Lake is perched. Eighteen Mile Swamp is located between Blue Lake and Main Beach, NSI and also supports a diverse range of flora and fauna.

3.5.2 Coastal Wetlands

The coastal fringes of the mainland and the SMBI are divided from the waters of Moreton Bay by coastal wetlands along the foreshores. They are characterised by mangrove, mudflats, rush and melaleuca vegetation associations that are home to a diverse range of terrestrial and aquatic flora and fauna.

The wetlands provide a buffer between the land and Moreton Bay and its tributaries. Development along the coastal fringe has seen a decrease in wetland communities and changes to water quality from increased erosion, turbidity and sediment build-up.

Coastal wetlands of local significance include:

- Geoff Skinner Reserve, Hilliards Creek (mainland)
- Myora Fish Habitat Reserve, North Stradbroke Island
- Point Halloran Conservation Area, Eprapah Creek (mainland)
- Coochiemudlo Island Reserve
- Islands within Southern Moreton Bay (Cassim, Pannikan, Lagoon and Long Islands)
- Whistling Kite, Turtle Swamp and Water Mouse wetlands, Russell Island
- Cow Bay Conservation Area and Paul Carter Wetlands, Macleay Island.
- Swan Bay, North Stradbroke Island.

3.6 Hollow Dependent / Using Fauna

Tree hollows are semi-enclosed cavities that naturally form in many species of trees – predominantly old or dead trees – and are a prominent feature of natural forests and woodlands (Gibbons & Lindenmayer, 2002). Many species of vertebrates and invertebrates use hollows as diurnal and nocturnal shelter sites, for rearing young, for feeding, for thermoregulation, and to facilitate ranging behaviour and dispersal. For many species the use of hollows is obligate – no other habitat resource represents a feasible substitute. Since hollows usually take over one hundred years to form they will continue to be a scarce habitat resource until regrowth forests adequately mature. Scarcity of hollows for native species is also compounded by competition from hollow dependent exotic species.

Some hollow dependent / using fauna will utilise constructed boxes where there are limited hollows available. It is therefore possible to commence restoring roosting and breeding habitat for hollow dependent species in forests with little or no hollow habitat. This can continue until such a time as the forest has adequately matured to the extent that it commences to produce hollows.

Figure 3 lists the percentage of hollow dependent / using fauna compared with the total listed within Redlands. This list is based upon native species that are reported as using hollows (Gibbons & Lindenmayer, 2002). A composite list is presented in Appendix 3. A large portion of mammals in particular found in Redlands are dependent or use hollows and nearly one-fifth

of all species are hollow dependent or use hollows (89 species out of total of 511 terrestrial species).

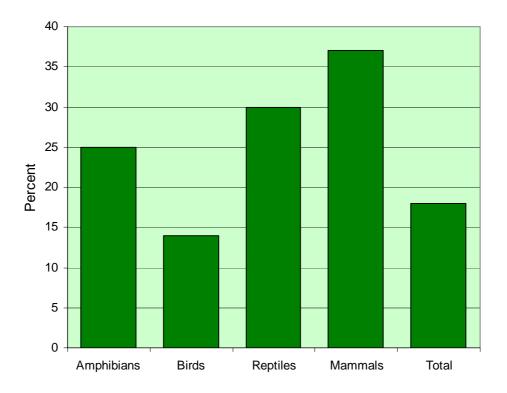


Figure 4. Percentage of hollow dependent / using fauna in Redlands.

There are numerous hollow-using species that are threatened including: Glossy Black-Cockatoo (*Calyptoryhnchus lathami*), Powerful Owl (*Ninox strenua*), Common Dunnart (*Sminthopsis murina*), Large-footed Myotis (*Myotis macropus*), South-eastern Broad-nosed Bat (*Scotorepens orion*), Sugar Gliders (*Petauarus breviceps*), Squirrel Gliders (*Petaurus norfolcensis*), Greater Gliders (*Petauroides volans*) and Yellow bellied Gliders (*Petaurus australis australis*).

4. Threats to Biodiversity

4.1 General Threats

South-East Queensland's biodiversity is under threat from land clearing, development, pollution and increased climate variability (EPA, 2003). Like other local government regions within the south-east, impact of environmental changes and imposition of various threatening processes in the Redland City has led to a continual decline in biodiversity, contributing to species becoming threatened and locally extinct. Although the full impact of threatening processes are unknown, it is generally accepted to be significant. This is not surprising considering the amount of historical vegetation removal and habitat modification.

Biodiversity within Redlands has been subjected to a range of past and continuing threatening processes including;

- (a) Population growth & development pressures such as:
 - Clearing and fragmentation of native vegetation
 - Residential and industrial development
 - Land filling, drainage and other earthworks
 - Inappropriate fire management
 - Pollution and contamination (waste disposal and rubbish dumping)
 - Roads, traffic and transport infrastructure
 - Soil erosion, sedimentation and compaction
 - Introduction and establishment of exotic species
 - Sand mining, particularly North Stradbroke Island
 - Extractive Industry
 - Barbed wire fencing
 - Deliberate vandalism / illegal activities.
- (b) Agricultural / Industrial pressures such as:
 - Stock grazing
 - Alteration to hydrological systems, increased nutrients, salinity and acid sulphate soils
 - Direct exploitation.
- (c) Global climate change issues such as:
 - Sea level rise
 - Extreme weather events
 - Drought
 - Global warming.

4.2 Specific Threats

4.2.1 Habitat Removal & Fragmentation

The first non-Indigenous settlers began to impact upon the native vegetation of what was to become Redland City as early as the 1840s. Scrub was cleared for farming and trees felled for timber and fuel. The rate of clearing increased with the growth of the population particularly where the soils were suitable for commercial farming and cropping. As the population has continued to increase, development has replaced farming as the principal cause of vegetation clearing. Habitat loss and consequential fragmentation are considered by many scientists to be the largest threats to preserving the world's biodiversity and a major cause of extinction today (Hilty *et al.*, 2006).

Prior to European settlement there were approximately 51,234 ha of remnant vegetation present within the entire Redlands (Accad *et al.*, 2006). In 2005, some 29,137 ha (57 percent) of remnant vegetation remained, of which 80 percent is present on North Stradbroke Island.

The quantity of re-growth in 2005 is substantial (16 percent) and increases the areas of total mapped vegetation to 73 percent. Although the highest percentage of re-growth is mapped for SMBI, the largest area is on North Stradbroke Island. However, large quantities of vegetation are removed annually on NSI due to sand mining activities, and this remains as one of the biggest threats to biodiversity on NSI.

These statistics highlight that the mainland presently has the lowest percentage of the remnant vegetation (30 percent) and total vegetation (43 percent) remaining. Some **14,989** ha of remnant vegetation has been cleared from the mainland, hence protection and enhancement of the remaining mainland vegetation is critical. On the mainland 25 percent of vegetation is within the urban footprint and 75 percent in rural landscape (both remnant and non-remnant). The ecologically recognised minimum percentage for sustaining viable biodiversity for total vegetation is indicated as a red line, and minimum remnant vegetation is indicated as an orange line in Figure 5.

There is approximately 1450 ha (3 percent) of unallocated vegetation mapped, mainly located on uninhabited islands in Moreton Bay.

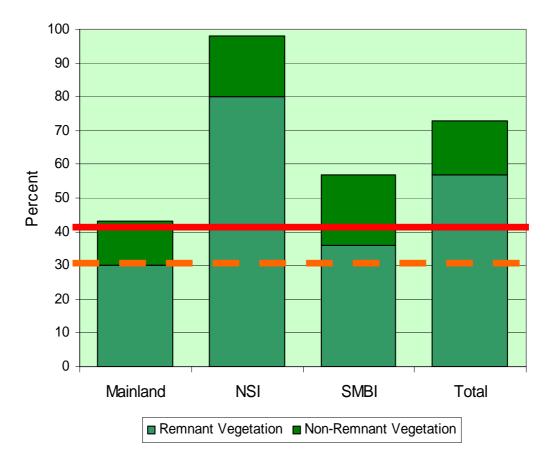
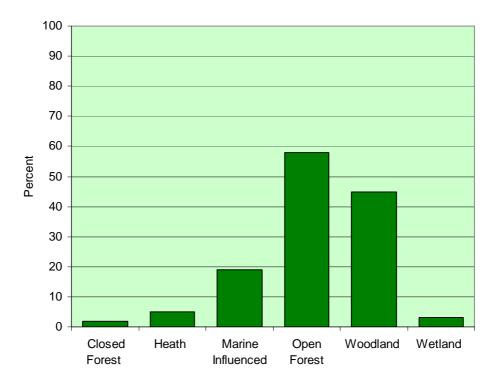


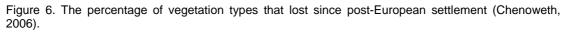
Figure 5. Percentage of remnant and non-remnant vegetation mapped in City in 2005, and breakdown for mainland, North Stradbroke Island and Southern Moreton Bay Islands (source: Accad *et al.*, 2006). Solid red line indicates minimum recommended total vegetation cover and orange dashed line indicates minimum recommended remnant vegetation cover.

The small size of Redlands is reflected in the relative small size of the vegetation remnants and, given the rate of vegetation clearing, the risk of loosing one or more of the remnant communities are brought into sharp focus. Loss and fragmentation of habitat not only has direct impact on biodiversity due to mortality, but has an indirect influence by reducing the carrying capacity. Increased habitat fragmentation and changed landscape / micro-climates / hydrology leads to reduced ecological functions resulting in increased rates of local population extinction. Between 1999 and 2005, some 1600 ha of remnant vegetation has been cleared (Chenoweth, 2006).

Habitat loss is recognised as one of the leading causes of biodiversity decline, therefore planning and design will be essential in any viable solution by directly conserving, protecting, and managing landscapes and habitats (Ahern *et al.*, 2006). Habitat destruction affects not only the quantity of species but also the quality of those species that survive. Some species are disproportionally affected depending on the size of their habitats and where their habitats exist in relation to the altered land.

Some vegetation types have been consequentially preserved due to the restricted range and inaccessibility of their environmental niche. Historically the majority of clearing has occurred in more widely spread vegetation communities such as open forest and woodland (mainly scribbly gums). Disproportionate losses of some vegetation types occur due to particular needs for certain land, such as agriculture and urban development on the mainland (Figure 6).





Two remnant vegetation communities – shrubby woodland (12.12.14) and open forest of grey gum & grey iron bark (12.11.3a) are now listed as extinct in the Redlands. These ecosystems may still occur but may be present in a condition that is not considered to be remnant under the *Vegetation Management Act 1999* (VMA).

4.2.2 Climate Change

It is recognised that human-induced climate change may result in large-scale biodiversity loss on a global scale. It could cause dramatic shifts in species distributions and species extinctions, particularly across fragmented or vulnerable ecosystems (DEH, 2004). Thomas *et al.* (2004) suggested that world-wide, between 15 and 37 percent of species could be committed to extinction by 2050. Australia would not be immune. Therefore biodiversity conservation will have to address the challenges from past environmental degradation with a new overlay of pressures from climate change. CSIRO (2001) projected that climate change would have implications of greater warming leading to decreased annual rainfall, extreme weather events (cyclones), higher evaporation and sea level rise.

Climate change has the potential to have a significant impact upon both our terrestrial and aquatic biodiversity. Redlands has large areas of low-lying coastal habitat that maybe effected by sea-level rise. Although predicted heights of sea-level rise have not been agreed, the Council must be prepared to protect the biodiversity from future impacts. For example, many areas of crucial foreshore habitat including shorebirds roost sites, water mouse habitat, seagrasses and turtle roost sites may be lost. Sea water inundation into freshwater wetlands and waterways would have serious impacts upon the biodiversity.

The biodiversity strategy recognises that the threat from climate change is extremely important, and directs Council to supporting and developing sustainable policies such as carbon trading and habitat offset, and initiatives to encourage renewable energy to reduce carbon emissions and pollution.

4.2.3 Fire

Fire is an essential, natural force in the Australian landscape (Olsten & Weston, 2005). Fire can be detrimental or beneficial to flora and fauna. Some plant and animal species and communities such as open forests and woodlands depend on fire to assist in increasing populations and regeneration, while others such as rainforest experience a decline in biodiversity as a result of fire. Biodiversity loss is associated with high fire frequency, intense broadscale fire, and fire exclusion, all of which tend to homogenise the landscape. Increasing loss of habitat is the single most damaging effect of poor fire management.

Of importance when examining fire and the impacts on biodiversity are the appropriateness of fire use in a particular vegetation type, season, frequency and intensity of a fire. Redlands contains a significant area of natural and re-vegetated bushland which is often impacted by fire, thus fire management must be ongoing and adequately resourced. Fire management can generally be incorporated into management plans in such a way that neither biodiversity conservation nor other goals, particularly protection of human life and property, are sacrificed (Olsten & Weston, 2005).

4.2.4 Pests & Weeds

One of the most significant challenges facing the Redlands is to minimise the impact of those pest plants and animals that pose a threat to the ecosystems, and impose high annual costs on agricultural and conservation industries. Exotic organisms do represent additional species diversity, but they have been taken out of their original community and ecosystem context. Their abundance usually endangers the existence of other species and communities which may only occur in Australia (McIntyre *et al.*, 2002). Many exotic species, both fauna and flora, out-compete native species for resources such as food and space, or are aggressive or poisoness. Exotic species also adapt better and faster to modified habitats, thus leading to decline in native species abundance.

Appendix 4 (fauna) and Appendix 5 (flora) lists declared plants and animals which have been identified in Redlands and present a potential threat to biodiversity. These pest and weed species are listed under *Land Protection (Pest and Stock Route Management) Act 2002* and Local Law No. 13 – Control of Pests.

Declared pests are listed by the Land Protection (Pest and Stock Route Management) Act 2002 under three categories:

- Class 1 refers to declared pests which are not commonly present or established in the State, and if introduced would cause a serious economic, environmental or social impact. Class 1 pests are subject to eradication. Land owners must take reasonable steps to keep land free of these pests.
- Class 2 refers to declared pests which are established in the State and have, or could have, a substantial economic, environmental or social impact. The management of these pests requires co-ordination and they are subject to local

government, community or owner led programs. Landowners must take reasonable steps to keep land free of these pests.

 Class 3 – refers to declared pests which are established in the State and have, or could have, a substantial economic, environmental or social impact. A pest control notice can only be issued for land that is, or is adjacent to, an environmentally significant area. Thus, the impact of species in this class is primarily environmental.

Management of pest species on a regional and catchment basis offer the best solution to controlling pest species. The Redland Shire Council Pest Management Plan 2005 – 2009 recognises that there are 93 declared pest plants species (41 class 1, 28 class 2, 22 class 3 and two Local Law 13) and 14 known declared pest animals (four class 1 and 10 class 2). Two hundred and one known non-declared weeds and 15 non-declared animal pests have been identified within the Redlands (such as Kudzu vine).

Some species of pests have not yet been recorded in Redlands; but they have been identified in close proximity to the Redland's boundary, and therefore pose a potential threat. Coordinted management of pest species on a regional and catchment basis offers the best solution to controlling pest species.

4.2.5 Roads

The RSC Bushland and Habitat Corridor Plan 2005 reported that all roads that cross wildlife corridors present a degree of risk for animals. Wide roads with high traffic loads moving at high speed are almost universally fatal for all wildlife; therefore there is significant cause for concern regarding fauna and the interaction with traffic. In addition to this existing level of hazard, there is the possibility that additional roads may be built and existing roads may be widened to four lanes.

Animals are taking great risks to move between ever increasing fragmented habitat in an ever expanding urban landscape. Protection and enhancement of biodiversity, including koala habitat, can only be successfully achieved if one of the biggest threats is addressed as a primary issue and not a secondary consideration. The Biodiversity Strategy recommends that all infrastructure development, particularly roads, addresses environmental concerns as part of a planning process prior to any design and that these are the over-riding factors that must be addressed before any development is approved. RSC Bushland and Habitat Corridor Plan 2005 identified the need for effective fauna crossings which can be translated into a greenspace corridor plan to identify places for fauna crossings. Adoption of the Queensland Main Roads Fauna Sensitive Road Design 2000 design elements can be used to facilitate fauna movement.

5. Protecting Redland's Biodiversity

Protection and effective management of Redland's biodiversity will be achieved by the undertaking a combination of several approaches:

a) Maintain vegetation, wetlands, waterways & corridor linkages

This is a strategic approach that protects areas of habitat before the quality of the ecosystems and species within an area degrades. Significant habitat has been identified in the Environmental Inventory as Conservation Management Areas (CMA). CMA includes habitat that is defined as priority, major, enhancement or general, and is mapped as the Bushland Habitat overlay on the Redlands Planning Scheme.

The protection of remnant and non-remnant vegetation (including riparian vegetation), wetlands and corridor linkages will provide significant protection to many species and ecological processes, without targeting specific species. It is recognised that the protection of at least 30 percent of remnant vegetation with minimum 10 percent managed as "core conservation areas" is required to ensure that there is a significant amount present for wildlife and effective connectivity (Hobbs & Saunders, 1994; McIntyre *et al.*, 2002). Possingham & Field (2001) have indicated that at least 40 percent of vegetation is required to sustain viable ecological function.

In 2005, 30 percent of remnant vegetation remains on the mainland, with the highest clearing being the open forest and woodlands (Chenoweth, 2006). With re-growth, the total area of vegetation remaining on the mainland is approximately 9300 ha (43 percent). However, more clearing has occurred since 2005 throughout the City.

The quality of re-growth is variable, and although provides an ecological function, it is not the identical to remnant bushland. This highlights that the protection and management of the current existing mainland vegetation is crucial to protecting biodiversity where the threats are greatest.

Draft SEQ NRM Resource Condition Targets for 2008 – 2031 to address biodiversity (or Nature Conservation) objectives within the SEQ Regional Plan 2006 – 2026 include maintaining at least 35 percent extent of remnant vegetation, 22 percent of woody vegetation and non-woody ground cover.

b) Protect threatened species & regional ecosystems

This is a focused approach to protect specified targeted species and ecosystems. The Biodiversity Strategy recommends providing protection and management of all native species, but prioritising the targeted protection of vulnerable and iconic species. The objective should be to improve or at least maintain 2001 extent and condition of habitat for key (or surrogate) species, including "iconic" species.

Allocating resources to protect and manage threatening processes of these species will provide extended protection to migratory or fringe species. Continual improvement in our understanding of threatened biodiversity and ecological processes will be the key to refining biodiversity protection and management.

At least 4 percent of extent of each remnant vegetation type should be retained and protected (Sattler & Williams, 1999). Draft SEQ NRM Resource Condition Targets for biodiversity include that not less than 4 percent of extent of vulnerable REs are protected in reserves throughout SEQ. Vulnerable REs include those listed in VMA as endangered or of-concern, or those that are locally rare or threatened.

5.1 Legislative Protection

Commonwealth and State protection exists for many species that are present within the City. These species lists are continually updated and refined, and will provide a basis for prioritizing

research and protection. Some species listed have only been reported once, and their current presence is questionable.

5.1.1 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC) (previously known as the Endangered Species Protection Act 1992) lists threatened species, ecological communities and threatening processes.

New categories have been added for listed threatened species and ecological communities. Critically endangered, conservation dependant and extinct in the wild have been added to the previous categories of endangered, vulnerable and extinct for threatened species and critically endangered and vulnerable have been added to the previous category of endangered for ecological communities. The definitions for each category are listed in Appendix 6. The definition of a species under the EPBC Act includes sub-species and distinct populations that the Federal Environment Minister has determined to be species for the purposes of the Act.

5.1.2 Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NCA) is based on principles to conserve biological diversity, ecologically sustainable use of wildlife, ecologically sustainable development and international criteria developed by the World Conservation Union (International Union for the Conservation of Nature and Natural Resources) for establishing and managing protected areas.

The Act's object is the conservation of nature. This is to be achieved by an integrated and comprehensive conservation strategy for the whole of Queensland involving matters including:

- Gathering, researching and disseminating information on nature, identifying critical habitats and areas of major interest, and encouraging the conservation of nature by education and co-operative involvement of the community
- Dedication and declaration of areas representative of the biological diversity, natural features and wilderness of Queensland as protected areas
- Managing protected areas
- Protecting native wildlife and its habitat
- Ecologically sustainable use of protected wildlife and areas
- Recognition of the interest of Aborigines and Torres Strait Islanders in nature and their co-operative involvement in its conservation
- Co-operative involvement of landholders.

The terms 'nature', 'conservation', 'biological diversity', 'ecologically sustainable use', 'threatening process' and 'critical habitat' are among many defined (Appendix 21). In this context 'animal' means any member of the animal kingdom, and 'plant' means any member of the plant or fungus kingdom. Both terms include the whole or any part of the animal or plant as well as the genetic or reproductive material. 'Wildlife' means any taxon or species of an animal, plant, protista (unicell organism other than a procaryote), procaryote (unicell organism lacking a true nucleus and including bacteria and cyanobacteria), or virus.

The NCA provides for interim conservation orders to conserve, protect or manage wildlife, habitat or areas subject to a threatening process likely to have significant detrimental effect. Definitions of the categories for threatened species and ecosystems are listed in Appendix 7.

5.2 What are Redland's Endangered Species?

In Redlands, there are currently 54 fauna and 20 flora species listed under Commonwealth and State protection (Figure 7). Endangered biodiversity are protected under Federal and State laws, and Local Governments have the responsibility to ensure effective management ensures life-long protection to these species to prevent future local extinction.

Redland City Council has limited information regarding the location of many of these species, the specific threatening processes that are impacting upon many species and limited or no management plans to protect endangered species or ecosystems. Several listed species such as the Glossy-black cockatoo (*Calyptorhynchus latham*), koala (*Phascolarctos cinereus adustus*), grey-headed flying fox (*Pterodroma neglecta*), native jute (*Corchorus cunninghamii*) and swamp orchid (*Phaius australis*) have been investigated. However, many species still require immediate assistance to ensure protection and rehabilitation to prevent their local extinction.

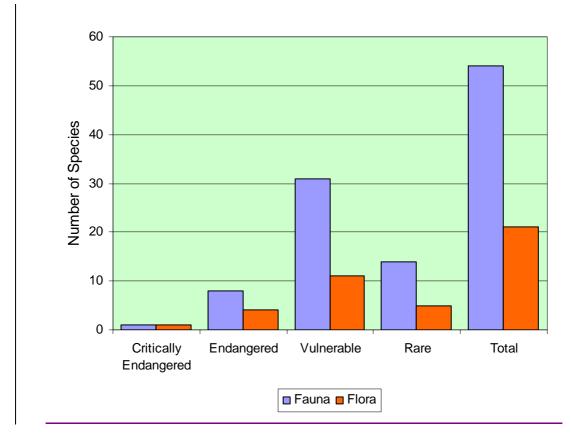


Figure 7. Number of endangered fauna and flora species listed in the Redlands under EPBC and NCA legislation.

5.2.1 Fauna

Composite lists of terrestrial and aquatic faunal species considered being Critically Endangered, Endangered, Vulnerable, and Rare that occur or may occur are listed in Appendix 8 and 9. Of these, 35 are terrestrial species and 19 aquatic species.

The Grey-nurse shark (*Carcharias taurus*) is the only faunal species presently listed as Critically Endangered by the EPBC. This means that this species is facing an extremely high risk of extinction in the wild in the immediate future, and efforts must be made to protect this species within Moreton Bay and surrounding areas.

The protection of marine species such as the grey-nurse shark, dugong, and turtles are primarily the responsibility of the Environmental Protection Agency (EPA). However, activities by all stakeholders within the City, such as pollution of waterways can contribute to the decline in marine habitat within Moreton Bay where these endangered and vulnerable species occur. Council can facilitate the survival of marine species by continuing to improve the health of our waterways.



Endangered: Wallum Froglet (*Crinia tinnula*)

Numerous high profile and well-known animals are listed, namely the koala (*Phascolarctos cinereus adustus*), glossy-black cockatoo (*Calyptorynchus latham*), grey-headed flying fox (*Pteropus poliocephalus*), water mouse (*Xeromys myoides*), wallum froglet (*Crinia tinnula*) and oxleyan pygmy perch (*Nannoperca oxleyana*).

5.2.2 Flora

Composite lists of flora species considered critically endangered, endangered, vulnerable or rare under EPBC and NCA that occur or may occur are listed in Appendix 10. There are currently 20 flora species listed that require immediate protection. One of the most endangered species is the native jute, where only a few specimens remains throughout the entire city.



Endangered flora species: Native Jute (Corchorus cunninghamii)

5.3 Redland's "Iconic" Species

The term "iconic species" is used here to refer to a species that is widely recognised by the community and represents their connection to the nature of the Redlands (Table 1). Some of these species may not be officially recognised under State or Federal legislation as endangered or vulnerable but are locally under threat or are particularly close to the hearts of the community. As a starting point for that list, the Redlands Planning Scheme (RPS) includes in the "Ecological Impacts" policy a list of iconic species and species groups. These species and species groups were chosen by an expert panel that have excellent local knowledge.

Within the list, the koala is the most iconic species in the Redlands and its image is used as the Council symbol. It is also typical of many species that have significant cultural, historical and economic values but are under threat from development and human activity. It should be recognised that an important benefit from creating reserves to protect iconic species is that many other important flora and fauna will benefit by protection of their habitat as well. SEQ NRM Resource Condition Targets for biodiversity indicate to improve or at least maintain 2001 extent and condition of habitat for key (or surrogate) species, including "iconic" species.



Endangered Iconic Species: Koala's in Koala Coast

Table 1. List of "Iconic" faunal species recognised locally (source: Redland Planning Scheme, 2006).

Iconic species and species groups			
Terrestrial	Aquatic		
Golden swamp wallaby	Wallum froglet		
Koala	Green tree frog		
Greater glider	Dugong		
Magpie geese	Sea turtles		
Glossy black-cockatoo	Platypus		
Bush stone curlew	Shorebirds (waders)		
Flying fox			
Small dasyurids			
Wrens and finches			
Insectivorous bats			
Goannas / Monitors			

This list is currently being updated for the planning scheme, and the amendments will be available when the RPS is reviewed. The list of locally significant species not listed under EPBC and NCA are shown in Appendix 11.

5.4 South-East Queensland Priority Taxa

A list of fauna known as "Priority Taxa" for the South East Queensland (SEQ) bioregion, including Redlands, has been collated by Environmental Protection Agency (EPA). These include species that are not listed under the EPBC and NCA. Many of species are located within Redlands, and it is important to provide protection for these species that are vulnerable at a regional level and are listed in Appendix 12. The numbers of each species are indicated in Figure 8.

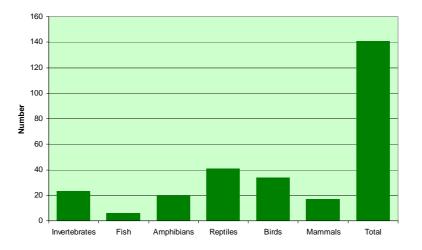


Figure 8. Numbers of species listed in SEQ Priority Taxa found in the Redlands.

The swamp crayfish (*Tenuibranchiurus glypticus*) that is listed under the SEQ Priority Taxa was thought to be locally extinct until a rare discovery in the City in 2006. One of the most significant aquatic species is the ornate sunfish (*Rhadinocentrus ornatus*), which has been located in numerous locations throughout the Redlands (including NSI), and is vulnerable due to waterway degradation.

5.5 Shorebirds (Waders)

Protection of shorebirds and wading birds has been outlined in the EPA / QPWS Shorebird Management Strategy 2005. Shorebirds are integral components of Moreton Bay's wetland ecosystems, providing important biological, aesthetic, scientific and cultural values of both national and international significance (EPA, 2005). The international significance of Moreton

Bay for shorebirds has been recognised by its listing as a Ramsar site (international treaty dedicated to the conservation of wetlands).

There are 35 species of birds found along the shores of the Redlands area during their nonbreeding season September-April. Of these, 25 species are migratory and breed in the northern hemisphere during June-August each year. Coastal intertidal areas are critical feeding areas for these species. At high tide, these birds roost on open areas above the tide. There are 25 high tide roosts in the Redlands and they support over 6,000 shorebirds. There are significant numbers of four internationally recognised species (Bar-tailed Godwit, Greytailed Tattler, Eastern Curlew and Pied Oystercatcher). The most important roosts for these species include Geoff Skinner Reserve at Wellington Point and Thornlands Road, Thornlands.



Moreton Bay Marine Park is a haven for shorebirds (Photo: EPA)

Numbers of most species are gradually declining in Redlands and this is due to habitat loss associated with reclamation of coastal land and habitat deterioration due to disturbance and associated water quality decline.

Protection and enhancement of shorebird habitats and protection from disturbance within Redland City area (above astronomical high tide) and assistance and co-operation with EPA / QPWS and Queensland Waders Study Group for the protection of shorebirds is crucial for biodiversity protection.

5.6 Remnant Vegetation & Regional Ecosystems (RE)

5.6.1 Vegetation Management Act 1999

Remnant vegetation is defined as "vegetation where the dominant canopy has >70 percent of the height and >50 percent of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy" (Nelder *et al.*, 2005). Remnant vegetation can be classified as different types of regional ecosystems (based upon vegetation type, geology and landscape). There are 39 Regional Ecosystems (REs) and sub-groups present in the Redlands. Their status is shown in Table 2.

A description of vegetation and geology associated with each Regional Ecosystem, their Vegetation Management (VM) status and Biodiversity Status under the *Vegetation Management Act* 1999 (VMA) is shown in Appendix 13. The specific criteria used to assess the VM status and Biodiversity Status of regional ecosystems is given in Appendix 14. The locations of the Regional Ecosystems are shown as maps in Appendix 15.

Table 2. Number of each category of Regional Ecosystems and Biodiversity Status in the Redlands acoording to the VMA (source: Accad *et al.*, 2006).

Region	VM Status	Biodiversity Status
Endangered	4	6
Of-concern	11	13
Not of concern	24	22

Figure 9 indicates the area of endangered and of-concern RE remaining in the Redlands in 2005 since pre-clear. These figures show that some 8700 ha of endangered and 455 ha of of-concern REs have been lost (Chenoweth, 2006). These figures clearly highlight the extent of the lack of protection to endangered REs over many decades of land clearing.

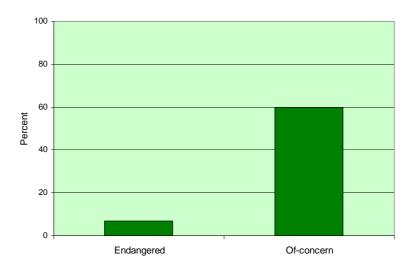


Figure 9. Percentage of Endangered and Of-concern REs listed in VMA remaining in the Redlands in 2005 compared to pre-clear quantities.

5.6.2 Locally Significant Regional Ecosystems

There are 12 REs that are naturally rare within the Redlands or have had high extent of clearing that require protection, but not listed as Endangered or Of-concern under VMA. Ten of these have a total of >50 ha remaining, some of which is highly fragmented.

Using the criteria under the VMA to define the conservation status for REs, those that are poorly conserved or critically low (less than 300 ha or less than 10 percent pre-clearing extents) can be identified (Appendix 16 and Appendix 17). Two regional ecosystems are listed as extinct at the local level (12.11.3a - open forest with ironbark and grey gums on metamorphics, 12.12.14 - shrubby woodlands on rocky coastal areas of Mesozoic and Protozoic igneous rocks).

5.6.3 Non-Remnant Vegetation & Potential Regrowth

Non-remnant vegetation is all vegetation that is not mapped as remnant vegetation, including regrowth, heavily thinned or logged and significantly disturbed vegetation that fails to meet the structural and floristic characteristics of remnant vegetation (Nelder *et al.*, 2005). In 2005, there were 8297 ha of non-remnant vegetation mapped within the Redlands, of which 2734 ha area are present on the mainland, 581 ha on SMBI, and 4934 ha on NSI.

Some areas of vegetation may become remnant in the near future, and some may even attain remnant status within the relatively short time (Appendix 18). Some other areas of regrowth are not regarded as remnant and seem unlikely to attain remnant status as they included planted vegetation or areas supporting significant weed growth.

However, their value should not be disregarded. Patches of black sheoak provide potential food trees for Glossy Black-Cockatoos (*Calyptorhynchus lathami*) and dense patches of wattle provide food opportunities for a diversity of fauna. Narrow bands of vegetation have been shown to be important for connectivity, for example, Sugar Gliders (*Petaurus breviceps*) have been recorded utilising roadside vegetation remnants to move up to 1.9 km between fragmented forests in Victoria (DMR, 2000).

Areas of regrowth that support a predominance of native species are regarded as the areas likely to attain remnant status given the right conditions over time. This has significant implications for future management of particular regional ecosystems as some of these patches may then be reclassified as remnant vegetation.

6.1 Addressing Biodiversity Pressures

Current trends indicate increasing threats to SEQ biodiversity, hence proactive and effective planning and management are necessary to halt and even reverse these trends. The Regional Nature Conservation Strategy for South-East Queensland 2003-2008 identified the need to avoid or minimise the causes of threatening processes which are also relevant to addressing threats to Redlands biodiversity. This can be achieved through;

- Sustainable land-use and development such as:
 - Appropriate urban and residential developments (e.g. encourages public transport)
 - o Appropriate eco-tourism development in natural areas
 - Development such as extractive activities (including sand mining) and infrastructure (including transport corridors – terrestrial and marine, utility services and dams) avoids areas of substantial biodiversity value (including coastal ecosystems)
 - o Sufficient protected estate and voluntary conservation areas on private lands
 - Identification, retention and linking of natural areas across the landscape with viable corridors
 - Sustainable farming / rural activities
 - o Sustainable population growth and related urban development.
- An informed community:
 - o Increased awareness, knowledge and education of biodiversity values
 - Sustainable recreation activities and visitation rates in natural areas
 - Maintenance of biodiversity by committed landowners as part of their "as-of-right" uses
 - o Adequate scientific information
 - Awareness and information on the economic values of ecosystems and the need for full cost accounting.
- Environmental management:
 - Improvement and maintenance of air quality
 - o Improvement and maintenance of water quality (e.g. nutrients levels)
 - Improvement and maintenance of land quality (e.g. acid sulphate soils and salinity)
 - o Improvement and maintenance of scenic amenity
 - Sustainable biodiversity management practices (e.g. weeds, feral animals, fire management, erosion, sedimentation and water management)
 - o Management of recreation activities
 - o Adequate legislation, monitoring and enforcement
 - Minimising the impacts of climate change and planning for adaptation to anticipated climate change.
- Environmental economics:
 - Recognition of the economic values of ecosystems and their services and use of full cost accounting
 - o Sustainable land valuation processes for maintaining biodiversity values.

The Regional Nature Conservation Strategy recognises to achieve the outcomes, biodiversity management in the region requires and integrated approach that takes account of threatening processes and their causes, and operates with full participation of all stakeholders.

6.2 Redland City Council's Response to Protection of Biodiversity Values

The protection and management of natural areas in South-East Queensland has become a primary concern for planning and land management in the 21st century. Redland City Council has responded with vegetation protection and management measures that are similar to those of most other Councils in South-East Queensland.

Since 1989 Redland City Council has created tools to protect, manage and enhance the natural environment. The Corporate Plan (2006 to 2010) recognises that preserving the Redland's natural environment well-being continues to be a vital community outcome. The Corporate Plan outlines objectives to protect, manage and improve the rich environmental values and biodiversity, and in particularly recognises the need to sustain the local koala population. There are programs which strive to protect and improve the waterways and coastal zones, manage and restore the local biodiversity and find ways to improve ecological functionality.

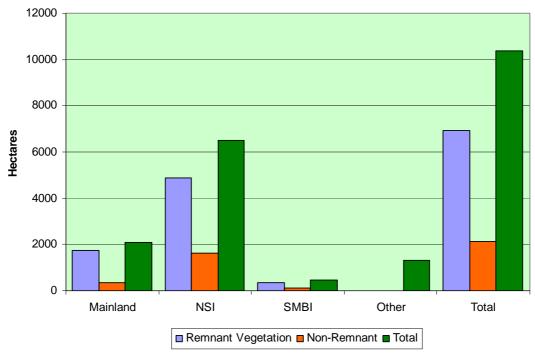
Examples of how the Corporate Plan objectives have been translated into policy and actions include:

- Use of Environment Separate Charge levy (on residents) since 1993 to purchase over 580 ha of conservation lands at an expenditure of in excess of \$18.6 million
- Development of the Environmental Inventory Stage 4 (El4) mapping analysis that links habitat values to a planning and management response by categories listed as Conservation Management Areas (CMA). As such, it is a planning tool that focuses Council policy and actions where natural values are highest and clearly indicates areas that the Council wishes to "protect, maintain and rehabilitate environmental values and biodiversity"
- Council adopted Bushland Habitat and Corridor Plan (July 2004) with four main objectives and eleven principles to guide for achieving the above Corporate strategies
- Supporting and funding private extension programs such as Land for Wildlife Program, Voluntary Conservation Agreements Program, Your Back Yard Garden Program and the Rural Support Program
- Redland Planning Scheme and Local Laws.

The Environmental Inventory Stage 4 (EI4) mapping was used as a basis for allocation of the Conservation Zone, Environmental Protection Zone and Habitat Protection Overlay in the RPS. This mapping is an early, simpler and more robust version of the Common Nature Conservation Classification System and the SEQ Biodiversity Assessment Mapping Methodology (BAMM). Importantly, Redland City is, as far as we are aware, the only City in SEQ to have fully integrated such "conservation priority" mapping into its IPA Planning Scheme.

6.3 Land Tenure

In 2005, Redland City Council was responsible for 10,384 ha of remnant and non-remnant vegetation, representing approximately 28 percent in Redlands (Chenoweth, 2006). Of this total two-thirds of is present on NSI (6624 ha). This total includes vegetation on both freehold and leased land (Figure 9).



* includes vegetation unassigned to properties

Figure 9. Area (ha) of land under Council responsibility including freehold and leased land.

Redland City Council owns 1,379 ha of remnant vegetation and 353 ha of non-remnant vegetation (total 1,723 ha out of 37,386 ha) as freehold land. This equates to 4.7 percent of of remnant vegetation and 4.3 percent of non-remnant vegetation remaining in 2005 (overall total 4.6 percent).

However, the proportion and area of each regional ecosystem under Council tenure is disproportionate, and some naturally rare vegetation communities are not represented. There are five regional ecosystems not presently represented in Council tenure which will be addressed in future acquisitions:

- 12.9-10.17 Open forest complex with White mahogany, grey gum, broad-leaved ironbark on sedimentary rocks
- 12.9-10.17a Brush-box dominated open forest on sedimentary rocks
- 12.9-10.19a Red iron bark dominated open forest on sedimentary rocks
- 12.11.10 Vine forest ± hoop pine on metamorphics ± interbedded volcanics
- 12.3.11 Broad-leaved ironbark dominated open forest on alluvial plains.

6.4 Statutory Protection

6.4.1 South-East Queensland Regional Plan 2005 – 2026 (Regional Plan)

The primary purpose of the Regional Plan is to provide a sustainable growth management strategy for South-East Queensland (SEQ) to the year 2026. SEQ is recognised as Australia's fastest growing region, therefore the Regional Plan provides a sustainable growth management strategy that encompasses protecting and enhancing the region's natural environment, biodiversity and natural resources.

The Regional Plan has been prepared in accordance with section 2.5A of the *Integrated Planning Act 1997* (IPA). The Regional Plan is a statutory instrument under the *Statutory Instruments Act 1992*, and is also the planning instrument under the IPA. It has a direct effect in its own right and indirect effect through the amendment and alignment of local government

planning schemes and state plans and policies. The Regional Plan outlines the desired outcomes for the natural environment including desired regional outcome 2 and principles to achieve these outcomes:

- a) 2.1 Biodiversity Conserve and manage the region's biodiversity values and maintain supporting ecological processes.
- b) 2.2 Koala conservation Assist the survival of koalas in SEQ by protecting identified koala habitat areas and adopting conservation measures to reduce conflict between urban development and koalas.
- c) 2.3 Atmosphere Manage urban settlement and the use of transport, industry, energy and natural resources to minimise adverse impacts on the atmosphere.
- d) 2.4 Managing the coast Protect and maintain the region's coast, including the foreshore, coastal wetlands, dunes, marine ecosystems and coastal marine waters.

The Regional Plan instructs that local government will prepare local nature conservation strategies that identify local biodiversity values, including terrestrial and aquatic biodiversity, ecological corridors and threatening processes. This also instructs that local government will set local targets and performance indicators that have the capacity to be integrated with State of Region reporting.

6.4.2 Integrated Planning Act 1997 (IPA)

The IPA forms the foundation of Queensland's planning and development assessment legislation. The purpose of IPA is to balance community well-being, economic development and the protection of the natural environment by providing a framework for managing growth and change within the State. IPA planning schemes have been prepared by local governments to manage growth and change in the Redland's. IPA planning scheme outlines the development outcomes sought for local government area by:

- a) Allocating land for different uses.
- b) Indicating the location and nature of major infrastructure.
- c) Identifying areas or places that constrain the use of land due to environmental value or adverse effects on development.
- d) Identifying the kind of development that requires approval.

Desired Environmental Outcomes (DEOs) state what the planning scheme seeks to achieve including a broad range of issues such as community needs, economic activity and nature conservation.

6.4.3 State Coastal Management Plan – Queensland's Coastal Policy & South-East Queensland Regional Coastal Management Plan 2006

The State Coastal Management Plan (State Coastal Plan) describes how the coastal zone is to be managed. As a statutory instrument it has statutory effect under the *Coastal Protection and Management Act 1995* and guides relevant decisions by the State and local governments, and the Planning and Environment Court. The South-East Queensland Regional Coastal Management Plan (SEQ Coastal Plan) describes how the coastal zone within the South-East Queensland (SEQ) region is to be managed and provides direction for implementing the State Coastal Management Plan – Queensland's Coastal Policy and the SEQ Regional Plan.

The SEQ Coastal Plan identifies, protects and manages the important coastal resources and values through regional policies, a key coastal site, resource maps, the coastal management district and coastal building lines. State Coastal Policy 2.8 indicates policies for conserving nature, including:

 a) 2.8.1 Areas of State Significance (natural resources) - aligns with DEO2 of SEQ Regional Plan. This includes maintenance, restoration and protection of significant coastal wetlands (Moreton Bay), coastal dunes of North Stradbroke Island and endangered regional ecosystems.

- b) 2.8.2 Coastal Wetlands outlines protection and maintenance of SEQ's coastal wetlands including Carbrook wetlands and wetland complexes within and adjacent to the southern Moreton Bay Islands.
- c) 2.8.3 Biodiversity outlines the key issues effecting ecological and ecosystem functioning such as the loss, fragmentation and degradation of coastal resources including; riparian vegetation, coastal wetlands, shorebird habitat, fish habitat and fish migratory pathways, marine species habitat, and benthic communities.

6.4.4 Redland Planning Scheme (RPS)

The Redland Planning Scheme (enacted 30 March 2006) provides a framework for managing development in a way that advances the purpose of the *Integrated Planning Act 1997* (IPA). This can be achieved by identifying exempt development, self-assessable development and assessable development (code or impact). It also identifies outcomes such as Desired Environmental Outcomes (DEO), overall outcomes for a code, specific outcomes for assessable development and acceptable solutions for self-assessable development.

The current RPS introduced significant new initiatives to improve habitat protection in planning, such as: extensive Conservation and Environmental Protection zones, habitat protection overlays and waterway protection and ecological impact policies. The RPS can achieve protection of environmental values through various mechanisms including nomination of land use through zoning. Some 8866 ha of land within the City is currently zoned as conservation, of which 70 percent is located on the foreshores (mainly NSI). Maps of zoning are shown in Appendix 19.

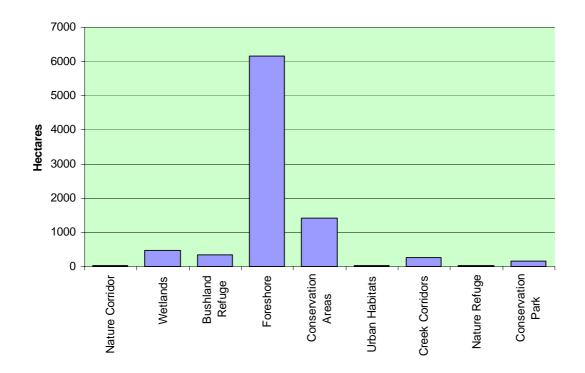


Figure 10. The area (ha) of land zoned as conservation under the current Redland Planning Scheme.

There is high percentage of remnant vegetation covered by the Conservation and Environmental Protection zoning (Figure 11), and although both Closed Forest and Wetland vegetation types are under represented within Council ownership, the zoning of these vegetation types recognises their value and gives weight to their protection (Chenoweth, 2006). Ensuring that land currently zoned as conservation and environmental protection remains protected in future years will be important to ensuring that habitat is retained.

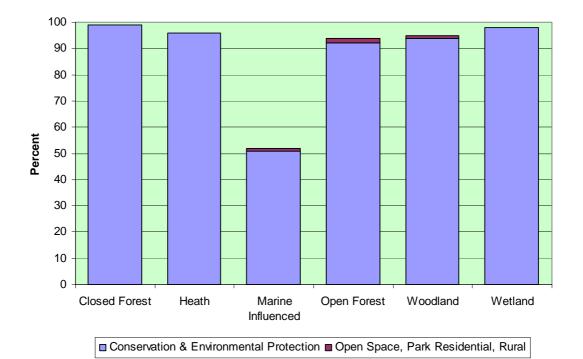


Figure 11. Proportion of existing vegetation types protected under the Redland Planning Scheme (source: Chenoweth, 2006).

The RPS underlies the principles associated with the protection of biodiversity, and forms the backbone of the Biodiversity Strategy. Section 4.8.1 Principles and Purposes of Habitat Protection, Management and Enhancement, sub-section (3) recognises eleven broad principles:

Principle 1: In order to protect biodiversity, all the important habitat types in the Shire must be protected and managed not just the ones that are easiest to protect or that we most like.

Principle 2: In Redland Shire we protect and manage habitat areas for all the species present and, where information is available, act to the benefit of individual species where possible.

Principle 3: The more like natural bush, the greater the habitat value of an area. Management should aim for complex, diverse, multi-layered bush with understorey that closely approximates that which existed prior to European settlement.

Principle 4: Our first priority is to protect and manage the habitat we have because once it is lost it is gone for good.

Principle 5: Many cleared areas provide some habitat and freedom of movement for native animals, which can be essential for their survival. These values must be recognised, managed and enhanced if wildlife is to be protected in Redlands.

Principle 6: In replacing habitat, allow the bush to regenerate naturally wherever possible and where replanting is required, provide clear guidance regarding appropriate standards for replanting work.

Principle 7: In addition to managing 'generalised' habitats for wildlife, the local government must address the specific survival needs of some species of concern and some ecosystems and some areas of concern.

Principle 8: Core habitat areas must be protected and maintained as 'reservoirs' and sanctuaries for wildlife in the network of habitat across the landscape.

Principle 9: Patches of bushland must be protected, managed and enhanced for their value as habitat, particularly those in lowland areas that function as 'nodes' in the network of habitat and corridors across the landscape.

Principle 10: A web of wildlife corridors and linkages must be maintained and established to allow wildlife to move across the landscape and in particular between habitats.

Principle 11: Barriers to wildlife movement must be identified and managed preferably removed wherever possible, to promote safe movement of animals across the landscape and in particular between habitats.

6.4.5 Local Government Act 1993 - Local Laws

The *Local Government Act 1993* provides local governments with discretionary powers to create Local Laws. Redland City Council is responsible for introducing and enforcing Local Laws covering a range of activities that are related to biodiversity protection. A summary of the Local Laws objectives include:

- a) Local Law 2: Keeping and Control of Animals to protect the community against the risk of injury and damage, ensure that animals do not create a nuisance or hazard to health & safety, prevent pollution and other environmental damage resulting from the keeping of animals & protect amenity of the local environment, ensure keepers of animals meet their obligations regarding the keeping of their animals in a way that is consistent with the rights and expectations of the local community.
- b) Local Law 6: Protection of Vegetation providing appropriate protection for significant vegetation, management of protected vegetation, necessary powers to enforce Vegetation Protection Orders and powers to action reinstatement of vegetation damaged in contravention of the Local Laws.
- c) Local Law 13: Control of Pests to protect the environment against animal and plant pests for which adequate protection does not exist under other laws.
- d) Local Law 15: Parks & Reserves provide for establishment of parks and reserves under the Council's control, provide appropriate public access to parks and reserves for active and passive recreation, protect safety of persons using parks and reserves, preserve features of the natural and built environment and other aspects of the amenity of parks and reserves, regulate activities in parks and reserves and ensure appropriate standards of conduct.

6.4.6 Redland City Council Policies

Several Redland City Council policies focus upon the protection and enhancement of vegetation, koalas and biodiversity. The Biodiversity Strategy will align with current Council environmental policies and biodiversity issues, as well addressing the aims and objectives of State and Federal policies and strategies. A list of relevant legislation including strategies, policies and plans are presented in Appendix 20.

6.4.6.1 Environment Policy

The Environmental Policy POL-2644 states that Council is committed to achieving environmentally sustainable development. It aims to manage its operations and development to meet the needs of the present without compromising the ability of future generations to meet their own needs through the protection, enhancement, management and maintenance of the Redland's natural and built environment. This policy relating to biodiversity states that Council is committed to:

1. Protecting, maintaining and enhancing the health of the Shire's public open space, bushland, vegetation and biological diversity.

2. Protecting, maintaining and enhancing the health of the Shire's waterways and coastal zones.

3. Protecting the Shire's natural ecosystems and the amenity and health of the community from the environmental nuisance.

6.4.6.2 Vegetation Enhancement Strategy and Policy (2007)

This Vegetation Enhancement Policy POL-2609 objective states "To provide clear specification for native species revegetation practices undertaken by Council, community, developers, Energex and other stakeholders to improve habitat value and management across the Shire".

The policy statements related to biodiversity that Council is committed to includes:

1. Retaining, protecting, enhancing and linking remnant bushland areas to maximise their ecological values through improved specification of vegetation standards.

2. The use of 100 percent locally native and/or Australian native species in Council managed lands including streetscape plantings with special management for *Delonix regia* (poincianas).

3. Ensure at least 90 percent of development approvals meet the standards set in the Vegetation Enhancement Strategy through cooperative "off maintenance" assessment of properties by Parks and Conservation and Development Assessment Services.

4. Support ongoing SEQ regional initiatives for assessment and management of vegetation communities

5. Recording and reporting on all rehabilitation and revegetation in the Shire annually.

The Strategy is a Council-approved landscaping document for the Redlands. It aims to implement a co-ordinated approach to enhance corridor linkages between remnant bushland areas while providing shade, shelter and aesthetic value. It recognises three vegetation enhancement areas within the Redlands:

- Habitat Consolidation Areas areas identified as containing major environmental and conservation values where landscaping and restoration activities areas can contribute to consolidating existing habitat.
- Habitat Linkage Areas areas providing key linkages between areas of core habitat to promote fauna movement throughout the City.
- Balance Areas landscaping or restoration activities mainly designed to enhance comfort and amenity of the surrounding environment.

Specifications are provided for species selection for all landscaping or restoration works conducted under the control or approval of Council to promote the proper use of indigenous species. Also weed schedules are included to control the use of weed species within landscaping or restoration projects.

6.4.6.3 Redlands Koala Policy (2008) and Redlands Koala Implementation Strategy 2008

The Koala Conservation and Management Policy and Strategy 2002 aimed to conserve and manage the Redland's koala population and its health. The policy goal was to maintain the current population of 4000, however population counts in 2005 indicated a decline to 2900. Statement 1.1.2 of this strategy actioned that Council develop a Biodiversity Strategy which would detail the actions required to protect and manage the Redland's flora and fauna.

Following extensive public consultation at the Koala Summit in 2007, the Redlands Koala Policy (2008) and Implementation Strategy 2008 has been released to address the continued decline in koala numbers in the Koala Coast. It recognises that the koalas within the koala coast are geographically isolated and have been declared as "endangered" by the Council. Protection of the koala and its habitat will be extremely beneficial to the protection of many other plant and animal species. The main objective of the koala policy and strategy is to stop habitat loss. This key objective is complimentary to the policy objectives of the Biodiversity Policy.

6.4.6.4 Environment Charge Acquisition and Management Policy

The Environmental Charge and Acquisition and Management Policy POL-3057 aims to protect environmentally significant land through selective acquisition as part of the broader

strategy of methods for protecting, maintaining and rehabilitating environmental values and biodiversity.

6.4.6.5 Pest Management Plan

Redland City Council has prepared a Pest Management Plan for 2006 - 2010. This plan identifies pests, their status and priority for treatment to prevent the establishment and spread of pests. It also aims to control those species which are already prevalent. Pest Management Plans have been undertaken for Kudzu vine, pig, fox, Senegal tea, feral cats and rabbits. Pests are one of the main threats to biodiversity, and the currently not enough resources are invested in preventing pest invasions.

6.5 Non-statutory Protection

6.5.1 Redland City Council Management Plans

Redland City Council has developed and implemented numerous management plans to manage biodiversity. These are often linked with other areas of environmental management, particularly waterways and land management. An outline of each of these plans is provided below.

6.5.1.1 Land Management Plans

Redland City Council prepares Land Management Plans for state land which it manages under trust and for conservation land over which it has freehold title. These plans identify the flora and fauna, waterways, fire management and heritage issues of the land, along with any other issues of community importance. The plans identify how each of the issues identified during a community consultation process will be managed. Appendix 20 lists management plans developed and implemented by the Redland City Council.

6.5.1.2 Open Space Plans

The Open Space Plan provides a framework for the planning and management of the Redland's open space network. The plan covers all recreation, sporting and conservation open space including the mainland, North Stradbroke Island, Coochiemudlo Island and the Southern Moreton Bay Islands.

6.5.2 Education & Extension Programs

Redland City Council launched the Redlands Indigiscapes Centre in October 1997. The Centre covers 14.5 ha on Runnymede Road at Capalaba and includes:

- Demonstration gardens
- Over a kilometre of walking tracks;
- An information centre and gift shop
- A nursery that provides locally native plant stock
- A meeting / training / events room
- A tea garden.

The demonstration gardens showcase the advantages of using locally native vegetation in urban and rural garden landscaping. The display gardens include: coastal garden, scribbly gum garden, formal garden, wildlife attracting garden, grey gum garden, water-wise garden, rainforest garden, wetland garden and a creek vegetation garden. All of these gardens demonstrate the use of locally indigenous species. The Redlands Indigiscapes Centre also provides office space and facilitates activities of Environmental Education Unit which delivers a number of education and extension programs as well as a number of research projects.

The Environmental Education Unit is divided into seven distinct areas, with each specialising in one of the following areas:

School Education

- Natural Resources Education
- Wildlife
- Bushcare
- Habitat protection Your Back Yard Garden Program, Land for Wildlife, Rural Support, Voluntary Conservation Agreements
- Water and Waste Education

6.5.2.1 Bushcare

This program is principally about environmental education and stewardship of natural areas. Apart from making on-ground advances in revegetation of sites, bushcare groups help disperse environmental knowledge and ethics into the surrounding community.

Many members of the Redlands community actively participate in the bushcare program. The bushcare program has been operating for over 10 years, and there are currently 44 bushcare groups supported by Council throughout the mainland and Bay Islands, with over 400 volunteers. Bushcare volunteers dedicate time and resources, with the assistance of Council, to managing and maintaining an area of local bushland which is important to them. This involves tree planting, weeding, rubbish removal and monitoring wildlife and waterways. The bushcare team most importantly educates the bushcare volunteers and the general public about the impacts of weed species on biodiversity and, hence, the importance of using locally native species in the bush and adjacent gardens / properties.

Bushcare Officers also develop and deliver environmental training packages to members of the public and Council. Some such packages are outlined as follows:

- Plant Morphology and Australian Plant Families This training package was provided for Council, public and bushcare volunteers. The course included theoretical and practical instruction on vegetative and floral morphology and key identifying characteristics of several Australian plant families.
- Site Herbarium course A program was established to train bush-carers about how to create a herbarium for their bushcare sites. The program included plant specimen selection, storage, drying & pressing, mounting procedures and identification. This was done in order to improve bush carers' knowledge of both weed and native plants.
- Weed Management This course includes training in the theoretical and practical components of weed management practices, identifying common weeds and formulating weed management plans.

6.5.2.2 Land for Wildlife Program

The Land for Wildlife Program is a voluntary scheme operating in Redlands for the owners of properties that are vegetated with retained or replanted bushland, which is an essential home for local wildlife. It aims to encourage and assist private landholders to provide habitats for native plants and animals on their property, even though the property may be managed primarily for other purposes.

6.5.2.3 Rural Support Program

Redland City Council introduced the Rural Support Program to help landowners manage their property. This program provides education to rural landowners and facilitates access to information and services. The initiative is aimed primarily at landowners who may not consider themselves to be conservationists. In addition to on site advice, participants may receive a grant and/or materials. It supports landholders whose properties either adjoin environmentally significant reserves or are located within identified wildlife corridors. Activities supported include weed identification and control, installation of wildlife, friendly fencing, revegetation and fire management planning.

6.5.2.4 Your Backyard Garden Program

The Your Backyard Garden Program provides advice to urban householders on garden layout, species choice, weeds, pest management, water-wise gardening and the values of existing vegetation including koala food tree and habitat. The initiative targets properties that can contribute to fauna pathways via vegetation corridors. Participating householders receive vouchers for free plants which are then redeemed at Indigiscapes centre. The program commenced in January 2004 and provides urban and non-urban areas with advice on maintaining and enhancing biodiversity in backyards, retaining food and habitat trees, waterwise gardening, weeds, pest management and the use of local native plants.

6.5.2.5 Schools Program

The "Schools Program" has been under way for a number of years now and provides for education of youth through a number of forums, schools program and Indigiscapes holiday program. The number of students engaged in the ISP (Indigiscapes Schools Program) has increased steadily since 2002, with the program providing a great range of activities for students and youth. The success of this program lies in reducing intergenerational transmission of previous environmentally unsustainable ideals and practices.

6.5.2.6 Voluntary Conservation Agreements (VCA)

The Redland's Voluntary Conservation Agreement (VCA) Program offers a very good way to protect land for future generations. The Redlands VCA is being offered to a few, select properties that we have identified as critical in the conservation of habitat corridors for wildlife movement and thus survival. It offers participating land-owners the opportunity to manage their land for conservation while encouraging sustainable economic activities. In return for agreeing to place a covenant on the title of private property and changing the planning zone to conservation or environmental protection, Council will provide the property owner with an annual cash grant to assist in managing the property for conservation, for a 10 year period. Council will also provide the property owner with personal advice on possible management options for the land.

A statutory covenant is a legally binding agreement between the land-owner and Redland City Council. It is registered on the title of the property and clearly states what activities can and cannot be carried out on the land. Most importantly, the covenant is binding on all future owners and ensures that they too must continue your conservation management practices. Council extension officers work with land owners to develop a management plan, including fire and pest management, water quality, revegetation and regeneration of bushland.

6.5.2.7 Wildlife Advice (provided by extension officers)

- Provide specialist advise and direction on fauna management
- Provide specialist advise for policy development
- Provide specialist advise to Council and community on fauna identification, distribution, physiology, behaviour, threats and mitigation measures
- Provide specialist advise on Conservation issues
- Initiate practical conservation measures for wildlife on Council controlled areas
- Responsible for monitoring of conservation reserves and parklands
- Participate in collaborative surveying and monitoring projects
- Co-ordinate research projects with other local governments, universities and community groups
- Liaise and consult regularly with a wide variety of external organisations
- Facilitate the flow of information between Conservation groups, Council, State, Government Departments and wider community
- Play a pivotal role in education schools, community and Council by raising local awareness in wildlife and conservation related issues
- Have extensive local knowledge

- Have established close ties with the community which enables them to be current with emerging issues / threats
- Maintain continuous consultation and liaison with the community on environmental issues
 - Co-ordinate the Redlands After-hours Wildlife Ambulance and Wildlife Care Network

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- $\circ~$ Date from these groups have directed Council in policies, procedures and development issues
- $\circ~$ It has contributed to the listing of the SE Qld Bioregion koala population as Vulnerable
- \circ $\;$ It has helped to identify trends and emerging issues and threats.

7. Assessment of Biodiversity Protection

7.1 Current Levels of Protection

The protection of biodiversity within Redlands is based upon a combination of enforcement of statutory laws (Commonwealth, State and Local), education and extension programs, Redland Planning Scheme (RPS), management plans and partnerships, and private stakeholder's initiatives.

However, threatening pressures continue, which inevitably lead to loss of biodiversity. A reevaluation of current policies, management plans and planning processes is required to prevent further biodiversity decline. An assessment of the effectiveness of present programs related to biodiversity protection and enhancement are presented in Table 3.

The loss and fragmentation of habitat from development pressure and land use is one of the main threatening processes. This threat is on-going and biodiversity protection will require financial costs, human resources, statutory planning protection, political and public support and determination if biodiversity is to be protected for the long term. Vulnerable and endangered species are initially at most risk, and effective protection is paramount.

7.2 Analysis of Biodiversity Protection

An analysis of the most fundamental issues associated with biodiversity protection in the Redlands is presented, and suggestions of where improvements to protecting biodiversity need to be addressed is shown in Part 2 - Action Plan.

Strengths

- Beautiful coastal location with high biodiversity values despite small size
- Numerous Iconic species such as koalas present within urban environment
- Excellent tourism and recreation industry
- Bay Islands & Moreton Bay on doorstep
- Redlands Planning Scheme conservation and environmental protection zones
- Excellent Extension and Education programs targeting private landowners
- Land acquisition strategy to protect and manage land for conservation
- Internationally recognised Ramsar wading bird sites on doorstep
- Population growth expanding economy and prosperity
- Significant cultural heritage values
- Indigenous Traditional Owners values and knowledge of biodiversity

Weaknesses

- Lack of inter-governmental communication
- Lack of Community awareness
- Lack of local and specialised knowledge within Council
- Limited protection of habitat within urban footprint
- Lack of information on location of many threatened species

Opportunities

- Strong Council leadership to maintain existing extent of remnant vegetation throughout the City, not allow mainland to fall below recommended ecological limit of minimum 30 percent
- Increase biodiversity protection on private properties by increasing resources to existing extension programs and incentives
- Enhance habitat functionality on mainland by increasing plantings
- Embracing sustainability initiatives
- Addressing and responding to climate change
- Greater biodiversity knowledge through research for increased protection and management
- Installation of fauna habitat and movement infrastructure
- Increased protection of biodiversity by reviewing Local Laws
- Higher level of inclusion of Traditional Landowners in biodiversity protection
- Excellent eco-tourism and social values

Threats

- Continued habitat clearing and modification despite high levels of conservation and environmental zoning
- Traditional urban development practices modifying landscape and hydrology
- Pollution
- Population growth
- Existing and future roads
- Pests and Weeds
- Lack of funding
- Ability to attract external funding or collaborative research projects
- Potential Rural Precinct
- Climate change

Program / Policy					P	rotection Cap	acity for Biod	diversity Valu	es	
	Habitat Corridors / Cores	Remnant Vegetation	Threatened REs	EVR Species	Waterways	Wetlands	Ramsar Sites - Waders	Riparian Corridors	Private Land / Urban	Comments - Effectiveness
Biodiversity Strategy	3	3	3	3	3	3	3	3	3	
Koala Management Policy	3	3	1	1	2	2	1	2	3	Changes required for greater protection of urban koala populations
Vegetation Enhancement Policy	3	3	2	3	2	2	2	2	3	Better protection of remnant vegetation required, particularly in urban areas
Environment Policy	3	3	2	3	3	3	3	3	3	More protection and rehabilitation of waterways required
Environment Charge Acquisition Policy	3	3	2	2	3	3	2	3	2	Excellent for purchasing and managing significant parcels of land
										Current levy not enough to compete with development in urban areas
Pest Management Plan	1	2	1	2	2	2	2	2	2	Too slow to implement – lack of financial and human resources
Redlands Planning Scheme	3	3	3	3	3	3	3	3	3	High levels of Conservation and Environmental Protection on existing vegetation
										Part 11 RPS Policy 4 – Ecological Impacts comprehensive
										Not preventing clearing of vegetation
Local Law - 2 Keeping and Controlling Animals	1	1	1	2	1	1	2	1	2	Dogs contributing to koala mortality, dogs disturbance of shorebirds at roost areas in Ramsar sites
Local Law 6 - Protection of Vegetation	3	3	3	3	3	3	3	3	3	Limited powers in urban areas with application of exemptions
										Vegetation Protection Orders need to be extended in urban footprint to protect significant vegetation
Local Law 13 - Control of Pests	2	2	2	3	2	2	2	2	3	Potential for addressing threatening processes that effect biodiversity, presently limited resources restricting Pest Management Plan
Your Back Yard Garden program	3	3	3	3	2	2	2	3	3	Excellent program targeting education and protection of biodiversity in urban areas, this program requires increased funding to target greater number of properties
Rural Support program	3	3	3	3	2	2	2	3	3	Excellent program targeting education and protection of biodiversity in rural areas, this program requires increased funding to target greater number of properties

Table 3. Assessment of present protection capacity of Redland City biodiversity values.

Program / Policy					P	rotection Capa	acity for Biod	diversity Valu	es	
	Habitat Corridors / Cores	Remnant Vegetation	Threatened REs	EVR Species	Waterways	Wetlands	Ramsar Sites - Waders	Riparian Corridors	Private Land / Urban	Comments - Effectiveness
Land for Wildlife	3	3	2	3	2	2	3	2	3	Excellent concept but current annual funding limiting project potential
Voluntary Conservation Agreements	3	3	3	3	3	3	3	3	3	Slow uptake on properties in scheme to date. Property owners not prepared to commit. VCA review required.
Catchment Management Plans	3	2	2	2	3	3	2	3	3	Waterways continue to have poor ratings under EHMP, low aquatic biodiversity & poor water quality
Environmental Education - Indigiscapes	2	2	2	2	2	2	2	2	2	Increases biodiversity awareness to public and supports community based biodiversity protection activities and efforts
Environmental Education -Research Projects	2	3	3	3	2	2	2	2	2	More biodiversity information / mapping required prior to development
Bushcare groups	3	3	3	3	3	3	3	3	2	Excellent work and Council should continue to encourage and support
Biodiversity related Research Projects	2	2	2	3	2	2	2	2	2	Limited number of projects to date or availability of knowledge transfer is low due to staff turnover
										Number of projects can be increased in future by co- ordinated efforts between departments
Schools Program	2	2	2	2	2	2	2	2	2	Increases biodiversity awareness to pre-school and school aged children
Wildlife	2	2	2	3	2	2	2	2	3	Excellent program targeting education, provision of technical advise and protection of wildlife diversity in the City (including Wildlife ambulance and wildlife care network)

3 = Direct contribution to protecting biodiversity values or key focus for programme; 2 = Indirect support – programme increases protection of biodiversity values; 1 = Limited to no contribution to protecting biodiversity

8. Addressing relevant Biodiversity Strategies

8.1 National Strategy for Ecologically Sustainable Development (1992)

"To protect biological diversity and maintain ecological processes and systems."

This strategy sets out a strategic approach to improve the level of coordination of the current range of activities in this area; implementing Australia's international obligations; strengthening the practical skills and knowledge of land managers; completing strategies for the management of plant and animal pests, improving management of veterinary chemicals, and conserving native vegetation, including encouraging off-reserve conservation.

Objective 9.1 suggests to develop effective mechanisms for minimising human, pest plant and animal impacts on ecological systems, expand habitats for native species of plants and animals, while maintaining a diverse and healthy economy. The strategy outlines that Government will:

- a) Continue cooperative work, actions and initiatives contained under the Landcare, Save the Bush and Endangered Species Programs and the National Forests Policy Statement
- b) Ensure mechanisms, including legislation, for the protection, conservation and management of flora and fauna reflect ESD principles
- c) Through ANZECC, and in consultation with relevant Ministerial Councils, assess the implications of the Convention on Biological Diversity and the draft National Strategy for the Conservation of Australia's Biological Diversity
- d) On the basis of this assessment, finalize, implement, monitor, and review the National Strategy for the Conservation of Australia's Biological Diversity
- e) At the Commonwealth level, and following consultation with States and Territories, work towards ratification of the Convention on Biological Diversity. Once it comes into effect, obligations under this Convention would include:
 - Identification and monitoring important components of biological diversity
 - Measures for *in situ* and *ex situ* conservation
 - Encouraging integration of the mechanisms for conservation and sustainable use of biological diversity into decision making processes
 - Reporting on measures taken to implement the convention and their effectiveness.

8.2 National Strategy for the Conservation of Australia's Biological Diversity (1996)

The National Strategy for the Conservation of Australia's Biological Diversity to which the Queensland Government is a signatory, defines a set of key components that can be used to identify priority areas for biodiversity conservation, including social, economic or scientific importance, and those components of biodiversity not adequately protected in reserves.

The Strategy recognises that:

- a) The conservation of biological diversity provides significant cultural, economic, educational, environmental, scientific and social benefits for all Australians
- b) There is a need for more knowledge and better understanding of Australia's biological diversity
- c) There is a pressing need to strengthen current activities and improve policies, practices and attitudes to achieve conservation and sustainable use of biological diversity
- d) We share the earth with many other life forms that have intrinsic value and warrant our respect, whether or not they are of benefit to us

- e) It acknowledges the core objectives of the National Strategy for Ecologically Sustainable Development:
 - To enhance individual and community wellbeing and welfare by following a path of economic development that safeguards the welfare of future generations
 - To provide for equity within and between generations
 - To protect biological diversity and maintain essential ecological processes and life-support systems.
- f) It accepts the guiding principles of the National Strategy for Ecologically Sustainable Development
- g) Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations
- h) Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- i) The global dimension of environmental impacts of actions and policies should be recognised and considered
- j) The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- k) The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms
- m) Decisions and actions should provide for broad community involvement on issues which affect them.

The following principles have been adopted as a basis for the Strategy's objectives and actions and should be used as a guide for implementation:

- a) Biological diversity is best conserved in-situ
- Although all levels of government have clear responsibility, the cooperation of conservation groups, resource users, indigenous peoples, and the community in general is critical to the conservation of biological diversity
- c) It is vital to anticipate, prevent and attack at source the causes of significant reduction or loss of biological diversity
- d) Processes for and decisions about the allocation and use of Australia's resources should be efficient, equitable and transparent
- e) Lack of full knowledge should not be an excuse for postponing action to conserve biological diversity
- f) The conservation of Australia's biological diversity is affected by international activities and requires actions extending beyond Australia's national jurisdiction
- g) Australians operating beyond our national jurisdiction should respect the principles of conservation and ecologically sustainable use of biological diversity and act in accordance with any relevant national or international laws
- h) Central to the conservation of Australia's biological diversity is the establishment of a comprehensive, representative and adequate system of ecologically viable protected areas integrated with the sympathetic management of all other areas, including agricultural and other resource production systems
- i) The close, traditional association of Australia's indigenous peoples with components of biological diversity should be recognised, as should the desirability of sharing equitably benefits arising from the innovative use of traditional knowledge of biological diversity.

8.3 Regional Nature Conservation Strategy for SEQ 2003 – 2008

Vision for region is:

South-East Queensland's rich biodiversity is better understood, valued and conserved through co-operative processes, so that it thrives and continues to underpin improved ecological, economic, social and cultural well-being, and allows the Indigenous Traditional Owners to continue their living culture until the end of time.

Objectives

The Strategy's objectives are to:

- a) Identify and conserve areas of nature conservation significance within the region, using a consistent methodology
- b) Raise levels of awareness, understanding and commitment to conserving the region's biodiversity
- c) Involve all stakeholders and Indigenous Traditional Owner in co-ordinating, implementing and monitoring the conservation and management of the biodiversity values in areas of nature conservation significance.

Outcomes

Primary outcomes to be achieved by the Strategy include:

- a) Common understanding of the nature and extent of nature conservation significance and biodiversity values
- b) Conservation of biodiversity values in areas of nature conservation significance and in Indigenous Traditional Owner ancestral homeland estates
- c) Improved or maintained conservation status of threatened species and endangered and of-concern ecosystems in the regions
- d) Minimisation of climate change impacts and establishment of a base for adapting to anticipated climate change
- e) Actions to protect, maintain and rehabilitate areas of nature conservation significance area identified, formulated and advanced by stakeholder partnerships involving Indigenous Traditional Owners, individuals, communities, government and non-governmental agencies
- f) Continuing refinement and up-dating of the identification, conservation and management of areas of nature conservation significance
- g) Improved capacity of all land managers to make informed and high-quality decisions about the biodiversity in the region, and thus to reconcile the potential conflict between development and conservation
- h) A comprehensive, adequate and representative system of areas (including parks, reserves and lands under voluntary conservation mechanisms), co-operatively established and managed by local and State land management agencies, Indigenous Traditional Owners and other interested groups
- A higher level of community commitment to achieving on-ground results for nature conservation (e.g. through voluntary conservation agreements and the Land for Wildlife program)
- j) A clear strategic direction and strong commitment to identified conservation priorities in the region.

This strategy is currently being reviewed in conjunction with representatives from State agencies, Regional NRM stakeholder groups, Traditional Indigenous Landowners and Local Government Authorities.

Part 2 - Action Plan

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1. Implementation

The Action Plan directs how Council will implement processes to address objectives for the biodiversity strategy. It provides an implementation schedule by providing a range of actions that will work towards addressing many issues impacting on biodiversity.

The action plan identifies a number of key themes within each objective, the actions required to address these themes and the desired outcomes. A timescale and level of priority has been assigned to each action so that issues requiring urgent attention are prioritised. The Council department responsible for implementing the action is listed first, but will consult and involve the other departments listed. An indicative cost provides estimation of the annual or on-going costs associated with implementing the objectives in the action plan.

Three levels of priority have been assigned dependent upon the urgency, current levels of understanding and protection, and Council's ability to address the actions.

Essential - These have been identified as actions that should be **immediately** addressed to protect biodiversity and reverse current trends (within 1 to 3 years). Some issues may have been partially addressed in the past but have been neglected or over-looked, but by not instigating actions will result in short term loss of biodiversity. This includes endangered species and regional ecosystems, several vulnerable iconic species (such as koala, glossy back cockatoo, greater gliders, *Corchorus cunninghamii*); Ramsar listed shorebirds and threatened wetlands. Several locally significant regional ecosystems are so close to extinction within the City that these could be permanently lost immediately unless adequately protected. Sufficient Council resources (staff and finances), Council determination, legislative protection, high levels of stakeholder participation and education will be required if any difference is to be protecting these values.

Highly Desirable - These have been identified as actions that require addressing secondary to high priority actions or on medium timescale (over period of 3 to 5 years). However, some of these actions will be partially addressed as a result of the high priority. This includes management actions of vulnerable and rare species, and of-concern regional ecosystems. This also includes addressing issues such as climate change, sea-level rise, sustainability, offsets and carbon trading, and longer term enhancement activities.

Desirable - These are actions that require addressing when high and medium priority actions have been implemented or over a longer timescale (>5 years). Some of these actions will be influenced by addressing the above actions. This includes management actions of all listed fauna and flora terrestrial and aquatic species and not-of-concern regional ecosystems. It also represents actions that occur over longer periods of time such as re-assessing non-remnant vegetation which may take decades.

It is recognised that the levels of priority assigned to these issues and actions may change over time by changes in factors such as:

- Commonwealth, State and Local species designation
- Commonwealth, State and Local Policy and Legislation
- Regional Ecosystem status
- Redland Planning Scheme zoning and overlays
- Development Applications
- Natural and man-made causes.

2. Monitor & Review

Monitoring the effectiveness of the actions outlined in the strategy is important to gauge the success or failure of the key outcomes of each objective. One of the prime indicators of success will be the review of the indicators of biodiversity within the State of Environment report. The ultimate indicators of success will be no reduction of existing extent of remnant or non-remnant vegetation, loss of regional ecosystems or core species, and rehabilitation of habitat associated with wildlife corridors and aquatic ecosystems.

Monitoring of the Redland's biodiversity status will involve:

- a) Assessment on performance of environmental projects and surveys associated with endangered and vulnerable biodiversity – increased levels of knowledge and management of threatening processes
- b) Increased levels of conservation protection of endangered / vulnerable biodiversity management strategies, land acquisition, extension and education, planning scheme protection and local laws
- c) Monitoring effectiveness of the Redlands Planning Scheme
- d) Improvement in key indicators outlined in State of Environment report
- e) Assessment of biodiversity condition and effectiveness of management plans, with the opportunity to implement changes on regular basis.

Outcomes that can measure the implementation of the biodiversity strategy include:

- a) Annual progress reports of fauna / flora and regional ecosystems targeted from priority lists
- b) Number of completed faunal / floral surveys and management plans to address threatening processes
- c) Annual calculation of areas under environmental protection from extension programs and land acquisition
- d) Annual updates of the extent of remnant and non-remnant vegetation.

3. Financial Implications

The Council has and continues to contribute substantial funding to the protection and enhancement of biodiversity, as outlined on pages 41 & 42. Additional to existing commitments, there are proposed costs relating to specific projects and objectives that require funding or budgetary allocation through capital works as shown in Table 4. Initial costs for 2008/09 budget is \$50,000, whilst on-going additional funding for achieving biodiversity objectives is estimated at \$80,000 per annum.

Indicative financial costs associated with completing the objectives and actions are outlined in the action plan. Most of the objectives outlined in the action plan will be completed in-house by Council Officers at no additional cost.

Table 4. Indicative costs associated with achieving the achieving the objectives outlined in the action plan.

Objective	Action	2008/09	On-going
		Costs	Annual Costs
1.6 Protection of shorebirds roost and feeding sites	Increased public awareness and protection by installation of additional signage and fencing and / or other infrastructure for Ramsar sites	\$50,000	
2.1 Increase extent of remnant vegetation	Annual mapping of non-remnant vegetation to confirm status		\$10,000
2.7 Waterways ecological restoration	Increase aquatic research for in-creek ecological restoration		\$30,000
3.1 Develop a greater understanding of biodiversity issues, values and solutions	Annual funding for biodiversity related projects		\$50,000
	Total =	\$50,000	\$80,000

OBJECTIVE 1 - PROTECTION & MANAGEMENT

Protect and effectively manage remnant and non-remnant vegetation (bushland habitat), significant urban vegetation, core species and ecological communities of plants and animals native to Redlands for future generations to enjoy.

The main goal of this objective is the protection and management of remnant and nonremnant vegetation (bushland habitat), significant urban vegetation, core species and ecological communities of fauna and flora native to Redlands. Bushland habitat and wildlife corridors have been identified and mapped as Conservation Management Areas (CMA) in the Environmental Inventory that forms the basis for the Redland's Planning Scheme Bushland Habitat Overlay. This must be protected and managed to retain the large areas of relatively "undisturbed" habitat and the associated species and regional ecosystems, and the movement of fauna throughout Redlands. Protection of bushland habitats will reduce the decline of biodiversity, but management for conservation purposes will be required to prevent habitat degradation.

Significant urban vegetation need to be adequately protected and maintained under Local Law 6 with Vegetation Protection Orders (VPO). In 2005, 24 percent (2100 ha) of vegetation was located within the urban footprint on the mainland, with only 219 ha having VPO and 349 ha with Tree Protection. This vegetation provides important habitat for many core or 'iconic' species (particularly urban koala, flying foxes and gliders). Many areas within the urban footprint are too small or fragmented to be mapped as remnant vegetation (or have no protection under VMA), but protection and re-linking fragmented patches is crucial.

Protection of high conservation value and endangered biodiversity (fauna, flora, regional ecosystems) is fundamental to maintaining biodiversity; however Council resources must be directed at realistic and achievable targets for protecting biodiversity. Conservation of all species, may not be realistic or achievable, Council recognises that protection of locally "significant" and / or "iconic" species, their habitats and corridors, will be most effective in preventing biodiversity decline. Protection of these habitats will ensure the survival of associated species that co-exist in these areas.

Identification and management of threatening processes is fundamental to preventing loss. On-going research and education is important to understanding the geographic range and demographics of biodiversity ie. we must understand where it is and how many there are in order to better protect and manage.

Key Themes

- Maintain or improve existing extent of remnant and non-remnant vegetation
- Protect all aquatic habitats, wetlands and coastal environment
- Minimise loss of core species
- Identify and manage the processes that threaten core fauna and flora
- Identify and protect Indigenous Traditional Landowner's cultural and biodiversity values
- Disseminate information and provide advice to Council, landholders & developers on biodiversity protection and management.

Key Actions

- Identify extent, condition, threatening processes and pressures on Critically Endangered / Endangered / Vulnerable / Rare fauna and flora species, Endangered / Of-concern Regional Ecosystems and land zones, Iconic Species, Wetlands / Waterways / Foreshores and Locally Significant Priority Taxa
- Develop management plans to protect against threatening processes

- Prioritise strategies for land acquisition, urban and rural extension projects
- Ensure implementation of Commonwealth and State legislation
- Ensure Redland Planning Scheme adequately protects identified species and ecosystems, through the assessment of development proposals
- Ensure Local Laws adequately protect biodiversity
- Regular update of Environmental Inventory and Vegetation Mapping as new information is obtained
- Ensure development assessment adequately protects endangered / vulnerable species and endangered / of-concern regional ecosystems highlighted from research to ensure future protection, and prioritise biodiversity and greenspace values as top priority during development assessments
- Ensure "biodiversity aware" and sustainable development through the development assessment process
- Using information from research and surveying that confirm biodiversity values for endangered / iconic species, these areas are given Conservation Zoning and / or Environmental Protection zoning, and environmental inventory up-dated
- Ensure current and future faunal infrastructure is compatible with biodiversity conservation and management, and increase budget for fauna infrastructure in capital works projects
- Overlay Bushland and Habitat Corridor Plan 2004 mapping over current infrastructure planning to identify future conflicts between habitat crossings and developments – develop greenspace corridor plan
- Ensure adequate environmental assessments and consultation with Environmental Management during assessment process prior to commencement of works
- Ensure vegetation is considered as long-term environmental assets and protected for long-term, particularly tree-hollows
- Assessment of the functionality of waterways to ensure correct and appropriate aquatic infrastructure is used i.e. fishways / culverts ensure prior environmental assessments and consultation
- Develop long-term management strategies to ensure protection and survival, and to reduce local extinctions (100 years +).

Key Outcomes

- Maintain all remaining remnant vegetation (30 percent) on the mainland
- Maintain all existing remnant and non-remnant vegetation on North Stradbroke Island
- Maintain all existing conservation and environmental protection zoned vegetation on Southern Moreton Bay Islands
- Maintain all 39 regional ecosystems
- Effective faunal movements by protection of wildlife corridors
- Threatening processes to core species are identified and managed
- Keeping animals and plants, and terrestrial and aquatic ecosystems viable for future generations to enjoy.

Objective 1	Action	Outcome	Time Scale	Responsible	Indicative Costs
1.1 Maintain and protect existing extent of vegetation (including each remnant / non-remnant, riparian, wetlands and non-woody groundcover)	1.1.1 Prevent clearing of remnant or non-remnant habitat by implementing the existing provisions of the RPS	 Retention of: Remaining 30 percent of remnant vegetation on the mainland All vegetation on North Stradbroke Island All conservation zoned habitat on SMBI Balance future residential or industrial development 	Immediate On-going	Planning & Policy Development Assessment	Absorbed in existing positions
	current Urban Footprint or previously cleared rural landscape that has been appropriately zoned	without preventing development			
1.2 Co-ordinated response and increased awareness of threatened biodiversity within Council	1.2.1 Establish Biodiversity Working Group within Council	Tasked with ensuring actions of biodiversity strategy are completed Lists of fauna / flora and regional ecosystems prioritised for research for protection and management	1-3 years	Environmental Management Environmental Education	Absorbed in existing positions
	1.2.2 Conduct regular meetings within Council to disseminate information & exchange ideas	Formalise survey techniques & information collation	1-3 years		
	1.2.3 Locate, ground truth and map Endangered / Vulnerable fauna & flora	Updated Flora / Fauna listing and mapping that can be used to assist EM with Management Plans for biodiversity protection	On-going		
	1.2.4 Identify areas of threatened biodiversity ecosystems including wetlands	Priority ecosystems list on public and private land	On-going		
	1.2.5 Prioritise and develop management plans to ensure long-term survival of Iconic Species	Management plans for the protection and conservation of Redlands Iconic Species	On-going		
1.3 Improve or at least maintain existing extent of vulnerable Regional Ecosystems	1.3.1 Update and refine mapping of Endangered / Of-concern and locally vulnerable regional ecosystems	Priority Endangered / Of-concern Regional Ecosystems property list for protection of at least 4 percent of pre-clear extant	1-3 years	Environmental Management Environmental	Absorbed in existing positions
	1.3.2 Ecological surveys of properties mapped as endangered / of-concern Regional Ecosystem to assess level accuracy	Ground truthing of properties – report to Queensland Herbarium if amendments are required	On-going	Education Land Use Planning	
	1.3.3 Using Prioritised Regional Ecosystem property list ensure conservation protection on these properties using extension programs, land acquisition, planning scheme, research projects	Increased area of endangered / of-concern RE & associated biodiversity having conservation and environmental protection zoning	On-going		

Objective 1	Action	Outcome	Time Scale	Responsible	Indicative Costs
1.4 Increase levels of future biodiversity protection	Identify and prioritise threatening processes and develop local	Develop management action plan that will prevent the further degradation of biodiversity values	On-going	Environmental Management	Absorbed in existing
	management plans for endangered & vulnerable species			Environmental Education	positions
1.5 Recognise Indigenous Traditional Landowners cultural and biodiversity	Consultation with Indigenous Traditional Landowners for input into protection of	Incorporate Indigenous Traditional Landowners knowledge into biodiversity management	On-going	Environmental Management	Absorbed in existing
values	Redland's biodiversity			Social Planning	positions
1.6 Increases public awareness and protection of Ramsar listed shorebirds	1.6.1 Collaborative effort between EPA and Council to map roost and feeding	Local Shorebird Management Plan to address issues to protect shorebird roost sites	1-3 years	Environmental Management	Absorbed in existing
roost and feeding sites	sites & identification of specific threatening processes			Environmental Education	positions
	1.6.2 Identify areas along shoreline for creation of artificial roost sites	Creation of artificial roost sites & enhancement of eco-tourism industry by ensuring long-term	> 5 years	EPA / QPWS	
		protection		Qld Wader Studies Group	
		Compensatory shorebird habitat provided prior to loss or degradation of existing shorebird habitat where development and activities have the potential to adversely impact on critical shorebird roost sites		Studies Group	
	1.6.3 Installation of signage and fencing and / or other infrastructure for site protection and / or facilitation of visitor access	Increased level of protection through environmental education and public awareness, prevention of public access to most sensitive areas	3–5 years		2008/09 \$50,000
	1.6.4 Assist Qld Waders Study Group in GIS mapping of Ramsar sites along Redland's coastline	Data incorporated in RSC fauna database – used to assess changes in shorebird populations and amend RPS as required	3-5 years		2008/09 \$2,000
1.7 Protection of wetlands	Identify and prioritise threatening processes and develop long term management plans for wetlands not	Long term protection of wetlands and associated biodiversity by effective management of threatening processes	3–5 years	3–5 years Environmental Management	
	previously investigated	Increased area and effectiveness of buffer zones around wetlands using Waterway & Wetland Code in RPS	3–5 years		
		Increased buffering area for protection of foreshores, including sand dunes, mangroves using Waterway & Wetland Code in RPS	3-5 years		
1.8 Protection of waterways	1.8.1Establish an annual local monitoring program of freshwater waterways health	Local waterways health monitoring annual assessment to compliment and expand Ecosystem Health Monitoring Program	On-going	Environmental Education	Absorbed in existing positions
	1.8.2 Increase public awareness and participation in protecting waterways on private land	Waterways extension program to provide advise and assistance for private landowners			

Objective 1	Action	Outcome	Time Scale	Responsible	Indicative Costs
	1.8.3 Increase number of automatic water testing equipment	All major creek systems monitored for water quality, particularly to ensure rehabilitation works are effective at improving water quality	5-10 years		
		Water quality data acquired to check compliance with ANZECC guidelines			
	1.8.4 Use of artificial wetlands for nutrient removal from treatment plants	Increased area of wetlands to improve water quality, flood prevention, habitat refuge	>5 years		
1.9 Update vegetation & wildlife corridors	Review Environmental Inventory for Redland Planning Scheme	Updated vegetation mapping, environmental inventory and biodiversity assessment including NSI, SMBI	Every 5 years	Environmental Management Land Use	Absorbed in existing positions
		Areas of high biodiversity that are not presently endangered identified for future protection	Within 5 years	Planning	
1.10 Protection of habitat hollows	Mapping of hollows and species identification that use the hollows and	Protection of individual trees that provide critical roost sites and nesting habitat for hollow dependent	On-going	Environmental Management	Absorbed in existing
	develop as overlay for Red-e-map	fauna – listed as significant vegetation		Environmental Education	positions
				ІТ	
1.11 Collection & dissemination of biodiversity information	Establish internet site for biodiversity related database for surveys and GIS	Surveying information & data collation	1-3 years	ars Environmental Management	Absorbed in existing
	products	Information exchange – biodiversity advise, weed /	1-3 years	Environmental Education	positions
		pest advise Provision of up-to-date ecological and planning scheme mapping	1-3 years	Communication	
1.12 Increased level of co-operation and information exchange between Council departments	Monthly information exchange between Council departments to ensure best environmental outcomes	Increased level of communications between Land Use Planning, Development Assessment, Environmental Management, Infrastructure, Project Delivery Group, Redland Waste & Water, Environmental Education Unit and Conservation	On-going	Environmental Management	Absorbed in existing positions
1.13 Increased level of co-operation and information exchange between Local	Meetings between Local Governments and State Government on biodiversity	Increased level of co-operation and communication between Local Governments and State Agencies for	On-going	Environmental Management	Absorbed in existing
Governments and State departments	related issues	biodiversity and conservation related issues		Government Departments	positions
				Local Councils	
1.14 Updated land purchase for conservation purposes	1.14.1 Continual review of Land Acquisition watchlist	Updated land acquisition watchlist with properties identified from updated City vegetation & biodiversity assessment including NSI & SMBI	On-going	Environmental Management	Absorbed in existing positions
	1.14.2 Develop priority watchlist of	List of properties identified that have Endangered &	On-going		

Objective 1	Action	Outcome	Time Scale	Responsible	Indicative Costs
	properties with Regional Ecosystems	Of-concern Regional Ecosystem status			
1.15 Increased levels of biodiversity protection on private land	1.15.1 Expand existing Environmental Extension programs	More private properties within Urban and Rural footprint targeted for assistance with environmental conservation – increased area under protection	1-3 years	Environmental Management Environmental	Absorbed in existing positions
		Property based biodiversity assessments – surveying information collated in database & monitored over time	1-3 years	Education	
	1.15.2 More flexible financial incentives for private land owners that wish to protect biodiversity values on their properties	Promote VCA Financial reward scheme for private land owners to retain, protect and enhance biodiversity on their properties – properties audited and offered Council rebate	On-going		
1.16 Increase levels of biodiversity protection through Council Policy and	1.16.1 Review current Local Laws relevant to biodiversity values	Ensure adequate level of legislative protection and enforcement on public land and private properties	Within 3 years	Environmental Management Land Use Planning	Absorbed in existing
Local Laws		Increase quantity of urban vegetation protection using Vegetation Protection Orders on private and freehold land			positions
	1.16.2 Ensure adequate biodiversity protection in Sustainable Policy	Legislation to protect local endangered biodiversity values i.e. Endangered / Of-concern RE or presence of E / V / R / iconic species	Within 3 years		
		Ensure Council legislation addresses State and Commonwealth legislation for biodiversity protection	Within 3 years		
1.17 Update and refine Redland Planning Scheme to protect biodiversity	Review Redland Planning Scheme as new biodiversity information becomes available	More accurate conservation and environmental protection from surveying and research projects	On-going	Environmental Management Land Use	Absorbed in existing positions
		Amendments to Planning Scheme on regular basis to protect biodiversity – conservation zoning to be placed upon areas identified as 'high biodiversity value'	On-going	Planning	
		Strengthen protection of koala habitat trees by adopting State Koala Policy Criteria 1 & 2 for uncommitted development	On-going		
1.18 Increased external funding for biodiversity protection	Seek external / in-kind funding for biodiversity projects	Increased number and scope of biodiversity related projects	On-going	Environmental Management	Absorbed in existing
				Environmental Education	positions
1.19 Review of fauna infrastructure	Assess effectiveness of fauna infrastructure including:	Develop a "Green Corridor" plan for the upgrade and installation of fauna infrastructure in prioritised areas	3-5 years	Environmental Management	Absorbed in existing
	 Fauna Overpasses / Underpasses Fish ways Roost sites Signage Speed restrictions 	such as road crossings to facilitate koala and other animal movements		Environmental Education	positions

Objective 1	Action	Outcome	Time Scale	Responsible	Indicative Costs
	 Lighting 				
1.20 Implement recommendations of under-grounding powerlines study	1.20.1 Develop exotic streetscape tree planting replacement scheme	Increase proportion of native streetscape trees for native biodiversity, particularly koala feed / living trees in urban areas	3-5 years	Environmental Management	Absorbed in existing positions
	1.20.2 Consultation with Energex for co- ordinated approach to replacement and future planting, and management of individual trees as per MOU	Ensure footpaths wide enough to accommodate native tree species – future growth an root systems	3-5 years		
1.21 Mandatory fauna infrastructure	1.21.1 Service Level Agreements (SLA) between Infrastructure Planning, Land Use Planning & Environmental Management to ensure infrastructure planning takes into consideration biodiversity values	Ensure fauna infrastructure is mandatory planning requirement for all new developments, expansions, road works	1-3 years	Environmental Management Infrastructure Planning Project Delivery	Absorbed in existing positions
	1.21.2 Increase Council awareness of ecological implications of development and construction activities	More eco-friendly development designs and construction techniques	1-3 years		

OBJECTIVE 2 - REHABILITATION

Regenerate and restore native vegetation, wildlife corridors, and terrestrial and aquatic ecosystems that have been degraded or lost ecological function back to a condition of good health.

A range of land uses has degraded ecosystems and has left many habitats in the Redlands at threat from impacts associated with isolation and fragmentation, weed and pest invasion, adverse land uses, altered nutrient and hydraulic cycles, inappropriate fire regimes, loss of species and subsequent losses of symbiotic relationships. Targeted ecological rehabilitation actions are required to reverse threatening impacts. Ecological rehabilitation actions will promote the recovery of ecologically sustainable landscapes and healthy waterways, which ultimately benefits commercial land users, rural industries and recreational activities by buffering ecosystems against threatening processes. Rehabilitation will serve to repair wildlife habitats and corridors, improve aesthetic qualities and provide employment opportunities.

One main target is to increase the amount of remnant vegetation on the mainland to at least the quantity present in 2001 by 2031. This means that approximately 1600 ha of existing non-remnant vegetation requires protection to allow to achieve remnant status and new plantings on public and private land are identified for revegetation and appropriately protected (total of 8% of mainland to be re-classified as remnant vegetation by 2031). This would address the SEQ NRM Resource Condition Target to address the SEQ Regional Plan's desired regional outcome for at least 35 percent remnant vegetation cover.

Key Themes

- To reverse biodiversity decline in core species, bushland habitats and the restoration of wildlife corridors
- To prevent decline in koala population, promote restoration of koala habitat, health and increase numbers
- To reduce threatening processes and improve biodiversity health
- To respond to potential climate change for core species
- To implement sustainable management practises.

Key Actions

- Rehabilitation of corridors, riparian vegetation, wetlands and Endangered / Of-concern Regional Ecosystems
- Identify and prioritise threatening processes to waterways, riparian areas, wetlands and coastal areas and undertake appropriate rehabilitation projects
- Five yearly confirmation of non-remnant ecosystems to check status, re-classify to remnant if eligible and protect under RPS
- Regular review and update of RPS to include new areas for Conservation zoning from surveying and research on "significant" species and ecosystems
- Increase co-operation between Council Departments through Service Level Agreements (SLA)
- Support and encourage Sustainability Strategy
- Support and encourage offset & carbon trading initiatives
- Improved infrastructure and design to protect and enhance biodiversity

- Increased biodiversity awareness by educating engineers, infrastructure planners
- Assess current effectiveness of fauna infrastructure and implement corrective actions to prevent further decline in biodiversity from anthropogenic threats such as vehicles, boats, walkways
- Increase proportion of native trees in Council ownership and implement tree replacement, including koala habitat trees native to Redlands
- Enhance the condition of ecosystems and increase the extent of native vegetation cover through targeted ecological restoration works and development of appropriate planning controls
- Ensure development approved conditions require rehabilitation where appropriate
- Encourage appropriate ecologically sensitive development
- Achieve appropriate domestic and pest animal management which is compatible with biodiversity conservation and management
- Enhance effectiveness of existing programs directed at private property stakeholders by supporting extension programs such as Your Backyard Garden, Rural Support and Land for Wildlife
- Develop new initiatives to target biodiversity on properties in urban areas, particularly to assist urban koala populations – network connection plan to link fragmented vegetation in urban areas and increase levels of native vegetation
- Lobby State and Federal Governments to increase levels of legislative protection for urban koala populations
- Address long-term issues such as climate change and sea-level rise, which will potentially result in loss of habitat including shorebird roost & feeding sites, coastal wetlands and land zones, and biodiversity associated with habitat loss.

Key Outcomes

- Increased extent of remnant vegetation on mainland by at least 1600 ha by 2031 (by protection of existing non-remnant vegetation, re-growth and new plantings)
- Ensure wildlife corridors are effective
- Improve and maintain waterway health
- Address future global impacts such as climate change on biodiversity
- Increase private stake-holders responsibility in restoration of functional ecosystems.

Objective 2	Action	Outcome	Time scale	Responsible	Indicative Costs
2.1 Increase protection of existing non- remnant re-growth vegetation by 2026	2.1.1 Annual mapping of non-remnant vegetation to confirm status	Contributes towards increasing the extent of remnant vegetation by at least 1600 ha	2026	RSC	Absorbed in existing positions
	2.1.2 Ensure budgetary process allows for expenditure for annual mapping	Adequate consultant fees for mapping	On-going	Environmental Management	Consultant costs
					\$10,000 / annum
	2.1.3 Rezoning of non-remnant RE as conservation or environmental protection that has minimal protection and under potential threat	Higher protection of non-remnant vegetation that will achieve RE status in future	On-going	Land Use Planning	Absorbed in existing positions
2.1 Identify specific threats to E/V/R species	Risk assessment of threatening processes to protect	Recommendations to address specific threatening processes for E/V/R, iconic species,	Ongoing	oing Environmental Management Environmental Education	Absorbed in existing
	biodiversity as outlined in fauna / flora management plans	locally significant species and endangered regional ecosystems			positions
2.2 Reduce threatening processes due to pests	2.2.1 Implement Pest Management Plan (PMP)	Reduction in effects of pest species on native biodiversity	Ongoing	Environmental Management	Absorbed in existing positions
	2.2.2 Review PMP success	Implement any changes required to ensure PMP is working properly	On-going		
	2.2.3 Expand PMP to incorporate more species as more information becomes available	Expanded PMP to include waterways exotic fish & aquatic plants	On-going		
2.4 Implement recommendations for improved habitat	Implement guidelines for improvement in vegetation outlined in Vegetation	Increased areas of native habitat, and removal of exotic species	Every 5 years	Environmental Management	Absorbed in existing
	Enhancement Policy and Strategy 2007			Environmental Education	positions
				Parks and Conservation	
2.5 Increase habitat by re-vegetation programs	2.5.1 Re-vegetate previously cleared habitat via development approval conditions where necessary and appropriate	No net loss of vegetation during development	Immediate	Environmental Management Environmental	Annual Maintenance and Waterway
	2.5.2 Re-vegetate targeted endangered Regional Ecosystems – identify vegetation required / propagate at nursery / re-plant	No net loss of endangered and locally significant REs leading to eventual increase in remnant vegetation	Immediate	Education Land Use Planning	contributions from Environment Acquisition
	2.5.3 Re-vegetation of identified cleared wildlife corridors	Increase effectiveness of habitat corridors as outlined in Vegetation Enhancement Policy POL- 2609	Immediate	Planning	Charge
	2.5.4 Explore options to re-vegetate brown field sites (land fill sites) to previous ecosystem by identifying landzone and pre- clear vegetation	Long-term re-establishment of previous Regional Ecosystems	5–10 years		

Objective 2	Action	Outcome	Time scale	Responsible	Indicative Costs
	2.5.5 Explore options to re-soil and re- vegetate unused public & private quarries to previous regional ecosystem	Long-term re-establishment of vegetation to original Regional Ecosystems – eventual increased area of remnant vegetation	10-100 years		
	2.5.6 Targeted extension programs to assist restoration of private properties identified in regional ecosystem restoration program	Increased area of protection of remnant vegetation	On-going		
	2.5.7 Provide training in native plant and animal identification, weed control, bush regeneration, and habitat and threatened species management to bushcare volunteers and private stakeholders	Increased levels of understanding of stakeholders knowledge in protecting and enhancing biodiversity	On-going		Absorbed in existing positions
	2.5.8 Bushcare groups to provide detailed mapping and annual assessment of sites to Council	Area of land revegetated and quantity of weed removal known – effectiveness of bushcare assessed	On-going		Absorbed in existing positions
2.6 Restoration of hollow dependent / using species habitats	2.6.1 Identify areas where natural hollows have been removed by development on Council land	Replacement by using constructed boxes where natural hollows have been removed – no net loss of critical habitat	On-going	Environmental Management Environmental	Minor costs dependent upon numbers
	2.6.2 Development Approval process ensures that development on private land must identify hollows (environmental assessment), take actions to not disturb habitat hollows or replace with constructed boxes	Protection of hollow dependent / using species	On-going	Education Development Assessment	
2.7 Waterways ecological restoration	2.7.1 Identification and removal of anthropogenic fish barriers & restrictions	Effective migration of fish along waterways	On-going	Environmental Management	Absorbed in existing positions
	2.7.2 Review of effectiveness of fish-ways / ladders / culverts	Effective migration of fish along waterways	On-going		
	2.7.3 Continued support of riparian restoration programs	Enhanced waterway health	On-going		
	2.7.4 Increase aquatic research for in-creek ecological restoration	Increased understanding of waterways ecology and enhanced management options	On-going		In-creek ecological restoration reserach \$30,000 per annum
	2.7.5 Establish buffer zones for minor drainage lines in Redland Planning Scheme	Increased waterway protection by increasing areas of buffering around minor drainage lines that lead into creeks	3-5 years	Land Use Planning	
2.8 Reduce impacts of pollution on biodiversity values	2.8.1 Support initiatives for reduction in pollution - target public & private industry with educational information	Lowered impacts of air, water, noise pollution upon biodiversity both in short and long-term	3-5 years	Environmental Management	Absorbed in existing positions
	2.8.2 Continued support for local	Increased education of protecting biodiversity by	3-5 years	Environmental Education	

Objective 2	Action	Outcome	Time scale	Responsible	Indicative Costs
	environmental awards	reducing impacts of environmental pollution		Pollution Prevention	
2.9 Enhancement of koala habitat	Replacement of exotic streetscape trees with appropriate natives, particularly in urban suburbs	Increase streetscape native trees to levels recommended in Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006-2016, and Redland Planning Scheme	3-5 years	Environmental Management	Annual levy from Environment Acquisition Charge
2.10 Increased community awareness along Council walking and bike tracks	Increase signage along Council owned lands to increase levels of biodiversity education	Increase community awareness of biodiversity within conservation areas including walking	3-5 years	Environmental Management	Minor annual budget
	and awareness	tracks and bikeways		Infrastructure Planning	
2.11 Support Sustainability Strategy & Policy	2.11.1 Implement actions to ensure the long- term survival of species against sea-level rises, global warming, ozone depletion	Council environmental policies and management decisions to address issues of sustainability to reduce impacts of anthropogenic affects on biodiversity	3-5 years	Environmental Management	Absorbed in existing positions
	2.11.2 Support private & public sustainable development initiatives	Increased awareness of sustainability and environmental issues surrounding global environmental issues	3-5 years		
2.12 Support Habitat / Biodiversity Offset & Carbon Trading Strategy	2.12.1 Support habitat or biodiversity off-set & carbon trading initiatives to encourage Council & private development to invest in carbon trading and offsets for environmental purposes	Council set targets to become carbon neutral – offset planting against Council carbon emissions. Carbon audit of Council related activities.	3-5 years	Environmental Management	Absorbed in existing positions
	2.12.2 Purchase cleared land with presently low environmental value (at low costs using existing environmenta levy funds) and revegetate as off-sets for development or for carbon trading	Revegetation and Restoration of regional ecosystems paid by development	3-5 years		
	2.12.3 Market habitat offset properties as a unique "product" i.e. Koala friendly offset	Habitat offsets from development within / out- with City to enhance Koala habitats	3-5 years		

OBJECTIVE 3 - RESEARCH & EDUCATION

To encourage, co-ordinate and integrate the collection, management and dissemination of information about biodiversity to provide an improved basis for planning within Redlands. Educate, promote and market biodiversity issues to facilitate community and stakeholder responsibility and support for biodiversity conservation and management.

Successful delivery of actions outlined in the Biodiversity Strategy requires support and involvement of the wider community. Community support and involvement requires the delivery of education, training, and incentives, which improve the community's knowledge of relevant issues and empowers them to deliver outcomes. Relevant training and education opportunities need to be tailored to target the community and meet the needs of Council staff.

Research is fundamental to continuously improve our understanding of the ecological processes associated with biodiversity, and to assist Council with making informed management decisions regarding protection and restoration. Focus and prioritisation for research will be on core and iconic species, threatened species and regional ecosystems. Groups such as aquatic and terrestrial invertebrates which are extremely important in ecosystem processes have largely been overlooked, and warrant investigation. Collaborative research projects should be co-ordinated through one department to ensure continuity.

Key Themes

- Education and extension are delivered to Council staff and the wider community
- Increased RSC involvement and support in biodiversity projects
- Improved understanding of biodiversity values
- Implementation of priority biodiversity actions.

Key Actions

- Property based biodiversity assessments
- Advise on threatened species management and provision of background information
- Advise on weed management, habitat protection / revegetation, animal pest control
- Property planning advice
- Advise to landowners to manage biodiversity values
- Offer workshops on environmental repair and enhancement and biodiversity management to encourage greater community involvement in restoration actions on Council land
- Develop and encourage public use of Council database to conduct biodiversity surveys and for information exchange
- Council to support inducements to entice private landowners to remove weeds and plant native trees
- On-going database to record presence of species, threatening processes and responses
- Continued support for Bushcare groups.

Key Outcomes

- Better understanding of biodiversity to ensure effective management decisions are made
- Higher level of biodiversity understanding within Council and Public
- Increased collaborative research and education projects.

Objective 3	Action	Outcome	Time Scale	Responsible	Indicative Costs
3.1 Develop a greater understanding of biodiversity issues, values and solutions	3.1.1 Increased local knowledge of specialist biodiversity through research projects	Increase ecological knowledge to allow informative management decisions and guidance in policy making	On-going	External Consultants	Annual Budget \$50,000
	3.1.2 Formalise generic research agreements between Natural Area Management & Environmental Education	Fauna & Flora surveying program	Immediate	Environmental Management Environmental	Absorbed in existing positions
	 3.2.3 Support work with community based groups such as; Qld Wader Studies Group Koala Action Group Australian Koala Foundation Wildlife Preservation Society Queensland 	Survey information fed to Environmental Education to enhance RCC Biodiversity database	Immediate	Education Government Agencies	
	3.2.4 Support and expand public education programs	Offer training workshops on environmental restoration and enhancement, and biodiversity management to encourage greater community involvement in restoration actions of Council and private land. Advise on but no limited to ;	On-going		
		 Threatened species management Weed / pest identification and management Habitat protection & regeneration Management of all biodiversity values 			
	3.2.5 Develop private property biodiversity focused extension programs	 Property based biodiversity assessments: Rural Support Land for Wildlife Your Back Yard Voluntary Conservation Agreements 	Immediate		
3.2 Expand education extension	3.2.1 Develop priority property watchlist to include high environmental values & potential enhancement programs	Increase number of targeted properties for inclusion into extension programs for assistance and education. Targets include Koala conservation / significance, endangered / of-concern RE, high BPA properties, wetlands, fore-shore, linkages / corridors	Immediate	Environmental Management Environmental Education	Absorbed in existing positions
	3.2.2 Develop a Council biodiversity website / database	Provide information to community on threatened species, endangered regional ecosystems, pests, weed management, fauna / flora surveying	Immediate		
	3.2.3 Foster information exchange with State /	Links to other relevant websites Information exchange with agencies such as	On-going		

Objective 3	Action	Outcome	Time Scale	Responsible	Indicative Costs
	Local Government Agencies	State – EPA, DPIF, NR&W			
		Local Councils – BCC, Logan CC, GCCC			
3.3 Develop collaborative links with tertiary institutions	3.3.1 Seek opportunities and encourage biodiversity related research projects, and support student projects	Increased awareness of biodiversity values and management issues	On-going	Environmental Management Environmental	Absorbed in existing positions
	3.3.2 Bushcare groups linked to tertiary institutions for partnership schemes			Education	

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Family	Scientific Name	Common Name
Amphibians		
Bufonidae	Bufo marinus	cane toad
Hylidae	Litoria sp. cf. cooloolensis (North Str	adbroke Is population)
Hylidae	Litoria cooloolensis	Cooloola sedgefrog
Hylidae	Litoria caerulea	common green treefrog
Hylidae	Litoria gracilenta	graceful treefrog
Hylidae	Litoria fallax	eastern sedgefrog
Hylidae	Litoria peronii	emerald spotted treefrog
Hylidae	Litoria tyleri	southern laughing treefrog
Hylidae	Litoria olongburensis	wallum sedgefrog
Hylidae	Litoria rubella	ruddy treefrog
Hylidae	Litoria nasuta	striped rocketfrog
Hylidae	Litoria freycineti	wallum rocketfrog
Hylidae	Litoria latopalmata	broad palmed rocketfrog
Hylidae	Litoria lesueuri sensu lato	stony creek frog
Hylidae	Litoria dentata	bleating treefrog
Myobatrachidae	Adelotus brevis	tusked frog
Myobatrachidae	Crinia signifera	clicking froglet
Myobatrachidae	Crinia parinsignifera	beeping froglet
Myobatrachidae	Crinia tinnula	wallum froglet
Myobatrachidae	Limnodynastes ornatus	ornate burrowing frog
Myobatrachidae	Limnodynastes terraereginae	scarlet sided pobblebonk
Myobatrachidae	Pseudophryne raveni	copper backed broodfrog
Myobatrachidae	Uperoleia fusca	dusky gungan
Myobatrachidae	Pseudophryne major	great brown broodfrog
Myobatrachidae	Pseudophryne coriacea	red backed broodfrog
Myobatrachidae	Mixophyes fasciolatus	great barred frog
Myobatrachidae	Limnodynastes peronii	striped marshfrog
Myobatrachidae	Limnodynastes tasmaniensis	spotted grassfrog
Birds		
Accipitridae	Elanus notatus	Black shouldered kite
Accipitridae	Accipiter cirrhocephalus	collared sparrowhawk
Accipitridae	Aquila audax	wedge-tailed eagle
Accipitridae	Accipiter fasciatus	brown goshawk
•	•	brown goshawk grey goshawk
Accipitridae	Accipiter fasciatus Accipiter novaehollandiae Elanus axillaris	-
Accipitridae Accipitridae	Accipiter novaehollandiae	grey goshawk
Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris	grey goshawk black-shouldered kite
Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans	grey goshawk black-shouldered kite swamp harrier
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus	grey goshawk black-shouldered kite swamp harrier brahminy kite
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster Aviceda subcristata	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle Pacific baza
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster Aviceda subcristata Circus assimilis	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle Pacific baza spotted harrier
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster Aviceda subcristata Circus assimilis Aegotheles cristatus	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle Pacific baza spotted harrier Australian owlet-nightjar
Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster Aviceda subcristata Circus assimilis Aegotheles cristatus Mirafra javanica	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle Pacific baza spotted harrier Australian owlet-nightjar singing bushlark
Accipitridae Accipitridae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster Aviceda subcristata Circus assimilis Aegotheles cristatus Mirafra javanica Alcedo azurea	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle Pacific baza spotted harrier Australian owlet-nightjar singing bushlark azure kingfisher
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Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae Anatidae	Accipiter novaehollandiae Elanus axillaris Circus approximans Haliastur indus Pandion haliaetus Haliastur sphenurus Hieraaetus morphnoides Lophoictinia isura Milvus migrans Haliaeetus leucogaster Aviceda subcristata Circus assimilis Aegotheles cristatus Mirafra javanica Alcedo azurea Cygnus atratus Aythya australis Biziura lobata Chenonetta jubata Anas superciliosa Anas gracilis Stictonetta naevosa Dendrocygna arcuata	grey goshawk black-shouldered kite swamp harrier brahminy kite osprey whistling kite little eagle square-tailed kite black kite white-bellied sea-eagle Pacific baza spotted harrier Australian owlet-nightjar singing bushlark azure kingfisher black swan hardhead musk duck Australian wood duck Pacific black duck grey teal freckled duck wandering whistling-duck
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Appendix 1. Fauna species recorded in Redlands (source: EPA Wildnet).

Family	Scientific Name	Common Name	
Anhingidae	Anhinga melanogaster	darter	
Anseranatidae	Anseranas semipalmata	magpie goose	
Apodidae	Hirundapus caudacutus white-throated ne		
Apodidae	Apus pacificus	fork-tailed swift	
Ardeidae	Ardea novaehollandiae	white-faced heron	
Ardeidae	Egretta sacra	eastern reef egret	
Ardeidae	Ixobrychus flavicollis	black bittern	
Ardeidae	Ixobrychus minutus	little bittern	
Ardeidae	Nycticorax caledonicus	nankeen night heron	
Ardeidae	Egretta novaehollandiae	white-faced heron	
Ardeidae	Botaurus poiciloptilus	Australasian bittern	
Ardeidae	Ardea pacifica	white-necked heron	
Ardeidae	Ardea intermedia	intermediate egret	
Ardeidae	Ardea alba	great egret	
Ardeidae	Ardea ibis	cattle egret	
Ardeidae	Butorides striatus	striated heron	
Ardeidae	Egretta garzetta	little egret	
Artamidae	Cracticus nigrogularis	pied butcherbird	
Artamidae	Cracticus torquatus	grey butcherbird	
Artamidae	Artamus cyanopterus	dusky woodswallow	
Artamidae	Artamus leucorynchus	white-breasted woodswallow	
Artamidae	Artamus personatus	masked woodswallow	
Artamidae	Strepera graculina	pied currawong	
Artamidae	Gymnorhina tibicen	Australian magpie	
Burhinidae	Esacus neglectus	beach stone-curlew	
Burhinidae	Burhinus grallarius	bush stone-curlew	
Cacatuidae	Calyptorhynchus lathami	glossy black-cockatoo	
Cacatuidae	Calyptorhynchus lathami lathami	glossy black-cockatoo (easter	
Cacatuidae	Cacatua sanguinea	little corella	
Cacatuidae	Cacatua roseicapilla	galah	
Cacatuidae	Calyptorhynchus banksii	red-tailed black-cockatoo	
Cacatuidae	Cacatua tenuirostris	long-billed corella	
Cacatuidae	Cacatua galerita	sulphur-crested cockatoo	
Cacatuidae	Calyptorhynchus funereus	yellow-tailed black-cockatoo	
Campephagidae	Lalage sueurii	white-winged triller	
Campephagidae	Coracina tenuirostris	cicadabird	
Campephagidae	Coracina tenunostris	white-bellied cuckoo-shrike	
Campephagidae	Coracina papuensis Coracina lineata	barred cuckoo-shrike	
	Coracina inteata Coracina novaehollandiae		
Campephagidae		black-faced cuckoo-shrike	
Campephagidae	Lalage leucomela	varied triller	
Caprimulgidae	Eurostopodus mystacalis	white-throated nightjar	
Centropodidae	Centropus phasianinus	pheasant coucal	
Charadriidae	Vanellus miles	masked lapwing	
Charadriidae	Thinornis rubricollis	hooded plover	
Charadriidae	Charadrius leschenaultii	greater sand plover	
Charadriidae	Charadrius australis	inland dotterel	
Charadriidae	Pluvialis dominica	American golden plover	
Charadriidae	Charadrius bicinctus	double-banded plover	
Charadriidae	Erythrogonys cinctus	red-kneed dotterel	
Charadriidae	Charadrius ruficapillus	red-capped plover	
Charadriidae	Pluvialis squatarola	grey plover	
Charadriidae	Vanellus miles miles	masked lapwing (northern subspecies)	
Charadriidae	Vanellus miles novaehollandiae	masked lapwing (southern subspecies)	
Charadriidae	Charadrius mongolus	lesser sand plover	
Charadriidae	Elseyornis melanops	black-fronted dotterel	
Charadriidae	Pluvialis fulva	Pacific golden plover	
Ciconiidae	Ephippiorhynchus asiaticus	black-necked stork	
Cinclosomatidae	Psophodes olivaceus	eastern whipbird	
Cinclosomatidae	Cinclosoma punctatum	spotted quail-thrush	
Climacteridae	Cormobates leucophaeus metastasis	white-throated treecreeper	

Family	Scientific Name
Climacteridae	Climacteris picumnus
Climacteridae	Cormobates leucophaeus
Climacteridae	Climacteris erythrops
Columbidae	Geopelia humeralis
Columbidae	Geopelia cuneata
Columbidae	Chalcophaps indica
Columbidae	Geopelia striata
Columbidae	Columba leucomela
Columbidae	Columba livia
Columbidae	Phaps chalcoptera
Columbidae	Macropygia amboinensis
Columbidae	Ptilinopus magnificus
Columbidae	Ptilinopus regina
Columbidae	Ptilinopus superbus
Columbidae	Streptopelia chinensis
Columbidae	Phaps elegans
Columbidae	Leucosarcia melanoleuca
Columbidae	Ocyphaps lophotes
Coraciidae	Eurystomus orientalis
Corvidae	Corvus orru
Corvidae	Corvus coronoides
Corvidae	Corvus bennetti
Cuculidae	Cacomantis flabelliformis
Cuculidae	Chrysococcyx lucidus
Cuculidae	Cacomantis variolosus
Cuculidae	Eudynamys scolopacea
Cuculidae	Cuculus saturatus
Cuculidae	Scythrops novaehollandiae
Cuculidae	Chrysococcyx basalis
Cuculidae	Chrysococcyx minutillus
Cuculidae	Cuculus pallidus
Cuculidae	Chrysococcyx osculans
Cuculidae	Chrysococcyx russatus
Dicaeidae	Dicaeum hirundinaceum
Dicruridae	Dicrurus bracteatus bracteatus
Dicruridae	Rhipidura leucophrys leucophrys
Dicruridae	Dicrurus bracteatus
Dicruridae	Myiagra alecto
Dicruridae	Monarcha trivirgatus
Dicruridae	Myiagra cyanoleuca
Dicruridae	Myiagra inquieta
Dicruridae	Monarcha melanopsis
Dicruridae	Grallina cyanoleuca
Dicruridae	Rhipidura fuliginosa
Dicruridae	Rhipidura leucophrys
Dicruridae	Rhipidura rufifrons
Dicruridae	Myiagra rubecula
Dicruridae	Monarcha leucotis
Diomedeidae	Diomedea exulans
Diomedeidae	Thalassarche cauta
Falconidae	Falco berigora
Falconidae	Falco cenchroides
Falconidae	Falco longipennis
Falconidae	Falco peregrinus Fragata minor
Fregatidae	Fregata minor
Fregatidae Fringillidae	Fregata ariel Carduelis carduelis
Fringillidae Glareolidae	Stiltia isabella
Gruidae	Stiltia isabelia Grus rubicunda
Haematopodidae	Grus rubicunda Haematopus longirostris
Haematopodidae	Haematopus fuliginosus
naematopouluae	naomatopus runginosus

Common Name brown treecreep

brown treecreeper white-throated treecreeper red-browed treecreeper bar-shouldered dove diamond dove emerald dove peaceful dove white-headed pigeon rock dove common bronzewing brown cuckoo-dove wompoo fruit-dove rose-crowned fruit-dove superb fruit-dove spotted turtle-dove brush bronzewing wonga pigeon crested pigeon dollarbird Torresian crow Australian raven little crow fan-tailed cuckoo shining bronze-cuckoo brush cuckoo common koel oriental cuckoo channel-billed cuckoo Horsfield's bronze-cuckoo little bronze-cuckoo pallid cuckoo black-eared cuckoo Gould's bronze-cuckoo mistletoebird spangled drongo (eastern Australia) willie wagtail (southern) spangled drongo shining flycatcher spectacled monarch satin flycatcher restless flycatcher black-faced monarch magpie-lark grey fantail willie wagtail rufous fantail leaden flycatcher white-eared monarch wandering albatross shy albatross brown falcon nankeen kestrel Australian hobby peregrine falcon great frigatebird lesser frigatebird European goldfinch Australian pratincole brolga pied oystercatcher sooty oystercatcher

Family	Scientific Name	Common Name
Halcyonidae	Dacelo novaeguineae	laughing kookaburra
Halcyonidae	Todiramphus sanctus	sacred kingfisher
Halcyonidae	Todiramphus chloris	collared kingfisher
Halcyonidae	Todiramphus macleayii	forest kingfisher
Hirundinidae	Hirundo ariel	fairy martin
Hirundinidae	Hirundo rustica	barn swallow
Hirundinidae	Hirundo neoxena	welcome swallow
Hirundinidae	Cheramoeca leucosternus	white-backed swallow
Hirundinidae	Hirundo nigricans	tree martin
Hydrobatidae	Pelagodroma marina	white-faced storm-pet
Hydrobatidae	Fregetta tropica	black-bellied storm-pe
Jacanidae	Irediparra gallinacea	comb-crested jacana
Laridae	Anous minutus	black noddy
Laridae	Anous stolidus	•
		common noddy
Laridae	Larus pacificus	Pacific gull
Laridae	Chlidonias hybridus	whiskered tern
Laridae	Chlidonias leucopterus	white-winged black te
Laridae	Larus novaehollandiae	silver gull
Laridae	Gygis alba	white tern
Laridae	Sterna striata	white-fronted tern
Laridae	Sterna bergii	crested tern
Laridae	Sterna caspia	Caspian tern
Laridae	Sterna dougallii	roseate tern
Laridae	Sterna fuscata	sooty tern
Laridae	Sterna hirundo	common tern
Laridae	Stercorarius parasiticus	Arctic jaeger
Laridae	Sterna albifrons	little tern
Laridae	Sterna bengalensis	lesser crested tern
Laridae	Sterna nilotica	gull-billed tern
Laridae	Larus dominicanus	kelp gull
Maluridae	Malurus cyaneus	superb fairy-wren
	-	
Maluridae	Malurus lamberti	variegated fairy-wren
Maluridae	Malurus melanocephalus	red-backed fairy-wren
Megapodiidae	Alectura lathami	Australian brush-turke
Meliphagidae	Lichenostomus virescens	singing honeyeater
Meliphagidae	Philemon corniculatus	noisy friarbird
Meliphagidae	Myzomela sanguinolenta	scarlet honeyeater
Meliphagidae	Philemon citreogularis	little friarbird
Meliphagidae	Myzomela obscura	dusky honeyeater
Meliphagidae	Melithreptus gularis	black-chinned honeye
Meliphagidae	Xanthomyza phrygia	regent honeyeater
Meliphagidae	Lichmera indistincta	brown honeyeater
Meliphagidae	Manorina melanocephala	noisy miner
Meliphagidae	Meliphaga lewinii	Lewin's honeyeater
Meliphagidae	Melithreptus albogularis	white-throated honeye
Meliphagidae	Lichenostomus fuscus	fuscous honeyeater
Meliphagidae	Lichenostomus chrysops	yellow-faced honeyea
Meliphagidae	Lichenostomus fasciogularis	mangrove honeyeater
Meliphagidae	Epthianura albifrons	white-fronted chat
Meliphagidae Meliphagidae	Entomyzon cyanotis Anthochaera carunculata	blue-faced honeyeate red wattlebird
Meliphagidae		
Meliphagidae	Anthochaera chrysoptera	little wattlebird
Meliphagidae	Acanthagenys rufogularis	spiny-cheeked honey
Meliphagidae	Acanthorhynchus tenuirostris	eastern spinebill
Meliphagidae	Phylidonyris novaehollandiae	New Holland honeyea
Meliphagidae	Plectorhyncha lanceolata	striped honeyeater
Meliphagidae	Phylidonyris nigra	white-cheeked honey
Meliphagidae	Melithreptus lunatus	white-naped honeyea
Meropidae	Merops ornatus	rainbow bee-eater
Motacillidae	Anthus novaeseelandiae	Richard's pipit
Muscicapidae	Zoothera lunulata	Bassian thrush

Family

Neosittidae Oriolidae Oriolidae Pachycephalidae

Pachycephalidae Pachycephalidae Pachycephalidae Pachycephalidae Pachycephalidae Pachycephalidae Pachycephalidae Pardalotidae Passeridae Passeridae Passeridae Passeridae Passeridae Passeridae Passeridae Pelecanidae Petroicidae Petroicidae Petroicidae Petroicidae Petroicidae Petroicidae Phaethontidae Phaethontidae Phalacrocoracidae Phalacrocoracidae Phalacrocoracidae Phalacrocoracidae Phasianidae Phasianidae Phasianidae Phasianidae Pittidae Podargidae Podicipedidae Podicipedidae Pomatostomidae Procellariidae Procellariidae Procellariidae Procellariidae

Scientific Name

Daphoenositta chrysoptera Sphecotheres viridis Oriolus sagittatus Pachycephala pectoralis youngi

Pachycephala pectoralis Oreoica gutturalis Falcunculus frontatus Pachycephala olivacea Pachycephala rufiventris Colluricincla megarhyncha Colluricincla harmonica Acanthiza reguloides Gerygone mouki Gerygone fusca Gerygone olivacea Smicrornis brevirostris Sericornis citreogularis Sericornis frontalis Sericornis magnirostris Pardalotus punctatus Pardalotus striatus Chthonicola sagittata Gerygone levigaster Acanthiza apicalis Acanthiza nana Acanthiza lineata Acanthiza chrysorrhoa Acanthiza pusilla Neochmia modesta Lonchura punctulata Lonchura castaneothorax Taeniopygia bichenovii Taeniopygia guttata Neochmia temporalis Passer domesticus Pelecanus conspicillatus Eopsaltria australis Melanodryas cucullata Petroica phoenicea Petroica goodenovii Petroica rosea Microeca fascinans Phaethon lepturus Phaethon rubricauda Phalacrocorax carbo Phalacrocorax varius Phalacrocorax melanoleucos Phalacrocorax sulcirostris Coturnix pectoralis Coturnix ypsilophora Pavo cristatus Coturnix chinensis Pitta versicolor Podargus strigoides Poliocephalus poliocephalus Tachybaptus novaehollandiae Pomatostomus temporalis Pterodroma leucoptera Macronectes giganteus Macronectes halli Pterodroma cervicalis

Common Name

varied sittella figbird olive-backed oriole golden whistler (south-eastern Australia) golden whistler crested bellbird crested shrike-tit olive whistler rufous whistler little shrike-thrush grey shrike-thrush buff-rumped thornbill brown gerygone western gerygone white-throated gerygone weebill yellow-throated scrubwren white-browed scrubwren large-billed scrubwren spotted pardalote striated pardalote speckled warbler mangrove gerygone inland thornbill yellow thornbill striated thornbill yellow-rumped thornbill brown thornbill plum-headed finch nutmeg mannikin chestnut-breasted mannikin double-barred finch zebra finch red-browed finch house sparrow Australian pelican eastern yellow robin hooded robin flame robin red-capped robin rose robin jacky winter white-tailed tropicbird red-tailed tropicbird great cormorant pied cormorant little pied cormorant little black cormorant stubble quail brown quail Indian peafowl king quail noisy pitta tawny frogmouth hoary-headed grebe Australasian grebe grey-crowned babbler Gould's petrel southern giant-petrel northern giant-petrel white-necked petrel

Family Procellariidae Procellariidae Procellariidae Procellariidae Procellariidae Psittacidae Psittacidae

Psittacidae Psittacidae Psittacidae Psittacidae Psittacidae Psittacidae Psittacidae Ptilonorhynchidae Ptilonorhynchidae Rallidae Rallidae Rallidae Rallidae Rallidae Rallidae Rallidae Recurvirostridae Recurvirostridae Rostratulidae Scolopacidae Strigidae Strigidae Strigidae Sturnidae Sturnidae Sulidae Sulidae Sulidae Sulidae

Scientific Name

Pterodroma nigripennis Puffinus tenuirostris Puffinus pacificus Puffinus gavia Pterodroma solandri Platycercus adscitus palliceps

Alisterus scapularis Glossopsitta pusilla Platycercus eximius Trichoglossus chlorolepidotus Trichoglossus haematodus moluccanus Platycercus adscitus Platycercus elegans Glossopsitta concinna Lathamus discolor Ptilonorhynchus violaceus Sericulus chrysocephalus Fulica atra Gallinula tenebrosa Porzana pusilla Porphyrio porphyrio Porzana fluminea Rallus pectoralis Gallirallus philippensis Amaurornis olivaceus Himantopus himantopus Recurvirostra novaehollandiae Rostratula benghalensis Limosa limosa Tringa nebularia Numenius phaeopus Numenius madagascariensis Calidris tenuirostris Gallinago hardwickii Heteroscelus brevipes Heteroscelus incanus Limicola falcinellus Limnodromus semipalmatus Limosa lapponica Arenaria interpres Calidris acuminata Calidris alba Calidris canutus Calidris ferruginea Calidris melanotos Calidris ruficollis Actitis hypoleucos Tringa hypoleucos Xenus cinereus Tringa stagnatilis Numenius minutus Phalaropus lobatus Ninox strenua Ninox novaeseelandiae Ninox connivens Acridotheres tristis Sturnus vulgaris Sula sula Morus serrator Sula dactylatra Sula leucogaster

Common Name

black-winged petrel short-tailed shearwater wedge-tailed shearwater fluttering shearwater providence petrel pale-headed rosella (southern form) Australian king-parrot little lorikeet eastern rosella scaly-breasted lorikeet rainbow lorikeet pale-headed rosella crimson rosella musk lorikeet swift parrot satin bowerbird regent bowerbird Eurasian coot dusky moorhen Baillon's crake purple swamphen Australian spotted crake Lewin's rail buff-banded rail bush-hen black-winged stilt red-necked avocet painted snipe black-tailed godwit common greenshank whimbrel eastern curlew great knot Latham's snipe grey-tailed tattler wandering tattler broad-billed sandpiper Asian dowitcher bar-tailed godwit ruddy turnstone sharp-tailed sandpiper sanderling red knot curlew sandpiper pectoral sandpiper red-necked stint common sandpiper common sandpiper terek sandpiper marsh sandpiper little curlew red-necked phalarope powerful owl southern boobook barking owl common myna common starling red-footed booby Australasian gannet masked booby brown booby

Family	Scientific Name	Common Name	
Sylviidae	Acrocephalus stentoreus	clamorous reed-warbler	
Sylviidae	Cisticola exilis	golden-headed cisticola	
Sylviidae	Megalurus gramineus	little grassbird	
Sylviidae	Megalurus timoriensis	tawny grassbird	
Threskiornithidae	Plegadis falcinellus	glossy ibis	
Threskiornithidae	Platalea regia	royal spoonbill	
Threskiornithidae	Threskiornis spinicollis	straw-necked ibis	
Threskiornithidae	Threskiornis molucca	Australian white ibis	
Threskiornithidae	Platalea flavipes	yellow-billed spoonbill	
Turnicidae	Turnix pyrrhothorax	red-chested button-quail	
Turnicidae	Turnix varia	painted button-quail	
Turnicidae	Turnix maculosa	red-backed button-quail	
Tytonidae	Tyto capensis	grass owl	
Tytonidae	Tyto tenebricosa	sooty owl	
Tytonidae	Tyto alba	barn owl	
Zosteropidae	Zosterops lateralis cornwalli	silvereye (eastern)	
Zosteropidae	Zosterops lateralis	,	
· ·	Zosierops lateralis	silvereye	
Fish	A		
Anguillidae	Anguilla reinhardtii	longfin eel	
Anguillidae	Anguilla australis	short-finned eel	
Atherinidae	Craterocephalus majoriae	Marjorie's Hardyhead	
Atherinidae	Craterocephalus stercusmuscarum	fly-specked hardyhead	
	Arius graeffi	Salmon catfish	
Eleotridae	Hypseleotris galii	firetail gudgeon	
Eleotridae	Philypnodon grandiceps	flathead gudgeon	
Eleotridae	Hypseleotris klunzingeri	western carp gudgeon	
Eleotidae	Gobiomorphus australis	striped gudgeon	
Eleotidae	Mogurnda adspersa	purple-spotted gudgeon	
Gobiidae	Redigobius bikolanus	speckled goby	
Lutjanidae	Lutjanus argentimaculatus	mangrove jack	
Melanotaeniidae	Rhadinocentrus ornatus	ornate sunfish	
Melanotaeniidae	Melanotaenia duboulayi	crimson-spotted rainbowfish	
Mugilidae	Mugil cephalus	sea mullet	
Maginado	Myxus petardi	Freshwater mullet	
Poeciliidae	Gambusia holbrooki	Mosquitofish	
Poeciliidae	Xiphophorus helleri	swordtail	
Poeciliidae			
	Xiphophorus maculates	platy	
Pseudomugilidae	Pseudomugil signifier	Pacific blue eye	
Dasyatidae	Dasyatis fluviorum	estuary stingray	
Galaxiidae	Galaxias maculatus	common galaxias	
Synbranchidae	Ophisternon gutterale	swamp eel	
Terapontidae	Leiopotherapon unicolour	spangled perch	
Percichthyidae	Macquaria novemaculeata	Australian bass	
Cichlidae	Oreochromis mossambicus	tilapia	
Plotosidae	Tandanus tandanus	freshwater catfish	
Cyprinidae	Cyprinus carpio	common carp	
Nannopercidae	Nannoperca oxleyana	oxleyan pygmy perch	
Ceratodontidae	Neoceratodus forsteri	Queensland lungfish	
	Glossamia aprion gillii	Mouth almighty	
	Ambassis agassizi	Agassiz's glassfish	
	Notesthese robusta	Bullrout	
	Ambassis marinus	Yellow perchlet	
Insects			
	Contronoc outsiddoo or orthing	orango polm dort	
Hesperiidae	Cephrenes augiades sperthias	orange palm-dart	
Hesperiidae	Cephrenes trichopepla	yellow palm-dart	
Looperudee	Ocybadistes walkeri sothis	green grass-dart (Bassian	
Hesperiidae		subspecies)	
	O misma a li li	. ,	
Hesperiidae Hesperiidae	Suniana sunias nola	wide-brand grass-dart (southern	
Hesperiidae		wide-brand grass-dart (southern subspecies)	
	Suniana sunias nola Taractrocera dolon dolon Hesperilla donnysa icaria	wide-brand grass-dart (southern	

Family

Lycaenidae Lycaenidae

Lycaenidae Lycaenidae Lycaenidae

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Papilionidae Papilionidae

Papilionidae Papilionidae Pieridae Pieridae Pieridae Pieridae

Pieridae Pieridae Pieridae Pieridae Pieridae Pieridae

Mammals

Acrobatidae Balaenidae Balaenopteridae Canidae Canidae Dasyuridae Dasyuridae Dasyuridae Dasyuridae Delphinidae Delphinidae

Scientific Name

Nacaduba berenice berenice Candalides hyacinthina hyacinthina

Candalides acasta Nacaduba biocellata biocellata Prosotas dubiosa dubiosa Theclinesthes sulpitius sulpitius

Neolucia agricola Agricola Lampides boeticus Zizina labradus labradus

Candalides erinus erinus Candalides absimilis Ogyris amaryllis amaryllis Hypochrysops apelles apelles Hypochrysops epicurus Acrodipsas illidgei Illidge's Nesolycaena albosericea Euploea core corinna Doleschallia bisaltide australis Hypolimnas bolina nerin Vanessa kershawi Junonia villida calybe Tirumala hamata hamata Danaus plexippus plexippus Danaus affinis affinis Danaus chrysippus petilia Cressida cressida cressida Papilio demoleus sthenelus Papilio aegeus aegeus

Papilio anactus Graphium eurypylus lycaon

Graphium sarpedon choredon Ornithoptera richmondia Pieris rapae Cepora perimale scyllara Belenois java teutonia Delias nysa nysa

Delias nigrina Delias aganippe Delias argenthona argenthona Elodina parthia Eurema hecabe phoebus Catopsilia pomona pomona Catopsilia pyranthe crokera

Acrobates pygmaeus Eubalaena australis Megaptera novaeangliae Vulpes vulpes Canis lupus dingo Canis familiaris Sminthopsis murina murina Antechinus flavipes Sminthopsis murina Planigale maculata Tursiops aduncus Delphinus delphis Sousa chinensis Common Name

large purple line-blue varied dusky-blue (southern subspecies) blotched dusky-blue two-spotted line-blue small purple line-blue saltpan blue (southern subspecies) fringed heath-blue long-tailed pea-blue common grass-blue (Australian subspecies) small dusky-blue common pencilled-blue satin azure (Bassian subspecies) copper jewel mangrove jewel ant-blue satin opal common crow leafwing a varied eggfly Australian painted lady meadow argus blue tiger monarch marsh tiger lesser wanderer greasy swallowtail chequered swallowtail orchard swallowtail (Australian subspecies) dingy swallowtail pale-blue triangle (eastern subspecies) blue triangle Richmond birdwing cabbage white caper gull (Australian subspecies) caper white yellow-spotted jezebel (Australian subspecies) black jezebel red-spotted jezebel scarlet jezebel striated pearl-white large grass-yellow lemon migrant white migrant

feathertail glider

southern right whale humpback whale red fox dingo dog common dunnart (SE mainland) yellow-footed antechinus common dunnart common planigale Spotted bootlenose dolphin common dolphin Indo-Pacific hump-backed dolphin

Family Delphinidae Delphinidae Dugongidae Felidae Leporidae Leporidae Macropodidae Macropodidae Macropodidae Macropodidae Molossidae Molossidae Molossidae Molossidae Muridae Muridae Muridae Muridae Muridae Muridae Muridae Muridae Muridae Ornithorhynchidae Peramelidae Peramelidae Petauridae Petauridae Petauridae Phalangeridae Phalangeridae Phascolarctidae Phascolarctidae Pseudocheiridae Pseudocheiridae Pteropodidae Pteropodidae Pteropodidae Suidae Tachyglossidae Vespertilionidae Vespertilionidae Vespertilionidae Vespertilionidae Vespertilionidae

Scientific Name

Tursiops truncatus Stenella longirostris Dugong dugon Felis catus Oryctolagus cuniculus Lepus capensis Macropus agilis Macropus giganteus Macropus rufogriseus Wallabia bicolor Nyctinomus australis Tadarida australis Mormopterus beccarii Mormopterus norfolkensis Melomys burtoni Hydromys chrysogaster Mus musculus Melomys cervinipes Xeromys myoides Rattus rattus Rattus tunneyi Rattus fuscipes Rattus lutreolus Ornithorhynchus anatinus Perameles nasuta Isoodon macrourus Petaurus breviceps Petaurus australis australis

Petaurus norfolcensis Trichosurus vulpecular Trichosurus caninus Phascolarctos cinereus (southeast Queensland bioregion) Phascolarctos cinereus Petauroides volans Pseudocheirus perearinus Pteropus alecto Pteropus poliocephalus Pteropus scapulatus Sus scrofa Tachyglossus aculeatus Myotis macropus Scotorepens orion Chalinolobus morio Chalinolobus gouldii Miniopterus schreibersii oceanensis Vespadelus darlingtoni Vespadelus regulus Scotorepens greyii Nyctophilus gouldi Miniopterus australis Chalinolobus nigrogriseus

Diporiphora australis

Chelodina longicollis

Chelodina expansa

Elseya latisternum

Emydura macquarii signata

Pogona barbata

Morelia spilota

Physignathus lesueurii

Reptiles

Vespertilionidae

Vespertilionidae

Vespertilionidae Vespertilionidae

Vespertilionidae

Vespertilionidae

Agamidae Agamidae Agamidae Boidae Chelidae Chelidae Chelidae Chelidae Common Name

bottlenose dolphin long-snouted spinner dolphin dugong cat rabbit brown hare agile wallaby eastern grey kangaroo red-necked wallaby swamp wallaby White-striped freetail bat white-striped freetail bat Beccari's freetail bat east coast freetail bat grassland melomys water rat house mouse fawn-footed melomys false water-rat black rat pale field-rat bush rat swamp rat platypus long-nosed bandicoot northern brown bandicoot sugar glider yellow-bellied glider (southern subspecies) squirrel glider common brushtail possum short-eared possum koala (southeast Queensland bioregion) koala greater glider common ringtail possum black flving-fox grey-headed flying-fox little red flying-fox pia short-beaked echidna large-footed myotis south-eastern broad-nosed bat chocolate wattled bat Gould's wattled bat eastern bent-wing bat large forest bat southern forest bat little broad-nosed bat Gould's long-eared bat little bent-wing bat hoary wattled bat

two lined dragon eastern water dragon bearded dragon carpet python eastern snake-necked turtle broad-shelled river turtle saw-shelled turtle Brisbane short-necked turtle

Family	Scientific Name	Common Name
Cheloniidae	Eretmochelys imbricata	hawksbill turtle
Cheloniidae	Chelonia mydas	green turtle
Cheloniidae	Caretta caretta	loggerhead turtle
Cheloniidae	Natator depressus	flatback turtle
Colubridae	Boiga irregularis	brown tree snake
Colubridae	Dendrelaphis punctulata	common tree snake
Colubridae	Tropidonophis mairii	freshwater snake
Elapidae	Acanthophis antarcticus	common death adder
Elapidae	Cacophis harriettae	white-crowned snake
Elapidae	Hoplocephalus stephensii	Stephens' banded snake
Elapidae	Notechis scutatus	eastern tiger snake
Elapidae	Rhinoplocephalus nigrescens	eastern small-eyed snake
Elapidae	Vermicella annulata	bandy-bandy
Elapidae	Astrotia stokesii	Stokes' sea snake
Elapidae	Tropidechis carinatus	rough-scaled snake
Elapidae	Pseudonaja textilis	eastern brown snake
Elapidae	Pseudechis porphyriacus	red-bellied black snake
Elapidae	Hemiaspis signata	black-bellied swamp snake
Elapidae	Demansia psammophis	yellow-faced whip snake
Elapidae	Cacophis krefftii	dwarf crowned snake
Gekkonidae	Gehyra dubia	House gecko
Gekkonidae	Oedura robusta	robust velvet gecko
Gekkonidae	Heteronotia binoei	Bynoe's gecko
Gekkonidae	Hemidactylus frenatus	house gecko
Pygopodidae	Lialis burtonis	Burton's legless lizard
Scincidae	Calyptotis scutirostrum	scute-nosed skink
Scincidae	Ctenotus arcanus	
Scincidae	Anomalopus verreauxii	Verreaux's skink
Scincidae	Carlia vivax	lively skink
Scincidae	Cryptoblepharus virgatus	wall skink
Scincidae	Eulamprus tenuis	rainforest skink
Scincidae	Lampropholis amicula	secretive slink
Scincidae	Lampropholis delicata	grass skink
Scincidae	Eulamprus martini	Martin's skink
Scincidae	Eulamprus murrayi	Murray's skink
Scincidae	Eulamprus quoyii	eastern water skink
Scincidae	Cyclodomorphus gerrardii	pink-tongued lizard
Scincidae	Egernia frerei	major skink
Scincidae	Egernia major	land mullet
Scincidae	Ctenotus robustus	striped skink
Scincidae	Tiliqua scincoides	eastern blue-tongued lizard
Scincidae	Ophioscincus truncatus	short limbed snake-skink
Scincidae	Morethia taeniopleura	fire-tailed skink
Scincidae	Carlia foliorum	rainbow skink
Scincidae	Lampropholis guichenoti	garden skink
Scincidae	Ctenotus taeniolatus	copper-tailed skink
Typhlopidae	Ramphotyphlops proximus	Proximus blindsnake
Typhlopidae	Ramphotyphlops ligatus	robust blindsnake
Typhlopidae	Ramphotyphlops wiedii	brown snouted blindsnake
Varanidae	Varanus gouldii	sand monitor
Varanidae	Varanus sp.	goanna
Varanidae	Varanus varius	lace monitor

Appendix 2. Flora species recorded in Redlands (source: EPA Wildnet).

Family	Scientifc Name	Common Name
Fungi		
Acarosporaceae	Acarospora	
Arthoniaceae	Arthonia spp.	
Bacidiaceae	Bacidia multiseptata	
Brigantiaeaceae	Brigantiaea tricolor	
Caliciaceae	Calicium spp.	
Caliciaceae	Calicium robustellum	
Candelariaceae	Candelaria concolor	concolor lemon lichen
Cladiaceae	Cladia aggregata	
Cladoniaceae	Thysanothecium scutellatum	
Cladoniaceae	Cladonia spp.	
Cladoniaceae	Cladonia rigida var. rigida	
Cladoniaceae	Cladonia macilenta	
Cladoniaceae	Cladonia corymbescens	
Cladoniaceae	Cladonia floerkeana	Florke's cup lichen
Coccocarpiaceae	Coccocarpia spp.	
Coccocarpiaceae	Coccocarpia erythroxyli	
Coccocarpiaceae	Coccocarpia palmicola	
Collemataceae	Leptogium isidiosellum	
Collemataceae	Leptogium cyanescens	
Collemataceae	Leptogium coralloideum	
Collemataceae	Collema rugosum	
Collemataceae	Collema implicatum	
Collemataceae	Collema glaucophthalmum	
Collemataceae	Collema laeve	
Collemataceae	Collema spp.	
Collemataceae	Physma spp.	
Collemataceae	Physma byrsaeum	
Graphidaceae	Phaeographina	
Graphidaceae	Graphis librata	
Graphidaceae	Graphis spp.	
Graphidaceae	Thalloloma subvelata	
Graphidaceae	Graphis duplicata	
Haematommaceae	Haematomma persoonii	bloodstain lichen
Lecanoraceae	Pyrrhospora queenslandica	
Lecanoraceae	Lecanora subumbrina	
Lecanoraceae	Lecanora leprosa	rim lichen
Lecanoraceae	Lecanora helva	
Lecanoraceae	Lecanora austrotropica	
Lecanoraceae	Lecanora argentata	rim lichen
Lecanoraceae	Lecanora achroa	
Lecanoraceae	Lecanora alba	
Lecanoraceae	Lecanora arthothelinella	
Lecanoraceae	Lecanora caesiorubella	
Lecanoraceae	Lecanora interjecta	
Lecanoraceae	Maronina australiensis	
Lecanoraceae	Lecanora spp.	
Lecideaceae	Malcolmiella spp.	
Lecideaceae	Lecidea terrena	
Letrouitaceae	Letrouitia flavocrocea	
Lichen	Lichen spp.	
Lichen	Lepraria spp.	
Lichen	Graphia spp.	
Micareaceae	Micarea prasine	
Opegraphaceae	Opegrapha spp.	
Pannariaceae	Parmeliella mariana	
Pannariaceae	Pannaria lurida	
Pannariaceae	Pannaria spp.	
Parmeliaceae	Parmotrema austrocetratum	
Parmeliaceae	Relicina sydneyensis	

Family	Scientifc Name	Common Name
Parmeliaceae	Canoparmelia texana	
Parmeliaceae	Canoparmelia spp.	
Parmeliaceae	Parmotrema tinctorum	
Parmeliaceae	Parmotrema saccatilobum	
Parmeliaceae	Parmotrema robustum	
Parmeliaceae	Parmotrema dilatatum	
Parmeliaceae	Parmelia erumpens	
Parmeliaceae	Parmelia tenuirima	
Parmeliaceae	Parmelia spp.	
Parmeliaceae	Parmelina conlabrosa	
Parmeliaceae	Parmelinopsis neodamaziana	
Parmeliaceae	Parmelinopsis spumosa	
Parmeliaceae	Parmotrema austrosinense	
Parmeliaceae	Parmotrema crinitum	
Parmeliaceae	Parmotrema cristiferum	
Parmeliaceae	Bulbothrix apophystata	
Parmeliaceae	Bulbothrix goebelii	
Parmeliaceae	Bulbothrix queenslandica	
Parmeliaceae	Bulbothrix spp.	
Parmeliaceae	Bulbothrix tabacina	
Parmeliaceae	Flavoparmelia euplecta	
Parmeliaceae	Hypotrachyna immaculate	
Parmeliaceae	Parmotrema parahypotropum	
Parmeliaceae	Myelochroa aurulenta	
Parmeliaceae	Parmotrema subtinctorium	
Parmeliaceae	Punctelia subflava	
Parmeliaceae	Canoparmelia aptata	
Parmeliaceae	Parmotrema judithae	
Parmeliaceae	Parmotrema reticulatum	
Pertusariaceae	Pertusaria clarkeana	
Pertusariaceae	Ochrolechia subpallescens	
Pertusariaceae	Ochrolechia spp.	
Pertusariaceae	Pertusaria pustulata	
Pertusariaceae	Pertusaria undulata	
Pertusariaceae	Pertusaria leioplacella	
Pertusariaceae	Pertusaria elliptica var. elliptica	
Pertusariaceae Pertusariaceae	Pertusaria thiospoda Pertusaria spp.	
Phyllopsoraceae	Perlusaria spp. Phyllopsora spp.	
Physciaceae	Buellia gerontoides	
Physciaceae	Pyxine spp.	
Physciaceae	Pyxine spp. Pyxine berteriana	
Physciaceae	Pyxine subcinerea	
Physciaceae	Physcia spp.	
Physciaceae	Phaeophyscia hispidula	
Physciaceae	Heterodermia spp.	
Physciaceae	Heterodermia opp. Heterodermia obscurata	
Physciaceae	Dirinaria picta	
Physciaceae	Buellia subcallispora	
Physciaceae	Buellia placodiomorpha	
Physciaceae	Buellia sanguinariella	
Physciaceae	Physcia tribacoides	
Physciaceae	Amandinea punctata	
Physciaceae	Amandinea efflorescens	
Physciaceae	Amandinea turgescens	
Physciaceae	Hafellia curatellae	
Physciaceae	Hafellia demutans	
Physciaceae	Hafellia bahiana	
Physciaceae	Hafellia dissa	
Physciaceae	Hafellia parastata	
Physciaceae	Physcia poncinsii	
Physciaceae	Buellia lauricassiae	

Family	Scientifc Name	Common Name
Physciaceae	Heterodermia speciosa	
Physciaceae	Dirinaria aegialita	
Physciaceae	Dirinaria applanata	
Physciaceae	Dirinaria aspera	
Physciaceae	Dirinaria confluens	
Physciaceae	Dirinaria melanoclina	
Physciaceae	Dirinaria spp.	
Physciaceae	Hyperphyscia adglutinata	
Physciaceae	Buellia spp.	
Physciaceae	Physcia minor	
Pyrenulaceae	Pyrenula spp.	
Pyrenulaceae	Pyrenula nitida	
Ramalinaceae	Ramalina confirmata	
Ramalinaceae	Ramalina exiguella	
Ramalinaceae	Ramalina pacifica	
Ramalinaceae	Ramalina nervulosa	
Teloschistaceae	Caloplaca sp. (Mud Island C.Scarlett 3995)	
Teloschistaceae	Caloplaca byrsonimae	
Thelotremataceae	Thelotrema spp.	
Trichotheliaceae	Porina spp.	
Usneaceae	Eumitria baileyi	
Usneaceae	Usnea ramulosissima	
Usneaceae	Usnea spp.	
Verrucariaceae	Verrucaria spp.	
Verrucariaceae	Polyblastia spp.	
Ascomycota	Plectania campylospora	
Basidiomycota	Melanoleuca spp.	
Basidiomycota	Amanita spp.	
Basidiomycota	Rubinoboletus spp.	
Basidiomycota	Boletellus ananiceps	
Basidiomycota	Macrocybe crassa	
Basidiomycota	Armillaria fumosa	
Basidiomycota	Hexagonia decipiens	
Basidiomycota	Amanita sp. 09/8	
Basidiomycota	Amanita sp. 09/4	
Mosses		
Lycopodiaceae	Lycopodiella lateralis	slender clubmoss
Lycopodiaceae	Lycopodiella serpentine	bog clubmoss
Lycopodiaceae	Lycopodiella cernua	scrambling clubmoss
Conifers		
Cupressaceae	Callitris columellaris	coastal cypress pine
Cupressaceae	Callitris rhomboidea	dune cypress pine
Pinaceae	Pinus clausa	
Pinaceae	Pinus spp.	
Pinaceae	Pinus elliottii	slash pine
Podocarpaceae	Podocarpus spinulosus	dwarf plum-pine
Ferns		
Adiantaceae	Adiantum aethiopicum	
Adiantaceae	Adiantum hispidulum	
Adiantaceae	Pellaea viridis var. viridis	
Adiantaceae	Cheilanthes sieberi	
Adiantaceae	Cheilanthes tenuifolia	rock fern
Adiantaceae	Cheilanthes sieberi subsp. sieberi	
Aspleniaceae	Asplenium australasicum	
Aspleniaceae	Asplenium difforme	shore asplenium
Blechnaceae	Blechnum indicum	swamp water fern
Blechnaceae	Blechnum camfieldii	
Blechnaceae	Doodia caudata	
Blechnaceae	Blechnum cartilagineum	gristle fern
Cyatheaceae	Cyathea cooperi	Straw treefern
Davalliaceae	Davallia pyxidata	
Baranaooao	15	

	Common Name
	bats-wing fern
	swamp bracken common bracken
	common bracken
	mountain bracken
	trim shield fern
•	scrambling coral fern
	scrambling corai rem
	pouched coral fern
•	
Lindsaea linearis	screw fern
	fishbone fern
Botrychium australe	parsley fern
Todea barbara	king fern
Phlebodium aureum cv. mandaianum	<u> </u>
Drynaria rigidula	basket fern
Microsorum punctatum	
Platycerium spp.	
Platycerium bifurcatum	elkhorn
Microsorum grossum	
Pyrrosia spp.	
Acrostichum speciosum	mangrove fern
Pteris tremula	
Salvinia molesta	salvinia
Schizaea spp.	
Lygodium microphyllum	snake fern
Lygodium spp.	
Schizaea dichotoma	branched comb fern
Schizaea bifida	forked comb fern
Cyclosorus interruptus	
Thelypteris confluens	
Christella dentata	creek fern
Thunbergia fragrans	
Crossandra infundibuliformis	
Brunoniella australis	blue trumpet
Hygrophila angustifolia	
Odontonema tubaeforme	
Thunbergia alata	black-eyed Susan
Justicia betonica	
Pseuderanthemum variabile	pastel flower
Carpobrotus glaucescens	pigface
Sesuvium portulacastrum	sea purslane
Carpobrotus aequilaterus	
Tetragonia tetragonioides	New Zealand spinach
Alternanthera denticulate	lesser joyweed
Guilleminea densa	small matweed
Alternanthera nana	hairy joyweed
Gomphrena celosioides	gomphrena weed
Amaranthus viridis	green amaranth
A de la colta de la colta d	mango
Mangifera indica	mango
Schinus terebinthifolius	mango
-	mango
	Nephrolepis hirsutulaNephrolepis cordifoliaBotrychium australeTodea barbaraPhlebodium aureum cv. mandaianumDrynaria rigidulaMicrosorum punctatumPlatycerium spp.Platycerium bifurcatumMicrosorum grossumPyrrosia spp.Acrostichum speciosumPteris tremulaSalvinia molestaSchizaea spp.Lygodium microphyllumLygodium spp.Schizaea bifidaCyclosorus interruptusThelypteris confluensChristella dentataVaticia betonicaJusticia betonicaJusticia betonicaSesuvium portulacastrumCarpobrotus glaucescensSesuvium portulacastrumCarpobrotus aequilaterusTetragonia tetragonioidesAlternanthera dentsuAlternanthera brasiliana cv. rubiginosaGomphrena celosioides

Family	Scientifc Name	Common Name
Apiaceae	Centella asiatica	<i>A</i> 11
Apiaceae	Hydrocotyle laxiflora	stinking pennywort
Apiaceae	Hydrocotyle acutiloba	
Apiaceae	Trachymene incisa subsp. incise	
Apiaceae	Apium prostratum var. prostratum	
Apiaceae	Xanthosia pilosa	woolly xanthosia
Apiaceae	Platysace ericoides	heath platysace
Apiaceae	Hydrocotyle bonariensis	
Apiaceae	Hydrocotyle tripartite	chield perpendent
Apiaceae Apiaceae	Hydrocotyle verticillata Cyclospermum leptophyllum	shield pennywort
	Acokanthera oblongifolia	hushman'a paisan
Apocynaceae	Parsonsia eucalyptophylla	bushman's poison gargaloo
Apocynaceae	Nerium oleander	oleander
Apocynaceae	Allamanda cathartica	oleander
Apocynaceae Apocynaceae	Parsonsia straminea	monkey rope
	Catharanthus roseus	pink periwinkle
Apocynaceae	Cascabela thevetia	
Apocynaceae Apocynaceae	Parsonsia velutina	yellow oleander hairy silkpod
Apocynaceae Araliaceae	Astrotricha longifolia	star hair bush
Araliaceae	Astrotricha longitolia Astrotricha latifolia	
Araliaceae	Astrotricha spp.	
Araliaceae	Polyscias elegans	celery wood
Araliaceae	Schefflera actinophylla	umbrella tree
Asclepiadaceae	Asclepias curassavica	red-head cottonbush
Asclepiadaceae	Secamone elliptica	Ted-field collonbush
Asclepiadaceae	Marsdenia fraseri	narrow-leaved milk vine
Asclepiadaceae	Sarcostemma viminale subsp. brunonianum	harrow leaved milk whe
Asclepiadaceae	Marsdenia spp.	
Asclepiadaceae	Marsdenia opp. Marsdenia rostrata	
Asclepiadaceae	Cynanchum carnosum	
Asclepiadaceae	Gomphocarpus physocarpus	balloon cottonbush
Asteraceae	Cassinia laevis	
Asteraceae	Cosmos bipinnatus	cosmos
Asteraceae	Conyza canadensis var. pusilla	0001100
Asteraceae	Crassocephalum crepidioides	thickhead
Asteraceae	Gaillardia pulchella var. picta	
Asteraceae	Ageratum houstonianum	blue billygoat weed
Asteraceae	Cirsium vulgare	spear thistle
Asteraceae	Dittrichia graveolens	stinkwort
Asteraceae	Tagetes minuta	stinking roger
Asteraceae	Vernonia spp.	
Asteraceae	Xanthium occidentale	
Asteraceae	Soliva sessilis	
Asteraceae	Cyanthillium cinereum	
Asteraceae	Cosmos sulphureus	
Asteraceae	Ageratum conyzoides subsp. conyzoides	
Asteraceae	Sphagneticola trilobata	
Asteraceae	Senecio pinnatifolius var. pinnatifolius	
Asteraceae	Gamochaeta coarctata	
Asteraceae	Hypochaeris microcephala var. albiflora	
Asteraceae	Hypochaeris radicata	catsear
Asteraceae	Emilia sonchifolia var. javanica	
Asteraceae	Emilia sonchifolia	
Asteraceae	Epaltes australis	spreading nutheads
Asteraceae	Eclipta prostrate	white eclipta
Asteraceae	Conyza bonariensis	Forker
Asteraceae	Conyza sumatrensis	tall fleabane
Asteraceae	Chrysanthemoides monilifera subsp. rotundata	
Asteraceae	Aster subulatus	wild aster
Asteraceae	Vernonia cinerea	/=-
	Youngia japonica	

Family	Scientifc Name	Common Name
Asteraceae	Tridax procumbens	tridax
Asteraceae	Sonchus oleraceus	common sowthistle
Asteraceae	Podolepis longipedata	tall copper-wire daisy
Asteraceae	Olearia nernstii	Ipswich daisy
Asteraceae	Calyptocarpus vialis	creeping cinderella weed
Asteraceae	Baccharis halimifolia	groundsel bush
Asteraceae	Ambrosia artemisiifolia	annual ragweed
Asteraceae	Acmella grandiflora var. brachyglossa	
Asteraceae	Erechtites valerianifolius	
Asteraceae	Centipeda minima	
Asteraceae	Conyza spp.	
Asteraceae	Gazania spp.	
Asteraceae	Asteraceae spp.	
Asteraceae	Galinsoga parviflora	yellow wee
Asteraceae	Sigesbeckia orientalis	Indian weed
Asteraceae	Enydra fluctuans	
Asteraceae	Conyza canadensis var. canadensis	
Asteraceae	Blumea lacera	
Asteraceae	Cotula australis	common cotula
Asteraceae	Guizotia abyssinica	niger seed
Asteraceae	Senecio vulgaris	common groundsel
Asteraceae	Senecio madagascariensis	fireweed
Asteraceae	Podolepis neglecta	
Asteraceae	Osteospermum ecklonis	
Asteraceae	Zinnia peruviana	wild zinnia
Asteraceae	Montanoa hibiscifolia	
Asteraceae	Acanthospermum australe	owenn deiev
Asteraceae	Olearia hygrophila	swamp daisy
Asteraceae	Centratherum punctatum subsp. punctatum	
Asteraceae	Coreopsis lanceolata	Cingonoro doiou
Asteraceae	Wedelia trilobata	Singapore daisy
Asteraceae	Gymnocoronis spilanthoides	
Asteraceae	Bidens pilosa var. pilosa Glossocardia bidens	notivo cobblorio nogo
Asteraceae		native cobbler's pegs
Asteraceae Asteraceae	Gamochaeta pensylvanica Gamochaeta calviceps	
Asteraceae	Gamochaeta carriceps Gamochaeta americana	
Asteraceae	Chrysocephalum apiculatum	yellow buttons
	Pseudognaphalium luteoalbum	Jersey cudweed
Asteraceae	Bidens pilosa	Jersey Cudweed
Asteraceae Asteraceae	Picris angustifolia subsp. carolorum-henricorum	
Asteraceae	Erechtites valerianifolius forma valerianifolius	
Asteraceae	Ageratina adenophora	crofton weed
Asteraceae	Ageratina adenopriora Ageratina riparia	mistflower
Asteraceae	Wollastonia biflora	monower
Balsaminaceae	Impatiens walleriana	balsam
Basellaceae	Anredera cordifolia	Madeira vine
Bignoniaceae	Tecoma capensis	
Bignoniaceae	Macfadyena unguis-cati	cat's claw creeper
Bignoniaceae	Tecoma stans	tecoma
Bignoniaceae	Jacaranda mimosifolia	jacaranda
Boraginaceae	Symphytum officinale	juourunuu
Boraginaceae	Cordia wallichii	
Boraginaceae	Heliotropium amplexicaule	blue heliotrope
Brassicaceae	Lepidium didymum	2.20
Brassicaceae	Sisymbrium orientale	Indian hedge mustard
Brassicaceae	Lepidium virginicum	Virginian peppercress
Brassicaceae	Lepidium bonariense	Argentine peppercress
Brassicaceae	Brassica x juncea	Indian mustard
Brassicaceae	Lepidium africanum	common peppercress
Brassicaceae	Capsella bursapastoris	shepherd's purse
Brassicaceae	Cardamine flexuosa	wood bittercress

Family	Scientifc Name	Common Name
Brassicaceae	Cakile edentula	sea rocket
Buddlejaceae	Buddleja madagascariensis	buddleia
Cactaceae	Hylocereus undatus	night blooming cactus
Cactaceae	Opuntia stricta	
Caesalpiniaceae	Bauhinia galpinii	
Caesalpiniaceae	Bauhinia spp.	
Caesalpiniaceae	Caesalpinia bonduc	nicker bean
Caesalpiniaceae	Cassia fistula	Indian laburnum
Caesalpiniaceae	Senna alata	
Caesalpiniaceae	Senna pendula var. glabrata	Easter cassia
Caesalpiniaceae	Senna x floribunda	
Caesalpiniaceae	Chamaecrista rotundifolia var. rotundifolia	
Caesalpiniaceae	Chamaecrista nomame var. nomame	
Caesalpiniaceae	Chamaecrista maritima	
Campanulaceae	Lobelia purpurascens	white root
Campanulaceae	Lobelia membranacea	
Campanulaceae	Lobelia gibbosa	native lobelia
Campanulaceae	Lobelia alata	angled lobelia
Campanulaceae	Wahlenbergia gracilis	sprawling bluebell
Campanulaceae	Lobelia stenophylla	
Campanulaceae	Wahlenbergia stricta subsp. stricta	
Caprifoliaceae	Sambucus nigra	
Caricaceae	Carica papaya	pawpaw
Caryophyllaceae	Petrorhagia dubia	haha
Caryophyllaceae	Cerastium glomeratum	mouse ear chickweed
Caryophyllaceae	Stellaria media	chickweed
Caryophyllaceae	Polycarpon tetraphyllum	Shickweed
Caryophyllaceae	Drymaria cordata subsp. cordata	
Caryophyllaceae	Spergularia marina	
Casuarinaceae	Casuarina spp.	
Casuarinaceae	Allocasuarina spp.	
Casuarinaceae	Casuarina equisetifolia	
Casuarinaceae	Casuarina glauca	swamp she-oak
Casuarinaceae	-	Swamp She-bak
Casuarinaceae	Casuarina equisetifolia subsp. incana Allocasuarina littoralis	
Casuarinaceae	Allocasuarina intoralis Allocasuarina torulosa	
Celastraceae		
Celastraceae	Elaeodendron melanocarpum	broad-leaved boxwood
	Denhamia celastroides	broad-leaved boxwood
Chenopodiaceae	Sarcocornia quinqueflora	Mariaan taa
Chenopodiaceae	Chenopodium ambrosioides	Mexican tea
Chenopodiaceae	Chenopodium album	fat-hen
Chenopodiaceae	Einadia hastata	
Chenopodiaceae	Halosarcia pergranulata subsp. queenslandica	
Chenopodiaceae	Suaeda australis	a off role
Chenopodiaceae	Salsola kali	soft roly-poly
Chenopodiaceae	Halosarcia halocnemoides subsp. tenuis	
Chenopodiaceae	Suaeda arbusculoides	
Chenopodiaceae	Sarcocornia quinqueflora subsp. quinqueflora	
Chenopodiaceae	Einadia trigonos subsp. stellulata	
Clusiaceae	Hypericum gramineum	
Combretaceae	Lumnitzera racemosa	
Convolvulaceae	Ipomoea pes-caprae	
Convolvulaceae	Cuscuta campestris	dodder
Convolvulaceae	Ipomoea batatas	sweet potato
Convolvulaceae	Convolvulaceae spp.	
Convolvulaceae	Ipomoea indica	blue morning-glory
Convolvulaceae	Ipomoea alba	moon flower
Convolvulaceae	Ipomoea cairica	
Convolvulaceae	Polymeria calycina	pink bindweed
Convolvulaceae	Ipomoea pes-caprae subsp. brasiliensis	goatsfoot
Crassulaceae	Bryophyllum delagoense	
Crassulaceae	Bryophyllum fedtschenkoi	

Family	Scientifc Name	Common Name
Crassulaceae	Crassula ovata	
Crassulaceae	Bryophyllum pinnatum	resurrection plant
Cucurbitaceae	Cucurbitaceae spp.	
Cucurbitaceae	Cucurbita pepo	
Cunoniaceae	Bauera capitata	clustered bauera
Dilleniaceae	Hibbertia acicularis	
Dilleniaceae	Hibbertia spp.	
Dilleniaceae	Hibbertia scandens	
Dilleniaceae	Hibbertia linearis	
Dilleniaceae	Hibbertia linearis var. floribunda	
Dilleniaceae	Hibbertia aspera	
Dilleniaceae	Hibbertia stricta	
Dilleniaceae	Hibbertia vestita	
Dilleniaceae	Hibbertia fasciculata	
Dilleniaceae	Hibbertia linearis var. obtusifolia	
Dilleniaceae	Hibbertia salicifolia	
Droseraceae	Drosera binata	forked sundew
Droseraceae	Drosera spatulata	
Droseraceae	Drosera peltata	pale sundew
Droseraceae	Drosera pygmaea	Para Guina Gui
Droseraceae	Drosera spp.	
Ebenaceae	Diospyros geminata	scaly ebony
Ebenaceae	Diospyros gerinnata Diospyros kaki	persimmon
Ebenaceae	Diospyros spp.	persimition
Elaeocarpaceae	Elaeocarpaceae	
Elaeocarpaceae	Elaeocarpus reticulatus	ash quandong
Elaeocarpaceae	Elaeocarpus obovatus	blueberry ash
Epacridaceae	Agiortia pedicellata	
Epacridaceae	Brachyloma scortechinii	
Epacridaceae	Epacris pulchella	wallum heath
Epacridaceae	Brachyloma daphnoides subsp. daphnoides	
Epacridaceae	Monotoca sp.	
Epacridaceae	Styphelia viridis subsp. breviflora	
Epacridaceae	Epacris microphylla var. microphylla	
Epacridaceae	Epacridaceae spp.	
Epacridaceae	Leucopogon leptospermoides	
Epacridaceae	Leucopogon margarodes	pearl beard heath
Epacridaceae	Leucopogon pimeleoides	
Epacridaceae	Leucopogon virgatus	common beard heath
Epacridaceae	Leucopogon biflorus	
Epacridaceae	Leucopogon deformis	
Epacridaceae	Leucopogon juniperinus	prickly heath
Epacridaceae	Epacris microphylla	
Epacridaceae	Epacris obtusifolia	common heath
Epacridaceae	Monotoca spp.	
Epacridaceae	Melichrus procumbens	jam tarts
Epacridaceae	Leucopogon ericoides	,
Epacridaceae	Leucopogon pedicellatus	wallum beard heath
Epacridaceae	Woollsia pungens	
Epacridaceae	Styphelia viridis	
		enrengolio
Epacridaceae	Sprengelia sprengelioides	sprengelia
Epacridaceae	Monotoca scoparia	prickly broom heath
Epacridaceae	Leucopogon lanceolatus	
Epacridaceae	Brachyloma daphnoides	
Epacridaceae	Acrotriche aggregata	red cluster heath
Epacridaceae	Woollsia spp.	
Epacridaceae	Styphelia spp.	
Epacridaceae	Brachyloma spp.	
Euphorbiaceae	Adriana urticoides var. urticoides	
Euphorbiaceae	Amperea xiphoclada	
Euphorbiaceae	Amperea xiphoclada var. xiphoclada	

Family	Scientifc Name	Common Name
Euphorbiaceae	Chamaesyce psammogeton	
Euphorbiaceae	Aleurites moluccanus	candlenut tree
Euphorbiaceae	Phyllanthus virgatus	
Euphorbiaceae	Petalostigma pubescens	quinine tree
Euphorbiaceae	Mallotus philippensis	red kamala
Euphorbiaceae	Macaranga tanarius	macaranga
Euphorbiaceae	Macaranga spp.	
Euphorbiaceae	Glochidion sumatranum	umbrella cheese tree
Euphorbiaceae	Euphorbia cyathophora	dwarf poinsettia
Euphorbiaceae	Excoecaria agallocha	milky mangrove
Euphorbiaceae	Breynia oblongifolia	
Euphorbiaceae	Glochidion ferdinandi	
Euphorbiaceae	Ricinocarpos spp.	
Euphorbiaceae	Synadenium grantii	African milk bush
Euphorbiaceae	Chamaesyce hirta	asthma plant
Euphorbiaceae	Chamaesyce hyssopifolia	
Euphorbiaceae	Ricinus communis	castor oil bush
Euphorbiaceae	Sauropus hirtellus	
Euphorbiaceae	Homalanthus nutans	
Euphorbiaceae	Breynia oblongifolia var. oblongifolia	
Euphorbiaceae	Croton acronychioides	thick-leaved croton
Euphorbiaceae	Petalostigma triloculare	forest quinine
Euphorbiaceae	Mallotus discolor	white kamala
Euphorbiaceae	Ricinocarpos pinifolius	wedding bush
Euphorbiaceae	Pseudanthus orientalis	
Euphorbiaceae	Poranthera microphylla	small poranthera
Euphorbiaceae	Phyllanthus gasstroemii	
Euphorbiaceae	Phyllanthus tenellus	
Euphorbiaceae	Alchornea ilicifolia	native holly
Euphorbiaceae	Amperea spp.	
Euphorbiaceae	Homalanthus spp.	
Euphorbiaceae	Phyllanthus hirtellus	
Euphorbiaceae	Chamaesyce maculate	
Fabaceae	Desmodium varians	slender tick trefoil
Fabaceae	Indigofera suffruticosa	
Fabaceae	Sophora tomentosa	
Fabaceae	, Pultenaea euchila	orange pultenaea
Fabaceae	Macroptilium lathyroides	0.1
Fabaceae	Daviesia villifera	prickly daviesia
Fabaceae	Crotalaria incana subsp. incana	
Fabaceae	, Cajanus cajan	pigeon pea
Fabaceae	Zornia dyctiocarpa var. dyctiocarpa	
Fabaceae	Trifolium glomeratum	clustered clover
Fabaceae	Trifolium repens var. repens	white clover
Fabaceae	Sophora tomentosa subsp. australis	
Fabaceae	Sesbania cannabina var. cannabina	
Fabaceae	Pultenaea myrtoides	
Fabaceae	Pultenaea paleacea var. paleacea	
Fabaceae	Pultenaea petiolaris	
Fabaceae	Pultenaea retusa	
Fabaceae	Pultenaea villosa	hairy bush pea
Fabaceae	Rhynchosia minima var. minima	
Fabaceae	Phyllota phylicoides	yellow peabush
Fabaceae	Mucuna gigantea	burny bean
Fabaceae	Lotononis bainesii	lotononis
Fabaceae	Macroptilium atropurpureum	siratro
Fabaceae	Medicago lupulina	black medic
Fabaceae	Jacksonia scoparia	
Fabaceae	Jacksonia scopana Jacksonia stackhousii	wallum dogwood
Fabaceae	Jacksonia stacknousii Kennedia rubicunda	wallum dogwood red Kennedy pea
Fabaceae	Indigofera hirsuta Comphelebium pinnetum	hairy indigo
Fabaceae	Gompholobium pinnatum	poor mans gold

Family	Scientifc Name	Common Name
Fabaceae	Hardenbergia violacea	
Fabaceae	Hovea acutifolia	
Fabaceae	Hovea linearis	erect hovea
Fabaceae	Glycine clandestina var. clandestina	
Fabaceae	Glycine cyrtoloba	
Fabaceae	Glycine tabacina	glycine pea
Fabaceae	Glycine tomentella	woolly glycine
Fabaceae	Gompholobium latifolium	broad wedge pea
Fabaceae Fabaceae	Dillwynia retorta var. retorta Dillwynia retorta	
Fabaceae	Daviesia ulicifolia	native gorse
Fabaceae	Daviesia unbellulata	halive goise
Fabaceae	Daviesia wyattiana	long-leaved bitter pea
Fabaceae	Desmodium gunnii	
Fabaceae	Desmodium intortum	
Fabaceae	Desmodium rhytidophyllum	
Fabaceae	Desmodium triflorum	
Fabaceae	Crotalaria lanceolata subsp. lanceolata	
Fabaceae	Crotalaria montana	
Fabaceae	Crotalaria goreensis	gambia pea
Fabaceae	Chorizema parviflorum	eastern flame pea
Fabaceae	Bossiaea ensata	leafless bossiaea
Fabaceae	Bossiaea heterophylla	variable bossiaea
Fabaceae	Aotus ericoides	common aotus
Fabaceae	Aotus lanigera	pointed aotus
Fabaceae	Abrus precatorius	crabs-eye vine
Fabaceae	Canavalia rosea	coastal jack bean
Fabaceae Fabaceae	Hovea heterophylla	
Fabaceae	Macrotyloma uniflorum var. stenocarpum Macrotyloma axillare var. axillare	
Fabaceae	Gompholobium virgatum	
Fabaceae	Trifolium repens	
Fabaceae	Bossiaea spp.	
Fabaceae	Daviesia spp.	
Fabaceae	Hardenbergia spp.	
Fabaceae	Vigna caracalla	
Fabaceae	Macrotyloma uniflorum var. uniflorum	
Fabaceae	Medicago sativa subsp. sativa	
Fabaceae	Pueraria montana var. lobata	
Fabaceae	Erythrina x sykesii	
Fabaceae	Abrus precatorius subsp. africanus	
Fabaceae	Crotalaria pallida var. obovata	
Fabaceae	Glycine clandestine	
Fabaceae	Vicia sativa subsp. nigra	
Fabaceae	Pultenaea paleacea	
Fabaceae Fabaceae	Genista monspessulana	sandplain lupin
Fabaceae Fabaceae	Lupinus cosentinii Crotalaria linifolia	
Fabaceae	Medicago polymorpha	burr medic
Fabaceae	Vigna unguiculata subsp. unguiculata	
Fabaceae	Platylobium formosum	flat pea
Fabaceae	Pultenaea spp.	
Fabaceae	Indigofera spicata	creeping indigo
Fabaceae	Dillwynia floribunda	-
Fabaceae	Gompholobium virgatum var. virgatum	
Fabaceae	Vicia tetrasperma	slender vetch
Fabaceae	Stylosanthes hamata	
Fabaceae	Neonotonia wightii var. wightii	
Fabaceae	Desmodium incanum	
Fabaceae	Tephrosia glomeruliflora	pink tephrosia
Fabaceae	Desmodium uncinatum	-
Fabaceae	Desmodium tortuosum	Florida beggar-weed

Family	Scientifc Name	Common Name
Sentianaceae	Centaurium tenuiflorum	
Gentianaceae	Centaurium erythraea	common centaury
Geraniaceae	Pelargonium spp.	
Goodeniaceae	Dampiera sylvestris	blue dampiera
Goodeniaceae	Goodenia stelligera	
Goodeniaceae	Goodenia rotundifolia	
Goodeniaceae	Scaevola calendulacea	dune fan flower
Goodeniaceae	Velleia spathulata	wild pansies
Goodeniaceae	Brunonia australis	blue pincushion
Goodeniaceae	Goodenia spp.	
Goodeniaceae	Dampiera spp.	
Goodeniaceae	Goodenia paniculata	
Goodeniaceae	Scaevola ramosissima	purple fan flower
Goodeniaceae	Goodenia bellidifolia subsp. argentea	
Goodeniaceae	Dampiera stricta	
Haloragaceae	Gonocarpus tetragynus	
Haloragaceae	Myriophyllum gracile	
Haloragaceae	Gonocarpus micranthus	
Haloragaceae	Myriophyllum gracile var. gracile	
Haloragaceae	Gonocarpus micranthus subsp. ramosissimus	
Haloragaceae	Gonocarpus chinensis subsp. verrucosus	
Haloragaceae	Gonocarpus micranthus subsp. micranthus	
Lamiaceae	Plectranthus caninus	
Lamiaceae	Clerodendrum floribundum	
Lamiaceae	Anisomeles malabarica	
Lamiaceae	Vitex trifolia var. bicolour	
Lamiaceae	Plectranthus amboinicus	allspice
Lamiaceae	Salvia coccinea	red salvia
Lamiaceae	Stachys arvensis	stagger weed
Lamiaceae	Plectranthus verticillatus	
Lamiaceae	Leonotis nepetifolia	
Lamiaceae	Gmelina leichardtii	white beech
Lamiaceae	Westringia eremicola	slender westringia
Lamiaceae	Vitex trifolia var. trifolia	
Lamiaceae	Clerodendrum inerme	coastal lolly bush
Lamiaceae	Westringia fruticosa	
Lamiaceae	Vitex triflora	
Lamiaceae	Clerodendrum heterophyllum	
Lentibulariaceae	Utricularia uliginosa	asian bladderwort
Lentibulariaceae	Utricularia caerulea	blue bladderwort
Lentibulariaceae	Utricularia aurea	golden bladderwort
Lentibulariaceae	Utricularia gibba	floating bladderwort
Loganiaceae	Mitrasacme paludosa	
Loganiaceae	Mitrasacme alsinoides	
Loganiaceae	Logania pusilla Mitropogna polymorpho	
Loganiaceae	Mitrasacme polymorpha	
Loranthaceae	Amyema bifurcate	long flowers
Loranthaceae	Dendrophthoe vitellina	long-flowered mistletoe
Loranthaceae	Lysiana subfalcata	
Loranthaceae	Amyema congener subsp. congener	lionum
Malvaceae	Malvastrum coromandelianum subsp. coromandel	anum
Malvaceae	Sida cordifolia Thosposia populaça	
Malvaceae	Thespesia populnea Malua populitara	omoli flourored and
Malvaceae	Malva parviflora	small-flowered mallow
Malvaceae	Hibiscus rosasinensis	racalla
Malvaceae	Hibiscus sabdariffa	rosella
Malvaceae	Hibiscus mutabilis	uropowood
Malvaceae	Urena lobata Sida rhamhifelia	urena weed
Malvaceae	Sida rhombifolia	awama hibicawa
Malvaceae	Hibiscus diversifolius	swamp hibiscus
Malvaceae	Malvaviscus arboreus	aatta= +===
Malvaceae	Hibiscus tiliaceus	cotton tree

Family	Scientifc Name	Common Name
Malvaceae	Hibiscus heterophyllus	
Melastomataceae	Melastoma malabathricum subsp. malabathricum	
Melastomataceae	Tibouchina urvilleana	
Melastomataceae	Melastoma affine	black-mouth bush
Meliaceae	Melia azedarach	white cedar
Mimosaceae	Calliandra haematocephala	
Mimosaceae	Acacia aulacocarpa	
Mimosaceae	Acacia falcata	sickle wattle
Mimosaceae	Acacia concurrens	
Mimosaceae	Acacia maidenii	Maiden's wattle
Mimosaceae	Acacia leiocalyx	
Mimosaceae	Calliandra surinamensis	
Mimosaceae	Acacia leiocalyx subsp. leiocalyx	
Mimosaceae	Acacia saligna	golden wreath wattle
Mimosaceae	Acacia perangusta	
Mimosaceae	Leucaena leucocephala	
Mimosaceae	Acacia sophorae	coastal wattle
Mimosaceae	Acacia suaveolens	sweet wattle
Mimosaceae	Acacia hispidula	
Mimosaceae	Acacia longifolia	Sydney golden wattle
Mimosaceae	Leucaena leucocephala subsp. leucocephala	
Mimosaceae	Leucaena leucocephala subsp. glabrata	
Mimosaceae	Acacia nilotica subsp. indica	prickly acacia
Mimosaceae	Acacia ulicifolia	
Mimosaceae	Acacia spp.	
Mimosaceae	Acacia melanoxylon	blackwood
Mimosaceae	Acacia myrtifolia	
Mimosaceae	Acacia penninervis var. longiracemosa	
Mimosaceae	Acacia podalyriifolia	Queensland silver wattle
Mimosaceae	Acacia fimbriata	Brisbane golden wattle
Mimosaceae	Acacia flavescens	toothed wattle
Mimosaceae	Acacia macradenia	zig-zag wattle
Mimosaceae	Acacia baueri subsp. baueri	
Molluginaceae	Macarthuria neocambrica	
Moraceae	Ficus elastica	
Moraceae	Ficus religiosa	
Moraceae	Ficus spp.	
Moraceae	Ficus obliqua	
Moraceae	Maclura cochinchinensis	cockspur thorn
Moraceae	Cudrania cochinchinensis	
Moraceae	Ficus benjamina var. benjamina	weeping fig
Moraceae	Morus alba	white mulberry
Moraceae	Ficus pumila	
Moraceae	Ficus coronata	creek sandpaper fig
Moraceae	Ficus platypoda var. platypoda	
Myoporaceae	Myoporum acuminatum	coastal boobialla
Myoporaceae	Myoporum boninense subsp. australe	
Myrsinaceae	Myrsine howittiana	
Myrsinaceae	Aegiceras corniculatum	river mangrove
Myrsinaceae	Rapanea variabilis	muttonwood
Myrtaceae	Rhodamnia rubescens	
Myrtaceae	Melaleuca styphelioides	
Myrtaceae	Leptospermum laevigatum	coast tea-tree
Myrtaceae	Psidium guajava	guava
Myrtaceae	Calytrix spp.	
Myrtaceae	Eucalyptus siderophloia	
Myrtaceae	Melaleuca sieberi	
Myrtaceae	Melaleuca thymifolia	thyme honeymyrtle
Myrtaceae	Leptospermum polygalifolium	tantoon
Myrtaceae	Leptospermum speciosum	
Myrtaceae	Eucalyptus interstans	
Myrtaceae	Syzygium oleosum	blue cherry

Family	Scientifc Name	Common Name
Myrtaceae	Rhodomyrtus psidioides	native guava
Myrtaceae	Ochrosperma lineare	
Myrtaceae	Melaleuca nodosa	
Myrtaceae	Melaleuca quinquenervia	swamp paperbark
Myrtaceae	Lophostemon suaveolens	swamp box
Myrtaceae	Lophostemon confertus	brush box
Myrtaceae	Leptospermum juniperinum	prickly tea-tree
Myrtaceae	Leptospermum liversidgei	
Myrtaceae	Corymbia intermedia	pink bloodwood
Myrtaceae	Eucalyptus racemosa subsp. racemosa	scribbly gum
Myrtaceae	Corymbia tessellaris	Moreton Bay ash
Myrtaceae	Lophostemon spp.	
Myrtaceae	Eucalyptus carnea	
Myrtaceae	Angophora costata	
Myrtaceae	Callistemon pachyphyllus	
Myrtaceae	Callistemon salignus	
Myrtaceae	Eugenia uniflora	Brazilian cherry tree
Myrtaceae	Baeckea stenophylla	
Myrtaceae	Baeckea spp.	
Myrtaceae	Austromyrtus dulcis	midgen berry
Myrtaceae	Angophora leiocarpa	rusty gum
Myrtaceae	Angophora woodsiana	smudgee
Myrtaceae	Acmena hemilampra subsp. hemilampra	5
Myrtaceae	Acmena hemilampra	
Myrtaceae	, Acmena smithii	lillypilly satinash
Myrtaceae	Baeckea omissa	
Myrtaceae	Eucalyptus spp.	
Myrtaceae	Eucalyptus microcorys	
Myrtaceae	Eucalyptus moluccana	gum-topped box
Myrtaceae	Eucalyptus pilligaensis	narrow-leaved grey box
Myrtaceae	Eucalyptus pilularis	blackbutt
Myrtaceae	Callistemon viminalis	weeping bottlebrush
Myrtaceae	Callistemon spp.	
Myrtaceae	Calytrix tetragonal	fringe myrtle
Myrtaceae	Baeckea frutescens	
Myrtaceae	Leptospermum semibaccatum	wallum tea-tree
Myrtaceae	Leptospermum trinervium	woolly tea-tree
Myrtaceae	Homoranthus virgatus	twiggy homoranthus
Nyrtaceae	Eucalyptus planchoniana	twiggy nonoraninas
Myrtaceae	Eucalyptus propingua	small-fruited grey gum
Myrtaceae	Eucalyptus resinifera	red mahogany
Myrtaceae	Eucalyptus robusta	swamp mahogany
Nyrtaceae	Eucalyptus robusta Eucalyptus seeana	narrow-leaved red gum
Nyrtaceae	Eucalyptus seeana Eucalyptus tereticornis	hanow-leaved led guilt
•		
Myrtaceae Myrtaceae	Corymbia trachyphloia Corymbia blakei	
•		
Myrtaceae	Homoranthus spp.	
Myrtaceae	Eucalyptus tereticornis subsp. tereticornis	
Myrtaceae	Melaleuca pachyphylla	Codosti
Myrtaceae	Corymbia torelliana	Cadaghi
Myrtaceae	Corymbia trachyphloia subsp. trachyphloia	and blackburged
Myrtaceae	Corymbia gummifera	red bloodwood
Myrtaceae	Eucalyptus tindaliae	Queensland white stringybark
Nyrtaceae	Angophora spp.	
Myrtaceae	Psidium guineense	cherry guava
Myrtaceae	Leptospermum spp.	
Myrtaceae	Syncarpia hillii	Fraser Island satinay
Nyctaginaceae	Mirabilis jalapa	four o'clock
Ochnaceae	Ochna serrulata ochna	
Olacaceae	Olax spp.	
Olacaceae	Olax stricta	

Family	Scientifc Name	Common Name
Olacaceae	Olax retusa	
Oleaceae	Chionanthus ramiflora	northern olive
Oleaceae	Jasminum didymum subsp. didymum	
Oleaceae	Notelaea longifolia forma glabra	
Oleaceae	Notelaea ovata	forest olive
Oleaceae	Notelaea longifolia	
Oleaceae	Jasminum suavissimum	forest jasmine
Oleaceae	Jasminum mesnyi	·
Oleaceae	Jasminum didymum subsp. didymum - J.didym	um subsp. racemosum
Oleaceae	Ligustrum sinense	, small-leaved privet
Oleaceae	Jasminum didymum	
Onagraceae	Oenothera drummondii subsp. drummondii	
Onagraceae	Oenothera stricta subsp. stricta	
Onagraceae	Oenothera indecora subsp. bonariensis	
Onagraceae	Oenothera mollissima	
Onagraceae	Oenothera affinis	long-flowered evening
-		primrose
Onagraceae	Ludwigia octovalvis	willow primrose
Oxalidaceae	Oxalis spp.	
Oxalidaceae	Oxalis debilis var. corymbosa	pink shamrock
Oxalidaceae	Oxalis rubens	
Oxalidaceae	Oxalis corniculata	
Oxalidaceae	Oxalis thompsoniae	
Passifloraceae	Passiflora subpeltata	white passion flower
Passifloraceae	Passiflora suberosa	corky passion flower
Passifloraceae	Passiflora aurantia	
Passifloraceae	Passiflora edulis	
Passifloraceae	Passiflora foetida	
Pedaliaceae	Ibicella lutea	
Phytolaccaceae	Phytolacca octandra	inkweed
Phytolaccaceae	Rivina humilis	
Pittosporaceae	Bursaria spinosa	
Pittosporaceae	Pittosporum undulatum	sweet pittosporum
Pittosporaceae	Pittosporum revolutum	yellow pittosporum
Plantaginaceae	Plantago lanceolata	,
Plantaginaceae	Plantago major	greater plantain
Polygalaceae	Comesperma retusum	groater plainain
Polygalaceae	Comesperma hispidulum	
Polygalaceae	Polygala paniculata	
Polygalaceae	Comesperma volubile	love creeper
Polygalaceae	Polygala linariifolia	
Polygalaceae Polygalaceae	Polygala virgata Comesperma defoliatum	leafless milkwort
		leaness mikwon
Polygalaceae	Comesperma ericinum	
Polygonaceae	Rumex crispus	curled dock
Polygonaceae	Persicaria orientalis	princes feathers
Polygonaceae	Persicaria attenuate	
Polygonaceae	Persicaria elatior	
Polygonaceae	Persicaria barbata	
Polygonaceae	Persicaria decipiens	slender knotweed
Polygonaceae	Persicaria strigosa	
Polygonaceae	Rumex brownie	swamp dock
Primulaceae	Anagallis arvensis	blue pimpernel
Proteaceae	Strangea spp.	
Proteaceae	Conospermum	
Proteaceae	Banksia spp.	
Proteaceae	Banksia serrata	red honeysuckle
Proteaceae	Banksia oblongifolia	dwarf banksia
Proteaceae	Grevillea linearifolia	
Proteaceae	Hakea plurinervia	
	Macadamia integrifolia	macadamia nut
Proteaceae	Macaoamia meomona	

Family	Scientifc Name	Common Name
Proteaceae	Lomatia silaifolia	crinkle bush
Proteaceae	Hakea salicifolia	willow-leaved hakea
Proteaceae	Grevillea robusta	
Proteaceae	Strangea linearis	strangea
Proteaceae	Grevillea leiophylla	wallum grevillea
Proteaceae	Hakea florulenta	three-nerved willow hakea
Proteaceae	Conospermum taxifolium	devil's rice
Proteaceae	Banksia spinulosa	
Proteaceae	Hakea actites	
Proteaceae	Persoonia sp. (Plunkett G.Leiper AQ568385)	
Proteaceae	Banksia integrifolia subsp. integrifolia	
Proteaceae	Banksia integrifolia subsp. compar	
Proteaceae	Persoonia stradbrokensis	
Proteaceae	Banksia integrifolia	
Proteaceae	Banksia aemula	wallum banksia
Proteaceae	Xylomelum salicinum	
Proteaceae	Persoonia cornifolia	broad-leaved geebung
Proteaceae	Persoonia sericea	silky geebung
Proteaceae	Persoonia virgata	small-leaved geebung
Proteaceae	Persoonia spp.	
Proteaceae	Petrophile canescens	
Proteaceae	Petrophile shirleyae	
Proteaceae	Macadamia tetraphylla	
Proteaceae	Grevillea banksii	
Proteaceae	Banksia spinulosa var. spinulosa	
Proteaceae	Banksia robur	broad-leaved banksia
Proteaceae	Banksia spinulosa var. collina	
Rhamnaceae	Cryptandra longistaminea	
Rhamnaceae	Alphitonia excelsa	soap tree
Rhizophoraceae	Bruguiera gymnorhiza	large-fruited orange
Dh'ann hann an a		mangrove
Rhizophoraceae	Rhizophora stylosa	spotted mangrove
Rhizophoraceae	Ceriops tagal	yellow mangrove
Rosaceae	Rhaphiolepis spp.	
Rosaceae	Rubus moluccanus var. trilobus	la surat
Rosaceae	Eriobotrya japonica	loquat
Rosaceae	Rhaphiolepis indica	Indian hawthorn
Rosaceae	Rubus ellipticus	yellow raspberry
Rosaceae	Prunus persica var. persica	sist flavorad active
Rosaceae	Rubus parvifolius	pink-flowered native raspberry
Rosaceae	Rubus moluccanus	laspoerty
Rubiaceae	Spermacoce brachystema	
Rubiaceae	Durringtonia paludosa	durringtonia
Rubiaceae	Pomax spp.	dannigionia
Rubiaceae	Richardia brasiliensis	white eye
Rubiaceae	Pomax umbellata	white eye
Rubiaceae	Opercularia diphylla	
Rubiaceae	Mitracarpus hirtus	
Rubiaceae	Morinda jasminoides	morinda
Rubiaceae	Timonius timon	monnaa
Rubiaceae	Cyclophyllum coprosmoides	
Rubiaceae	Oldenlandia galioides	
Rubiaceae	Psychotria loniceroides	hairy psychotria
Rutaceae	Murraya paniculata cv. exotica	nany psycholia
Rutaceae	Boronia rivularis	Wide Bay boronia
Rutaceae	Boronia falcifolia	wallum boronia
_		wallum bululla
Rutaceae	Melicope elleryana	alossy acronychia
Rutaceae	Acronychia laevis Euodia son	glossy acronychia
Rutaceae	Euodia spp.	
Rutaceae	Zieria smithii subsp. smithii	

Family	Scientifc Name	Common Name
Rutaceae	Boronia safrolifera	safrole boronia
Rutaceae	Zieria laxiflora	wallum zieria
Rutaceae	Acronychia imperforata	beach acronychia
Rutaceae	Zieria smithii	
Rutaceae	Melicope vitiflora	northern evodia
Rutaceae	Boronia polygalifolia	dwarf boronia
Rutaceae	Boronia rosmarinifolia	forest boronia
Rutaceae	Citrus x limon	
Rutaceae	Boronia spp.	
Salicaceae	Salix nigra	
Santalaceae	Leptomeria spp.	
Santalaceae	Leptomeria acida	sour currant bush
Santalaceae	Choretrum candollei	white sour bush
Santalaceae	Exocarpos latifolius	
Santalaceae	Exocarpos cupressiformis	native cherry
Sapindaceae	Alectryon coriaceus	beach alectryon
Sapindaceae	Dodonaea viscosa subsp. burmanniana	
Sapindaceae	Dodonaea triangularis	
Sapindaceae	Guioa semiglauca	guioa
Sapindaceae	Dodonaea spp.	
Sapindaceae	Jagera pseudorhus forma pseudorhus	
Sapindaceae	Dodonaea lanceolata var. subsessilifolia	
Sapindaceae	Dodonaea triquetra	large-leaved hop bush
Sapindaceae	Cupaniopsis anacardioides	tuckeroo
Sapindaceae	Alectryon connatus	grey birds-eye
Sapotaceae	Pouteria chartacea	thin-leaved coondoo
Scrophulariaceae	Bacopa monnieri	
Scrophulariaceae	Buchnera urticifolia	
Scrophulariaceae	Scoparia dulcis	Scoparia
Scrophulariaceae	Calceolaria tripartite	lady's slipper
Scrophulariaceae	Kickxia elatine subsp. crinita	pointed toadflax
Solanaceae	Solanum lycopersicum var. cerasiforme	
Solanaceae	Solanum mauritianum	wild tobacco
Solanaceae	Solanum torvum	devil's fig
Solanaceae	Solanum seaforthianum	Brazilian nightshade
Solanaceae	Solanum americanum subsp. nodiflorum	
Solanaceae	Petunia axillaris	petunia
Solanaceae	Solanum jasminoides	potato creeper
Solanaceae	Solanum capsicoides	devil's apple
Solanaceae	Physalis angulata	
Solanaceae	Physalis peruviana	
Solanaceae	Capsicum frutescens	
Solanaceae	Capsicum annuum var. glabriusculum	
Solanaceae	Solanum nigrum	
Solanaceae	Solanum americanum subsp. nutans	
Solanaceae	Solanum stelligerum	devil's needles
Solanaceae	Solanum americanum	
Solanaceae	Duboisia myoporoides	
Solanaceae	Solanum chrysotrichum	
Solanaceae	Cestrum nocturnum	
Stackhousiaceae	Stackhousia viminea	slender stackhousia
Stackhousiaceae	Stackhousia spathulata	coast stackhousia
Sterculiaceae	Commersonia bartramia	brown kurrajong
Sterculiaceae	Rulingia dasyphylla	kerrawang
Sterculiaceae	Seringia arborescens	
Stylidiaceae	Stylidium graminifolium	grassy-leaved trigger-flowe
Stylidiaceae	Stylidium ornatum	
Thymelaeaceae	Pimelea linifolia	
Thymelaeaceae	Wikstroemia indica	tie bush
Thymelaeaceae	Pimelea linifolia subsp. linifolia	
Tiliaceae	, Grewia latifolia	dysentery plant
Tiliaceae	Triumfetta rhomboidea	chinese burr

Family	Scientifc Name	Common Name
Tremandraceae	Tetratheca spp.	
Tremandraceae	Tetratheca thymifolia	
Tropaeolaceae	Tropaeolum majus	garden nasturtium
Ulmaceae	Trema tomentosa var. viridis	
Ulmaceae	Trema tomentose	
Ulmaceae	Celtis sinensis	Chinese elm
Verbenaceae	Verbena litoralis var. litoralis	
Verbenaceae	Phyla nodiflora	carpetweed
Verbenaceae	Lantana camara cv. Gol Gol	
Verbenaceae	Verbena incompta	
Verbenaceae	Phyla canescens	
Verbenaceae	Stachytarpheta cayennensis	
Verbenaceae	Lantana montevidensis	creeping lantana
Verbenaceae	Verbena litoralis	verbena
Verbenaceae	Duranta erecta	duranta
Verbenaceae	Stachytarpheta jamaicensis	Jamaica snakeweed
Verbenaceae	Stachytarpheta mutabilis	pink snakeweed
Verbenaceae	Lantana camara	
Verbenaceae	Lantana spp.	
Verbenaceae	Verbena litoralis var. brasiliensis	
Verbenaceae	Verbena gaudichaudii	
Violaceae	Viola hederacea	
Violaceae	Hybanthus enneaspermus	
Violaceae	Hybanthus monopetalus	
Viscaceae	Viscum articulatum	flat mistletoe
Viscaceae	Notothixos subaureus	golden mistletoe
Vitaceae	Cayratia clematidea	slender grape
Vitaceae	Cissus sterculiifolia	
Vitaceae	Cissus opaca	
Vitaceae	Cissus hypoglauca	
Vitaceae	Cissus spp.	
	Cissus spp.	
	Cissus spp. Polyalthia nitidissima	polyalthia
Lower Dicots Annonaceae		polyalthia
Lower Dicots Annonaceae Annonaceae	Polyalthia nitidissima	polyalthia
Lower Dicots Annonaceae Annonaceae Avicenniaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica	polyalthia
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae	Polyalthia nitidissima Annona squamosa Avicennia marina	polyalthia
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica	polyalthia bastard fumitory
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis	
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii	bastard fumitory camphor laurel
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella	bastard fumitory
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora	bastard fumitory camphor laurel
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi	bastard fumitory camphor laurel hard corkwood
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana	bastard fumitory camphor laurel hard corkwood avocado
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura	bastard fumitory camphor laurel hard corkwood avocado murrogun
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata	bastard fumitory camphor laurel hard corkwood avocado murrogun
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens Cassytha spp.	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens Cassytha spp. Stephania japonica var. discolor	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens Cassytha spp. Stephania japonica var. discolor Echinostephia aculeata	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens Cassytha spp. Stephania japonica var. discolor Echinostephia aculeata Stephania japonica	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae Menispermaceae Menispermaceae Monimiaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha filiformis Cassytha pubescens Cassytha pubescens Cassytha pp. Stephania japonica var. discolor Echinostephia aculeata Stephania japonica	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine prickly snake vine
Lower Dicots Annonaceae Annonaceae Avicenniaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae Monimiaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens Cassytha pubescens	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine prickly snake vine
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae Monimiaceae Nymphaeaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha pubescens Cassytha pubescens Cassytha spp. Stephania japonica var. discolor Echinostephia aculeata Stephania japonica Austromatthaea spp. Wilkiea macrophylla Nymphaea caerulea	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine prickly snake vine
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae Menispermaceae Monimiaceae Nymphaeaceae Papaveraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha glabella forma glabella Cassytha pubescens Cassytha spp. Stephania japonica var. discolor Echinostephia aculeata Stephania japonica Austromatthaea spp. Wilkiea macrophylla Nymphaea caerulea Argemone spp.	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine prickly snake vine large-leaved wilkiea
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae Menispermaceae Monimiaceae Nymphaeaceae Papaveraceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha glabella forma glabella Cassytha pubescens Cassytha spp. Stephania japonica var. discolor Echinostephia aculeata Stephania japonica Austromatthaea spp. Wilkiea macrophylla Nymphaea caerulea Argemone spp. Argemone ochroleuca subsp. ochroleuca	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine prickly snake vine large-leaved wilkiea
Lower Dicots Annonaceae Annonaceae Avicenniaceae Fumariaceae Fumariaceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Lauraceae Menispermaceae Menispermaceae Menispermaceae Menispermaceae Monimiaceae Nymphaeaceae Papaveraceae Piperaceae	Polyalthia nitidissima Annona squamosa Avicennia marina Avicennia marina subsp. australasica Fumaria officinalis subsp. officinalis Fumaria bastardii Cassytha glabella Cinnamomum camphora Endiandra sieberi Persea americana Cryptocarya microneura Neolitsea dealbata Cryptocarya glaucescens Cassytha filiformis Cassytha glabella forma glabella Cassytha glabella forma glabella Cassytha pubescens Cassytha spp. Stephania japonica var. discolor Echinostephia aculeata Stephania japonica Austromatthaea spp. Wilkiea macrophylla Nymphaea caerulea Argemone spp. Argemone ochroleuca subsp. ochroleuca Peperomia leptostachya	bastard fumitory camphor laurel hard corkwood avocado murrogun white bolly gum dodder laurel downy devil's twine prickly snake vine large-leaved wilkiea

Agavaceae

Agave spp.

Family	Scientifc Name	Common Name
Agavaceae	Agave americana var. americana	
Agavaceae	Agave vivipara var. vivipara	
Agavaceae	Agave sisalana	sisal hemp
Alliaceae	Nothoscordum borbonicum	
Alstroemeriaceae	Alstroemeria psittacina	
Amaryllidaceae	Crinum pedunculatum	river lily
Amaryllidaceae	Zephyranthes grandiflora	rain lily
Anthericaceae	Chlorophytum comosum	
Araceae	Dieffenbachia seguine	
Araceae	Monstera deliciosa	
Araceae	Syngonium podophyllum	
Araceae	Gymnostachys anceps	settler's flax
Arecaceae	Syagrus romanzoffiana	Queen palm
Arecaceae	Livistona australis	cabbage tree palm
Arecaceae	Archontophoenix cunninghamiana	piccabeen palm
Arecaceae	Archontophoenix spp.	
Asparagaceae	Asparagus retrofractus	
Asparagaceae	Asparagus falcatus	
Asparagaceae	Asparagus officinalis	asparagus
Asparagaceae	Asparagus plumosus	climbing asparagus fern
Asparagaceae	Asparagus africanus	
Asparagaceae	Protasparagus densiflorus	
Asparagaceae	Asparagus densiflorus	
Asparagaceae	Asparagus virgatus	
Asparagaceae	Asparagus aethiopicus cv. sprengeri	
Asphodelaceae	Aloe arborescens	
Asphodelaceae	Aloe maculata	
Blandfordiaceae	Blandfordia grandiflora	christmas bells
Burmanniaceae	Burmannia disticha	
Cannaceae	Canna indica	Indian shot
Colchicaceae	Burchardia umbellate	
Colchicaceae	Tripladenia cunninghamii	
Colchicaceae	Gloriosa superba	glory lily
Commelinaceae	Callisia elegans	
Commelinaceae	Murdannia graminea	murdannia
Commelinaceae	Tradescantia fluminensis	
Commelinaceae	Commelina lanceolata	
Commelinaceae	Tradescantia zebrine	
Commelinaceae	Callisia repens	
Commelinaceae	Commelina diffusa	wandering jew
Commelinaceae	Callisia fragrans	
Cymodoceaceae	Cymodocea serrulata	
Cymodoceaceae	Syringodium isoetifolium	
Cymodoceaceae	Halodule uninervis	
	Caustis recurvata	
	Cyperus javanicus	
Cyperaceae	Cyperus enervis	
Cyperaceae	Cyperus aquatilis	p. 46
Cyperaceae	Cyperus rotundus	nutgrass
Cyperaceae	Cyperus pilosus	
Cyperaceae	Fuirena ciliaris	
Cyperaceae	Fimbristylis nutans	
Cyperaceae	Schoenoplectus litoralis	
Cyperaceae	Schoenoplectus validus	
	Schoenus apogon var. apogon	
Cyperaceae	Schoenus calostachyus	
Cyperaceae	Schoenus falcatus	
Cyperaceae	Schoenus melanostachys	
Cyperaceae	Scleria sphacelata	
Cyperaceae	Lepidosperma laterale var. laterale	
Cyperaceae	Lepidosperma longitudinale	pithy swordsedge
Cyperaceae	Carex appressa	

Family	Scientifc Name	Common Name
Cyperaceae	Caustis blakei	
Cyperaceae	Baumea rubiginosa	soft twigrush
Cyperaceae	Caustis blakei subsp. blakei	
Cyperaceae	Abildgaardia vaginata	
Cyperaceae	Cyperus eglobosus	
Cyperaceae	Ptilothrix deusta	
Cyperaceae	Lepidosperma laterale	
Cyperaceae	Carex maculata	
Cyperaceae	Cyperus haspan	
Cyperaceae	Abildgaardia ovata	
Cyperaceae	Eleocharis difformis	
Cyperaceae	Cyperus albostriatus	
Cyperaceae	Caustis spp.	
Cyperaceae	Carex fascicularis	tassel sedge
Cyperaceae	Cyperus papyrus	papyrus
Cyperaceae	Fimbristylis velata	
	Schoenus ornithopodioides	
Cyperaceae	Schoenus scabripes	
Cyperaceae Cyperaceae	Schoenus yarrabensis Schoenoplectus erectus	
Cyperaceae	Cyperus sesquiflorus	
Cyperaceae	Cyperus sesquinorus Cyperus unioloides	
Cyperaceae	Gahnia spp.	
Cyperaceae	Isolepis cernua	nodding club rush
Cyperaceae	Caustis flexuosa	
Cyperaceae	Cyperus polystachyos	
Cyperaceae	Gahnia clarkei	tall sawsedge
Cyperaceae	Schoenus brevifolius	
Cyperaceae	Schoenus ericetorum	
Cyperaceae	Schoenus nitens	shiny bogrush
Cyperaceae	Eleocharis dulcis)
Cyperaceae	Eleocharis equisetina	
Cyperaceae	Eleocharis minuta	
Cyperaceae	Cyperus involucratus	
Cyperaceae	Cyperus stradbrokensis	
Cyperaceae	Cyperus flavidus	
Cyperaceae	Cyperus lucidus	
Cyperaceae	Cyperus scaber	
Cyperaceae	Cyperus sphacelatus	
Cyperaceae	Cyperus spp.	
Cyperaceae	Carex pumila	strand sedge
Cyperaceae	Baumea articulata	jointed twigrush
Cyperaceae	Baumea juncea	bare twigrush
Cyperaceae	Baumea teretifolia	
Cyperaceae	Trachystylis stradbrokensis	
Cyperaceae	Lepironia articulata	
Cyperaceae	Isolepis inundata	swamp club rush
Cyperaceae	Isolepis nodosa	knobby club rush
Cyperaceae	Gahnia aspera	
Cyperaceae	Gahnia sieberiana	sword grass
Cyperaceae	Fimbristylis cinnamometorum	
Cyperaceae	Fimbristylis dichotoma	common fringe-rush
Cyperaceae	Fimbristylis ferruginea	
Cyperaceae	Fimbristylis polytrichoides	
Cyperaceae	Eleocharis sphacelata	tall spikerush
Cyperaceae	Cyperus polystachyos var. polystachyos	
Cyperaceae	Cyperus trinervis	
Cyperaceae	Cyperus brevifolius	Mullumbimby couch
Cyperaceae	Chorizandra cymbaria	
Cyperaceae	Cladium procerum	leafy twigrush
Dioscoreaceae	Dioscorea transversa	native yam
Dioscoreaceae	Dioscorea alata	greater yam

Family	Scientifc Name	Common Name
Dracaenaceae	Dracaena bicolor	
Dracaenaceae	Dracaena marginata	
Dracaenaceae	Sansevieria trifasciata	mother-in-law's tongue
Dracaenaceae	Dracaena sanderiana	
Eriocaulaceae	Eriocaulon scariosum	
Eriocaulaceae	Eriocaulon australe	
Flagellariaceae	Flagellaria indica	whip vine
Haemodoraceae	Haemodorum austroqueenslandicum	
Haemodoraceae	Haemodorum	
Haemodoraceae	Haemodorum tenuifolium	
Hyacinthaceae	Ledebouria petiolata	
Hydrocharitaceae	Halophila ovalis subsp. ovalis	
Hydrocharitaceae	Halophila spinulosa	
Hypoxidaceae	Hypoxis pratensis var. pratensis	
Hypoxidaceae	Hypoxis hygrometrica var. villosisepala	
ridaceae	Freesia laxa	
ridaceae	Patersonia sericea	
ridaceae	Watsonia meriana var. bulbillifera	
ridaceae	Patersonia sericea var. sericea	
ridaceae	Patersonia fragilis	
ridaceae	Freesia x hybrida	
ridaceae	Gladiolus x gandavensis	
ridaceae	Patersonia glabrata	
Juncaceae	Juncus usitatus	
Juncaceae	Juncus continuus	
Juncaceae	Juncus planifolius	
Juncaceae	Juncus kraussii	sea rush
Juncaceae	Juncus spp.	
Juncaceae	Juncus polyanthemus	
Juncaceae	Juncus bufonius	toad rush
Juncaginaceae	Triglochin striatum	streaked arrowgrass
Juncaginaceae	Triglochin procerum	Strouted arrowgrass
Juncaginaceae	Triglochin multifructum	
Ausaceae	Musa spp.	
Najadaceae	Najas tenuifolia	water nymph
Orchidaceae	Thelymitra longifolia	water flyffipfi
Orchidaceae	Cymbidium suave	
Orchidaceae	Glossodia minor	small wax lip orchid
Orchidaceae	Cryptostylis erecta	bonnet orchid
Orchidaceae	Cryptostylis erecta Cryptostylis subulata	large tounge orchid
Orchidaceae	Caladenia carnea	arge tounge oronid
Orchidaceae	Caladenia catenata var. catenata	
Orchidaceae		flying duck crobid
Orchidaceae	Caleana major Acianthus fornicatus	flying duck orchid pixie caps
Orchidaceae	Calochilus grandiflorus	giant beard orchid
Orchidaceae	Thelymitra ixioides var. ixioides	giant beard oroniu
Orchidaceae	Dendrobium linguiforme	
Orchidaceae	Geodorum neocaledonicum	
Orchidaceae	Geodorum neocaledonicum Dendrobium teretifolium	
	Dockrillia linguiformis	tonguo orchid
Orchidaceae Orchidaceae	-	tongue orchid
Orchidaceae	Genoplesium psammophilum	nink nodding archid
Orchidaceae	Geodorum densiflorum Braccophyllum fuccum	pink nodding orchid
Orchidaceae	Prasophyllum fuscum	
Orchidaceae	Diuris alba Enidondrum v obvionionum	
Orchidaceae	Epidendrum x obrienianum	
Orchidaceae	Dipodium variegatum	
Orchidaceae	Pterostylis nutans	
Orchidaceae	Diuris punctata var. punctata	
Orchidaceae	Spiranthes sinensis	austral ladies tresses
Orchidaceae	Thelymitra pauciflora	slender sun orchid
Orchidaceae	Phaius australis	
Orchidaceae	Phaius bernaysii	

Family	Scientifc Name	Common Name
Orchidaceae	Lyperanthus suaveolens	brown beaks
Orchidaceae	Corybas spp.	
Orchidaceae	Prasophyllum brevilabre	
Orchidaceae	Microtis unifolia	common onion orchid
Orchidaceae	Dipodium hamiltonianum	yellow hyacinth orchid
Orchidaceae	Dendrobium speciosum	
Orchidaceae	Corybas aconitiflorus	
Orchidaceae	Zeuxine oblonga	hairy jewel orchid
Orchidaceae	Prasophyllum patens	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Orchidaceae	Microtis parviflora	slender onion orchid
Orchidaceae	Diuris aurea	
Orchidaceae	Bulbophyllum minutissimum	grain-of-wheat orchid
Orchidaceae	Thelymitra x truncata	3
Orchidaceae	Geodorum spp.	
Orchidaceae	Cryptostylis spp.	
Orchidaceae	Caladenia catenata	
Orchidaceae	Phaius spp.	
Pandanaceae	Pandanus tectorius	
Pandanaceae	Pandanus tectorius var. stradbrookeensis	
Philydraceae	Philydrum lanuginosum	frogsmouth
Poaceae	Aristida warburgii	-
Poaceae	Elymus multiflorus	
Poaceae	Digitaria didactyla	Queensland blue couch
Poaceae	Chrysopogon sylvaticus	
Poaceae	Aristida queenslandica var. queenslandica	
Poaceae	Digitaria violascens	bastard summergrass
Poaceae	Pennisetum glaucum	pearl millet
Poaceae	Cortaderia selloana	pampas grass
Poaceae	Eragrostis atrovirens	
Poaceae	Poa annua	annual poa
Poaceae	Ottochloa gracillima	pademelon grass
Poaceae	Panicum maximum var. coloratum	
Poaceae	Lolium perenne	perennial ryegrass
Poaceae	Eriachne pallescens var. pallescens	
Poaceae	Paspalum conjugatum	sourgrass
Poaceae	Paspalum notatum	bahia grass
Poaceae	Lachnagrostis filiformis	
Poaceae	Zoysia macrantha subsp. macrantha	
Poaceae	Megathyrsus maximus var. pubiglumis	
Poaceae	Megathyrsus maximus var. maximus	
Poaceae	Megathyrsus maximus	
Poaceae	Tripsacum dactyloides	
Poaceae	Panicum effusum	
Poaceae	Aristida calycina	
Poaceae	Aristida jerichoensis	
Poaceae	Microlaena stipoides var. stipoides	
Poaceae	Hemarthria uncinata	
Poaceae	Axonopus compressus	
Poaceae	Axonopus fissifolius	
Poaceae	Sporobolus natalensis	
Poaceae	Phyllostachys bambusoides	
Poaceae	Saccharum officinarum	sugarcane
Poaceae	Pennisetum clandestinum	kikuyu grass
Poaceae	Sporobolus fertilis	giant Parramatta grass
Poaceae	Sporobolus africanus	Parramatta grass
Poaceae	Schizachyrium microstachyum	
Poaceae	Urochloa decumbens	
Poaceae	Austrostipa pubescens	tall speargrass
Poaceae	Cynodon dactylon var. dactylon	-
Poaceae	Melinis repens	red natal grass
Poaceae	Setaria sphacelata	

Family	Scientifc Name	Common Name
Poaceae	Chloris ventricosa	tall chloris
Poaceae	Cenchrus echinatus	Mossman River grass
Poaceae	Chloris gayana	rhodes grass
Poaceae	Arundinella nepalensis	reedgrass
Poaceae	Aristida benthamii var. benthamii	
Poaceae	Aristida jerichoensis var. jerichoensis	
Poaceae	Aristida vagans	
Poaceae	Alloteropsis semialata	cockatoo grass
Poaceae	Andropogon virginicus	whiskey grass
Poaceae	Eriachne pallescens	
Poaceae	Eriachne spp.	
Poaceae	Eragrostis brownii	Brown's lovegrass
Poaceae	Eleusine indica	crowsfoot grass
Poaceae	Elionurus citreus	lemon-scented grass
Poaceae	Entolasia marginata	bordered panic
Poaceae	Entolasia stricta	wiry panic
Poaceae	Entolasia whiteana	
Poaceae	Digitaria breviglumis	
Poaceae	Panicum effusum var. simile	
Poaceae	Paspalidium disjunctum	
Poaceae	Paspalidium gausum	
Poaceae -	Lepturus repens	stalky grass
Poaceae	Melinis minutiflora	molasses grass
Poaceae -	Ischaemum australe var. australe	
Poaceae -	Ischaemum triticeum	
Poaceae	Imperata cylindrica	blady grass
Poaceae	Hemarthria uncinata var. spathacea	
Poaceae	Briza minor	shivery grass
Poaceae	Sporobolus elongatus	
Poaceae	Oplismenus hirtellus subsp. imbecillis	
Poaceae	Paspalidium distans	shotgrass
Poaceae	Paspalidium albovillosum	
Poaceae	Leersia hexandra	swamp rice grass
Poaceae	Eragrostis pubescens	
Poaceae	Eriachne insularis	
Poaceae	Dichelachne micrantha	shorthair plumegrass
Poaceae	Digitaria leucostachya	
Poaceae	Capillipedium spicigerum	spicytop
Poaceae	Bromus catharticus	prairie grass
Poaceae	Aristida spp.	
Poaceae	Themeda triandra	kangaroo grass
Poaceae	Sporobolus creber	and a such
Poaceae	Sporobolus virginicus Stopotophrum socundatum	sand couch
Poaceae	Stenotaphrum secundatum Setaria pumila subsp. pumila	buffalo grass
Poaceae		
Poaceae	Sorghum x almum	forman annahum
Poaceae	Sorghum bicolor	forage sorghum
Poaceae	Sorghum halepense	Johnson grass
Poaceae	Spinifex sericeus	beach spinifex
Poaceae	Schizachyrium fragile	firegrass
Poaceae	Sacciolepis indica Paspalum dilatatum	Indian cupscale grass
Poaceae	Paspalum dilatatum Paspalum scrobiculatum	paspalum ditch millet
Poaceae	Paspalum scrobiculatum Paspalum unilloi	ditch millet
Poaceae	Paspalum urvillei Poppisotum purpurpur	vasey grass
Poaceae	Pennisetum purpureum	elephant grass
Poaceae	Phragmites australis	common reed
Poaceae	Oplismenus aemulus	creeping shade grass
Poaceae	Panicum effusum var. effusum	
Poaceae	Eriochloa crebra	spring grass
Poaceae	Eriochloa procera	slender cupgrass
Poaceae	Eragrostis elongata	

Family	Scientifc Name	Common Name
Poaceae	Eragrostis sororia	
Poaceae	Eragrostis spartinoides	
Poaceae	Eragrostis tenuifolia	elastic grass
Poaceae	Eremochloa bimaculata	poverty grass
Poaceae	Digitaria ciliaris	summer grass
Poaceae	Digitaria longiflora	-
Poaceae	Digitaria parviflora	
Poaceae	Digitaria ramularis	
Poaceae	Echinochloa telmatophila	swamp barnyard grass
Poaceae	Dichanthium sericeum subsp. sericeum	
Poaceae	Cymbopogon refractus	barbed-wire grass
Poaceae	Cynodon dactylon	201200 1110 9.000
Poaceae	Panicum simile	
Poaceae	Arundo donax	
Poaceae	Poa labillardieri	
Poaceae	Cymbopogon spp.	
_		
Poaceae	Imperata spp.	
Poaceae	Oplismenus spp.	
Poaceae	Phyllostachys spp.1	
Poaceae	Themeda spp.	
Poaceae	Sporobolus laxus	Frankland and a
Potamogetonaceae	Potamogeton pectinatus	Fennel pondweed
Restionaceae	Sporadanthus caudatus	
Restionaceae	Baloskion pallens	
Restionaceae	Baloskion tetraphyllum subsp. meiostachyum	
Restionaceae	Baloskion tetraphyllum	
Restionaceae	Sporadanthus interruptus	
Restionaceae	Empodisma spp.	
Restionaceae	Restio tetraphyllus	
Restionaceae	Leptocarpus tenax	
Restionaceae	Lepyrodia interrupta	
Restionaceae	Restio pallens	
Restionaceae	Lepyrodia scariosa	
Restionaceae	Hypolaena fastigiata	Tassel rope rush
Restionaceae	Empodisma minus	Spreading rope rush
Restionaceae	Coleocarya gracilis	
Restionaceae	Coleocarya spp.	
Restionaceae	Restio spp.	
Smilacaceae	Smilax glyciphylla	Sweet sarsaparilla
Smilacaceae	Smilax australis	Barbed-wire vine
Typhaceae	Typha domingensis	Narrow leaf cumbungi
Xanthorrhoeaceae	Xanthorrhoea latifolia	
Xanthorrhoeaceae	Xanthorrhoea latifolia subsp. latifolia	
Xanthorrhoeaceae	Xanthorrhoea fulva	Swamp grasstree
Xanthorrhoeaceae	Xanthorrhoea spp.	Grass tree
Xanthorrhoeaceae	Xanthorrhoea johnsonii	
Xanthorrhoeaceae	Xanthorrhoea macronema	
Xyridaceae	Xyris operculata	Tall yellow eye
Xyridaceae	Xyris operculata Xyris complanata	Yellow-eye
Xyridaceae	Xyris complanala Xyris spp.	I CHOW-GYE
Zingiberaceae		Shell gingor
	Alpinia zerumbet	Shell ginger
Zingiberaceae Zosteraceae	Alpinia caerulea Zostora muollori subsp. capricorni	Wild ginger
	Zostera muelleri subsp. capricorni	
Mosses		
Amblystegiaceae	Leptodictyum spp.	
Hypopterygiaceae	Hypopterygium tamarisci	
Neckeraceae	Thamnobryum pandum1	
Orthotrichaceae	Macromitrium spp.	
Sphagnaceae	Sphagnum falcatulum1	
Sphagnaceae	Sphagnum spp.	
Selaginellaceae	Selaginella uliginosa	Swamp selaginella

Family	Scientifc Name	Common Name
Psilotaceae	Psilotum spp.	
Plants		
Hemerocallidaceae	Caesia parviflora var. parviflora	
Hemerocallidaceae	Dianella crinoides	
Hemerocallidaceae	Dianella congesta	
Hemerocallidaceae	Dianella caerulea var. protensa	
Hemerocallidaceae	Tricoryne anceps subsp. pterocaulon	
Hemerocallidaceae	Dianella revoluta	
Hemerocallidaceae	Dianella brevipedunculata	
Hemerocallidaceae	Dianella spp.	
Hemerocallidaceae	Caesia parviflora	
Hemerocallidaceae	Dianella caerulea x D.congesta	
Hemerocallidaceae	Dianella longifolia	
Hemerocallidaceae	Dianella caerulea var. assera	
Hemerocallidaceae	Dianella longifolia var. stenophylla	
Hemerocallidaceae	Dianella caerulea var. caerulea	
Hemerocallidaceae	Tricoryne spp.	
Hemerocallidaceae Hemerocallidaceae	Dianella caerulea var. producta Dianella revoluta var. revoluta	Dive flex lilly
Hemerocallidaceae		Blue flax lilly
Hemerocallidaceae	Geitonoplesium cymosum	scrambling lily
Hemerocallidaceae	Tricoryne elatior Dianella caerulea	yellow autumn lily Paroo lilly
Hemerocallidaceae	Dianella longifolia var. longifolia	Smooyh flax lilly
Laxmanniaceae	Lomandra longifolia	Long leaved mat rush
Laxmanniaceae	Lomandra hystrix	Slender mat rush
Laxmanniaceae	Lomandra spp.	Siender mat rush
Laxmanniaceae	Lomandra confertifolia	Mat rush
Laxmanniaceae	Lomandra elongata	
Laxmanniaceae	Lomandra confertifolia subsp. pallida	
Laxmanniaceae	Cordyline rubra	red-fruited palm lily
Laxmanniaceae	Eustrephus latifolius	wombat berry
Laxmanniaceae	Eustrephus spp.	
Laxmanniaceae	Sowerbaea juncea	vanilla plant
Laxmanniaceae	Lomandra filiformis subsp. filiformis	·
Laxmanniaceae	, Lomandra filiformis	Wattle mat rush
Laxmanniaceae	Lomandra laxa	Delicate mat rush
Laxmanniaceae	Lomandra multiflora subsp. multiflora	
Laxmanniaceae	Thysanotus tuberosus	Common fringe lilly
Laxmanniaceae	Cordyline fruticosa	
Laxmanniaceae	Lomandra obliqua	Twisted mat rush
Laxmanniaceae	Laxmannia gracilis	slender wire lily
Algae		
Cyanophyceae	Blennothrix lyngbyacea	
Cyanophyceae	Nodularia harveyana	
Cyanophyceae	Lyngbya majuscula	
Phaeophyceae	Sporochnus pedunculatus	
Phaeophyceae	Scytosiphon lomentaria	
Phaeophyceae	Sargassum sp. (Myora A.E.Bird AQ707362)	
Phaeophyceae	Hincksia sordida	
Phaeophyceae	Sporochnus comosus	
Phaeophyceae	Zonaria diesingiana	
Phaeophyceae	Dictyota acutiloba	
Phaeophyceae	Stypopodium flabelliforme	
Phaeophyceae	Spatoglossum macrodontum	
Phaeophyceae	Sargassum flavicans	
Phaeophyceae	Sargassum parvifolium	
Phaeophyceae	Padina gymnospora	
Phaeophyceae	Sargassum lophocarpum	
Phaeophyceae	Sargassum spp.	
Phaeophyceae	Hydroclathrus clathratus	

Hydroclathrus clathratus Lobophora variegata

Padina australis

Phaeophyceae

Phaeophyceae Phaeophyceae

Family	Scientifc Name	Common Name
Phaeophyceae	Petalonia fascia	
Phaeophyceae	Rosenvingea orientalis	
Phaeophyceae	Dictyota dichotoma	
Phaeophyceae	Dictyota dichotoma var. intricata	
Phaeophyceae	Dictyota furcellata	
Phaeophyceae	Dictyopteris australis	
Phaeophyceae	Dictyota bartayresiana	
Phaeophyceae	Cystoseira trinodis	
Phaeophyceae	Colpomenia spp.	
Phaeophyceae	Colpomenia sinuosa	
Phaeophyceae	Sporochnus bolleanus	
Phaeophyceae	Bachelotia antillarum	
Bacillariophyceae	Surirella spiralis	
Dinophyceae	Peridinium spp.	
Euglenophyceae	Euglena spp.	
Chlorophyceae	Codium duthiae	
Chlorophyceae	Cladophoropsis herpestica	
Chlorophyceae	Cladophorella calcicola C. 3	
Chlorophyceae	Caulerpa taxifolia	
Chlorophyceae	Enteromorpha spp.	
Chlorophyceae	Chaetomorpha spp.	
Chlorophyceae	Caulerpa racemosa var. laetevirens	
Chlorophyceae	Bryopsis spp.	
Chlorophyceae	Caulerpa cupressoides	
Chlorophyceae	Caulerpa lentillifera	
Chlorophyceae	Ulvaria oxysperma	
Chlorophyceae	Trentepohlia odorata	
Chlorophyceae	Trentepohlia odorata var. umbrina	
Chlorophyceae	Rhizoclonium spp.	
Chlorophyceae	Staurastrum spp.	
Chlorophyceae	Phaeophila dendroides	
Chlorophyceae	Ostreobium spp.	
Chlorophyceae	Nitella tasmanica spp.	
Chlorophyceae	Nitella flexilis	
Chlorophyceae	Pseudocodium spp.	
Chlorophyceae	Oocystis spp.	
Chlorophyceae	Sphaerocystis spp.	
Chlorophyceae	Spongocladia vaucheriaeformis	
Chlorophyceae	Udotea argentea	
Chlorophyceae	Ulva spp.	
Chlorophyceae	Microdictyon umbilicatum	
Chlorophyceae	Enteromorpha prolifera	
Chlorophyceae	Gongrosira spp.	
Chlorophyceae	Halimeda macroloba	
Chlorophyceae	Codium spongiosum	
Chlorophyceae	Codium spp.	
Chlorophyceae	Derbesia spp.	
Chlorophyceae	Cladophora spp.	
Chlorophyceae	Acetabularia calyculus	
Chlorophyceae	Avrainvillea spp.	
Chlorophyceae	Avrainvillea erecta	
Chlorophyceae	Caulerpa racemosa	
Chlorophyceae	Botryococcus braunii	
Chlorophyceae	Apatococcus lobatus	
Chlorophyceae	Codium platyclados	
Rhodophyceae	Laurencia papillosa	
Rhodophyceae	Laurencia obtusa	
Rhodophyceae	Martensia spp.	
Rhodophyceae	Lophosiphonia prostrata	
Rhodophyceae	Lophocladia spp.	
Rhodophyceae	Polysiphonia opaca	
Rhodophyceae	Polysiphonia infestans	
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Family	Scientifc Name	Common Name
Rhodophyceae	Peyssonnelia spp.	
Rhodophyceae	Polysiphonia spp.	
Rhodophyceae	Laurencia brongniartii	
Rhodophyceae	Laurencia cartilaginea	
Rhodophyceae	Gracilaria verrucosa	
Rhodophyceae	Laurencia rigida	
Rhodophyceae	Laurencia spp.	
Rhodophyceae	Herposiphonia spp.	
Rhodophyceae	Hypnea musciformis	
Rhodophyceae	Hypnea spinella	
Rhodophyceae	Griffithsia spp.	
Rhodophyceae	Haloplegma duperreyi	
Rhodophyceae	Gracilaria edulis	
Rhodophyceae	Gracilaria textorii	
Rhodophyceae	Gracilaria spp.	
Rhodophyceae	Tolypiocladia glomerulata	
Rhodophyceae	Dasya iyengarii	
Rhodophyceae	Chondria spp.	
Rhodophyceae	Ceramium spp.	
Rhodophyceae	Champia parvula	
Rhodophyceae	Bostrychia moritziana	
Rhodophyceae	Bostrychia tenella subsp. flagellifera	
Rhodophyceae	Callithamnion spp.	
Rhodophyceae	Caloglossa spp.	
Rhodophyceae	Catenella nipae	
Rhodophyceae	Asparagopsis taxiformis	
Rhodophyceae	Asparagopsis spp.	
Rhodophyceae	Audouinella microscopica	
Rhodophyceae	Acanthophora muscoides	
Rhodophyceae	Acanthophora spicifera	
Rhodophyceae	Acanthophora spp.	
Rhodophyceae	Spyridia filamentosa	
Rhodophyceae	Hypnea spp.	
Rhodophyceae	Acrochaetium pulvinatum	
Rhodophyceae	Polysiphonia atlantica	
Rhodophyceae	Gracilaria cylindrica	
Rhodophyceae	Gracilaria foliifera	
Rhodophyceae	Gracilaria compressa	
Rhodophyceae	Solieria spp.	
Rhodophyceae	Solieria robusta	
Rhodophyceae	Heterosiphonia crispella	
Rhodophyceae	Polysiphonia sertularioides	
Rhodophyceae	Dasya stanleyi	
Rhodophyceae	Audouinella hermannii	
No Family	Vaucheria spp.	

Appendix 3. List of hollow dependent / using species in Redlands (source: Gibbons & Lindenmayer, 2002).

Scientific Name	Common Name	EPBC	NCA	Iconic	SEQ Priority Taxa
Amphibians					
Litoria caerulea	Common greenfrog				
Litoria gracilenta	Graceful treefrog				
Litoria fallax	Eastern sedgefrog				
Litoria peroni	Emerald spotted treefrog				1
Litoria tyleri	Southern laughing treefrog				J
Litoria rubella	Ruddy treefrog				
Litoria dentata	Bleating treefrog				J
Birds					v
Aegotheles cristatus	Australian owlet-nightjar				
Chenoonetta jubata	Australian wood duck				
Anas superciliosa	Pacific black duck				
Anas gracilis	Grey teal				
Anas castanea	Chestnut teal				
	Mallard				
Anas platyryhnchus					
Artamus cyanopterus	Dusky woodswallow				
Artamus leucorynchus	White-breasted woodswallow				
Artamus personatus	Masked woodswallow				
Calyptoryhnchus lathami	Glossy black-cockatoo	V			
Cacatua sanguinea	Little corella				
Cacatua roseicapilla	Galah				
Cacatua galerita	Sulphur-crested cockatoo				
Nymphicus hollandicus	Long-billed corella				
Cormobates leucophaesus metastasis	White-throated treecreeper (southern)				
Climacteris picumnus	Brown treecreeper				
Cormobates leucophaeus	White-throasted treecreeper				
Climacteris erythrops	Red-browed treecreeper		R		
Geopelia cuneata	Diamond dove				
Falco cenchroides	Nankeen kestrel				
Falco peregrinus	Peregrine falcon				
Daecelo novaeguineae	Laughing Kookaburra				
Todiramphus sanctus	Sacred kingfisher				
Todiramphus chloris	Collared kingfisher				
Todiramphus macleayii	Forest kingfisher				
Hirundo ariel	Fairy martin				
Zoothera lunulata	Bassian thrush				
Pardalotus striatus	Striated pardalote				
Melanodryes cucullata	Hooded robin				
Petroica phoenicea	Flame robin				
Platycercus adscitus palliceps	Pale-headed rosella				
Alisterus scapularis	Australian king-parrot				
Glossopsitta pusilla	Little lorikeet				
Platycercus eximius	Eastern rosella				
Trichoglossus chlorolepidotus	Scaley-breasted lorikeet				
Trichoglossus haematodus	Rainbow lorikeet				
moluccanus					
moluccanus Platycercus adscitus	Pale-headed rosella				

Glossopsitta concinna	Musk lorikeet		
Gallirallus philippensis	Buff-banded rail		
Acridotheres tristis	Common myna		
Stumus vulgaris	Common starling		
Tyto tenebricosa	Sooty owl	R	
Tyto alba	Barn owl	N	
Ninox strenua	Powerful Owl	V	
Mammals		v	
Acrobates pygmaeus	Feathertail glider		
Sminthopsis murina murina	Common dunnart (SE mainland)		
Antechinus flavipes	Yellow-footed antechinus		
Sminthopsis murina	Common dunnart		1
Felis catus	Cat		v
Nyctinomus australis	White-striped freetail bat		
Mormopterus beccani	Beccari's freetail bat		
Mormopterus norfolkensis	East coast freetail bat		
Rattus rattus	Black rat		
Rattus fuscipes	Bush rat		
Petaurus breviceps	Sugar glider		
Petaurus norfolcensis	Squirrel glider		
Trichosurus vulpecular	Common brushtail possum		
Trichosurus caninus	Short-eared possum (mountain possum)		
Petauroides volans	Greater glider		
Petaurus australis australis	Yellow bellied glider		
Myotis macropus	Large-footed myotis		J
Scotorepens orion	South-eastern broad-nsed bat		J
Chalinolobus morio	Chocolate wattled bat		
Chalinolobus gouldii	Gould's wattled bat		
Vespadelus darlingtoni	Large forest bat		
Scotoerpens greyii	Little broad-nosed bat		
Nyctophilus gouldi	Gould's long-eared bat		
Chalinolobus nigrogriseus	Hoary wattled bat		
Reptiles			
Morelia spilota	Carpet python		
Bioga irregularis	Brown tree snake		
Dendrelaphis punctulata	Common tree snake		
Hoplocephalus stephensii	Stephen's banded snake	R	
Gehyra dubia	House gecko		
Oedura robusta	Robust velvet gecko		
Hemidactylus frenatus	House gecko		
Cryptoblepharus virgatus	Wall skink		
Eulamprus tenuis	Rainforest skink		
Eulamprus martini	Martin's skinks		
Varanus sp	Goanna		
Varanus varius	Lace monitor		

Appendix 4. State and Locally Declared Animal Pests Extant in Redlands listed under *Land Protection (Pest and Stock route Management) Act 2002* and Local Law No. 13 – Control of Pests.

Common name	Scientific name	Class
Ferret	Mustela furo	1
Red ear slider turtle	Trachemys scripta elegans	1
Red imported fire ant	Solenopsis invicta	1
Yellow crazy ant	Anoplolepis gracilipes	1
Australian Plague locust	Chortoicetus erminifera	2
Cat (other than domestic)	Felis catus	2
Dingo	Canis familiaris dingo	2
Dog (other than domestic)	Canis familiaris	2
European fox	Vulpes vulpe	2
European rabbit (domestic and wild)	Oryctolagus cuniculus	2
Goat (other than domestic)	Capra hircus	2
Migratory locust	Locusta migratoria	2
Pig (feral)	Sus scrofa	2
Spur throated locust	Austracris guttulosa	2

Appendix 5. State and Locally Declared Pest Plants Extant in Redlands listed under *Land Protection (Pest and Stock route Management) Act 2002* and Local Law No. 13 – Control of Pests (LL13).

Common name	Botanical name	Class
Acacia's non-indigenous to Australia	Acacia spp (other than Acacia nilotica and A. farnesiana)	1
African boxthorn	Lycium ferocissimum	2
African fountain grass	Pennisetum setaceum	3
African Tulip Tree	Spathodea campanulate	3
Alligator Weed	Alternanthera philoxeroides	1
American rat's tail grass	Sporobolus jacquemontii	2
Anchored water hyacinth	Eichhomia azurea	1
Annual ragweed	Ambrosia artemisiifolia	2
Asparagus fern	Protasparagus africanus	3
Asparagus fern	Protoasparagus aethiopicus	3
Athel pine	Tamarix aphylla	3
Badhara bush	Gmelina asiatica	1
Barner grass / cow cane	Pennisetum purpurem	LL13
Bitou Bush	Chrysanthemoides monilifera subsp. rotundata	1
Blackberry	Rubus anglocandicans	3
Blackberry	Rubus fruiticosus	3
Bolivian wattle	Acacia boliviana	1
Bridal creeper	Protasparagus asprasagoides	1
Cabomba	Cabomba sp.	2
Camphor laurel	Cinnamomum camphora	3
Cats claw creeper	Macfadyena unguis-cati	3
Chilean needle grass	Naselle neessiana	1
Chinee apple	Ziziphus mauritiana	2
Chinese celtis	Celtis sinensis	3
Christ thorn	Ziziphus spina-christi	1
Climbing asparagus	Protasparagus plumosus	3
Cotton-leaf physic nut, bellyache bush	Jatropha gossypiifolia	2
Creeping lantana	Lantana montevidensis	3
Cutch tree	Acacia catechu	1
Dutchman's pipe	Aristolochia spp	3
Eurasian watermilfoil	Myriophyllum spicatum	1
Fireweed	Senecio madagascariensis	2
Giant Rats Tail Grass	Sporobolus pyramidalis and S. natalensis	2
Glush weed	Hydrophilia costata	1
Gorse	Ulex europaesus	1
Green cestrum	Cestrum parqui	LL13
Groundsel Bush	Baccharis halimifolia	2
Harrisia cactus	Eriocerceus spp	2
Harungana	Harungana madagascariensis	3
Honey locust	Gleditsia spp	1
Horsetails	Equisetum spp	1
Hymenachne	Hymenachne amplexicualis	2
Karoo thorn	Acacia karoo	1
Kochia	Kochia scoparia	1
Koster's curse	Clidemia hirta	1
Lagarosiphon	Lagarosiphon major	1
Lantana	Lantana spp	3
Madeira vine	Anredera cordifolia	3
Madras thorn	Pithecellobium dulce (Syn mimosa dulcis)	1

MesquitesProsopis glandulosa2MesquitesProsopis palidia1MesquitesProsopis valutina1MiconiaMiconia spp1Minosa bushAcacia farnasinan1Mimosa bushAcacia farnasinan1Mimosa pigraMimosa pigra1Mither of millionsBryophylum delagoense and B. daigremontanum X.B.2AdelagoenseAdelagoense1ParkinsoniaParkinsonia culeate2Partamatta grassSporobolus africanus, S. fortilis2Partamatta grassSporobolus faricanus, S. fortilis2Pencil willowSalix chilensis syn. S humbolttiana3Peperi VereSchrus terebinttilolius3Peper treeSchrus terebinttilolius3Peruvian primroseLudwigi paruviana1Prickly acaciaAcacia niloica2Prickly acaciaAcacia niloica2PrivetLigustrum lucidum and sinense3PrivetSalvinia spo other than O. ficus-indica)2PrivetLigustrum sinense3Purple Rubber vineCryptostegia grandifora2SalviniaSalvinia molesta1SalviniaSalvinia molesta1SicklepodSerna hursute2SalviniaSalvinia molesta1SicklepodSerna hursute2SicklepodSerna hursute2SicklepodSerna hursute2SicklepodSerna hursute2 <tr< th=""><th>Common name</th><th>Botanical name</th><th>Class</th></tr<>	Common name	Botanical name	Class
MesquitesProsopis velutina1MiconiaMiconis spp1Mikania vineMikania spp1Minosa bushAcacia farnesiana1Minosa pigraMinosa pigra1Mother of millionsBryophyllum delagoense and B. daigremontanum X.B. delagoense1MyricaMyrica faya1ParkinsoniaParkinsonia aculeate2Parramatta grassSporobolus africanus, S. ferilis2Partanetta grassSporobolus ferilis3Pencil willowSalix chilensis syn. S. humboldtiana3Peperi WillowSalix chilensis syn. S. humboldtiana3Peperi treeSchinus terebinthifolius3Peperi willowSalix chilensis syn. S. humboldtiana1Pord appleAnnona glabra2Prickly acaciaAcacia glabra2Prickly acaciaOpuntia spp (other than O. ficus-indica)2PrivetLigustrum lucidum and sinense3PrivetLigustrum lucidum and sinense3PrivetSalvinia molesta1SalviniaSalvinia molesta1SalviniaSalvinia spi other than s. molesta1SalviniaSalvinia nore2SicklepodSerna hirsute2SicklepodSerna hirsute2SicklepodSerna hirsute2SicklepodSerna hirsute2SicklepodSerna hirsute2SicklepodSerna hirsute2SicklepodSerna hirsu	Mesquites	Prosopis glandulosa	2
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Pencil willowSalix chilensis syn. S humboldtiana3Pepper treeSchinus terebinthifolius3Peruvian primroseLudwigia peruviana1Piper, spiked pepperPiper aduncum1Pond appleAnona glabra2Prickly acaciaAcacia nilotica2Prickly acaciaOpuntia spp (other than O. ficus-indica)2PrivetLigustrum lucidum and sinense3PrivetLigustrum sinense3Purple Rubber vineCryptostegia madagascariensis3Purple Rubber vineCryptostegia grandiflora2SalviniaSalvinia molesta2SalviniaSalvinia molesta1Senaed tussockNaselle trichotoma1Serated tussockNaselle trichotoma1Siam weedChromolaena odorata1SicklepodSenna hirsute2SicklepodSenna hirsute2Singapore DaisySphagneticola trilobata3Thunbergia, Laurel clock vineThunbergia grandiflora1Thunbergia, Laurel clock vineThunbergia fargans1ThunbergiaThunbergia fargans1Water caltrope, floating chestnutsTrapa spp1ThunbergiaThunbergia fargans1Water lettucePistia stratiotes2Witch weedsStringa spp1Thunbergia leuritolia11Water lettuceSalix spp. Other than S. babylonica, S. xcalodendron, S. xreichardtii and S. chilensis2 <t< td=""><td>Parramatta grass</td><td>Sporobolus fertilis</td><td>2</td></t<>	Parramatta grass	Sporobolus fertilis	2
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ThunbergiaThunbergia laurifolia1Water HyacinthEichhornia crassipes2Water lettucePistia stratiotes2WillowsSalix spp. Other than S. babylonica, S. xcalodendron, S. x reichardtii and S. chilensis1Witch weedsStringa spp1Yellow BellsTecoma stans3	Thunbergia, Laurel clock vine	Thunbergia annua	1
Water HyacinthEichhornia crassipes2Water lettucePistia stratiotes2WillowsSalix spp. Other than S. babylonica, S. xcalodendron, S. x reichardtii and S. chilensis1Witch weedsStringa spp1Yellow BellsTecoma stans3	Thunbergia	Thunbergia fragrans	1
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x reichardtii and S. chilensisWitch weedsStringa spp1Yellow BellsTecoma stans3	Water lettuce	Pistia stratiotes	2
Yellow Bells Tecoma stans 3	Willows		1
	Witch weeds	Stringa spp	1
Yellow oleander (Captain Cook tree) Thevetia peruviana 2	Yellow Bells	Tecoma stans	3
	Yellow oleander (Captain Cook tree)	Thevetia peruviana	2

LL13 = Local Law 13 - Control of Pests

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Appendix 6. List of definitions of species listed under the *Environmental Protection and Biodiversity Conservation Act 1999.*

Category	Definition
Extinct	A native species is eligible to be included in the <i>extinct</i> category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.
Extinct in wild	A native species is eligible to be included in the <i>extinct in the wild</i> category at a particular time if, at that time:
	 it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
	 it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
Critically Endangered	A native species is eligible to be included in the <i>critically endangered</i> category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
Endangered	A native species is eligible to be included in the endangered category at a particular time if, at that time:
	 it is not critically endangered; and
	• it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
Vulnerable	A native species is eligible to be included in the vulnerable category at a particular time if, at that time:
	 it is not critically endangered or endangered; and
	• it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
Conservation dependent	A native species is eligible to be included in the <i>conservation dependent</i> category at a particular time if, at that time:
	• the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or
	 the following subparagraphs are satisfied:
	(i) the species is a species of fish;
	(ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised;
	(iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory;
	(iv) cessation of the plan of management would adversely affect the conservation status of the species.

Appendix 7. List of definitions of threatened species and ecosystems under the *Nature Conservation Act 1992*.

Category	Definition
Extinct in the Wild	• if there have been thorough searches conducted for the
	wildlife; and
	 it has not been seen in the wild over a period that is appropriate for the life cycle or form of the wildlife.
Endangered	• there have not been thorough searches conducted for the
	wildlife and the wildlife has not been seen in the wild over a
	period that is appropriate for the life cycle or form of the
	wildlife; orthe habitat or distribution of the wildlife has been reduced to
	 The matrix of distribution of the wildlife has been reduced to an extent that the wildlife may be in danger of extinction; or
	 the population size of the wildlife has declined, or is likely to
	decline, to an extent that the wildlife may be in danger of
	extinction; or
	 the survival of the wildlife in the wild is unlikely if a threatening
<u></u>	process continues.
Vulnerable	• its population is decreasing because of threatening processes,
	 or its population has been seriously depleted and its protection is
	not secured, or
	• its population, while abundant, is at risk because of
	threatening processes, or
	• its population is low or localised or depends on limited habitat
Doro	that is at risk because of threatening processes.
Rare	 population of wildlife is represented by a relatively large population in a restricted range; or
	 relatively small populations thinly spread over a wide
	range.
	• the survival of the wildlife is affected to an extent that the
	wildlife is in danger of becoming vulnerable; and
	 native wildlife may be prescribed as rare wildlife even if the wildlife is subject of a threatening process.
Near threatened	 the population size or distribution of the wildlife is small and may become smaller; or
	 the population size of the wildlife has declined, or is likely to
	decline, at a rate higher than the usual rate for population
	changes for the wildlife; or
	• the survival of the wildlife in the wild is affected to an extent
Loost concorn	that the wildlife is in danger of becoming vulnerable.
Least concern	 the wildlife is common or abundant and is likely to survive in the wild.
	Native wildlife may be prescribed as least concern wildlife
	even if:
	 the wildlife is the subject of a threatening process; or
	 the population size or distribution of the wildlife has declined; or
	declined; or o there is insufficient information about the wildlife to
	conclude whether the wildlife is common or abundant
	or likely to survive in the wild.
	• All animals previously listed as Common are now listed as
	Least Concern

Appendix 8. List of terrestrial faunal species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* and *Nature Conservation Act 1992*.

Scientific name	Common name	EPBC	NCA
Endangered			
Sterna albifrons	Little tern		\checkmark
Xanthomyza phrygia	Regent honeyeater	\checkmark	
Macronectes giganteus	Southern giant petrel	\checkmark	
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed quoll (SE mainland population)	~	
Lathamus discolor	Swift parrot	\checkmark	\checkmark
Vulnerable			
Rostratula australis	Australian painted snipe	\checkmark	
Esacus neglectus	Beach stone-curlew		\checkmark
Calyptorhynchus latham	Glossy black-cockatoo		\checkmark
Pteropus poliocephalus	Grey-headed flying-fox	\checkmark	
Acrodipsas illidge	Illidge's ant-blue		\checkmark
Pterodroma neglecta	Kermadec petrel	\checkmark	
Phascolarctos cinereus	Koala (SE bioregion)		\checkmark
Chalinolobus dwyeri	Large pied bat	\checkmark	
Potorous tridactylus tridactylus	Long-nosed potoroo	\checkmark	
Macronectes halli	Northern giant-petrel	\checkmark	
Rostratula benghalensis	Painted snipe		\checkmark
Ninox strenua	Powerful owl		\checkmark
Phaethon rubricauda	Red-tailed tropicbird		\checkmark
Ornithoptera richmondia	Richmond birdwing butterfly		\checkmark
Coeranoscinus reticulatus	Three-toed snake toothed skink	\checkmark	
Xeromys myoides	Water mouse (false water rat)	\checkmark	\checkmark
Diomedea exulans	Wandering Albatross	\checkmark	
Thalassarche cauta	Shy Albatross	\checkmark	
Rare			
Melithreptus gularis	Black-chinned honey eater		\checkmark
Ephippiorhynchus asiaticus	Black-necked stork		\checkmark
Acanthophis antarcticus	Common death adder		\checkmark
Numenius madagascariensis	Eastern curlew		\checkmark
Accipiter novaehollandiae	Grey goshawk		\checkmark
Rallus pectoralis	Lewin's rail		\checkmark
Pachycephala olivacea	Olive whistler		\checkmark
Ophioscinsuc truncates	Skink		\checkmark
Tyto tenebricosa	Sooty owl		\checkmark
Haematopus fuliginosus	Sooty oystercatcher		\checkmark
Lophoictinia isura	Square-tailed kite		\checkmark
Hoplocephalus stephensii	Stephen's banded snake		\checkmark

Appendix 9. List of aquatic fauna species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* and *Nature Conservation Act 1992.*

Scientific name	Common name	EPBC	NCA
Critically Endangered			
Carcharias taurus	Grey-nurse shark	\checkmark	
Endangered			
Caretta caretta	Loggerhead turtle	\checkmark	
Nannoperca oxleyana	Oxleyan pygmy perch	\checkmark	
Eubalaena australis	Southern right whale	\checkmark	
Vulnerable			
Dugong dugon	Dugong		\checkmark
Natator depressus	Flatback turtle	\checkmark	\checkmark
Carcharodon carcharias	Great white shark	\checkmark	
Chelonia mydas	Green turtle	\checkmark	\checkmark
Eretmochelys imbricata	Hawksbill turtle		\checkmark
Megaptera novaeangliae	Humpback whale	\checkmark	\checkmark
Dermochelys coriacea	Leatherback turtle	\checkmark	
Adelotus brevis	Tusked frog		\checkmark
Crinia tinnula	Wallum froglet		\checkmark
Litoria freycineti	Wallum rocketfrog		\checkmark
Litoria olongburensis	Wallum sedgefrog	\checkmark	\checkmark
Rhincodon typus	Whale shark	\checkmark	
Neoceratodus forsteri	Queensland lungfish	\checkmark	\checkmark
Rare			
Sousa chinensis	Indo-Pacific humpbacked dolphi	n	\checkmark
Litoria cooloolensis	Cooloola Sedgefrog		\checkmark

Appendix 10. List of flora species listed under the *Environmental Protectionand Biodiversity Conservation Act 1999* and *Nature Conservation Act 1992*.

Scientific name	Common name	EPBC	NCA
Endangered			
Corchorus cunninghamii	Native jute	\checkmark	
Olearia hygrophila	Swamp daisy	\checkmark	\checkmark
Phaius australis	Lesser swamp orchid	\checkmark	\checkmark
Phaius bernaysii	Yellow swamp orchid	\checkmark	\checkmark
Vulnerable			
Acacia baueri subsp baueri	Tiny wattle		\checkmark
Baloghia marmorata	Marbled baloghia	\checkmark	
Bosistoa selwynii	Heart leaved bosistoa	\checkmark	
Bosistoa transversa	Three leaved bosistoa	\checkmark	
Cryptostylis hunteriana	Leafless tongue-orchid	\checkmark	
Hydrocharis dubia	Frogbit	\checkmark	
Macadamia integrifolia	Small fruit Queensland nut	\checkmark	\checkmark
Macadamia tetraphylla	Macadamia nut	\checkmark	
Marsdenia coronata	Slender milkvine	\checkmark	\checkmark
Marsdenia logilobia	Clear milkvine	\checkmark	
Prasophyllum fuscum		\checkmark	
Rare			
Thelypteris confluens			\checkmark
Blandfordia grandiflora	Christmas bells		\checkmark
Durringtonia paludosa	Durringtonia		\checkmark
Leptospermum purpurascens	Purple stemmed turkey bush		\checkmark
Schoenus scabripes			\checkmark

Appendix 11. Additional locally significant fauna and flora species to be added to the Redlands Planning Scheme that are not listed under *Environmental Protection and Biodiversity Conservation Act 1999* and *Nature Conservation Act 1992*.

Scientific name	Common name
Fauna	
Invertebrates	
Tenuibranchiurus gypticus	Swamp crayfish
Freshwater Fish	
Megalops cyprinoides	Tarpon
Porochilius renddahli	Catfish
Rhadinocentrus ornatus	Ornate sunfish
Ophistermon sp	Swamp Eel
Neoceratodus foresteri	Lungfish
Frogs	
Adelotus brevis	Tusked frog
Crinia signifera	Clicking froglet
Limnodynastes convexiusculus	Marbled frog
Limnodynastes salmini	Salmon-striped frog
Mixophyes fasciolatus	Great Barred-frog
Pseudophryne coriacea	Red-backed broodfrog
Pseudophryne major	Great brown broodfrog
Pseudophryne raveni	Copper-backed broodfrog
Uperoleia laevigata	Eastern gungan
Cyclorama brevipes	Superb collared-frog
Cyclorama novaehollandiae	Eastern snapping-frog
Litoria dentata	Bleating treefrog
Litoria peronii	Emerald-spotted treefrog
Litoria sp. Cf. cooloolensis	Stradbroke sedgefrog
Litoria tyleri	Southern Laughing treefrog
Litoria verreauxii	Whistling treefrog
Litoria caerulea	Green Treefrog
Reptiles	
Emydura signata	Shortneck turtle
Diporiphora australis	Tommy roundhead
Hypsilurus spinipes	Southern angle-headed dragon
Oedura lesueurii	Lesueur's velvet gecko
Saltuarius swaini	Gecko
Delma plebeia	Legless lizard
Anomalopus leuckartii	Skink
Calyptotis lepidorostrum	Skink
Carlia pectoralis	Skink
Coggeria naufragus	Satinay sand skink
Cternotus arcanus	Skink
Ctenotus eurydice	Skink
Ctenotus strauchii	Skink

Egernia major Egernia mcpheei Eremiascincus richardsonii Eulamprus maurrayi Eulamprus tryoni Glaphyromorphus punctulatus Lampropholis amicula Lampropholis couperi Lamprophilus guichenoti Menetia greyii Menetia timlowi Morethia boulengeri Morethia taeniopleura Ophioscincus ophioscincus Saiphos equalis Saproscincus challengeri Saproscincus oriarus Cacophis krefftii Demansia atra Hoplocephalus bitorquatus Notechis scutatus Simoselaps australis Simoselaps warro Ramophotyphlops nigrescens Varanus gouldii Varanus varius

Land mullet Skink Broad-banded sand swimmer Skink Skink Skink Skink Skink Grass skink Skink Skink Skink Fire-tailed skink Skink Skink Skink Skink Dwarf crowned snake Black whip snake Pale headed snake Eastern tiger snake Coral snake Snake Blindsnake Gould's Goanna Lace Monitor

Birds

Oxyura australis Biziura lobata Nettapus pulchellus Numenius minutus Heteroscelus incanus Burhinus grallarius Phaps elegans Ptilinopus superbus Ptilinopus regina Glossopsitta concinna Ninox connivens Tyto novaehollandiae Anthochaera carunculata Anthochaera chrysoptera Phylidonyris novaehollandiae Myzomela obscura Petroica multicolor Mjiagra alecto

Blue billed duck Musk duck Green pygmy goose Little curlew Wandering tattler **Bush stone-curlew** Brush bronzewing Superb fruit-dove Rose-crowned fruit-dove Musk lorikeet Barking owl Masked owl Red wattlebird Little wattlebird New Holland honeyeater Dusky honeyeater Scarlet robin

Artamus cinereus Ailuroedus crassirostris Anseranas semipalmata Malurus lamberti Malurus melanocephalus Malurus cyaneus Taeniopygia bichenovii Neochmia temporalis Haliaeetus leucogaster Pandion haliaetus Ninox connivens Chthonicola sagittata Lophoictinia isura Lonchura castaneothorax

Mammals

Ornithorynchus anatinus Tachyglossus aculeatus Petauroides volans Petaurus norfolcensis Petaurus breviceps Acrobates pygmaeus Petaurus australis Sminthopsis murina Myotis macropus Scoteanax rueppellii Scotorepens orion Vespadelus troughtoni Vespadelus pumilus Wallabia bicolor Pteropus alecto Pteropus scapulatus Hydromys chrysogaster Trichosaurus caninus

Green catbird Magpie geese Varigated fairy-wren Red-backed fairy-wren Superb fairy wren Double-barred finch Red-browed finch White-bellied sea-eagle Osprey Barking owl Speckled warbler Square tailed kite Chestnut breasted mannikin

Black-faced woodswallow

Platypus

Echidna Greater glider Squirrel glider Sugar glider Feathertail glider Yellow-bellied glider Common dunnart Large footed myotis Greater broad-nosed bat South-eastern broad nosed bat Eastern cave bat Eastern forest bat Golden Swamp wallaby Black flying fox Little red flying fox Water rat Short-eared possum (mountain possum)

Flora

Todea barbara Bulbophyllum minutissimum Calanthe triplicate Caleana major Dockrillia schoeninum Dockrillia linguiforme Erythrorchis cassythoides Pseudovanilla foliata Thelymitra ixioides Thelymitra nuda Thelymitra pauciflora

King Fern

Christmas orchid Flying duck orchid Pencil orchid Tick or tongue orchid Small climbing orchid Giant Climbing orchid Dotted sun orchid Scented sun orchid Slender sun orchid Acacia myrtifolia Acacia hispidula Bauera capitata Boronia safrolifera Hakea actites Melaleuca thymifolia Melaleuca irbyana Oxylobium aciculiferum Platylobium formosum Prostanthera ovalifolia Pultenaea cunninghamii Hibbertia dentata Acacia bakeri Acacia perangusta Acmena hemilampra Acronychia imperforata Acronychia pauciflora Ailanthus triphysa Alectryon tomentosus Argyrodendron trifoliatum Arytera divaricate Arytera foveolata Australorchis monophylla Baloghia lucida Beilschmiedia elliptica Beilschmiedia obtusifolia Canthium coprosmoides Capparis arborea Capparis sarmentosa Castanospermum australe Cayratia eurynema Clayoxylon australe Cleistanthus cunninghamii Clerodendron floribundum Croton acronychioides Croton insulare Cryptocarya glaucesens Cryptocarya obovata Cryptocarya macdonaldii Cryptocarya sclerophylla Cryptocarya triplinervis Cupaniopsis parvifolia Cyanthillium cinerium Cyclophyllum coprosmoides Cyclophyllum longipetallum Diploglottis cunnighamii

Safrole boronia Swamp tea tree Flat pea Mint bush Eprapah Wattle Broad-leafed lilypilly Few flowered aspen White bean Hairy birds eye White booyong Coogera Pitted coogera Lily of the valley Scrub bloodwood Brown walnut Hard bolly gum Native pomegranate Scrambling caper Black bean Slender grape Brittle wood Lolly bush Thick leafed croton Qld cascarilla bark Jackwood Totem pole tree Small leafed tuckeroo Coastal canthium Coastal coffee

Native tamarind

Drypetes deplanchei Dysoxylon rufum Elaeocarpus eumundi Elaeocarpus grandis Ellatostachys nervosa Endiandra discolour Endiandra sieberi Eucalyptus tesselaris Euroschinus falcata Ficus macrophylla Ficus virens Flindersia schottiana Flindersia xanthostyla Gossia bidwillii Gossia punctata Gmelina leichardtii Hippocrates barbata Hymenosporum flavum Ixora beckleri Litsea leefeana Litsea reticulata Livistonia australis Mallotus discolor Melaleuca linariifolia Morinda canthoides Pararchidendron pruinosum Parsonsia lanceolata Parsonsia ventricosa Pipterus argenteus Pittosporum mulitflorum Polyalthia nitidissima Polyscias murrayi Pouteria australis Pouteria myrsinifolia Pouteria pohlmaniana Sarcomelicope simplicifolia Schizomeria ovata Sloana woolsii Sophora tomentosa Sterculia quadrifida Streblus brunonianus Synoum glandulosum Syzygium leuhmanii Tinospora smilacina Toechima tenax Xylomelum salicinum

Yellow tulip

Blue quandong

Rose walnut Corkwood Moreton Bay Ash Ribbonwood Moreton Bay Fig White fig Bumpy ash Yellow wood Pvthon tree Myrtle White beech Knot vine Native frangipanni Brown coffeewood Brown bolly gum Bolly gum Cabbage tree palm

Flax Leaf Paperbark Morinda vine Snow wood Scrub silk pod vine Hairy silk pod vine Native mulberry Orange thorn

Black apple Hairy Coondoo Yellow boxwood Bauerella White cherry Yellow carrabeen

Peanut tree Whalebone tree Scentless rosewood Small leafed lilypilly Tinospora

Woody pear

Aegicerus corniculatum	River Mangrove
Aviecennia marina var australasica	Grey mangrove
Bruguiera gymnorhiza	Orange mangrove
Ceriops tagal var australis	Yellow mangrove
Exocoecaria agallocha	Milky mangrove
Lumnitzera racemosa	Black mangrove
Rhizophora stylosa	Red mangrove
Sporobolus virginicus	Saltwater couch
Casuarina glauca	Swamp she-oak
Hibiscus tileaceus	Cotton tree
Casuarina equisitifolia	Coastal she-oak
Melaleuca quinquenervia	Broad-leafed paper bark

Appendix 12. SEQ Bioregion Priority Taxa listed under Environmental Protection Agency BAMM (2002) that are not listed *Environmental Protection and Biodiversity Conservation Act 1999* and *Nature Conservation Act 1992*.

Scientific name	Common name
Invertebrates	
Euastacus hystricosus	Giant spiny crayfish
Euastacus jagara	Freshwater crayfish
Euastacus maidae	Freshwater crayfish
Euastacus monitithorum	Freshwater crayfish
Euastacus setosus	Mount Glorious spiny crayfish
Euastacus sulcatus	Freshwater crayfish
Euastacus urospinosus	Freshwater crayfish
Euastacus valentulus	Freshwater crayfish
Cherax punctatus	Land yabby
Cherax robustus	Sand yabby
Tenuibranchiurus gypticus	Swamp crayfish
Uca longidigita	Grey-clawed fiddler crab
Uca signata	Fiddler crab
Nameria insularis	Burleigh Heads spider
Argiolestis albenscens	Dragonfly
Petalura littorea	Dragonfly
Petalura gigantea	Dragonfly
Neogeoscapheus barbarae	Giant burrowing cockroach
Sphaenognathus spp	Stag beetle
Lissapterus spp	Stag beetle
Junonia hedonia zelima	Brown spider
Telicota eurychlora	Dingy darter
Tisiphone abeona morrisi	Swordgrass brown
กระคาการ สมอังกล กางการเ	Swordgrass brown
Freshwater Fish	Swoldgrass brown
	Queensland lungfish
Freshwater Fish	
Freshwater Fish Neoceratotodus forsteri	Queensland lungfish
Freshwater Fish Neoceratotodus forsteri Galaxius olidus	Queensland lungfish Mountain galaxias
Freshwater Fish Neoceratotodus forsteri Galaxius olidus Porochilius renddahli	Queensland lungfish Mountain galaxias Catfish
Freshwater Fish Neoceratotodus forsteri Galaxius olidus Porochilius renddahli Rhadinocentrus ornatus	Queensland lungfish Mountain galaxias Catfish Ornate sunfish
Freshwater Fish Neoceratotodus forsteri Galaxius olidus Porochilius renddahli Rhadinocentrus ornatus Kuhlia rupestris	Queensland lungfish Mountain galaxias Catfish Ornate sunfish Jungle perch
Freshwater Fish Neoceratotodus forsteri Galaxius olidus Porochilius renddahli Rhadinocentrus ornatus Kuhlia rupestris Gadopsis marmoratus	Queensland lungfish Mountain galaxias Catfish Ornate sunfish Jungle perch River blackfish Tusked frog
Freshwater FishNeoceratotodus forsteriGalaxius olidusPorochilius renddahliRhadinocentrus ornatusKuhlia rupestrisGadopsis marmoratusFrogsAdelotus brevisCrinia signifera	Queensland lungfish Mountain galaxias Catfish Ornate sunfish Jungle perch River blackfish Tusked frog Clicking froglet
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Freshwater FishNeoceratotodus forsteriGalaxius olidusPorochilius renddahliRhadinocentrus ornatusKuhlia rupestrisGadopsis marmoratusFrogsAdelotus brevisCrinia signiferaLimnodynastes convexiusculusLimnodynastes salminiPseudophryne coriaceaPseudophryne raveniUperoleia laevigataLitoria dentataLitoria sp. Cf. cooloolensisLitoria verreauxiiReptiles	Queensland lungfish Mountain galaxias Catfish Ornate sunfish Jungle perch River blackfish Tusked frog Clicking froglet Marbled frog Salmon-striped frog Red-backed broodfrog Great brown broodfrog Great brown broodfrog Eastern gungan Bleating treefrog Emerald-spotted treefrog Stradbroke sedgefrog Whistling treefrog

Scientific name

Diporiphora australis Hypsilurus spinipes Oedura lesueurii Saltuarius swaini Delma plebeia Anomalopus leuckartii Calyptotis lepidorostrum Carlia pectoralis Coggeria naufragus Cternotus arcanus Ctenotus eurydice Ctenotus strauchii Egernia major Egernia mcpheei Eremiascincus richardsonii Eulamprus maurrayi Eulamprus tryoni Glaphyromorphus punctulatus Lampropholis amicula Lampropholis couperi Lamprophilus guichenoti Menetia greyii Menetia timlowi Morethia boulengeri Morethia taeniopleura Ophioscincus ophioscincus Saiphos equalis Saproscincus challengeri Saproscincus oriarus Cacophis krefftii Demansia atra Hoplocephalus bitorquatus Notechis scutatus Pseudodechis guttatus Rhinoplocephalus nigrostriatus Simoselaps australis Simoselaps warro Ramophotyphlops nigrescens

Common name

Tommy roundhead Southern angle-headed dragon Lesueur's velvet gecko Gecko Legless lizard Skink Skink Skink Satinay sand skink Skink Skink Skink Land mullet Skink Broad-banded sand swimmer Skink Skink Skink Skink Skink Grass skink Skink Skink Skink Fire-tailed skink Skink Skink Skink Skink Dwarf crowned snake Black whip snake Pale headed snake Eastern tiger snake Spotted black snake Black-striped snake Coral snake Snake Blindsnake

Birds

Oxyura australis Biziura lobata Nettapus pulchellus Numenius minutus Heteroscelus incanus Burhinus grallarius Phaps elegans Ptilinopus superbus Ptilinopus regina Glossopsitta concinna Platycercus eximius Ninox connivens Tyto novaehollandiae Blue billed duck Musk duck Green pygmy goose Little curlew Wandering tattler Bush stone-curlew Brush bronzewing Superb fruit-dove Rose-crowned fruit-dove Musk lorikeet Eastern rosella Barking owl Masked owl

Scientific name	Common name
Anthochaera carunculata	Red wattlebird
Anthochaera chrysoptera	Little wattlebird
Manorina melanophrys	Bell miner
Phylidonyris novaehollandiae	New Holland honeyeater
Myzomela obscura	Dusky honeyeater
Petroica multicolor	Scarlet robin
Mjiagra alecto	Shining flycatcher
Artamus cinereus	Blac-faced woodswallow
Ailuroedus crassirostris	Green catbird
Mammals	
Ornithorynchus anatinus	Platypus
Sminthopsis murina	Common dunnart
Myotis macropus	Large footed myotis
Scoteanax rueppellii	Greater broad-nosed bat
Scotorepens orion	South-eastern broad nosed bat
Scotorepens sp.	Central-eastern broad nosed bat
Vespadelus regulus	Southern cave bat
Vespadelus vulturnus	Little forest bat

Appendix 13. Regional Ecosystems, description of Vegetation types and status, and Biodiversity Status under the *Vegetation Management Act 1999* (EPA 2007).

RE	Description	Туре	VM Status	Biodiversity Status
12.1.1	Casuarina glauca open forest on margins of marine clay plains	Wetland	Of concern	Endangered
12.1.2	Saltpan vegetation including grassland and herbland on marine clay plains	Wetland	Not of concern	No concern at present
12.1.3	Mangrove shrubland to low closed forest on marine clay plains and estuaries	Wetland	Not of concern	No concern at present
12.2.1	Notophyll vine forest on parabolic high dunes	Closed Forest	Of concern	Of concern
12.2.2	Microphyll / notophyll vine forest on beach ridges	Closed Forest	Of concern	Endangered
12.2.5	Corymbia spp., Banksia integrifolia, Callitris columellaris, Acacia spp. open forest to low closed forest on beach ridges usually in southern half of bioregion	Closed Forest	Not of concern	Of concern
12.2.5a	Swales dominated by <i>Melaleuca</i> <i>quinquenervia</i> often with <i>Livistona spp</i> . Occurs on Quartenary coastal dune swales.	Wetland	Not of concern	Of concern
12.2.6	<i>Eucalyptus racemosa</i> woodland on dunes and sand plains. Usually deeply leached soils	Wetland	Not of concern	No concern at present
12.2.7	Melaleuca quinquenervia or M. viridflora open forest to woodland on sand plains	Wetland	Not of concern	Of concern
12.2.8	<i>Eucalyptus pilularis</i> open forest on parabolic high dunes	Open Forest	Not of concern	No concern at present
12.2.9	Banksia aemula woodland on dunes and sand plains. Usually deeply leached soils	Wetland	Not of concern	No concern at present
12.2.10	Mallee <i>Eucalyptus</i> spp. and <i>Corymbia</i> spp. low woodland on dunes and sand plains, especially southern sand mass islands. Usually deeply leached soils	Wetland	Not of concern	No concern at present
12.2.12	Closed heath on seasonally waterlogged sand plains	Wetland	Not of concern	No concern at present
12.2.13	Open heath on dunes and beaches	Heath	Of concern	Of concern
12.2.14	Foredune complex of grassland and open forest	Marine	Not of concern	No concern at present
12.2.15	Swamps with <i>Baumea</i> spp., <i>Juncu</i> s spp. and <i>Lepironia articulata</i>	Wetland	Not of concern	No concern at present
12.2.16	Sand blows largely devoid of vegetation	Sand	Of concern	Of concern
12.3.1	Gallery rainforest (notophyll vine forest) on alluvial plains	Closed Forest	Endangered	Endangered
12.3.5	<i>Melaleuca quinquenervia</i> open forest on coastal alluvium	Wetland	Not of concern	Of concern
12.3.6	Melaleuca quinquenervia, Eucalyptus tereticornis, Lophostemon suaveolens	Wetland	Not of	No concern

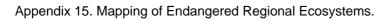
RE	Description	Туре	VM Status	Biodiversity Status
	woodland on coastal alluvial plains		concern	at present
12.3.8	Swamps with <i>Cyperus</i> spp., <i>Schoenoplectus</i> spp. and <i>Eleocharis</i> spp.	Wetland	Of concern	Of concern
12.3.11	<i>Eucalyptus siderophloia, E. tereticornis, Corymbia intermedia</i> open forest on alluvial plains usually near coast	Open Forest	Of concern	Of concern
12.3.13	Closed heathland on seasonally waterlogged alluvial plains usually near coast	Heath	Of concern	Of concern
12.5.2	<i>Eucalyptus tereticornis</i> , <i>Corymbia</i> <i>intermedia</i> on remnant Tertiary surfaces, usually near coast. Usually deep red soils	Open Forest	Endangered	Endangered
12.5.3	<i>Eucalyptus tindaliae</i> and/or <i>E. racemosa</i> open forest on remnant Tertiary surfaces	Open Forest	Endangered	Endangered
12.5.9	Sedgeland to heathland in low-lying areas on complex of remnant Tertiary surface and Tertiary sedimentary rocks	Wetland	Of concern	Of concern
12.9-10.4	Eucalyptus racemosa woodland on sedimentary rocks	Open Forest	Not of concern	No concern at present
12.9- 10.17	Open forest complex often with <i>Eucalyptus</i> acmenoides, <i>E. major, E. siderophloia</i> ± <i>Corymbia citriodora</i> on sedimentary rocks	Open Forest	Not of concern	No concern at present
12.9- 10.17a	Lophostemon confertus dominated open- forest. Occurs in gullies and southern slopes on Cainozoic and Mesozoic sediments	Open Forest	Not of concern	No concern at present
12.9- 10.19a	Open-forest of <i>Corymbia henryi</i> ± <i>Eucalyptus fibrosa subsp. fibrosa,</i> <i>Corymbia citriodora, E. siderophloia, E.</i> <i>crebra.</i> Occurs in coastal areas on Cainozoic and Mesozoic sediments	Open Forest	Not of concern	No concern at present
12.11.3a	Open forest generally with <i>Eucalyptus</i> <i>siderophloia, E. propinqua</i> on metamorphics ± interbedded volcanics	Open Forest	Not of concern	No concern at present
12.11.5	Open forest complex with <i>Corymbia</i> <i>citriodora, Eucalyptus siderophloia, E.</i> <i>major</i> on metamorphics ± interbedded volcanics	Open Forest	Not of concern	No concern at present
12.11.5a	12.11.5a: Open forest of <i>Eucalyptus</i> <i>tindaliae, Eucalyptus carnea</i> ± <i>Corymbia</i> <i>citriodora, Eucalyptus crebra, Eucalyptus</i> <i>major, Corymbia henryi, Angophora</i> <i>woodsiana, C. trachyphloia</i> (away from the coast) or <i>E. siderophloia, E. microcorys, E.</i> <i>racemosa, E. propinqua</i> (closer to the coast). Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics	Open Forest	Not of concern	No concern at present
12.11.5e	Open-forest complex in which spotted gum	Open	Not of	No concern at

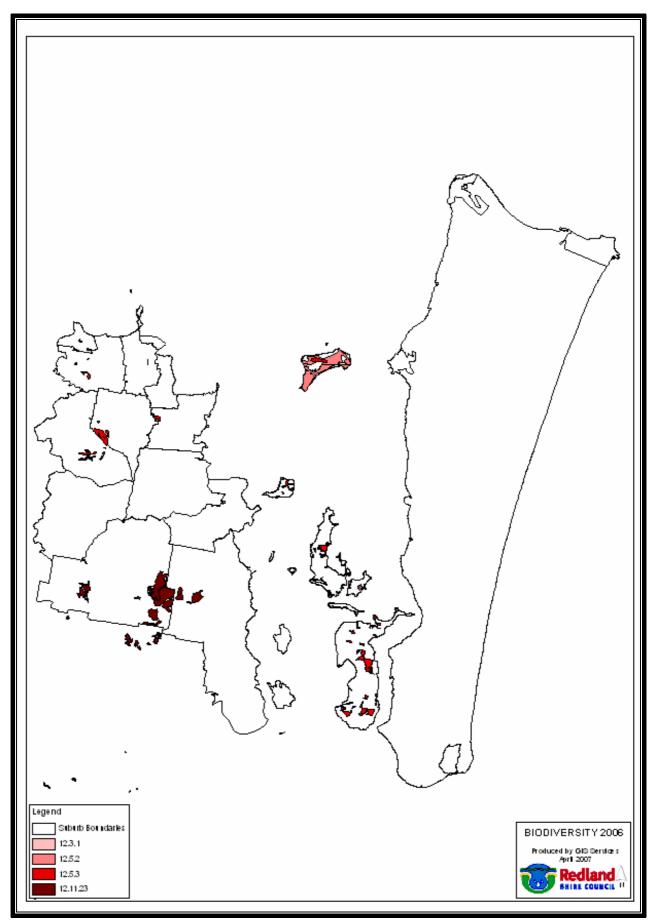
RE	Description	Туре	VM Status	Biodiversity
	is a relatively common species. Canopy trees include Corymbia citriodora, Eucalyptus siderophloia or E. crebra (sub coastal ranges), E. major and/or E. longirostrata and E. acmenoides or E. portuensis and/or E. carnea and/or E. eugenioides. Other species that may be present and abundant locally include Corymbia intermedia, C. trachyphloia, Eucalyptus tereticornis, E. propinqua, E. biturbinata, E. moluccana and Angophora leiocarpa. Lophostemon confertus often present in gullies and as a sub canopy or understorey tree. Mixed understorey of grasses, shrubs and ferns. Occurs on hills and ranges of Paleozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.	Forest	concern	Status present
12.11.5h	Woodland to open forest of <i>Eucalyptus</i> planchoniana, <i>E. carnea</i> and <i>Angophora</i> woodsiana $\pm E$. fibrosa subsp. fibrosa, <i>E.</i> racemosa, Corymbia intermedia, <i>C.</i> trachyphloia, <i>E. tindaliae</i> , <i>E. resinifera</i> . Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics	Open Forest	Not of concern	No concern at present
12.11.5j	Open forest of <i>Eucalyptus racemosa, E.</i> seeana and <i>Lophostemon suaveolens</i> ± <i>Corymbia intermedia, E. siderophloia, C.</i> <i>citriodora, E. pilularis</i> on low-altitude coastal metamorphics around Brisbane. <i>Melaleuca</i> <i>quinquenervia</i> is often present and at times becomes locally co-dominant. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics	Open Forest	Not of concern	No concern at present
12.11.5k	12.11.5k: Open forest of <i>Corymbia henryi</i> , <i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> ± <i>C</i> . <i>citriodora</i> , <i>Angophora leiocarpa</i> , <i>E. carnea</i> , <i>E. tindaliae</i> , <i>E. propinqua</i> , <i>C. intermedia</i> . Occurs on drier ridges and slopes on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.	Open Forest	Not of concern	No concern at present
12.11.10	Notophyll vine forest ± <i>Araucaria</i> <i>cunninghamii</i> on metamorphics ± interbedded volcanics	Closed Forest	Not of concern	No concern at present
12.11.23	Tall open forest of <i>Eucalyptus pilularis</i> open forest on metamorphics and interbedded volcanics	Open Forest	Endangered	Endangered
12.12.14	Shrubby woodland usually of rocky near coastal areas on Mesozoic to Proterozoic igneous rocks	Open Forest	Of concern	Of concern

RE	Description	Туре	VM Status	Biodiversity Status
12.12.19	Vegetation complex of rocky headlands, predominantly but not exclusively on Mesozoic to Proterozoic igneous rocks	Marine	Of concern	Of concern

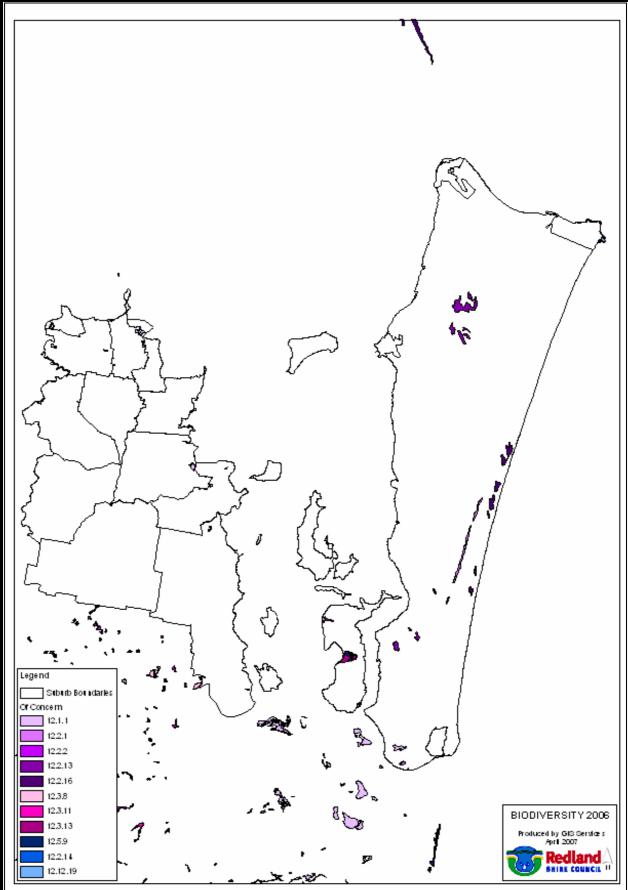
Appendix 14. The specific criteria used to assess the *Vegetation Management Act 1999* Regional Ecosystem (REs) and Biodiversity Status.

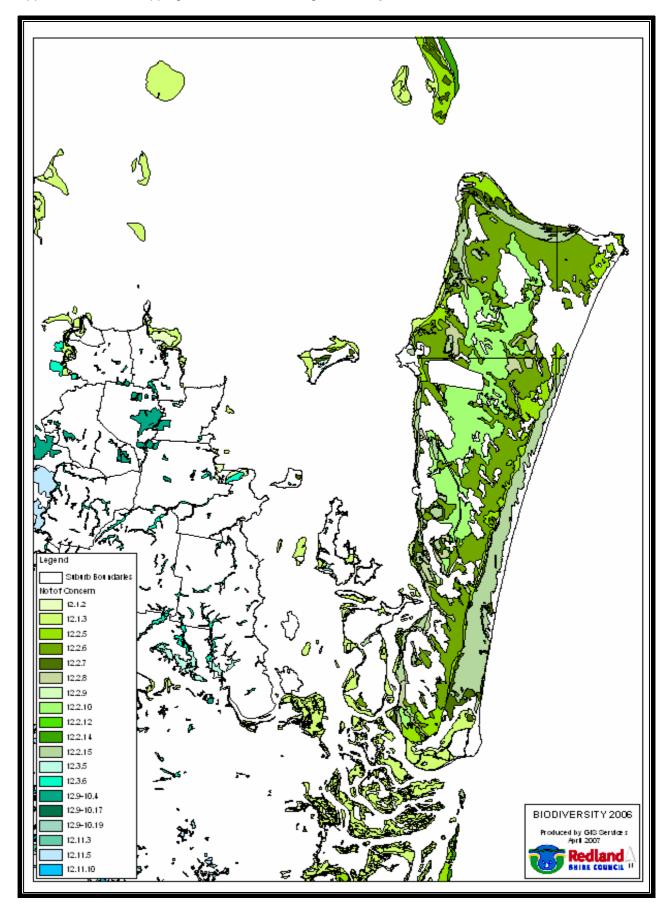
Category	Definition		
Endangered	Remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30percent of its pre-clearing extent remains and the remnant vegetation is less than 10,000 ha. In addition to the criteria listed for an endangered regional ecosystems under the <i>Vegetation Management Act 1999</i> , for biodiversity planning purposes the Environmental Protection Agency also classifies a regional ecosystem as endangered if:		
	 less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss; or 10-30 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 ha; or it is a rare regional ecosystem subject to a threatening process. 		
Of-concern	Remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 30 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 ha. In addition to the criteria listed for an of concern regional ecosystems under the <i>Vegetation Management Act 1999</i> , for biodiversity planning purposes the Environmental Protection Agency also classifies a regional ecosystem as of concern if:		
	• 10-30 per cent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss.		
Not of concern	Remnant vegetation is over 30 per cent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 ha. In addition to the criteria listed for Not of concern regional ecosystems under the <i>Vegetation Management Act 1999</i> , for biodiversity planning purposes the Environmental Protection Agency also classifies a regional ecosystem as No concern at present if:		
	 the degradation criteria listed above for endangered or of concern regional ecosystems are not met. 		







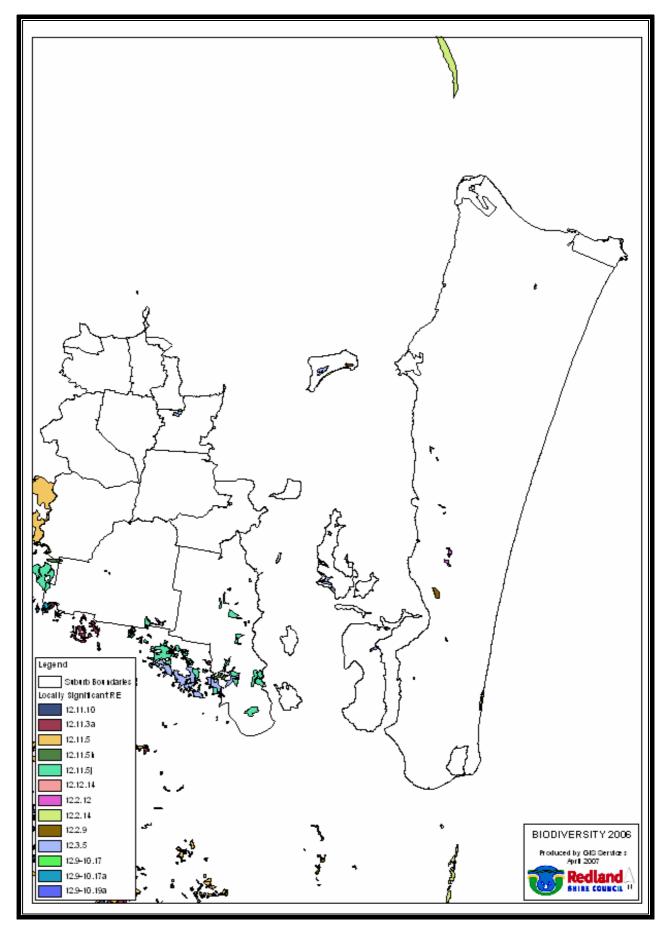




Appendix 15 con't. Mapping of Not-of-concern Regional Ecosystems.

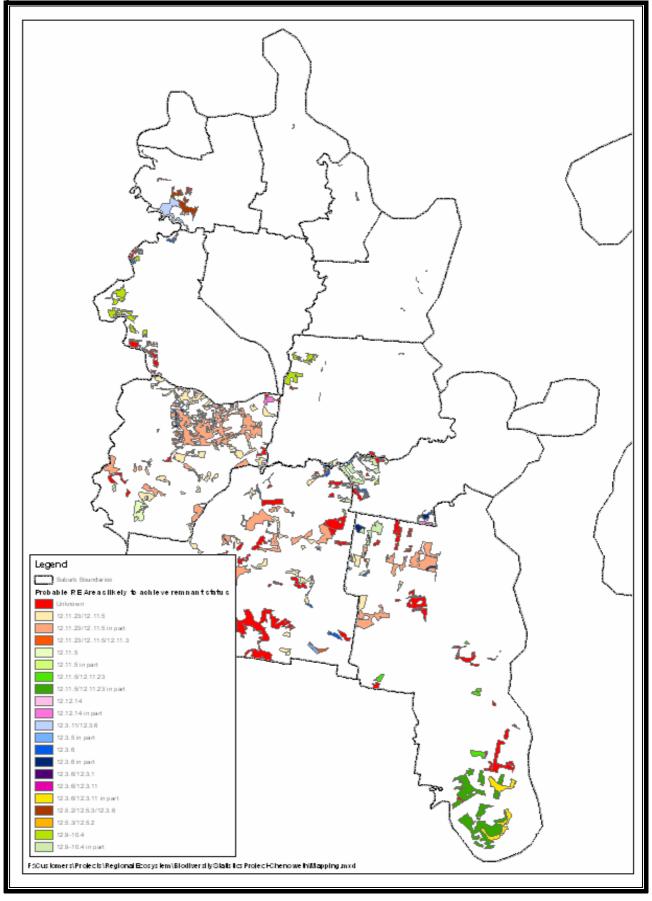
Appendix 16. List of locally significant Regional Ecosystems that are naturally rare or poorly conserved in Redlands that are not listed as endangered or of-concern under *Vegetation Management Act 1999* (source: Chenoweth 2006).

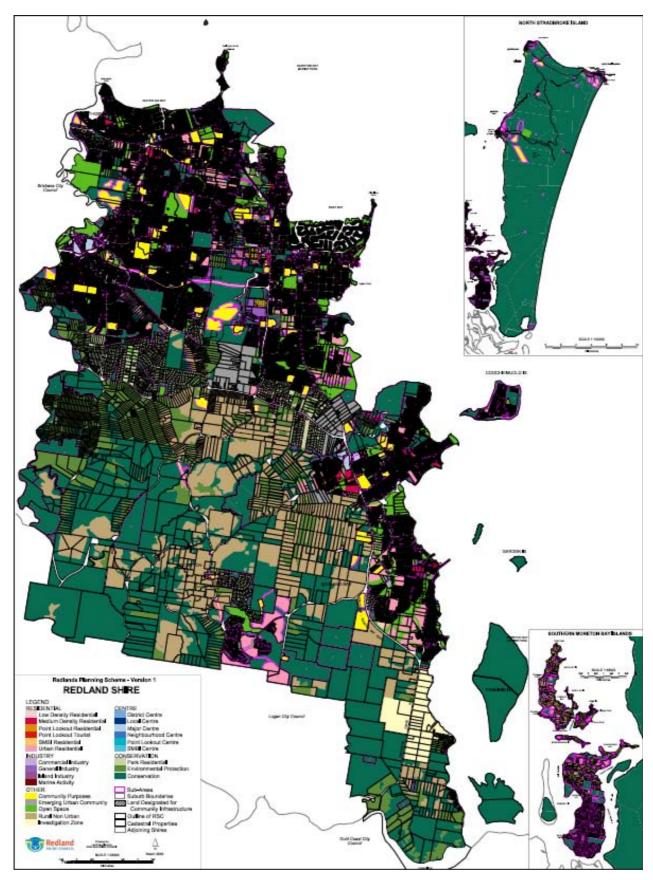
RE	Area Pre-clear (ha)	Area 2005 (ha)	Remaining 2005 (percent)
12.2.9	324.5	226.65	70
12.2.12	28.12	28.12	100
12.2.14	776.06	35.56	4.58
12.3.5	423.81	183.31	43.25
12.9-10.17	7.1	13.42	188.92
12.9-10.17a	0.07	0.07	100
12.9-10.19a	2.37	2.37	100
12.11.3a	7.2	0.3	0
12.11.5	4.44	4.41	99
12.11.5h	195.47	50.49	25.83
12.11.10	1.9	1.3	69
12.12.14	250	0	0



Appendix 17. Mapping of Locally Significant Regional Ecosystems.

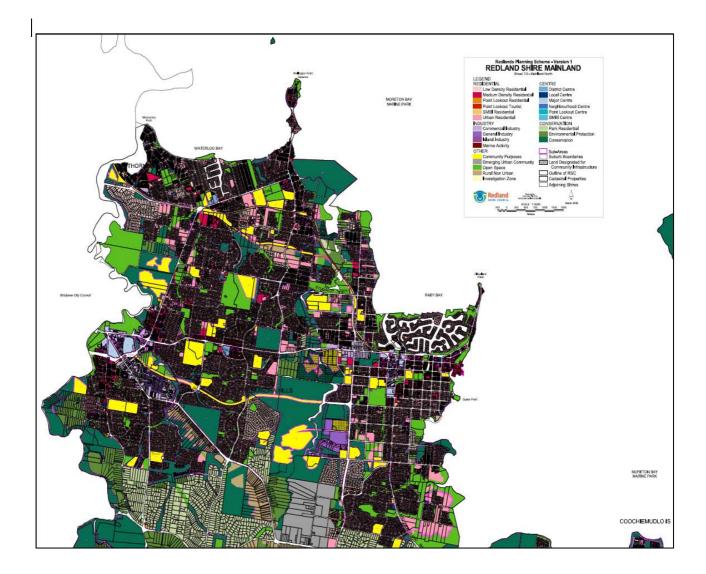
Appendix 18. Mapping of areas of potential Regrowth.



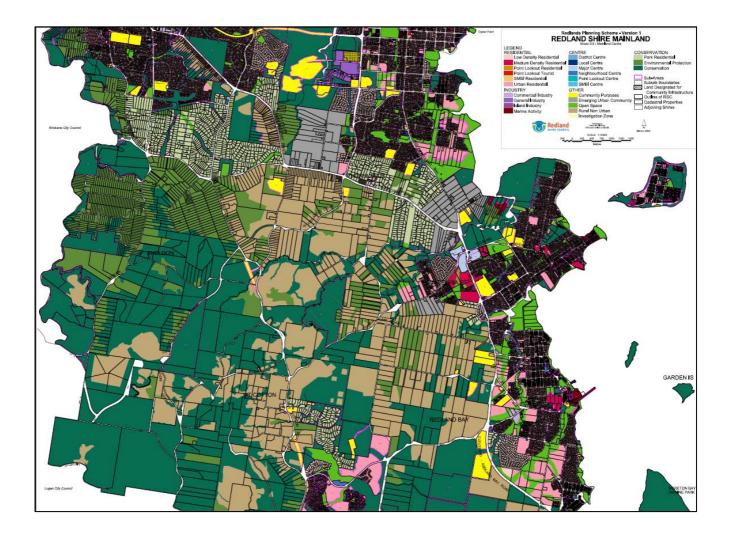


Appendix 19. Map of zoning (source: Redlands Planning Scheme).

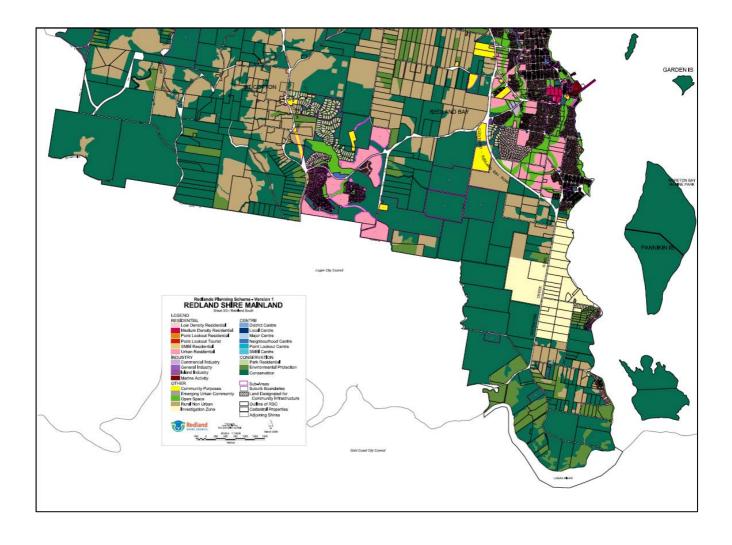
Appendix 19 con't. Detail map of North Mainland zoning (source: Redlands Planning Scheme).

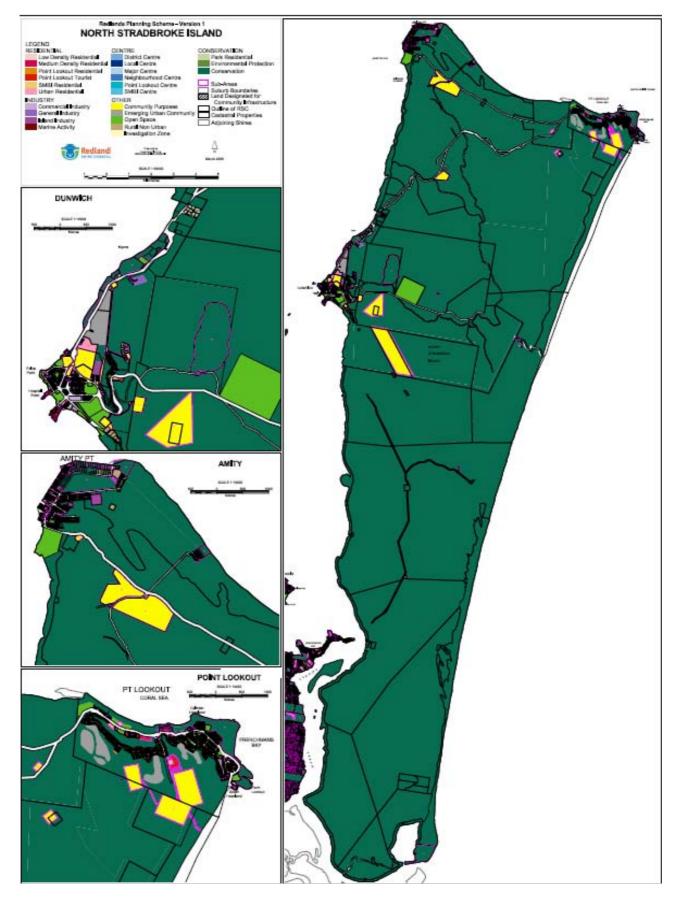


Appendix 19 con't. Detail map of central mainland zoning (source: Redlands Planning Scheme).

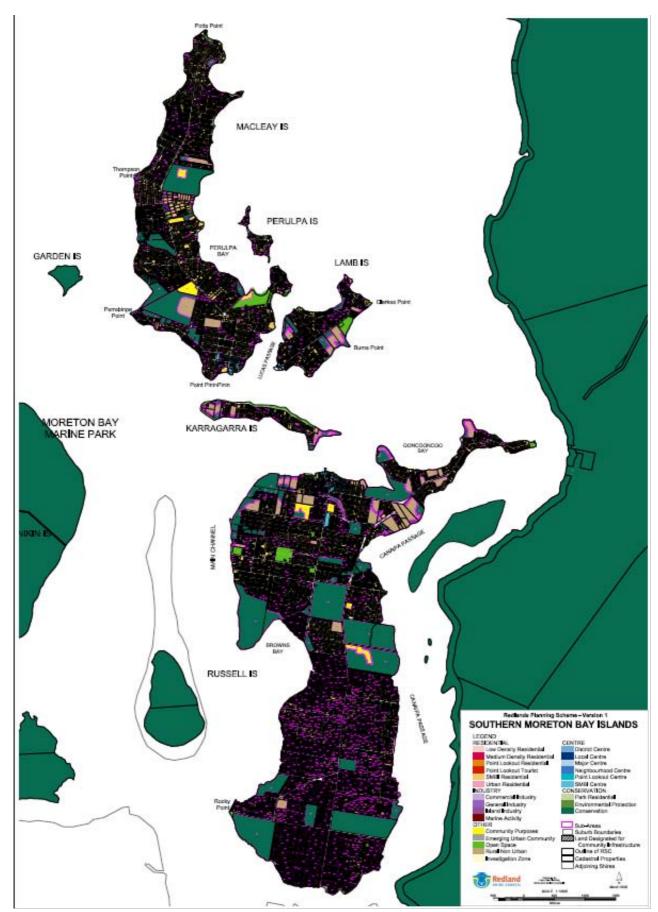


Appendix 19 con't. Detail map of southern mainland zoning (source: Redlands Planning Scheme).





Appendix 19 con't. Detail map of North Stradbroke Island zoning (source: Redlands Planning Scheme).



Appendix 19 con't. Detail map of Southern Moreton Bay Islands zoning (source: Redlands Planning Scheme).

Appendix 20. List of Management Plans developed and implemented by Redland City Council.

- Cylinder Beach Master Plan
- Greater Glider Land Management Plan
- McMillan Road (Squirrel Glider) Conservation Area LMP
- NSI Fire Management Plan
- Orchard Beach Wetland
- Scribbly Gums Conservation Area LMP
- Sleath St Foreshore Rehabilitation Plan
- Terra Bulla Leumeah Management Plan
- Flinders Beach Land Management Plan
- Serpentine Creek Cemetery Land Management Plan
- Coochiemudlo Island Land Management Plan
- SMBI Fire Management Plan
- Mainland Fire Management Plan
- 1996 Firebreak assessment report for Redland Shire Council
- Firebreak assessment report 2000
- SMBI Fire Access Report 2005.
- Cleveland Showgrounds
- Don and Christine Burnett Conservation Area
- Ford Rd Conservation area
- Eastern Escarpment Conservation area
- Wellington Point Master Plan
- Judy Holt Master Plan
- Victoria Point Master Plan

Appendix 21. Listed are legislation, policies, guidelines and strategies that are relevant at International, National, State and Local level to biodiversity.

International

- Ramsar 1971
- CAMBA 1976
- JAMBA 1974
- Convention on Biological Diversity 1992

Commonwealth

- World Heritage Properties Conservation Act 1983
- Australian Heritage Commission Act 1975
- Endangered Species Protection Act 1992
- Native Title Act 1993
- National Biodiversity and Climate Change Action Plan 2004-2007

National

- Environmental Protection and Biodiversity Conservation Act (EPBC) 1999
- Environmental Protection and Biodiversity Conservation Regulations 2000
- National Strategy for Ecological Sustainable Development (1992)
- National Water Quality Strategy
- National Heritage Trust & Envirofund
- Environmental Protection Act 1994
- Environment Protection (Water) Policy 1997

State

- Qld Aboriginal & Cultural Heritage Act 2003
- Integrated Planning Act 1997
- Nature Conservation (Koala) Conservation Plan 2006 & Management Program 2006 2016
- Land Protection (Pest & Stock Route Management) Act 2002
- Local Government Act 1993
- Marine Parks Act 2004
- Land Act 1994
- Fisheries Act 1994
- Vegetation Management Act 1999
- Water Act 2000
- South East Queensland Regional Plan 2005 2026
- Draft South East Queensland NRM Regional Plan 2008 2026
- Nature Conservation Act 1992
- Nature Conservation Act Amendments 2004
- Mineral Resources Act 1989
- Environmental Protection Act 1994
- Shorebird Management Strategy Moreton Bay 2005
- Regional Nature Conservation Strategy for South-East Queensland 2003-2008
- Coastal Protection and Management Act 1995
- State Coastal Management Plan Queensland's Coastal Policy
- South-East Queensland Regional Coastal Management Plan 2006

Local

- Corporate Plan 2006-2010
- Koala Conservation and Management Policy and Strategy 2002 POL-362
- Vegetation Enhancement Policy POL-2609
- Vegetation Enhancement Strategy 2004

- Environment Charge Acquisition & Management Policy POL-3057
- Environment Policy POL-2644
- Local Law 2 Keeping and Controlling Animals
- Local Law 6 Protection of Vegetation
- Local Law 13 Control of Pests
- Local Law 15 Parks and Reserves
- Redlands Planning Scheme 2006
- Redland Shire Pest Management Plan 2005 2009
- Redland Shire Council Urban Stormwater Management Plan 2002
- Redland Shire Council Litter Prevention Strategy 2005 2009
- Redlands Transport Plan 2016
- Redlands Cycling & Pedestrian Strategy
- Redland Shire Council Bushland and Corridor Plan 2005
- Redland Shire Council Open Space Plan 2004 2016

Glossary

abiotic - inaminate, non-lving, not of a biological nature

AKF - Australian Koala Foundation

anthropogenic - man made

aquatic – growing or living in or near water

artifical - man-made (not natural)

association (vegetation) is defined as a vegetation community where the predominant stratum has 'a qualitatively uniform floristic composition and which exhibitis a uniform structure as a whole'

BAMM – Biodiversity Assessment and Mapping Methodology

biodiversity (biological diversity) – the different communities, native plants, animals and micro-organisms, the genes they contain and the ecosystems they form

biotic - relating to life or living things

bioregion – an anrea of land that is dominated by similar broad landscape patterns that reflect major geologies and climate, as well as major changes in floristic and faunal assemblages

BCC – Brisbane City Council

brownfield – areas of land previously used for industrial or other purposes available to be redeveloped for alternative purposes

coastal - the border of the land near the sea

community – a group of species occurring in a defined area

CMA - Conservation Management Areas outlined in Redlands Environmental Inventory

conservation – all the processes and actions of looking after a place so as to retain its natural significance and always includes protection, maintenance and monitoring

corridors (wildlife corridors) – areas, both vegetated and non-vegetated, where fauna can move or disperse between patches of vegetation, the width and condition of corridors can vary immensely

critical habitat – habitat that is essential for the conservation of a viable population of protected wildlife, or community of native wildlife, regardless of whether special management considerations and protection is required

decomposer – heterotrophs that obtain energy from dead organic matter

degradation – any decline in the quality of natural resources or the viability of ecosystems, caused directly or indirectly by human activities

DEO – Desired Environmental Outcomes

dicots (higher and lower) – flowering plants characterised by having two cotyledons (seed leaves), examples include most fruiting and flowering trees, and most annual and perennial flowering plants

disturbance - accelerated change caused by human activity or extreme natural events

diurnal - during the day

DMR – Queensland Department of Main Roads

DNR&W – Queensland Department of Natural Resources and Water

DPI&F – Queensland Department of Primary Industries and Fisheries

ecologically sustainable use (eco-friendly) – using, conserving and enhancing the communities resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be improved

ecosystems – the most inclusive ecological level, the sum of the abiotic and biotic components of a defined system or region

endangered – placed in danger (of extinction)

enhance – improve qualities and values

enhancement – the introduction to a place of additional individuals of one or more organisms, species or elements of habitat or geodiversity that naturally exist there

EI – Redland City Council Environmental Inventory mapping layer in RPS

EPA – Queensland Environmental Protection Agency

EPBC – Environmental Protection and Biodiversity Conservation Act 1999

extinct - a species or ecosystem that has died out

fauna – animals

flora – plants

freshwater - not of the sea

GCCC - Gold Coast City Council

habitat – the physical location of an organism in the environment, the type of environment – vegetation and climate inhabited by an organism

habitat fragmentation – habitat becomes isolated from other habitat due to separation by roads, railways and clearing, leading to loss of ecological function

habitat loss – removal or clearance of habitat, also infers to loss of ecological functionality and modification

hollows – semi-enclosed cavities that naturally form in many species of trees (predominantly old or dead trees), and are a prominent feature of natural forests and woodlands

iconic species – a species that is widely recognised by the community and represents their connection to the nature of the Redlands

Indigenous Traditional Owners – Aboriginal peoples who are members of a group that has a particular relationship with land or water under Aboriginal tradition

IPA – Integrated Planning Act 1997

KAG – koala Action Group

land zone – represents major differences in geology and in the associated landforms, soils, and physical processes that give rise to distinctive landforms or continue to shape them

LCC – Logan City Council

LFW – Redland City Council Land for Wildlife

LGA – Local Government Act 1993

LGAQ - Local Government Association of Queensland

LGMS – Local Growth Management Strategy is prepared by local government to demonstrate how Regional Plan policies will be implemented as the local level

mainland – area of Redland City found on mainland and not associated with land on NSI or SMBI

maintain - preserve or continue to keep in good condition

marine - found in or produced by the sea

modification – altering a place to suit proposed uses which are compatible with the natural significance of the place

monitoring – on-going review, evaluation and assessment to detect changes in condition of the natural integrity of a place, with reference to a baseline condition

monocots - Flowering plants characterised by having a single cotyledon (seed leaf) including grasses, orchids and palms

native – plant taxa that have evolved in Queensland unaided by human intervention, or have migrated to and persist in Queensland unaided by human intervention

nature – all aspects of nature, including but not limited to: ecosystems and their constituent parts; all natural and physical resources; natural dynamic processes; the characteristics of places, however large or small, that contribute to their biological diversity and intregrity, or their intrinsic or scientific value

NCA – Nature Conservation Act 1992

niche – the ecological role of the species in the community, including the interactions in which it participates

nocturnal – during the night

non-remnant vegetation – all vegetation that is not mapped as remnant vegetation. May include regrowth, heavily thinned or logged and significantly disturbed vegetation that fails to meet the structural and / or floristic characteristics of remnant vegetation. It also includes urban and cropping land. Non-remnant vegetation may retain significant biodiversity values

NSI – North Stradbroke Island

pest species – plant and animal species that have established in areas outside their naturally occurring distribution

PMP – Pest Management Plan

preservation – maintaining the biodiversity and / or an ecosystem of a place at the existing stage of succession, or maintaining existing geodiversity

protect – to keep safe or defend against threats at all levels including species, communities and ecosystems

protection - taking care of a place by maintenance and by managing impacts to ensure that natural significance is retained

QPWS – Queensland Parks and Wildlide Service

Ramsar – International treaty for the protection of migratory birds that inhabitat the wetlands in Moreton Bay

rare – species or taxa that are not at present endangered or vulnerable but are at risk because of small population size

RCT – SEQ NRM Regional Resource Condition Targets 2008-2026

regional ecosystems (remnant vegetation) - vegetation communities that are consistently associated with a particularly combination of geology, landform and soil in a bioregion

re-growth - vegetation communities that have not obtained remnant status

regeneration – the recovery of natural integrity following disturbance or degradation

rehabilitate - restore to effectiveness or normality

reinstatement – to introduce to a place one or more species or elements of habitat or geodiversity that are known to have existed there naturally at a previous time but that can no longer be found at that place

restoration – return to existing habitats to a known past state or to an approximation of the natural condition by repairing degradation, by removing introduced species, or by reinstatement

riparian - on the banks of and adjacent to a waterway or wetland

RPS – Redlands Planning Scheme, enacted March 2006

rural – land uses including primary industries, within non-urban areas

- RS Redland City Council Rural Support extension program
- RSC Redland Shire Council

RCC – Redland City Council

- **SoE** Redland Shire Council State of Environment Report 2007
- SEQ South East Queensland
- SMBI Southern Moreton Bay Islands

species – a group of actually or potentially interbreeding individuals, reproductively isolated from other such groups

sub-region (province) – a subdivision of a bioregion that delineate the major geomorphic patterns within bioregions

terrestrial – living on or in the ground

threatening processes – any process that is capable of threatening the survival of any protected area, area of major interest, protected wildlife, community of native wildlife or native wildlife habitat, or any of these to sustain natural processes

threatened species – wildlife prescribed under NCA and EPBC as presumed extinct, endangered, vulberable, rare

urban area – an area identified on a map in a planning scheme as an area for urban purposes, including residential, industrial, commercial, rural residential, major tourist developments, ports and future urban purposes

VCA – Redland City Council Voluntary Conservation Agreement

vegetation – the entirety of the plant cover at a point on the Earth's surface at a particular time. It is the spatial and temporal expression of the flora of an area, as expressed in plant assemblages (communities) which consist of individual species with varied lifeforms

vegetation community – a component of a regional ecosystem that has similar structure and floristics and generally occurs within the same land zone

VMA – Vegetation Management Act 1999 – an act about the management of vegetation on freehold land in Queensland

vegetation type – a plant community, described by grouping field sites that have relatively closely overlapping composition of predominant species in the predominant stratum with similar structure and geology

vulnerable – population is decreasing or has been seriously depleted because of threatening processes

water quality – the ecosystem health of aquatic systems (including surface, soil and underground waters), including processes affecting or involving the physical, chemical and biological characteristics of water

waterway - includes a river, creek, stream, watercourse or inlet of the sea

WCU – World Conservation Union

wetlands – habitats that are perpetually or periodically flooded (both freshwater, estuarine and marine)

YBYP – Redland City Council Your Back Yard Program

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