



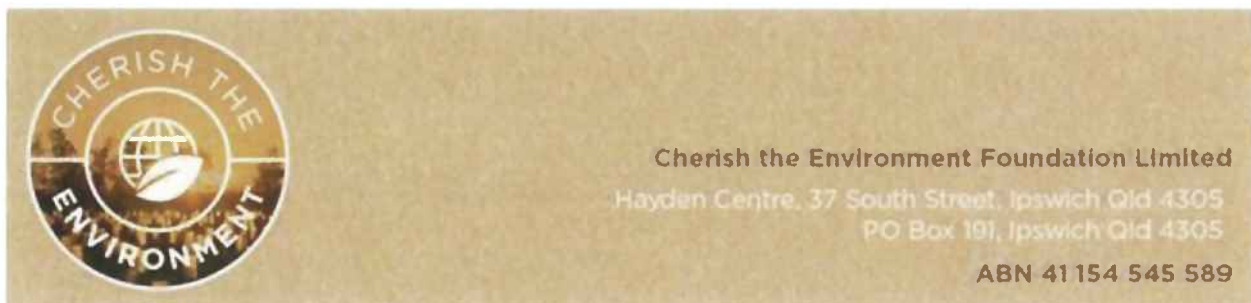
Offset Management Plan

**Koala Habitat Offset
40-100 Harrison Road Calvert
EPBC 2014/7306**

Stockland Development Pty Ltd

Prepared by Cherish the Environment Foundation Limited

20 April 2018



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1. Introduction

This Offset Management Plan (OMP) has been prepared to accompany an application to request land owned by Cherish The Environment Foundation Limited, declared as a Category A area representing a Voluntary Declaration (V-Dec) over the land under the *Vegetation Management Act 1999* (Qld) (VMA).

This plan is associated with a new residential development known as Springview Village One and located at Springfield, Ipswich, Queensland (EPBC 2014/7306). The residential development is approved under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the delivery of this offset of part of the approval conditions.

The conditional approval under the EPBC Act was granted to Cherish Enterprises Pty Ltd on 22 August 2016 and provides for a clearance area of 39.75 ha and an offset of 65 ha to compensate for the impact on listed threatened species and communities (sections 18 & 18A), specifically koala habitat.

Condition 2 of the approval requires the approval holder to secure the offset area for long-term protection under a legal mechanism. A V-Dec administered under the VMA is the nominated legal mechanism and this report accompanies the V-Dec application for the offset area.

Condition 3 of the approval requires the approval holder to achieve a gain in koala habitat quality across the offset compared to baseline offset koala habitat quality and extent. This OMP provides details of overarching management intent, actions and outcomes to satisfy the requirements of Condition 4 and Condition 5 of the EPBC Act approval and support the request for a V-Dec under the VMA.

The V-Dec area incorporates 65 hectares of Lot 230 CH311791 (refer Figure 1) which forms part of the Little Liverpool Range Corridor. The offset for EPBC 2014/7306 is entirely land based and is facilitated through an agreement between Cherish The Environment Foundation Limited and Stockland Development Pty Ltd.

1.1. OMP information requirements

Condition 4 of the EPBC Act approval triggers the requirement for an OMP to be implemented (refer extract below).

4. *The approval holder must have an Offset Management Plan in place. The Offset Management Plan must:*
 - a) *include monitoring and be designed so that the results are adequate to inform adaptive management and demonstrate whether the outcomes and milestones required by these conditions are on track to be achieved (before they are due) and have been achieved (at the time they are due);*
 - b) *include contingency measures to mitigate the risks of not achieving the outcomes and milestones required by these conditions;*
 - c) *be prepared in consultation with a suitably qualified person, and include written evidence of how the suitably qualified person's advice has been considered;*
 - d) *be in accordance with the Koala Habitat Offset Report; and*
 - e) *demonstrate how the plan is consistent with the Koala Conservation Advice.*

This OMP provides all information required under Condition 4 and a cross-reference table is provided in Appendix A.

Figure 1: Offset Area Location
40-160 Harrison Road, Calvert



1.2. Consultation

This OMP is authored by Cherish The Environment Foundation Limited who has experience in managing koala habitat in South East Queensland and authored the Koala Habitat Offset Report (2016) for this site (approval Condition 4 (d)). A review of the OMP was completed by consultants Saunders Havill Group who have experience in coordinating offset management plans seeking to deliver an improvement of koala habitat.

Saunders Havill Group's advice has included guidance and direction around establishing workable and achievable management actions to support koala habitat improvement. Additionally, monitoring and reporting timeframes have been streamlined with Saunders Havill Group's input based on their experience with delivering annual compliance reports.

2. Description of the Offset Management Area

2.1. Property and Ownership Details

The site is located in the Ipswich City Council LGA and development is subject to the provisions of the Ipswich City Council Planning Scheme, henceforth referred to as the 'Planning Scheme'. The site is shown on the Zoning Map 49 of the Planning Scheme and is in the Rural E (Special Land Management) land use themes. The intent for this zone is detailed in Division 8 for Rural E (Special Land Management). In summary, the key outcome that is sought for the Rural E (Special Land Management) Zone supports sustainable use and conservation.

Table 1: Property details

Name of Registered Owner(s) / Licensee/s or Trustee/s	Cherish The Environment Foundation Limited
Postal Address	c/- PO Box 191, Ipswich, Qld, 4305
Real Property Description	Lot 230 CH311791
Area (ha)	65 hectares
Local Government Area	Ipswich City Council
Tenure Type	Freehold

Table 2: Registered interests

Parcel (lot and plan)	Type of Registered Interest	Registered interest holder's name and contact details
Lot 230 CH311791	Owner	Cherish The Environment Foundation Limited, refer above

2.2. Legally Secured Offset Details

The offset area satisfies criteria for declaration under the Guide to Voluntary Declarations under the VMA. The V-Dec area is considered an:

- Area of high nature conservation value, specifically: (d) an area that makes a significant contribution to the conservation of biodiversity.

The certification of a V-Dec over the offset area will permit the landholder to undertake actions that are in accordance with this plan which are based on the intent to achieve a gain in koala habitat quality. Actions contrary to those stipulated in this plan or prohibited under the VMA due to the Category A area designation are not supported or permitted. Once the gain in koala habitat quality required under the EPBC Act approval has been achieved, the objectives of the OMP and V-Dec will be considered as fulfilled.

2.3. Site Description

2.3.1 Site Location and Tenure

The offset site is located on Harrison Road and Rosewood Laidley Road, Calvert, Queensland, approximately 1 km north of Calvert and 33 km west of Ipswich. The offset site comprises of one 65 ha freehold land parcel identified as Lot 230 CH311791.

The site is bounded by unformed roads on the southern and eastern boundaries, and part of an unformed road dissects the south-western corner of the lot. The boundaries of the offset site are shown and tabulated in Figure 2.

Cherish The Environment Foundation Limited purchased the land in 2016 and it has historically been used for grazing purposes.

2.3.2 Climate

Climate data from Bureau of Meteorology (BoM) Amberley site Number 040004 shows annual mean maximum and minimum temperatures of 27.3°C and 13.9°C respectively, and an annual mean rainfall of 865.3 mm. January has mean maximum and minimum temperatures of 31.1 °C and 19.6 °C, respectively, and July has mean maximum and minimum temperatures of 21.2°C and 5.3°C, respectively (BoM 2016). On average, the wettest month is December (mean rainfall of 120.9 mm) and the driest month is August (mean rainfall of 29 mm) (BoM 2016).

2.3.3 Topography, Soils and Geology

The topography of the site is undulating with rounded ridge lines and flat areas. Slopes are generally less than 15% with some steeper ridge lines. The highest point is a ridge line to the north west of the property at 130 m ASL and the lowest is the south east at 70 m ASL. Drainage is generally west to east in three distinct ephemeral drainage lines.

The geology of the site consists of lands formed on Jurassic Marburg formations (Geological Survey of Queensland 1:100,000 Ipswich Geological Map (DME 2008)).

Pre-clearing Broad Vegetation Groups of Queensland (EHP 2012a) is shown to consist of land zones 9-10. Land zone 9 is described as fine grained sedimentary rocks, generally with little or no deformation and usually forming undulating landscapes. Siltstones, mudstones, shales, calcareous sediments, and labile sandstones are typical rock types although minor interbedded volcanics may occur. Includes a diverse range of fine textured soils of moderate to high fertility, predominantly Vertosols, Sodosols, and Chromosols (EHP 2012b). Land zone 10 is described as medium to coarse grained sedimentary rocks, with little or no deformation, forming plateaus, benches and scarps. Includes siliceous (quartzose) sandstones, conglomerates and minor interbedded volcanics, and springs associated with these rocks. Excludes overlying Cainozoic sand deposits (land zone 5). Soils are predominantly shallow Rudosols and Tenosols of low fertility, but include sandy surfaced Kandosols, Kurosols, Sodosols and Chromosols (EHP 2012b).

Soils mapping indicates the site comprises of sodosols, chromosols and kandosols (*Ipswich Soil Management Guidelines 2015* Ipswich City Council, Ipswich Rivers Improvement Trust).

Figure 2: Bounding coordinates for offset area



2.4. Existing Vegetation and Habitat

Overall, the site is in relatively good ecological condition. A reduced level of grazing compared to historical intensities and few recent fires have contributed to an improving ecosystem with the major weed threat being lantana which is scattered throughout the site. Heavier infestations in previously cleared drainage lines and open areas require management. Other disturbances include some erosion along tracks and drainage lines however this is typical of a rural property with varying slopes.

The Commonwealth's Protected Matters Report identified several Matters of National Environmental Significance (MNES) under the EPBC Act that may occur in the locality (Appendix 1). The results of the report are summarised below:

- Two (2) listed Threatened Ecological Communities (TEC);
- A total of 59 threatened species; and
- A total of 30 listed migratory species.

A review of the Wildlife Online database identified that one vulnerable species (koala) as scheduled under the *Nature Conservation (Wildlife) Regulation 2006* has previously been recorded within the 10 km search area (Appendix 2). The koala is the only protected matter known to utilise the offset site.

Overstocked forest areas on this site are represented by two distinct age-classes: an older class of defective and senescing trees that were considered too poor for historical harvesting; and a class of regrowth that developed following the last harvest event. Without follow-up treatment, the regeneration event has resulted in gradual thickening and the reduction in sunlight reaching ground layers. When a forest has a healthy range of age-classes it is necessarily more open (because eucalypts require sunlight and soil disturbance to regenerate) and has a strongly developed strata of groundcover species (because greater levels of sunlight are able to reach the ground). The herbaceous groundcover layer is critical to protecting the soil from water erosion. Further, a structurally diverse forest is able to support a greater range of native plants.

2.4.1 Vegetation Communities

The Regulated Vegetation Management Map (DNRME 2018) presents the distribution and status of remnant regional ecosystems as gazetted under the VMA (refer Figure 3). The *Vegetation Management Act class* (i.e. endangered, of concern, least concern) is based on the Department of Natural Resources, Mines and Energy's (DNRME) assessment of the pre-clearing and remnant extent of a regional ecosystem and is as per the *Vegetation Management Regulation 2012*.

The VMA defines a community as 'remnant' when the vegetation exhibits more than 50% of the undisturbed predominant canopy, averages more than 70% of the undisturbed height and is composed of species characteristic of the undisturbed predominant canopy of the given vegetation community. The vegetation community surveys identified that the site primarily comprises remnant vegetation which generally correspond to remnant areas mapped and the proposed changes by DNRME.

The Vegetation Management Supporting Map (refer Figure 4) shows the site contains areas of Category X (non-remnant) and Category B (remnant) vegetation containing composite regional ecosystems including Of Concern (12.9-10.3, 12.9-10.7), Least Concern (12.9-10.2, 12.9-10.5, 12.9-10.19). Regrowth (Category C) is also proposed to be mapped across the site. A description of each of these regional ecosystems is present in Table 3.

A field assessment was undertaken by Ipswich City on 26 April 2016 to validate the desktop information. Vegetation values were found to generally correlate with the DNRME mapping.

Table 3: Regional ecosystems mapped as occurring in the offset area

Regional ecosystem	Description
12.9-10.2 Least concern	<i>Corymbia citriodora</i> subsp. <i>variegata</i> open forest or woodland usually with <i>Eucalyptus crebra</i> . Other species such as <i>Eucalyptus tereticornis</i> , <i>E. moluccana</i> , <i>E. acmenoides</i> and <i>E. siderophloia</i> may be present in scattered patches or in low densities. Understorey can be grassy or shrubby. Shrubby understorey of <i>Lophostemon confertus</i> (whipstick form) often present in northern parts of bioregion. Occurs on Cainozoic and Mesozoic sediments. (BVG1M: 10b)
12.9-10.3 Of concern	<i>Eucalyptus moluccana</i> +/- <i>Corymbia citriodora</i> subsp. <i>variegata</i> open forest. Other species include <i>Eucalyptus siderophloia</i> or <i>E. crebra</i> , <i>E. tereticornis</i> . Understorey generally sparse but can become shrubby in absence of fire. Occurs on Cainozoic and Mesozoic sediments, especially shales. Prefers lower slopes. (BVG1M: 13d)
12.9-10.5 Least concern	Shrubby woodland complex. More widely distributed and abundant species include <i>Corymbia trachyphloia</i> subsp. <i>trachyphloia</i> , <i>C. citriodora</i> subsp. <i>variegata</i> , <i>Eucalyptus crebra</i> , <i>E. fibrosa</i> subsp. <i>fibrosa</i> , <i>E. major</i> , <i>Angophora leiocarpa</i> , <i>E. helidonica</i> . Understorey of sclerophyllous shrubs. Localised occurrences of <i>Eucalyptus baileyana</i> , <i>E. pilularis</i> , <i>Corymbia henryi</i> , <i>E. dura</i> , <i>E. decorticans</i> (extreme west of bioregion), <i>E. taurina</i> , <i>Angophora woodsiana</i> , <i>Lysicarpus angustifolius</i> and <i>Lophostemon confertus</i> . Tends to shrubland or monospecific woodland of species such as <i>Eucalyptus dura</i> on shallow lithosols. Occurs on quartzose sandstone scarps and crests. (BVG1M: 9h)
12.9-10.7 Of concern	<i>Eucalyptus crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora leiocarpa</i> , <i>E. melanophloia</i> woodland. Occurs on Cainozoic and Mesozoic sediments. (BVG1M: 13c)
12.9-10.19 Least concern	<i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> woodland +/- <i>Corymbia citriodora</i> subsp. <i>variegata</i> , <i>E. acmenoides</i> or <i>E. portuensis</i> , <i>Angophora leiocarpa</i> , <i>E. major</i> . Understorey often sparse. Localised occurrences of <i>Eucalyptus sideroxylon</i> . Occurs on Cainozoic and Mesozoic sediments. (BVG1M: 12a)

2.4.2 Threatened Species Habitat

Essential Habitat mapping under the VMA does not designate any areas as such however field surveys have confirmed the site contains koala habitat.

Koala habitat can be broadly defined as any forest or woodland containing species that are known koala feed trees, or shrubland with emergent food trees (DoE 2014). Koala feed trees are generally defined as trees of the *Corymbia*, *Melaleuca*, *Lophostemon* or *Eucalyptus* genera (DERM 2010). More specifically, within the Ipswich region, Ipswich City Council has identified the following species as preferred koala food trees to be retained/planted for the koala: *Eucalyptus tereticornis*, *Corymbia citriodora*, *Eucalyptus crebra*, *Eucalyptus grandis*, *Eucalyptus microcorys*, *Eucalyptus moluccana*, *Eucalyptus propinqua*, *Eucalyptus seeana* and *Lophostemon confertus* (ICC 2014a). REs present on-site (refer Table 3) contain *Eucalyptus moluccana*, *Corymbia citriodora* and *E. crebra* with *E. tereticornis* and *E. siderophloia* presence within the community.

Additionally, koala scats were identified within the offset area during the koala faecal pellet survey completed by OWAD Environment on 7 May 2016 utilising a koala scat dog. The results of the survey indicate a significant amount of koala activity on the property originating from multiple individuals.

2.4.3 Koala Importance and Values

The site is mapped as Core Habitat in Ipswich City Council's (ICC) Nature Conservation Strategy, and is within a large contiguous vegetation area of predominantly eucalypt forest. While there is little data of koala populations and extents, a scat survey undertaken in 2016 revealed koala presence within the offset site.

Figure 3: Regulated Vegetation Management Map

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Lot: 230 Plan: CH311791

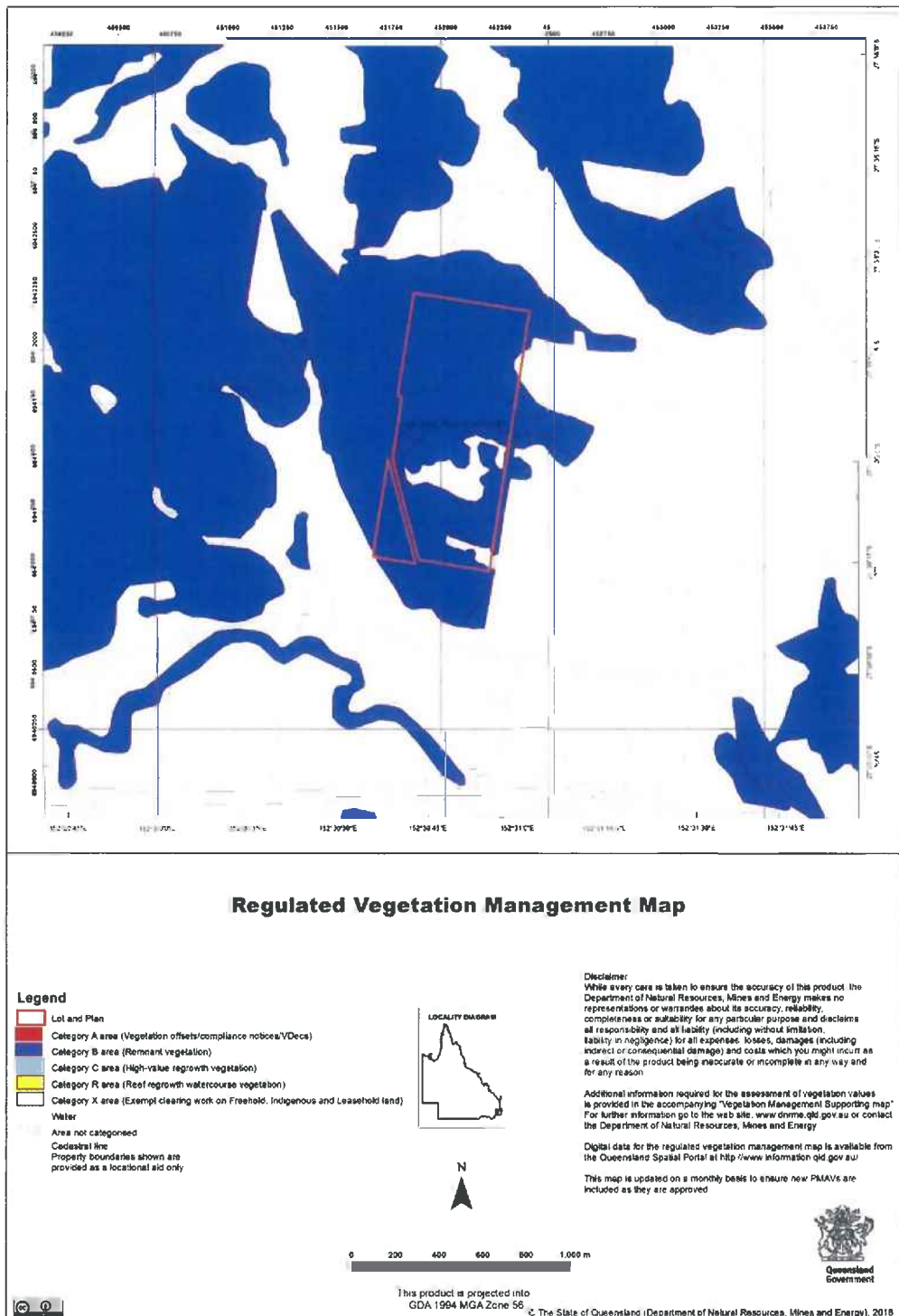
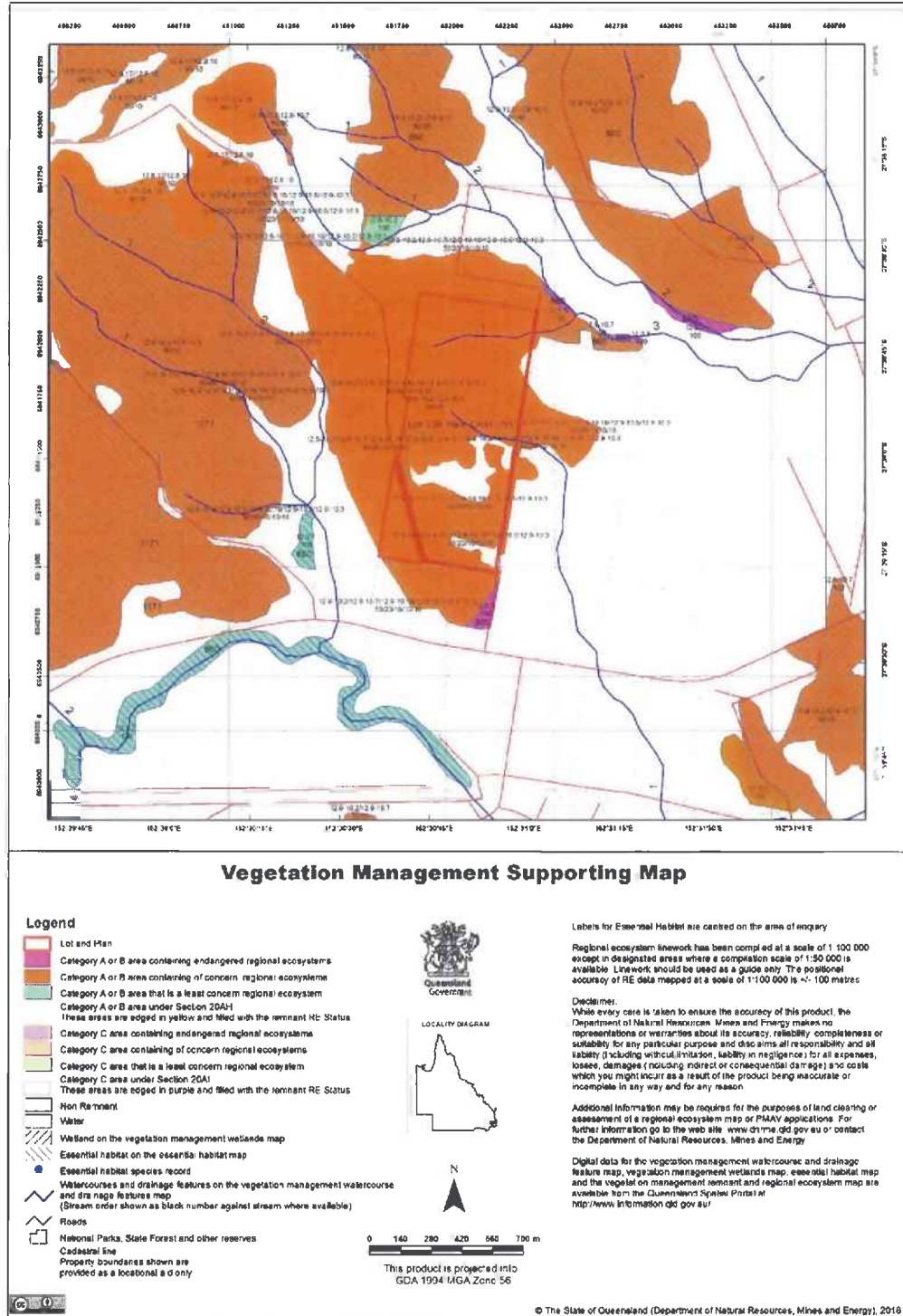


Figure 4: Vegetation Management Supporting Map

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Lot: 230 Plan: CH311791



2.4.4 Threats

Koalas and koala habitats within the proposed offset footprint are currently subject to threats. Key threats include:

- wild dog attacks;
- habitat degradation through weed invasion;
- unauthorised public access;
- erosion caused by vehicular access and loss of vegetation cover; and
- habitat loss from fire.

A field survey identified two (2) flora species declared under the *Land Protection (Pest and Stock Route Management) Act 2002* and two (2) Weeds of National Significance (WoNS) species were recorded on-site. No pest fauna species were recorded on-site during the field survey however a dog scat was found which may be from a wild dog.

Weeds present a concern to the site habitat quality, although only scattered and light infestations were noted. Weeds present and of concern are:

- *Lantana camara*, lantana, Class 3, WoNS; and
- *Opuntia stricta*, common prickly pear, Class 2, WoNS.

2.5. Site Values and Risks

Existing Land Use Protections

Section 43B of the EPBC Act provides for the continuation of existing land uses without the requirement for approval under the Act. Historically the site has been used for rural purposes – including grazing. Historical land uses have resulted in vegetation clearing throughout the flatter areas of the site, with the overall extent of clearing being low. The field investigation also found historical and recent evidence of clearing as a result of logging and thinning, which was observed within the flatter areas of the site and on the moderate to steeper slopes.

Additionally, no exclusion fencing was encountered within the site. On the basis of Section 43B of the EPBC Act and the historical and continuing land uses associated with the site, it is considered there is provision for ongoing clearing of koala habitat to be lawful under the Act. Specifically, provided that routine management activities and grazing levels do not exceed historical use patterns, it is understood that ongoing clearing of koala habitat associated with historical land uses would be exempt from requiring approval under the EPBC Act.

Under the Queensland VMA framework, there are three protection categories mapped across the site: Category B (remnant vegetation), Category X (non-remnant vegetation) and proposed Category C (regrowth vegetation). Category X vegetation is unregulated within the context of State Government planning instruments. Proposed Category C is part of proposed amendments to the VMA and is yet to be passed as legislation.

According to the Ipswich City Council Planning Scheme, the site is located within the Rural Zone E. Based on the Planning Scheme, the existing land use within the site would conform to animal husbandry, which is defined as 'the use of premises for the non-intensive keeping, breeding, grazing and depasturing of animals, if such use does not normally require the importation of feed'. The land use and Planning Scheme zoning are discussed below within the context of Local Government regulation of vegetation clearing. Within Rural E areas animal husbandry is an exempt land use and can therefore be undertaken without the need for Council approval. However, this does not necessarily enable the exempt clearing of vegetation from Local Government regulations. Based on the applicable Planning Scheme provisions, key considerations applicable to the level of protection for koala habitat on site relate to slope and vegetation size (i.e. circumference at 1.2 m above the ground).

The Planning Scheme allows for vegetation to be cleared in the E zone on the site without Local Government approval, provided that clearing does not:

- Occur on land with a slope of 15% or more; and
- Involve a species that is listed as threatened or near threatened under State or Commonwealth legislation; and
- Involve the removal of trees with a circumference of greater than 50 cm at 1.2 m above the ground.

Within the Rural E Zone, vegetation that does not meet all of the above criteria may still be cleared. However, in these instances vegetation clearing would be contingent upon an application being made to, and approved by Local Government.

Planning Protection Mechanisms Summary

Based on a review of the Commonwealth, State and Local planning and environmental regulations applicable to the site, it has been found that koala habitat on site is exempt from clearing regulation at all levels of government to the extent that it complies with the following.

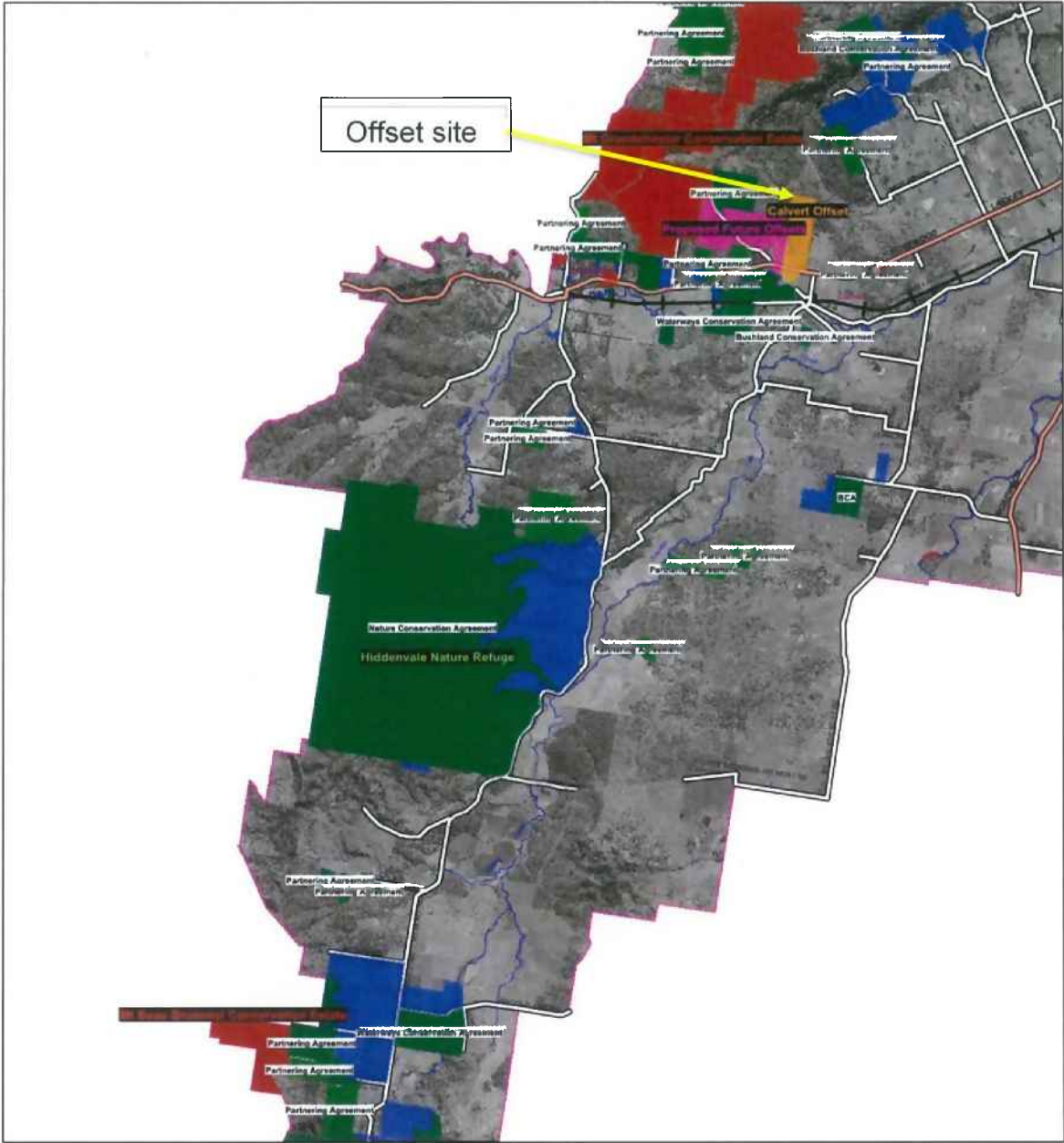
- Clearing is undertaken for the purposes of facilitating the ongoing historical land use of grazing/animal husbandry. This land use may be intensified to the extent that it is consistent with historical use patterns; and
- Clearing is limited to Category X areas, as shown on the Regulated Vegetation Management Map and Proposed Regulated Vegetation Management Map; and
- Clearing does not:
 - Occur on land with a slope of 15% or more; and
 - Involve removal of a species that is listed as threatened or near threatened under State or Commonwealth legislation; and
 - Involve the removal of trees with a circumference of greater than 50 cm at 1.2 m above the ground.

Connectivity and Regional Context

The Ipswich City Council Nature Conservation Strategy identified three terrestrial regional corridors that support mobile species. These corridors are larger landscape connections, linking core habitats. The site specifically sits in an area identified under the Ipswich LGA Conservation Strategy as a Priority Conservation Area.

The site is located within the Little Liverpool Range Corridor which connects to the Main Range National Park to the south. Large areas of the corridor are currently protected through a range of mechanisms including Local Government ownership for conservation purposes (Grandchester Conservation Estate), Nature Refuge (Old Hiddenvale), State Conservation Park (Mr Beau Brummell Regional Park), land owner by QLD Trust For Nature and voluntary conservation agreements. Figure 5 provides mapping of this regional context and identifies areas identified for future formal protection to establish key linkages within the regional Corridor.

Figure 5: Regional Context Map



3. Koala Habitat Assessment Tool

The focus of this OMP is to deliver a gain in koala habitat quality in accordance with the milestones and outcomes required under the EPBC Act approval. Table 4 specifies which koala habitat attributes are expected to improve in line with each milestone and outcome listed below.

Milestone #1: *By five years after the commencement of construction, a gain in Koala habitat quality to nine must be achieved in more than 50% of the offset area through rehabilitation.*

Outcome #1: *By 20 years after the commencement of construction, there must be a gain in Koala habitat quality to nine across the whole offset area.*

Outcome #2: *For the life of the approval, the approval holder must ensure no net loss in the extent of Koala habitat in the offset area.*

Table 4: Koala habitat assessment tool

Attribute	Coastal*	Attribute Score	Milestone #1 offset area score	Outcome #1 offset area score
Koala Occurrence	Evidence of one or more koalas within the last 2 years	+2	+2	+2
	Evidence of one or more koalas within 2km of the edge of the impact area within the last 5 years	+1		
	None of the above	0		
Vegetation Composition	Has forest or woodland with 2 or more known koala food tree species in the canopy, OR 1 food tree species that alone accounts for >50% of the vegetation in the relevant strata	+2	+2	+2
	Has forest or woodland with only 1 species of known koala food tree present in the canopy	+1		
	None of the above	0		
Habitat Connectivity	Area is part of a contiguous landscape >500ha	+2	+2	+2
	Area if part of a contiguous landscape <500ha, but >300ha	+1		
	None of the above	0		
Key Existing Threats	Little or no evidence of koala mortality from vehicle strike or dog attack at present in areas that score 1 or 2 for koala occurrence.	+2	+2	+2
	Evidence of infrequent or irregular koala mortality from vehicle strike or dog attack at present in areas that score 1 or 2 for koala occurrence.	+1		
	Evidence of frequent or regular koala mortality from vehicle strike or dog attack in the study area at present, or Areas which score 0 for koala occurrence and have a significant dog or vehicle threat present.	0		

Attribute	Coastal*	Attribute Score	Milestone #1 offset area score	Outcome #1 offset area score
Recovery Value	Habitat is likely to be important for achieving the interim recovery objectives for the relevant context, as outlined in the koala Assessment Tool.	+2	+1	+1
	Uncertainty exists as to whether the habitat is important for achieving the interim recovery objectives for the relevant context, as outlined in the koala Assessment Tool.	+1		
	Habitat is unlikely to be important for achieving the interim recovery objectives for the relevant context, as outlined in the koala Assessment Tool.	0		
Koala habitat assessment tool score			9	9

4. Offset Strategy

4.1. Management Objectives

The overarching management intent for the offset area is the removal of weeds, reduction of threats and protection of native vegetation to prevent the loss of biodiversity, maintain ecological processes and improve koala habitat quality. The successful implementation of proposed management mechanisms will assist with the creation of a self-sustaining, continuous area of high quality koala habitat supporting their population within the local landscape. This will help to achieve ICC's vision to create a locally significant conservation area within the Little Liverpool Range Corridor.

Natural regeneration and regrowth will be encouraged in open/sparse areas and areas of remnant vegetation will be managed to enhance and sustain their ecological condition and local environmental values to reduce their exposure to threatening processes including weed invasion, pests, pollution, clearing and disturbance.

4.2. Management Outcomes

The management strategies aim to protect and improve the value of the offset area as koala habitat. This will be primarily achieved through rehabilitation of the offset area (weed control) and implementation of other strategies such as restricting human and livestock access and fire management within the offset area. Management of the site will be undertaken for a minimum of ten years with ultimate weed control to achieve less than 5% total weed coverage. The intensity of management will be driven by the results of condition assessments completed on a regular basis. These assessments will be used to inform future determinations of koala habitat quality and are anticipated to show an improvement within five years across 50% of the offset area.

The dominant feature regarding ecological benefit within the offset area will be achieved through rehabilitation of the vegetation communities, thereby improving the quality of the habitats provided. It is expected that the greatest ecological benefit/improvement of the offset site may be attained within a year. This result is possible because as soon as the area is gazetted as an offset, it will be subject to a targeted management regime including ongoing management of weeds and grazing livestock as well as protection from self-assessable vegetation clearing.

The management outcome for the declared area is that the vegetation within meets the criteria, thresholds and descriptions outlined in the definition of remnant vegetation in the VMA. Additionally, that the entire declaration area is controlled and managed for the removal and suppression of declared weed species. Management outcomes are consistent with the requirements EPBC Act *Environmental Offsets Policy* and generally in accordance with management outcomes of the *Queensland Environmental Offsets Policy 2014*, specifically in terms of:

- Size of the offset area
- Location
- Regional Ecosystem Type
- Habitat Values
- Condition
- Landscape Features, including connectivity
- Biodiversity Values
- Environmental Values

5. Offset Management Actions

The management actions that will deliver improved koala habitat quality are detailed below. The landholder is responsible for undertaking the management actions in a timely, coordinated and lawful manner. These management actions are in accordance with those stipulated in the Koala Habitat Offset Report (6 June 2016).

5.1. Erosion Mitigation

Significant active erosion points must be repaired where possible and feasible (i.e. likely to succeed or be effective). Repair work involves re-profiling (where appropriate) and re-directing overland water flow away from the erosion path using cross-drainage. Cross-drainage should be located along all permanent access tracks at appropriate intervals. Allowance should be made for future maintenance of cross-drainage throughout the site.

Excessive soil disturbance can also exacerbate erosion problems by exposing larger areas of sodic subsoil. Re-profiling should only be carried out on significant erosion sites or areas that will be utilised for long-term access or water storage. Wherever possible, access tracks or new infrastructure will be located over erosion repair zones to limit disturbance of vegetation.

A broad improvement in erodibility of the forest soils can be achieved by improving the structure of the forest. Good forest structure is characterised by a healthy representation of the different forest strata. Broadly, this structural diversity can be represented with a bell curve of age-classes:

- a representation of young trees regenerating from seed, lignotubers or coppice;
- a series of old, senescing trees that provide hollows for habitat; and
- a range of developing saplings and mature trees in the middle age classes.

Timing

Erosion mitigation will be undertaken as necessary and will be determined by the landholder and/or project superintendent.

5.2. Access Infrastructure

The construction or re-opening of tracks will be necessary to facilitate weed management, infill planting establishment and maintenance, fence line construction and maintenance, pest management and fire protection activities.

Access tracks are generally located along the centre of major ridgelines, avoiding, where possible, the need to disturb grass cover or vegetation. Some gully crossings will be required where ridge access is not available. The final placement of tracks will be partly determined by requirements for fence line repair/construction, strategic fire management planning outcomes and possible access from neighbouring properties.

Tracks are constructed (or re-profiled) using an excavator with batter bucket. Cross-drainage is constructed at appropriate intervals. The preferential outcome is a grassed track with cross-drainage.

Timing

Access infrastructure will be established and maintained as necessary and will be determined by the landholder and/or project superintendent.

5.3. Weed Management

An intensive, 5-year weed management program is proposed for the remnant and regrowth parts of the offset area. The primary weed treatment process will begin as soon as practical, with follow-up weed treatment undertaken annually. After the first three years, the required management intensity should reduce significantly.

Methods of weed treatment will be applied as appropriate for the species and the growth stage of the plant:

- Lantana: in most instances, lantana will be treated using the cut-stump method.
 - Where larger infestations occur, foliar spraying will be used as primary treatment and cut-stump as a follow-up method.
- Prickly pear: in all instances, prickly pear will be stem injected with tordon.
- Climbing asparagus fern: basal bark application of Fluroxypyr and diesel (as per off label use permit).
- Fireweed: spot spraying with appropriate herbicide (in autumn/winter) and hand-pulling/bagging in spring/summer.

Once the intensive weed management actions have been completed, a reduced intensity will follow for the duration of the approval period.

Timing

Weed management will occur in two phases throughout the approval period (refer Table 5):

1. Intensive weed management until year 6; and
2. Ad-hoc weed management from year 6 until the end of the approval period.

Table 5: Weed management schedule of activities

Project year/s	Activity	Description	No.	Unit	Timing
1	Primary weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-18
2	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-19
3	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-20
4	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-21
5	Follow-up weed treatment	Spot spray, patch spray and cut stump treatment of weeds.	65	ha	Jun-22
6-24	Follow-up weed treatment	Control activities as deemed necessary by landholder or project superintendent	65	ha	As required

5.4. Fire Management

At this stage in the project, fire management activities have been limited to fire exclusion and asset protection. Prescribed burning (for fuel reduction or regeneration initiation) is restricted within the V-Dec area until a Fire Management Plan is developed. This plan will need to be reviewed/endorsed or similar by the rural fire brigade or other relevant stakeholder prior to implementation.

Timing

Development and implementation of a Fire Management Plan is scheduled for completion by the end of 2018. In the meantime strategic fire access tracks should be planned and established in consultation with neighbours where possible along the property boundary or at other strategic locations. Fire management actions will be undertaken throughout the approval period.

5.5. Infill Planting

A small, one hectare patch of open, grassy area in the south-east corner of Lot 230 CH311971 will require infill planting. Approximately 400 trees typical of regional ecosystems 12.9-10.2 and 12.9-10.3 will be planted in the area.

Timing

Infill planting is scheduled to occur within 12 months of the V-Dec being certified and maintenance will occur until year 2022 as detailed in Table 6.

Table 6: Infill planting schedule of activities

Project year	Milestone	Activity	Description	No.	Unit	Timing (indicative)
1	1	Site preparation	Mark-out and spot cultivate plant sites	1	ha	Nov-17
	2	Pre-plant spray	Pre-plant weed control	1	ha	Mar-18
		Planting	Plant 400 trees (fertilise and mulch)	1	ha	Mar-18
	3	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	May-18
		Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	May-18
4	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Nov-18	
2	5	Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	May-19
		Post-plant weed control	Weed control around trees (dribble bar)	1	ha	May-19
	6	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Jan-20
3	7	Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	Apr-20
		Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Apr-20
	8	Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Jan-21
4	9	Post-plant slash	Annual slash around infill planting for fire protection and grass suppression.	1	ha	Oct-21
		Post-plant weed control	Weed control around trees (dribble bar)	1	ha	Oct-21
5	10	Post-plant slash	Weed control around trees (dribble bar)	1	ha	Oct-22
		Post-plant weed control	Annual slash around infill planting for fire protection and grass suppression.	1	ha	Oct-22

5.6. Pest and Animal Management

There is no internal fencing on the property. Boundary fencing will be constructed, repaired and maintained to exclude domestic stock and pests. Pest animals such as wild dogs will be addressed via a control program that will be implemented at the discretion of the landholder.

Timing

This fencing is scheduled to be established/constructed within 12 months of the V-Dec being certified and must be in place for the duration of the approval.

A wild dog control program will occur ad hoc during the approval period.

5.7. Ongoing Management

It is intended that the offset area will be managed to enhance the biodiversity values to maximise koala habitat at a lesser intensity after five years. All management actions will be continued as necessary to support high value koala habitat quality and meet the EPBC Act approval objectives and milestone.

5.8. Adaptive Management

Monitoring (refer section 7) may reveal that management actions are not achieving the levels of success anticipated and review of the management actions may be warranted.

Without knowing which management actions may falter during the approval period, specific adaptive management actions will be determined as required and incorporated into future versions/updates of this OMP. Ongoing communication between Cherish The Environment Foundation Limited and Stockland Development Pty Ltd on the status and achievements of the offset area will be an important part of identifying the need for adaptive management measures.

5.9. Consistency with Koala Conservation Advice

The Koala Conservation Advice (2012) identifies the following threats to koala habitat:

The main identified threats to this species are loss and fragmentation of habitat, vehicle strike, disease, and predation by dogs. Drought and incidences of extreme heat are also known to cause very significant mortality, and post-drought recovery may be substantially impaired by the range of other threatening factors.

This OMP and associated V-Dec will protect 65 ha of koala habitat from loss and fragmentation that may otherwise occur if the land was utilised to its historical grazing intensity. The likelihood of predation by dogs/feral animals will also be reduced with these management actions in place as a control program is supported as part of landholder property management.

6. Roles and Responsibilities

The key personnel involved in delivering improved koala habitat quality across the offset area are detailed in Table 7.

Table 7: Roles and Responsibilities

Position	Roles	Responsibilities
Landholder	Cherish the Environment Foundation Limited Company Secretary: Bryce Hines – bhines@cherishtheenvironment.com.au Ph: 07 3810 6558	Implementation of this OMP including management actions and reporting requirements.
Project Superintendent	Geoff Faulkner Faulkner Consulting Pty Ltd	Coordinate the implementation of this OMP as instructed by the landholder.
Rehabilitation Contractor	Private Forestry Service Queensland Inc 8 Fraser Road Gympie QLD 4570 pfsq@bigpond.com Ph: 07 5483 6535	Undertake infill planting and maintenance as directed by the project superintendent or landholder.
Emergency Contact	Private Forestry Service Queensland Inc 8 Fraser Road Gympie QLD 4570 pfsq@bigpond.com Ph: 07 5483 6535	Provide assistance to contractors/site visitors in case of emergency.

7. Monitoring and Reporting

7.1. Monitoring Objectives

The core objective of this OMP is to maintain and enhance the koala habitat values throughout the declaration area. This will be primarily achieved through weed management works. Other management actions (section 5) will also contribute however these are viewed as secondary to weed management. As such, monitoring and reporting will be undertaken to confirm if this primary objective has been or is going to be achieved. This includes both short term and long term criteria to measure success. The area, which is already functioning as koala habitat, is to be managed through weed removal and cooperative fire management and predator exclusion.

Photo point monitoring sites will be established and photos and locations of sites will be included in reporting. Reporting will also include:

- Other monitoring results (e.g. transect surveys, BioCondition, survey details etc)
- Presence/absence of koalas — this may include the results of ad hoc observations or targeted surveys
- Recommended amendments to the management activities/schedule, restrictions or monitoring and reporting requirements.

Monitoring of weed management and predators allows for:

- A review of the pre-established performance indicators for measuring the success of the weed removal and control;
- Ensure level of protection for existing identified native vegetation inclusive of that which has naturally regenerated;
- Review the rate of spread or contraction of weed infestation under the control program;
- Identification of new weed threats or other factors which may be affecting areas designated for rehabilitation and;
- Monitor presence of species, frequency and distribution of predators.

7.2. Habitat Improvement Monitoring

In accordance with Condition 3 of the approval, to compensate for the impacts to koala habitat, the following outcomes and milestone must be achieved. Success will be measured by comparing baseline values for koala habitat quality and extent to future data. The outcomes and milestone are:

Milestone #1: *By five years after the commencement of construction, a gain in Koala habitat quality to nine must be achieved in more than 50% of the offset area through rehabilitation.*

Outcome #1: *By 20 years after the commencement of construction, there must be a gain in Koala habitat quality to nine across the whole offset area.*

Outcome #2: *For the life of the approval, the approval holder must ensure no net loss in the extent of Koala habitat in the offset area.*

The assessment of habitat improvement will be interpreted from the various datasets collected throughout each year and presented in the annual compliance report (refer section 7.5).

7.3. Benchmark

The weed management actions aim to improve the flora and fauna values of the area through weed removal and promoting native species growth and will provide the greatest positive impact on koala habitat. The following breakdown of works are proposed to achieve the improvement:

- Primary weed removal
- Secondary weed removal
- Minimum 90% weed removal from existing vegetation
- 10% or less weeds present on-site
- Photo point sites established within the offset area including infill planting areas.

Following on from the schedule of activities provided in Tables 5 and 6, monitoring and reporting of weed removal works will be undertaken annually within the works area. Post treatment inspections within six months of action will be undertaken to assess the success rate and inform future works.

7.4. Timeframes

The frequency of monitoring events for each management action will vary and the following schedule sets out the anticipated timing (refer Table 8). All completed management actions will be captured in the annual reporting (refer section 7.5).

Table 8: Monitoring events schedule

Management action	Monitoring action	Timeframe	
		Trigger-based	Recurring
Erosion mitigation	<ul style="list-style-type: none"> • inspect completed mitigation measures 	<ul style="list-style-type: none"> • approximately one month post completion; and • approximately two weeks post first minor rainfall event; and • approximately two weeks post first major rainfall event 	<ul style="list-style-type: none"> • annual report inspection
Access infrastructure	<ul style="list-style-type: none"> • inspect existing and new access infrastructure 	<p>Existing access infrastructure:</p> <ul style="list-style-type: none"> • approximately two weeks post major rainfall event <p>New access infrastructure:</p> <ul style="list-style-type: none"> • approximately one month post completion; and • approximately two weeks post first minor rainfall event; and • approximately two weeks post first major rainfall event 	<ul style="list-style-type: none"> • annual report inspection
Weed management	<ul style="list-style-type: none"> • assess weed infestations and success of weed 	<p>Weed reduction measures:</p> <ul style="list-style-type: none"> • approximately six months post completion 	<ul style="list-style-type: none"> • annual report inspection

	reduction measures		
Fire management	<ul style="list-style-type: none"> • assess suitability of fire breaks and access tracks 	<ul style="list-style-type: none"> • approximately one month post fire event 	<ul style="list-style-type: none"> • annual report inspection
Infill planting	<ul style="list-style-type: none"> • assess success of infill planting 	<ul style="list-style-type: none"> • approximately six months post completion 	<ul style="list-style-type: none"> • annual report inspection
Pest and animal management	<ul style="list-style-type: none"> • assess presence of pests and suitability of boundary fencing • undertake pest management 	<ul style="list-style-type: none"> • ad hoc as part of property management 	<ul style="list-style-type: none"> • annual report inspection

Future revisions of this OMP may amend this schedule, for example to reflect contemporary changes to monitoring and management actions.

7.5. Reporting

A report detailing the OMP implementation, management actions undertaken in accordance with the OMP and success of such actions will be completed annually by Cherish The Environment Foundation Limited and issued to Stockland Development Pty Ltd. The two entities will negotiate the timing of this report as it must align with other reporting timeframes stipulated in the approval.

The annual report prepared by Cherish The Environment Foundation Limited will include details of any emergent risk issues and associated responses, and recommendations to amend the OMP if necessary. Reports completed in years 3 to 6 and 18 to 21 must include commentary around whether or not the milestones and outcomes are on track to be achieved. If the available information indicates the habitat improvements are not on track and do not appear to be moving towards achieving the milestone and outcomes, an OMP review may be necessary.

7.6. Contingency Measures

The nature of any management action failures will inform suitable contingency measures that need to be applied. The annual report prepared by Cherish The Environment Foundation Limited will provide an indication of the likelihood of the management actions supporting the achievement of the outcomes and milestone. If the likelihood is low, a review of the OMP may be necessary and the contingency measures will be explored accordingly.

8. Risks to Offset Management Objectives

8.1. Risk Assessment

The following risk assessment matrix (refer Table 9) was used to complete the risk assessment detailed in Table 10.

Table 9: Risk Assessment Matrix

		Consequence				
		Minor	Moderate	High	Major	Critical
Likelihood	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Likelihood and consequence

Qualitative measure of likelihood (how likely is it that this event/circumstances will occur after management actions have been put in place/are being implemented)	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Qualitative measure of consequences (what will be the consequence/result if the issue does occur)	
Minor	Minor risk of failure to achieve the plan's objectives. Results in short term delays to achieving plan objectives, implementing low cost, well characterised corrective actions.
Moderate	Moderate risk of failure to achieve the plan's objectives. Results in short term delays to achieving plan objectives, implementing well characterised, high cost/effort corrective actions.
High	High risk of failure to achieve the plan's objectives. Results in medium-long term delays to achieving plan objectives, implementing uncertain, high cost/effort corrective actions.
Major	The plan's objectives are unable to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies.
Critical	The plan's objectives are unable to be achieved, may include widespread and severe environmental harm, with no evidenced mitigation strategies.

Table 10: Risk Assessment for Offset Management Actions

Management objective/desired outcome	Event or circumstance	Likelihood consequence and risk level			Management actions/risk reduction measures	Residual risk level			Detection/monitoring activity/ies	Feasible/effective corrective actions
		L	C	RL		L	C	RL		
<p>To achieve EPBC condition class 9/10 by 2023 across 50% of the offset area.</p> <p>AND</p> <p>To achieve EPBC condition class 9/10 by 2038 across the whole offset area.</p>	Weed control failure	2	1	L	<ul style="list-style-type: none"> Implement weed control action plan for the project 	2	1	L	<ul style="list-style-type: none"> Quarterly and ad hoc monitoring of weed species 	<ul style="list-style-type: none"> Increased weed control where necessary
	Grazing as a result of fences being damaged	3	3	M	<ul style="list-style-type: none"> Construction and repair of boundary fencing Regular inspections to ensure boundary fencing is maintained and no grazing occurs 	2	1	L	<ul style="list-style-type: none"> Quarterly and ad hoc monitoring of all fences 	<ul style="list-style-type: none"> Stock removed within seven business days when practical, otherwise as soon as possible under the circumstances
	Increased pest population	3	2	M	<ul style="list-style-type: none"> Timely implementation of animal control management programs 	3	1	L	<ul style="list-style-type: none"> Ad hoc observations as part of property management 	<ul style="list-style-type: none"> Undertake animal control events
	Lack of serviceable tracks for vehicular access	3	2	M	<ul style="list-style-type: none"> Construct and maintain tracks to a level where they can be easily accessed by 4WD vehicles and trailers and rural fire service vehicles Ensure no tracks are dead ends and all tracks interconnect within the property 	2	2	M	<ul style="list-style-type: none"> Degraded or inaccessible tracks to be reported when identified 	<ul style="list-style-type: none"> Tracks to be repaired as soon as possible under the circumstances
	Infill planting failure	3	2	M	<ul style="list-style-type: none"> Planted to AFS standards Weed control and management actions in accordance with the management plan 	2	2	M	<ul style="list-style-type: none"> Regular inspections during establishment phase 	<ul style="list-style-type: none"> Remedial actions as soon as possible

Management objective/desired outcome	Event or circumstance	Likelihood consequence and risk level			Management actions/risk reduction measures	Residual risk level			Detection/monitoring activity/ies	Feasible/effective corrective actions
		L	C	RL		L	C	RL		
	Fire	2	2	M	<ul style="list-style-type: none"> Fire breaks established and maintained Cooperative fire management plan established with neighbouring properties 	2	2	M	<ul style="list-style-type: none"> Monitoring of fuel load 	<ul style="list-style-type: none"> Maintain fire breaks and establish new fire breaks where deemed necessary

9. Appendices

Appendix A: Approval Condition 4 cross-reference table

Appendix B: Protected Matters Search Tool (2018)

Appendix C: Wildlife Online search results (2018)

Appendix A: Approval Condition 4 cross-reference table

EPBC Act Condition 4 extract:

4. *The approval holder must have an Offset Management Plan in place. The Offset Management Plan must:*
- a) *include monitoring and be designed so that the results are adequate to inform adaptive management and demonstrate whether the outcomes and milestones required by these conditions are on track to be achieved (before they are due) and have been achieved (at the time they are due);*
 - b) *include contingency measures to mitigate the risks of not achieving the outcomes and milestones required by these conditions;*
 - c) *be prepared in consultation with a suitably qualified person, and include written evidence of how the suitably qualified person's advice has been considered;*
 - d) *be in accordance with the Koala Habitat Offset Report; and*
 - e) *demonstrate how the plan is consistent with the Koala Conservation Advice.*

Condition 4 Report section

- a) Monitoring will occur across varying timeframes depending on the management action being monitored (refer section 7.4).
Monitoring results will be incorporated into the annual compliance report as required by Condition 10 of the approval. These results will note if the outcomes and milestone are on track to be achieved. The necessity to revise the OMP will be considered as part of the annual compliance reporting.
- b) Corrective actions are detailed in the risk assessment (refer section 8). Contingency measures are dependent on the matter hampering the achievement of the milestone and outcomes and will be explored in detail if the results indicate there is a threat to such achievements (refer section 7.6).
- c) As part of preparing this OMP, Cherish The Environment Foundation Limited has consulted Saunders Havill Group (refer section 1.2).
- d) The Koala Habitat Offset Report and this OMP propose consistent management actions and the latter expands upon key parameters (e.g. timing of events, monitoring, and reporting) relating to demonstrating compliance.
- e) The Koala Conservation Advice was reviewed as part of preparing this OMP. Details on how the OMP is consistent with the advice are presented in section 5.

Appendix B: Protected Matters Search Tool (2018)



Appendix B



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

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

Report created: 19/01/18 16:20:34

[Summary](#)

[Details](#)

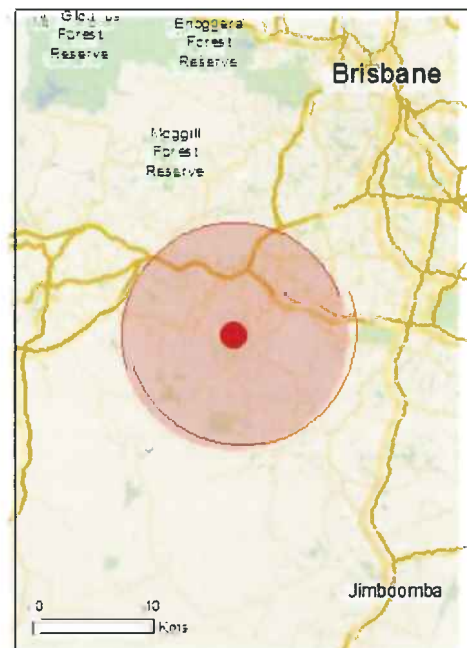
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

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Buffer: 10.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	59
Listed Migratory Species:	30

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	2
Commonwealth Heritage Places:	1
Listed Marine Species:	41
Whales and Other Cetaceans:	1
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	5
Regional Forest Agreements:	None
Invasive Species:	46
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area

Listed Threatened Species

[Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Endangered	Species or species habitat may occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat known to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
<u>Grantiella picta</u> Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
<u>Lathamus discolor</u> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
<u>Macronectes giganteus</u> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<u>Macronectes halli</u> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<u>Numenius madagascariensis</u> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
<u>Pachyptila turtur subantarctica</u> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
<u>Poephila cincta cincta</u> Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
<u>Rostratula australis</u> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<u>Thalassarche cauta cauta</u> Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Species or species habitat may occur within area
<u>Thalassarche cauta steadi</u> White-capped Albatross [82344]	Vulnerable	Species or species habitat likely to occur within area
<u>Thalassarche eremita</u> Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
<u>Thalassarche impavida</u> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<u>Thalassarche melanophris</u> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<u>Thalassarche salvini</u> Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
<u>Turnix melanogaster</u> Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Fish		
<u>Epinephelus daemeli</u> Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area
<u>Neoceratodus forsteri</u> Australian Lungfish, Queensland Lungfish [67620]	Vulnerable	Species or species habitat known to occur within area
Insects		
<u>Argynnis hyperbius inconstans</u> Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within

Name	Status	Type of Presence area
<u>Phyllodes imperialis smithersi</u> Pink Underwing Moth [86084]	Endangered	Species or species habitat may occur within area
Mammals		
<u>Chalinobius dwyeri</u> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
<u>Dasyurus hallucatus</u> Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area
<u>Dasyurus maculatus maculatus (SE mainland population)</u> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
<u>Petauroides volans</u> Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
<u>Petrogale penicillata</u> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat known to occur within area
<u>Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</u> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
<u>Potorous tridactylus tridactylus</u> Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
<u>Pteropus poliocephalus</u> Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
<u>Arthraxon hispidus</u> Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area
<u>Bosistoa transversa</u> Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
<u>Corchorus cunninghamii</u> Native Jute [14659]	Endangered	Species or species habitat may occur within area
<u>Cycas ophiolitica</u> [55797]	Endangered	Species or species habitat likely to occur within area
<u>Dichanthium setosum</u> bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
<u>Macadamia integrifolia</u> Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
<u>Macadamia tetraphylla</u> Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
<u>Notelaea ipsviciensis</u> Cooneana Olive [81858]	Critically Endangered	Species or species habitat known to occur within area
<u>Notelaea lloydii</u> Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence within area
<u>Phaius australis</u> Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
<u>Plectranthus habrophyllus</u> [64589]	Endangered	Species or species habitat likely to occur within area
<u>Samadera bidwillii</u> Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
<u>Thesium australe</u> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area

Reptiles

<u>Caretta caretta</u> Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
<u>Delma torquata</u> Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat known to occur within area
<u>Dermochelys coriacea</u> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
<u>Eretmochelys imbricata</u> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
<u>Furina dunmalli</u> Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
<u>Lepidochelys olivacea</u> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
<u>Saiphos reticulatus</u> Three-toed Snake-tooth Skink [88328]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species

[Resource Information]

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

Name	Threatened	Type of Presence
Migratory Marine Birds		
<u>Apus pacificus</u> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<u>Diomedea exulans</u> Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
<u>Macronectes giganteus</u> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Orcaella brevirostris Irrawaddy Dolphin [45]		Species or species habitat known to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur

Name	Threatened	Type of Presence within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [[Resource Information](#)]

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

Name

Defence - GREENBANK TRAINING AREA
Defence - SANANANDA BARRACKS - WACOL

Commonwealth Heritage Places [[Resource Information](#)]

Name	State	Status
Natural		
Greenbank Military Training Area (part)	QLD	Listed place

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

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

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<u>Ardea alba</u> Great Egret, White Egret [59541]		Breeding known to occur within area
<u>Ardea ibis</u> Cattle Egret [59542]		Breeding likely to occur within area
<u>Calidris acuminata</u> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		Species or species habitat known to occur within area
<u>Cuculus saturatus</u> Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat known to occur within area
<u>Diomedea antipodensis</u> Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
<u>Diomedea exulans</u> Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
<u>Diomedea gibsoni</u> Gibson's Albatross [64466]	Vulnerable*	Species or species habitat may occur within area
<u>Gallinago hardwickii</u> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<u>Haliaeetus leucogaster</u> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<u>Hirundapus caudacutus</u> White-throated Needletail [682]		Species or species habitat known to occur within area
<u>Lathamus discolor</u> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
<u>Macronectes giganteus</u> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<u>Macronectes halli</u> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<u>Merops ornatus</u> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<u>Monarcha melanopsis</u> Black-faced Monarch [609]		Species or species habitat known to occur within area
<u>Monarcha trivirgatus</u> Spectacled Monarch [610]		Species or species habitat known to occur within area
<u>Motacilla flava</u> Yellow Wagtail [644]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur

Name	Threatened	Type of Presence within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area

Whales and other Cetaceans [[Resource Information](#)]

Name	Status	Type of Presence
Mammals		
Orcaella brevirostris Irrawaddy Dolphin [45]		Species or species habitat known to occur within area

Extra Information

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

Name	State
Blunder Creek Reserve	QLD
Pooh Corner	QLD
Stewartdale	QLD
Wacol Bushlands	QLD
White Rock	QLD

Invasive Species [[Resource Information](#)]

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

Name	Status	Type of Presence
Birds		
<i>Acridotheres tristis</i> Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
<i>Anas platyrhynchos</i> Mallard [974]		Species or species habitat likely to occur within area
<i>Carduelis carduelis</i> European Goldfinch [403]		Species or species habitat likely to occur within area
<i>Columba livia</i> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
<i>Lonchura punctulata</i> Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
<i>Passer domesticus</i> House Sparrow [405]		Species or species habitat likely to occur within area
<i>Streptopelia chinensis</i> Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
<i>Sturnus vulgaris</i> Common Starling [389]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171] Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat likely to occur within area Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913] Dolichandra unguis-cati Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Protasparagus densiflorus Asparagus Fern, Plume Asparagus [5015]		Species or species habitat likely to occur within area
Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands		<u>[Resource Information]</u>
Name Greenbank Army Training Area C	State QLD	

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

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

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

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

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

Coordinates

-27.65134 152.9096

Acknowledgements

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

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

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

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

Appendix C: Wildlife Online search results (2018)



Appendix C



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Status: Rare and threatened species
Records: All
Date: All
Latitude: -27.0409
Longitude: 152.9198
Distance: 10
Email: jordanbachmann@saundershavill.com
Date submitted: Friday 19 Jan 2018 16:35:23
Date extracted: Friday 19 Jan 2018 16:40:03

The number of records retrieved = 26

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	<i>Litoria freycineti</i>	wallum rocketfrog		V		3
animals	amphibians	Limnodynastidae	<i>Adelotus brevis</i>	tusked frog		V		21
animals	amphibians	Myobatrachidae	<i>Mixophyes iteratus</i>	giant barred frog		E	E	3
animals	amphibians	Myobatrachidae	<i>Crinia tinnula</i>	wallum froglet		V		35/8
animals	birds	Cacatuidae	<i>Calyptorhynchus lathami lathami</i>	glossy black-cockatoo (eastern)		V		8
animals	birds	Charadriidae	<i>Charadrius mongolus</i>	lesser sand plover		E	E	1
animals	birds	Diomedidae	<i>Thalassarche cauta</i>	shy albatross		V	V	1
animals	birds	Meliphagidae	<i>Anthochaera phrygia</i>	regent honeyeater		E	CE	1
animals	birds	Meliphagidae	<i>Grantiella picta</i>	painted honeyeater		V	V	1
animals	birds	Rostratulidae	<i>Rostratula australis</i>	Australian painted snipe		V	E	1
animals	birds	Strigidae	<i>Ninox strenua</i>	powerful owl		V		2
animals	insects	Nymphalidae	<i>Argynnis hyperbius inconstans</i>	Australian fritillary		E	CE	1
animals	insects	Papilionidae	<i>Ornithoptera richmondia</i>	Richmond birdwing		V		1
animals	malacostracans	Parastacidae	<i>Tenuibranchiurus glypticus</i>			E		1
animals	mammals	Dasyuridae	<i>Dasyurus maculatus maculatus</i>	spotted-tailed quoll (southern subspecies)		V	E	2
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		V	V	483/1
animals	mammals	Pseudocheiridae	<i>Petauroides volans volans</i>	southern greater glider		V	V	3
plants	higher dicots	Apiaceae	<i>Lilaeopsis brisbanica</i>			E		1/1
plants	higher dicots	Apocynaceae	<i>Marsdenia coronata</i>	slender milkvine		V		1/1
plants	higher dicots	Haloragaceae	<i>Gonocarpus effusus</i>			V		3/3
plants	higher dicots	Myrtaceae	<i>Leptospermum luehmannii</i>			V		7/5
plants	higher dicots	Myrtaceae	<i>Leptospermum oreophilum</i>			V		3/3
plants	higher dicots	Myrtaceae	<i>Eucalyptus dunnii</i>	Dunn's white gum		V		1
plants	higher dicots	Proteaceae	<i>Macadamia ternifolia</i>	bopple nut		V	V	1
plants	higher dicots	Sapindaceae	<i>Dodonaea rupicola</i>			V	V	9/8
plants	lower dicots	Hernandiaceae	<i>Hernandia bivalvis</i>	cudgerie		NT		1

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ().

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*. The values of EPBC are Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Extinct in the Wild (XW) and Vulnerable (V).

Records - The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).

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

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