

DATE 9 August 2017
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**Protected Plant Survey Report – Power Supply to Clay Target Shooting Range, Belmont Rifle Range
For Mode Design**

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Revision	Date	Description	Author	Signature	Verifier	Signature	Approver	Signature
1		Draft	MD		JT		JT	
2		For Client	MD		JT	<i>Joseph Toor</i>	JT	<i>Joseph Toor</i>

1.0 INTRODUCTION

1.1 SCOPE AND OBJECTIVES

Underground power is to be installed to the clay target range at the Belmont Shooting Complex. A desktop assessment of Matters of National and State Environmental Significance (MNES and MSES) potentially affected by the installation of underground power supply to the site, was conducted by Lambert & Rehbein on 27 July 2017. One of the outcomes of the desktop study was that the proposed disturbance site was triggered under the Protected Plants provisions of the *Nature Conservation Act 1992*, resulting in the need for a Protected Plant survey.

The scope of this document is to:

- Summarise the legislation relevant to these works;
- Describe the methods used to survey the flora, present on and adjacent to the site;
- On the basis of desktop and field ecological surveys of the site -
 - Describe the vegetation flora present, and potentially present on the proposed disturbance site – with particular reference to flora protected by Commonwealth and State legislation; and
 - Present the findings of the Protected Plant survey.

1.2 PROPOSED DISTURBANCE

Installation of the underground power is proposed to be by a 15 tonne excavator digging an approximately 450mm wide trench that will be less than one metre deep. The proposed underground power route generally runs along the existing access road to the clay target range (**Appendix A**) and seeks to minimise the removal of vegetation.

1.3 DESCRIPTION OF THE PROJECT AREA

Lot 1 on RP169229 is situated at 1485 Old Cleveland Road, Belmont, (**Figure 1**) on about 499 hectares that have been used by a number of shooting clubs for over 150 years. Much of the site supports open forest and woodland remnant vegetation (**Appendix D**), comprising predominantly *Corymbia citriodora* ssp. *variegata* (Spotted Gum), *Eucalyptus siderophloa* (Grey Ironbark), *Eucalyptus crebra* (Narrow Leaved Ironbark), *Eucalyptus tereticornis* (Blue Gum), *Eucalyptus racemosa* (Scribbly Gum), *Eucalyptus major* (Grey Gum), *Eucalyptus microcorys* (Tallowwood), *Eucalyptus acmenoides* (White Mahogany), *Lophostemon confertus* (Brush Box), and *Corymbia intermedia* (Pink Bloodwood).

The area is zoned Sport and Recreation and is surrounded by Open Space, Low Density Residential and Emerging Community. The designated Open Space to the North and East of Lot 1 on RP169229 is predominantly small acreage blocks with little mapped Remnant Vegetation present.

The Lot is undulating to steep and includes vegetated creeks and poorly drained areas, foothills, slopes and ridges, and Mount Petrie. The majority of the existing development for the shooting range is in the Northern portion of the Lot, on the flatter areas. The proposed impact will be within and adjacent to the existing development on the site (**Appendix A**).

2.0 LEGISLATION AND PLANNING

This Section provides an overview of legislation and agreements that generally apply to development where vegetation needs to be cleared and Protected Plants have been indicated as potentially present on site. Reference to any piece of legislation or policy does not infer that that piece of legislation or policy is triggered by the proposed development. The findings of the desktop and field survey will be assessed against the following legislative requirements.

2.1 COMMONWEALTH LEGISLATION

2.1.1 *ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999*

The EPBC Act is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places as defined in the EPBC Act as Matters of National Environmental Significance (MNES).

The nine MNES which the EPBC Act applies to are:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (called 'Ramsar' wetlands);
- Nationally threatened species and ecological communities;
- Migratory species;
- Commonwealth marine areas;
- The Great Barrier Reef marine park;
- Nuclear actions (including uranium mining); and
- A water resource in relation to coal seam gas development and large coal mining development.

An on-line database, 'EPBC Act Protected Matters Report', provides geospatial information of the sightings or locations of MNES. If MNES are, or are likely, to be affected by a proposed development, the matter must be referred to the Commonwealth Department of the Environment (DoE). On the basis of the Referral, the Commonwealth Minister for the Environment will determine if the project is a 'Controlled Action'. The Referral includes an assessment of the Significance of the Impact on any MNES present, or likely to be present, in the impact area. If an action is considered to be a Controlled Action there may be a requirement to provide offsets under the *EPBC Act Environmental Offsets Policy 2012*.

2.2 STATE LEGISLATION

2.2.1 VEGETATION MANAGEMENT ACT 1999

Clearing native vegetation in Queensland is regulated by the *Vegetation Management Act 1999* (VM Act), and subordinate legislation, Policies and Codes. The purpose of the VM Act is to regulate the clearing of Endangered, Of Concern and Least Concern Regional Ecosystems (REs), to manage the environmental effects of clearing, to prevent land degradation and loss of biodiversity, and to maintain ecological processes. This is achieved by developing a decision-making framework, preparing Codes which relate to the assessment of vegetation clearing, and protecting some regrowth vegetation in certain circumstances.

Many routine clearing activities can be undertaken under an exemption or by simply notifying the Department of Natural Resources and Mines (DNRM). Whether or not a permit will be needed depends on the type of vegetation, the land tenure of the land, and the location, extent and purpose of the proposed clearing. Self-assessable Codes apply to a range of activities such as fodder harvesting and weed control; the practices listed in the Code must be followed and DNRM must be notified before clearing starts. Area Management Plans which apply to certain clearing activities can be prepared by groups of landholders or rural organisations.

Development approvals may be required if the clearing cannot be conducted under an exemption, self-assessable Code, or Area Management Plan. Any Remnant Vegetation on freehold or leasehold land tenure, and any High Value Regrowth vegetation on leasehold land, may only be cleared under a Development Authority (DA) for Operational Works – Vegetation Clearing. The application for a DA is assessed against State Development Assessment Provisions (SDAP) State Code 16 under the *Planning Act 2016* (Planning Act).

Geospatially referenced mapping of Remnant Vegetation and Regional Ecosystems is available on-line. The mapping indicates areas of Endangered, Of Concern and Least Concern vegetation under the VM Act; it also indicates areas of High Value Regrowth and of known Essential Habitat.

2.2.2 NATURE CONSERVATION ACT 1992

Much of Queensland's native wildlife is protected under the *Nature Conservation Act 1992* (NC Act) to ensure its survival and to protect biodiversity. All native birds, reptiles, mammals and amphibians are protected in Queensland, as well as a limited range of invertebrates, freshwater fish, and the grey nurse shark. All plants that are indigenous to Australia are protected. A licensing system helps protect native wildlife from over-exploitation and from the impacts of exotic species. These controls ensure that viable wild populations of plants and animals are maintained and that taking, keeping, using or moving wildlife for commercial, recreational or other purposes is monitored.

The *Nature Conservation (Wildlife) Regulation 2006* schedules plants and animals that are protected under statutory provisions in Queensland. These include Extinct in the Wild, Endangered, Near Threatened, Vulnerable, Special Least Concern, and Least Concern (EVNT, SLC and LC)

The NC Act endeavours to ensure that protected plants (whole plants or protected plant parts) and protected animals are not illegally removed from the wild, or illegally traded. The *Nature Conservation (Wildlife Management) Regulation 2006* regulates the clearing, growing, harvesting and trade of protected plants in Queensland. In most instances, commonly occurring native plants can be taken and used for a range of commercial, operational and recreational purposes in Queensland without a licence or permit. However, a licence, permit or authority may be required to take and use native plants or animals listed as Special Least Concern (SLC), Endangered, Vulnerable or Near Threatened (EVNT) under the *Nature Conservation Act 1992*.

An on-line database, 'Wildlife On-line', provides geospatial information of the sightings of plants and animals. Geospatially referenced mapping of Remnant Vegetation and Regional Ecosystems also indicates areas of known Essential Habitat. The 'Protected Plants Flora Survey Trigger Map' indicates areas of known protected plant habitat. If a proposed impact site falls within the 'Protected Plants Flora Survey Trigger Map' a survey of the site must be done to determine if any EVNT plants are present on that site. (<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/framework-guide.html>).

2.2.3 THE ENVIRONMENTAL OFFSETS ACT 2014 AND SUBORDINATE LEGISLATION

Under a number of existing Queensland laws, if there is an unavoidable impact on significant environmental values, offsets may be required for certain developments. Offset actions, which can include improvement and protection of alternative sites and/or actions that improve environmental viability, can provide a conservation outcome that is equivalent to the environmental value being lost. The *Environmental Offsets Act 2014* (EO Act) is the overarching legislative instrument that administers Environmental Offsets for matters which require offsetting under some Queensland legislation. The EO Act has provision for Offsets to be provided under the VM Act, the NC Act, Schedule 11 of the *Planning Regulation 2017*, and the *Fisheries Act 1994*.

3.0 SURVEY METHOD

3.1 DESKTOP STUDY

The desktop study drew from information derived from publically available datasets. The information was collected and collated to provide a detailed overview of Commonwealth and State MES potentially present on site.

To determine endangered flora and vegetation associations that may be present in the proposed disturbance area, the following three reports were accessed on-line:

- A desktop study of MNES listed under the EPBC Act, and potentially present on site, was downloaded from:
 - <http://www.environment.gov.au/webqis-framework/apps/pmst/pmst-coordinate.jsf> (02/08/2017) (**Appendix B**);
- A desktop study of Protected Plants and Animals under the NC Act, and potentially present in the proposed disturbance area was downloaded from:
 - <https://environment.ehp.qld.gov.au/report-request/species-list/> (02/08/2017) (**Appendix C**);
- Vegetation Management maps and data and the Protected Plants Flora Survey Trigger Map was downloaded from:
 - <https://www.dnrm.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form> (02/08/2017) (**Appendix D**).

Information on the distribution, ecology, and preferred habitat of EVNT plant species potentially present on site, was collated, reviewed, and used to plan the implementation of the field survey method.

3.2 FIELD SURVEY

A protected plant survey in accordance with Queensland State Guidelines was conducted on the site on August 3rd 2017 by Lambert & Rehbein's Senior Botanist/Ecologist Michele Deveze. The study area was concentrated on the proposed disturbance area and included a 100m buffer around the proposed disturbance area as required for the Protected Plant Survey (**Figure 2**).

The method employed for the protected plant survey followed the preferred method in 'Flora Survey Guidelines - Protected Plants *Nature Conservation Act 1992*' (2014), based on the 'Timed Random Meander' survey method designed by Cropper (1993), and Goff *et al.* (1982). Because the proposed impact area is relatively small, it was decided to survey the entire proposed impact area, and, where possible, a 100 metre buffer around the impact area.

The timed random meander search procedure provides information to document the level of effort expended in the examination as well as to describe the floristic resources of the site. Consequently, it is possible to construct a species/effort curve, indicating if the survey is approaching a full survey. The timed meander method has been demonstrated as a means of discovering threatened and endangered species that have low incidence or an uneven distribution across a site, and as a means of documenting a low probability of occurrence of such species if they have not been found during the procedure (Goff *et al.*, 1982).

The ecology of the EVNT plants listed as potentially present on site was reviewed and descriptions were obtained of each of the species potentially present in the proposed impact area. Analysis of the plants' preferred habitat and the degree of disturbance that the site has been subjected to determined which species are likely to be present.

The proposed impact area was located in the field and a starting point for the survey was selected based on vegetation associations and habitat type, and location within the proposed impact area. The proposed impact area was surveyed with random and regularly changing trajectories focussing on areas that met the habitat requirements of the target plant species.

A record was made of each species observed during each transect. Any species not able to be identified in the field and any threatened species found during the survey were to be sent to the Queensland Herbarium for positive identification.

Michele Deveze conducted the Protected Plant survey. She has over 25 years' experience in ecological management and assessment. Her area of expertise includes: flora survey and identification, RE verification, Biocondition Assessment, and vegetation management planning. Michele's CV is attached in **Appendix E**.

3.3 SURVEY LIMITATIONS

3.3.1 PROTECTED PLANT SURVEY AREA

The protected plant survey area followed the proposed route of the disturbance for the underground power supply and included a buffer of 100m on either side of the route. The Archery target site was being used for archery practice at the time of the survey (**Plate 1**) and consequently was not completely surveyed. This is a very small and heavily disturbed area, and it was considered that its exclusion did not compromise the integrity of the survey.

The vegetation on each side of the proposed route is not mapped as remnant and the area to the south-west of the proposed disturbance site appears to have been subject to a number of very hot fires over the last ten years, resulting in dense regeneration of *Allocasuarina* sp., and *Melaleuca* spp., and then their subsequent mortality (**Plates 2 and 3**). In some areas the

regeneration and fallen stems were too dense to safely traverse, consequently the survey route circumnavigated these areas.



Plate 1 Archery practice at archery field site



Plate 2 Dense regeneration of *Allocasuarina* sp., and *Melaleuca* spp.



Plate 3 Dense regeneration of *Allocasuarina* sp.

3.3.2 FLORA AND VEGETATION

At the time of survey there had not been any substantial rain for several months. It is possible that any cryptic or ground dwelling species present may not have been recorded because they were not active or growing diagnostic parts under the conditions. Repeat assessments to address seasonality were not included in the survey.

4.0 RESULTS – DESKTOP STUDY

4.1 DESKTOP STUDY

The results of the searches described in Section 3.1 are summarised in Section 4.2, and Section 4.3, and are discussed in Section 4.4 .

4.2 DESKTOP STUDY – FLORA AND VEGETATION ASSOCIATIONS

The desktop study for flora and vegetation associations is based on the MNES listed under the EPBC Act (**Appendix B**), the 'Wildlife On-Line Report' (**Appendix C**) and the Vegetation Management Report (**Appendix D**).

One Threatened Ecological Community (TEC) listed under the EPBC Act was indicated as potentially present on the site (**Appendix B**):

- Lowland Rainforest of Subtropical Australia Critically Endangered Community may occur within the area

The proposed disturbance site is mapped as not supporting Remnant Vegetation. To the south and west of the proposed development site is an extensive area of Regional Ecosystem 12.11.5, most of which is indicated as 'Essential Habitat' for Koala, and scattered occurrences of RE 12.3.11 are mapped along watercourses and drainage lines (**Appendix D**). The pre-clearing vegetation mapping indicates that RE 12.11.5, 12.11.25, and 12.11.27 covered most of the proposed disturbance area, whilst REs 12.3.5, and 12.3.6 followed drainage lines (**Appendix D**). The pre-clearing mapping also indicates that the steeper terrain to the south of the Lot also supported 12.11.24, and 12.11.3.

Landzone 11 is described as:

Metamorphosed rocks, forming ranges, hills and lowlands. Primarily lower Permian and older sedimentary formations which are generally moderately to strongly deformed. Includes low- to high-grade and contact metamorphics such as phyllites, slates, gneisses of indeterminate origin and serpentinite, and interbedded volcanics. Soils are mainly shallow, gravelly Rudosols and Tenosols, with Sodosols and Chromosols on lower slopes and gently undulating areas. Soils are typically of low to moderate fertility.

RE 12.11.5 (Least Concern) is described as:

Corymbia citriodora subsp. *variegata*, *Eucalyptus siderophloia*, *E. major* open forest on metamorphics +/- interbedded volcanics

Open forest complex in which spotted gum is a relatively common species. Canopy trees include *Corymbia citriodora* subsp. *variegata*, *Eucalyptus siderophloia* or *E. crebra* (sub coastal ranges), *E. major* and/or *E. longirostrata* and *E. acmenoides* or *E. portuensis* and/or *E. carnea* and/or *E. eugenioides*. Other species that may be present and abundant locally include *Corymbia henryi*, *C. intermedia*, *C. trachyphloia*, *Eucalyptus tereticornis*, *E. propinqua*, *E. biturbinata*, *E. moluccana*, *E. melliodora*, *E. fibrosa* subsp. *fibrosa* and *Angophora leiocarpa*. *Lophostemon confertus* often present in gullies and as a sub-canopy or understorey tree. Mixed understorey of grasses, shrubs and ferns. Occurs on hills and ranges of Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

Vegetation communities in this regional ecosystem include:

12.11.5a: *Eucalyptus tindaliae*, *E. carnea*, *Corymbia intermedia* woodland +/- *E. crebra*, *Corymbia citriodora* subsp. *variegata*, *Eucalyptus major*, *E. helidonica*, *Corymbia henryi*, *Angophora woodsiana*, *C. trachyphloia* (away from the coast) or *E. siderophloia*, *E. microcorys*, *E. racemosa* subsp. *racemosa*, *E. propinqua* (closer to the coast). Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

12.11.5e: *Corymbia citriodora* subsp. *variegata* woodland usually including *Eucalyptus siderophloia* or *E. crebra* (sub coastal ranges), *E. propinqua* and *E. acmenoides* or *E. carnea*. Other species that may be present and abundant locally include *Corymbia intermedia*, *C. trachyphloia* subsp. *trachyphloia*, *Eucalyptus tereticornis*, *E. microcorys*, *E. portuensis*, *E. helidonica*, *E. major*, *E. longirostrata*, *E. biturbinata*, *E. moluccana* and *Angophora leiocarpa*. *Lophostemon confertus* often present in gullies and as a sub-canopy or understorey tree. Mixed understorey of grasses, shrubs and ferns. Occurs on hills and ranges of Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

12.11.5h: Woodland to open forest of *Eucalyptus planchoniana*, *E. carnea* and *Angophora woodsiana* +/- *E. fibrosa* subsp. *fibrosa*, *E. racemosa* subsp. *racemosa*, *Corymbia intermedia*, *C. trachyphloia*, *E. tindaliae*, *E. helidonica* and *E. resinifera*. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

12.11.5j: *Eucalyptus racemosa* subsp. *racemosa* and/or *E. seeana* and *Corymbia intermedia* woodland. Other characteristic species include *E. siderophloia*, *Angophora leiocarpa*, *C. trachyphloia* subsp. *trachyphloia* and rarely *E. pilularis*. *Melaleuca quinquenervia* may be present and at times becomes locally co-dominant. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

12.11.5k: *Corymbia henryi* woodland +/- *Eucalyptus crebra*, *E. carnea*, *E. tindaliae*, *E. fibrosa* subsp. *fibrosa*, *E. siderophloia*, *C. citriodora* subsp. *variegata*, *Angophora leiocarpa*, *E. acmenoides*, *E. helidonica*, *E. propinqua*, *C. intermedia*. Includes patches of *E. dura*. Occurs on drier ridges and slopes in near coastal areas on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

12.3.11 (Of Concern) is described as:

Eucalyptus tereticornis +/- *Eucalyptus siderophloia*, *Corymbia intermedia* open forest on alluvial plains usually near coast.

Eucalyptus tereticornis +/- *E. siderophloia* and *Corymbia intermedia* open forest to woodland. *Corymbia tessellaris*, *Lophostemon suaveolens* and *Melaleuca quinquenervia* frequently occur and often form a low tree layer. Other species present in scattered patches or low densities include *Angophora leiocarpa*, *E. exserta*, *E. grandis*, *C. trachyphloia*, *C. citriodora* subsp. *variegata*, *E. latisinensis*, *E. tindaliae*, *E. racemosa* and *Melaleuca sieberi*. *E. seeana* may be present south of Landsborough and *Livistona decora* may occur in scattered patches or low densities in the Glenbar SF and Wongi SF areas. Occurs on Quaternary alluvial plains and drainage lines along coastal lowlands. Rainfall usually exceeds 1000mm/y.

Vegetation communities in this regional ecosystem include:

12.3.11a: Open forest of *Eucalyptus tereticornis* and/or *E. siderophloia* with vine forest understorey. Other canopy species include *Corymbia intermedia*, *Araucaria cunninghamii* and *Agathis robusta*. Frequently occurring understorey species include *Flindersia* spp., *Lophostemon suaveolens*, *L. confertus*, *Cupaniopsis parvifolia*, *Acronychia* spp., *Alphitonia excelsa* and *Acacia disparrima* subsp. *disparrima*. Occurs on sub-coastal Quaternary alluvial plains. Rainfall usually exceeds 1000mm/y.

12.3.11b: *Eucalyptus tereticornis* and *E. racemosa* subsp. *racemosa* +/- *E. siderophloia*, *Lophostemon suaveolens*, *E. seeana* and *Angophora leiocarpa* open forest often with a dense shrub layer dominated by *Melaleuca nodosa*. Occurs on Quaternary alluvium usually higher Pleistocene plains and terraces. Rainfall usually exceeds 1000mm/y. Contains palustrine wetland (e.g. in swales).

The Vegetation Management Report also indicated that the proposed development site is mapped as a High Risk Area on the Protected Plants Flora Survey Trigger Map (Appendix D). Consequently, a Protected Plant survey was conducted in accordance with the Flora Survey Guidelines - Protected Plants, prepared under the *Nature Conservation Act 1992*.

The twelve EVNT plants listed in the two on-line reports (**Appendix B** and **Appendix C**) as potentially present in or close to the proposed disturbance area are presented in **Table 1**.

Table 1 EVNT Plant Species Listed in On-Line Data-Searches as Potentially Present on Site and Preferred Habitat

Scientific Name	Common Name	Habit	NCA Status	EPBC Status	EPBC Comment	Preferred Habitat
<i>Arthraxon hispidus</i>	Hairy-joint Grass	creeping perennial grass		Vulnerable	Species or species habitat likely to occur within area	In NSW and Queensland, <i>A. hispidus</i> is found in or on the edges of rainforest and in wet eucalypt forest, often near creeks or swamps, as well as woodland. In the South-East Queensland Bioregion, <i>A. hispidus</i> has also been recorded growing around freshwater springs on coastal foreshore dunes, in shaded small gullies, on creek banks, and on sandy alluvium in creek beds in open forests, and also with bog mosses in mound springs. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?arthraxon-hispidus
<i>Bosistoa selwynii</i>	Heart-leaved Bosistoa			Vulnerable	Species or species habitat likely to occur within area	Three-leaved Bosistoa was formerly recognised as two species, <i>Bosistoa selwynii</i> and <i>B. transversa</i> (Hartley 1977), with division being based on whether leaves had one leaflet or whether at least some leaves on the plant had three or more leaflets (Harden 1991). <i>Bosistoa transversa</i> and <i>Bosistoa selwynii</i> are now conventionally accepted as synonyms (CHAH 2010; Hartley 2013). http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=16091
<i>Bosistoa transversa</i>	Three-leaved Bosistoa, Yellow Satinheart	small tree		Vulnerable	Species or species habitat likely to occur within area	<i>Bosistoa transversa</i> grows in wet sclerophyll forest, dry sclerophyll forest and rainforest up to 300 m in altitude. Associated vegetation includes <i>Argyrodendron trifoliolatum</i> , <i>Syzygium hodgkinsoniae</i> , <i>Endiandra pubens</i> , <i>Dendrocnide photinophylla</i> , <i>Acmena ingens</i> , <i>Diploglottis australis</i> and <i>Diospyros mabacea</i> . http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?bosistoa-transversa

<i>Corchorus cunninghamii</i>	Native Jute	shrub	Endangered	Endangered	Species or species habitat likely to occur within area	Native Jute is found in a mosaic of wet sclerophyll and subtropical rainforest as well as grassy open forest. This species is generally located at low to mid elevations (110–430 m), on upper hill-slopes or hill-crests that have a south-easterly or easterly aspect. There is no specific geology or soil type associated with the species as it occurs on both metamorphic and igneous substrates and on loam or clay soils. In general the soils are shallow, stony and well drained and common canopy species occurring alongside this species include Grey Gum (<i>Eucalyptus propinqua</i>), Brush Box (<i>Lophostemon confertus</i>) and Grey Ironbark (<i>Eucalyptus siderophloia</i>). http://www.environment.gov.au/biodiversity/threatened/species/pubs/14659-conservation-advice.pdf
<i>Cryptocarya foetida</i>	Stinking Cryptocarya, Stinking Laurel	small to medium-sized tree	Vulnerable	Vulnerable	Species or species habitat may occur within area	Found in littoral, warm temperate and subtropical rainforest, and wet sclerophyll forest usually on sandy soils, but mature trees are also known on basalt soils. http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10186
<i>Macadamia integrifolia</i>	Macadamia Nut, Queensland Nut, Smooth-shelled Macadamia, Bush Nut, Nut Oak	tree	Vulnerable	Vulnerable	Species or species habitat likely to occur within area	This species grows in remnant rainforest, including complex mixed notophyll forest, and prefers partially open areas such as rainforest edges. http://www.environment.gov.au/biodiversity/threatened/species/pubs/7326-conservation-advice.pdf
<i>Phaius australis</i>	Lesser Swamp-orchid	ground orchid		Endangered	Species or species habitat likely to occur within area	<i>Phaius australis</i> grows in areas where soils are almost always damp, but not flooded for lengthy periods. Sands are generally the underlying soil type. <i>P. australis</i> are usually found in coastal habitats between swamps and forests or in suitable areas further inland. This includes swampy sclerophyll forest dominated by melaleucas, swampy forest that often have sclerophyll emergents, or fringing open forest and melaleuca swamp forest associated with rainforest species. <i>P. australis</i> has also been recorded in wallum, sedgeland, rainforest and closed forest. They often grow in deep shade, but can also occur in full sun. This species occurs at higher altitudes in northern Queensland. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?phaius-australis

<i>Phebalium distans</i>	Mt Berryman Phebalium	small tree		Critically Endangered	Species or species habitat may occur within area	<i>Phebalium distans</i> is found on red soils in vineforest, semi-evergreen vine thicket and open forest ecosystems and ecotones, generally above 200 m elevation. Associated species include <i>Acacia disparrima</i> subsp. <i>disparrima</i> , <i>Croton insularis</i> , <i>Phebalium nottii</i> , <i>Flindersia australis</i> , <i>Owenia venosa</i> , <i>Flindersia</i> spp., <i>Denhamia parvifolia</i> , <i>Capparis</i> spp., <i>Carissa ovata</i> . http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?phebalium-distans
<i>Streblus pendulinus</i>	Siah's Backbone, Sia's Backbone, Isaac Wood	tree or shrub		Endangered	Species or species habitat likely to occur within area	Grows to 6 m tall with fleshy red fruit and very rough leaves. It exudes a white latex when damaged. Siah's backbone is a Norfolk Island endemic and consists of a population of 187 mature individuals. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=21618
<i>Symplocos harroldii</i>	Hairy Hazelwood	small tree	Near Threatened			Dry rainforest. http://www.logan.qld.gov.au/_data/assets/pdf_file/0012/3126/threatenedplants.pdf
<i>Thesium australe</i>	Austral Toadflax, Toadflax	erect herb		Vulnerable	Species or species habitat may occur within area	<i>Thesium australe</i> grows in grassland or woodland, often in damp sites. Examples of associated vegetation includes: open woodland with <i>Eucalyptus tereticornis</i> and <i>E. tindaliae</i> on skeletal soils; on heavy alluvium soil in grassy <i>E. populnea</i> woodland; on black cracking clay in grassland of <i>Dichanthium sericeum</i> ; and grassland dominated by <i>Themeda triandra</i> and <i>Heteropogon contortus</i> on basaltic, rocky soils. http://wetlandinfo.ehp.qld.gov.au/wetlands/ecology/components/species/?thesium-australe
<i>Zieria furfuracea</i> subsp. <i>gymnocarpa</i>		shrub	Endangered			Occurs in rainforest fringes and wetter areas in coastal districts (Stanley & Ross, 1995)

4.3 DESKTOP STUDY DISCUSSION

Twelve plant species listed as Endangered, Vulnerable or Near Threatened under State and/or Commonwealth Legislation were indicated for the site (**Table 1**), and the site is mapped as a Protected Plant Survey Trigger Area. The proposed disturbance area is not mapped with Remnant Vegetation, although the southern and western portion of the Lot is mapped as supporting 'Least Concern' remnant vegetation.

5.0 RESULTS – FIELD STUDY

The weather during the survey period was hot and humid, with daytime temperatures reaching over 20°C. Generally the weather was clear with a light breeze. There had been little rain leading up to the survey, and no rain was recorded on the site immediately before, or leading up to the survey.

Access was available to all areas required for the survey, with the exception of the Archery target site which was being used for archery practice at the time of the survey (**Plate 1**). This is a very small and heavily disturbed area, and it was considered that its exclusion did not compromise the integrity of the survey.

5.1 FIELD SURVEY – VEGETATION ASSOCIATIONS

The survey recorded 92 plant species (**Appendix H**). Many of the plants recorded around the Archery clubhouse and facilities are off site native species associated with landscaping the gardens surrounding the facilities. Dominant structural species in the forested area adjacent to the proposed disturbance area included:

<i>Acacia disparrima</i>	Hickory Wattle
<i>Allocasuarina littoralis</i>	Black She-Oak
<i>Alphitonia excelsa</i>	Red Ash
<i>Angophora leiocarpa</i>	Rusty Gum
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Corymbia trachyphloia</i>	Brown Bloodwood
<i>Eucalyptus acmenoides</i>	White Mahogany
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Eucalyptus propinqua</i>	Grey Gum
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Lophostemon confertus</i>	Brush Box
<i>Lophostemon suaveolens</i>	Swamp Box
<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark

The species composition and structure was generally consistent with the mapped RE of 12.11.5. The area surrounding the archery clubhouse predominantly comprised off-site 'native' species; it was considered that these had been intentionally planted for landscaping purposes.

5.2 FIELD SURVEY – PROTECTED PLANTS

A comparison of the preferred habitats of EVNT Plant Species potentially present on site (**Table 1**) with the results of the field assessment suggests that of the 12 EVNT plants listed, the habitat of

only six species – *Arthraxon hispidus*, *Bosistoa transversa*, *Corchorus cunninghamii*, *Phaius australis*, *Thesium australe*, and *Zieria furfuracea* subsp. *gymnocarpa* could potentially be present.

The survey path is represented in **Figure 2**. One EVNT plant species were recorded during the survey. Five specimens of *Eucalyptus curtisii* ('Near Threatened' NC Act) were recorded in the gardens surrounding the Archery clubhouses and facilities (**Figure 2**). It is understood that these plants are a component of the landscape gardening around the buildings and were intentionally planted. The five specimens of *Eucalyptus curtisii* are consequently not growing 'in the wild'.

No other EVNT Plant species were observed or recorded during the survey.

5.3 FIELD SURVEY – WEEDS

The survey recorded 34 exotic plant species (**Appendix F**). Of those, five are listed as Category 3 Restricted Invasive Plants under the *Biosecurity Act 2014*, fifteen are identified by Brisbane City Council (BCC) as Class R pest plants and four are listed by BCC as 'Special Investigation List', and one is listed as a Weed of National Significance (WoNS). The remainder of the exotic species recorded during the survey are either low risk weeds, intentionally planted ornamental plants or fruit trees.

6.0 DISCUSSION

6.1 VEGETATION, VEGETATION ASSOCIATIONS AND WETLANDS

During the survey, 92 plant species were recorded, of which 34 were exotic species. Of the exotic species, five are 'Category 3 Restricted Invasive Plants' under the *Biosecurity Act 2014*. Fifty-eight (58) native and endemic plant species were recorded across the site of which 21 were thought to be either off-site or planted native species. Most of the native endemic species recorded during the survey were consistent with the current and pre-clearing REs mapped for the location (**Section 4.2** and **Appendix D**). The TEC identified in the EPBC Protected Matters Report (**Appendix B**) was not observed in the proposed disturbance area and the observed ecological characteristics of the site are unlikely to support that community.

6.2 PROTECTED FLORA

The current and Pre-Clearing REs for the location (**Appendix D**) are on Landzone 11. The current and Pre-Clearing Regional Ecosystems are all described as moist to dry sclerophyll open forests or woodlands (**Section 4.2**). The preferred habitat for protected flora potentially present on site was researched and is tabulated in **Table 1**.

Analysis of the plants' preferred habitat and the degree of disturbance that the site has been subjected to, suggests that it would be unlikely for many of the protected plant species to be present on site. Those that were most likely to be present are species that prefer sclerophyllous environments such as are present on the site, in particular *Arthraxon hispidus*, *Bosistoa transversa*, *Corchorus cunninghamii*, *Phaius australis*, *Thesium australe*, and *Zieria furfuracea* subsp. *gymnocarpa*. These could potentially be present in or close to the proposed disturbance site.

One EVNT plant species was recorded during the Protected Plant survey: *Eucalyptus curtisii*. The specimens recorded were considered to have been planted, and consequently were not 'in the wild'.

6.3 POTENTIAL IMPACTS

No 'in the wild' conservation significant plants were observed during the survey. No Endangered REs or TECs were observed during the survey. The mapping for the project area indicates that remnant vegetation adjacent to the proposed disturbance area is mapped as 'Least Concern'. The field survey confirmed that the proposed disturbance area was largely clear of remnant vegetation, with the Regulated 'Least Concern' Vegetation occurring outside the proposed disturbance area (**Appendix D**).

7.0 RECOMMENDATIONS

Although the site is mapped in the Protected Plants Trigger Area mapping, no 'in the wild' conservation significant plants were observed during the survey. However, because a number of protected plants are indicated as potentially present in the location, if during planning, or construction of the proposed works, any plant is located or observed and is considered to potentially be a protected plant, steps should be taken to avoid clearing the plant, and a specimen of the plant should be presented to the Queensland Herbarium for positive identification.

Because no protected plants were observed within the survey area, this report is required to be submitted to the Department of Environment and Heritage Protection, with an Exempt Clearing Notification, at least one week prior to disturbance activities being commenced. If the project is delayed, Protected Plant survey guidelines limit the currency of this report to 12 months from the survey date. If this report and the Exempt Clearing Notification is not submitted within this timeframe the survey will be required to be undertaken again.

8.0 REFERENCES

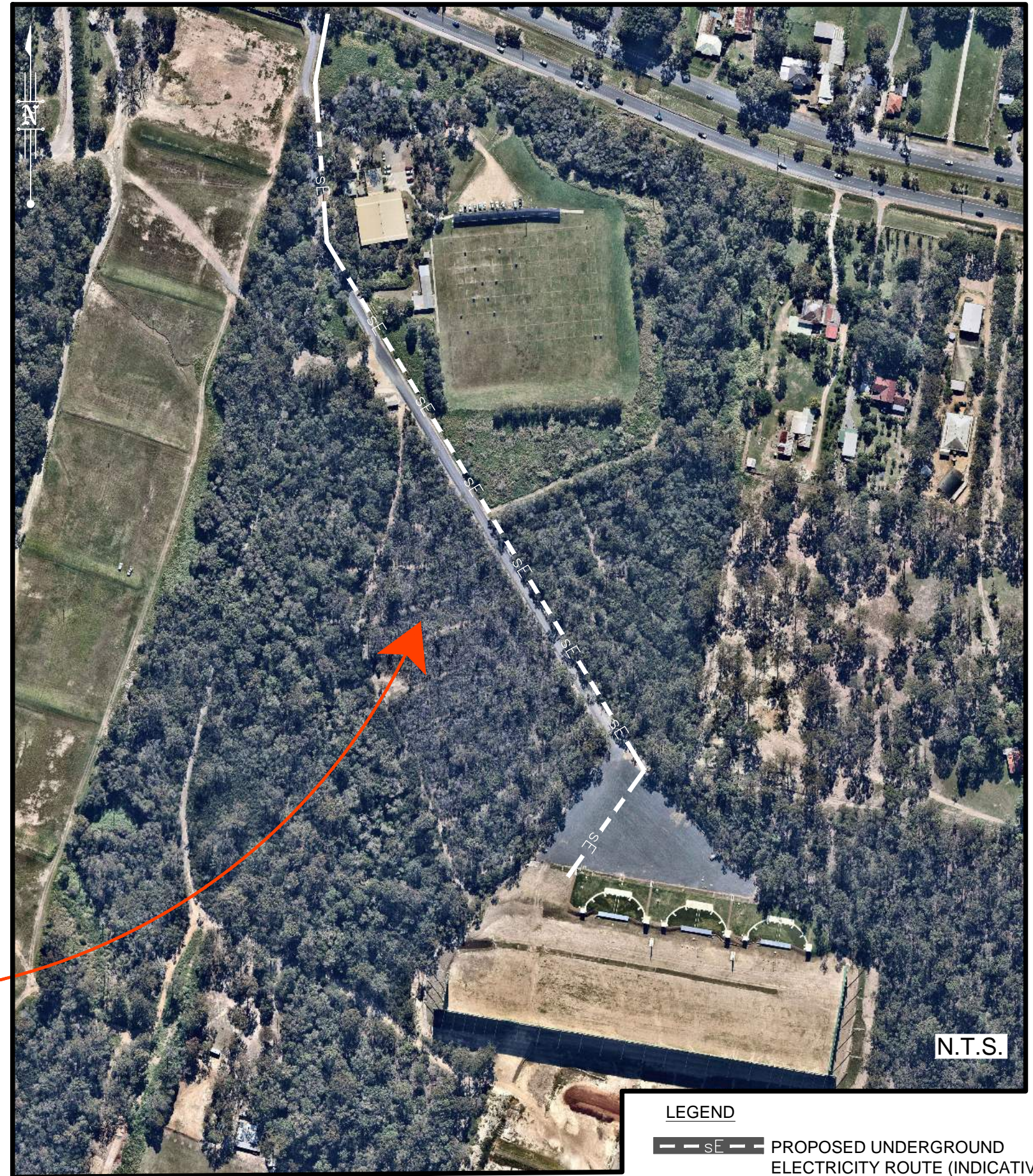
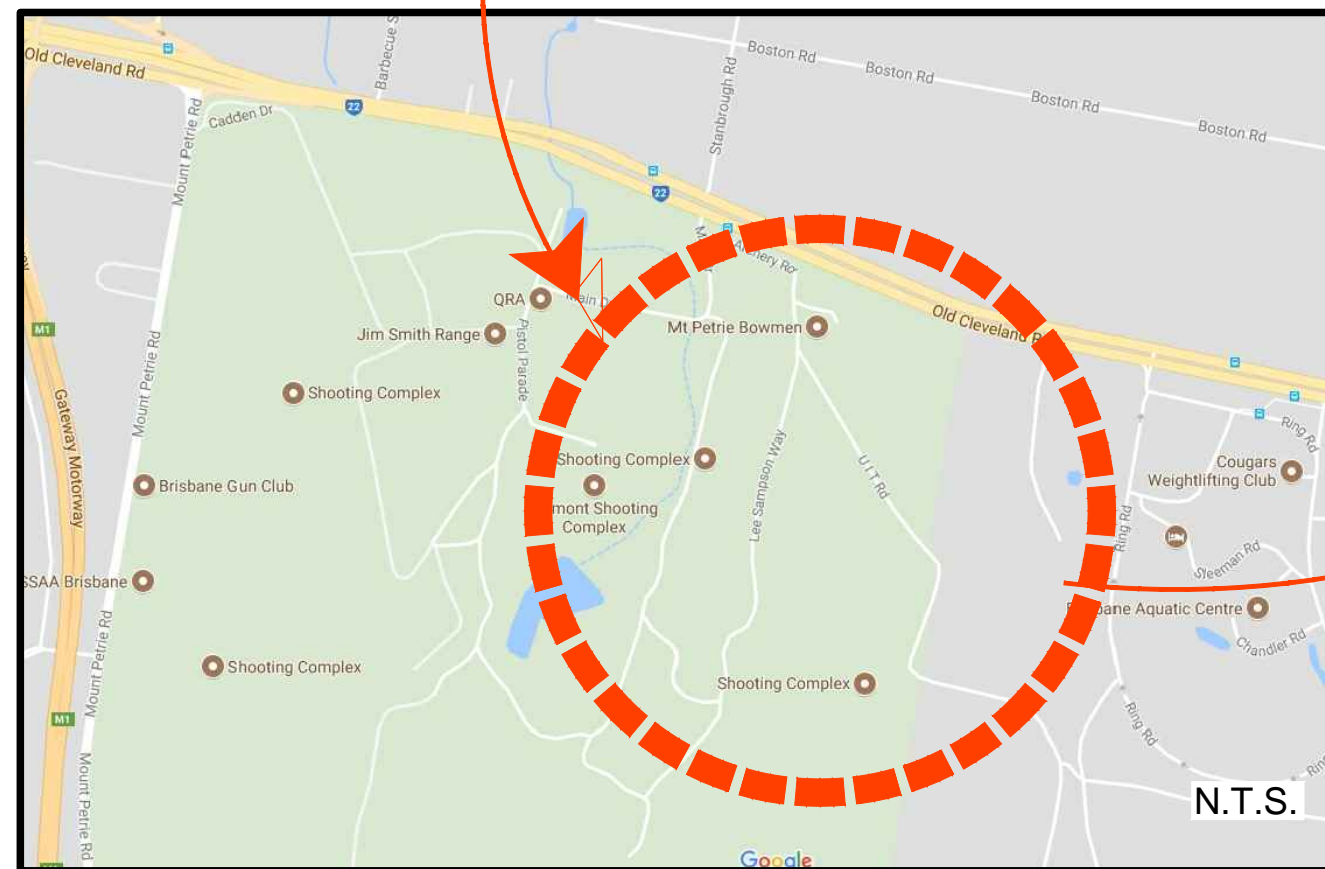
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- Stanley, T.D. and Ross, E.M. (1989) *Flora of South East Queensland Volume 3*, Queensland Department of Primary Industries, Brisbane, Australia



FIGURES

FIGURE 1 LOCATION OF PROPOSED DEVELOPMENT SITE

FIGURE 2 SURVEY PATH



LEGEND
 - - - SE - - - PROPOSED UNDERGROUND ELECTRICITY ROUTE (INDICATIVE)

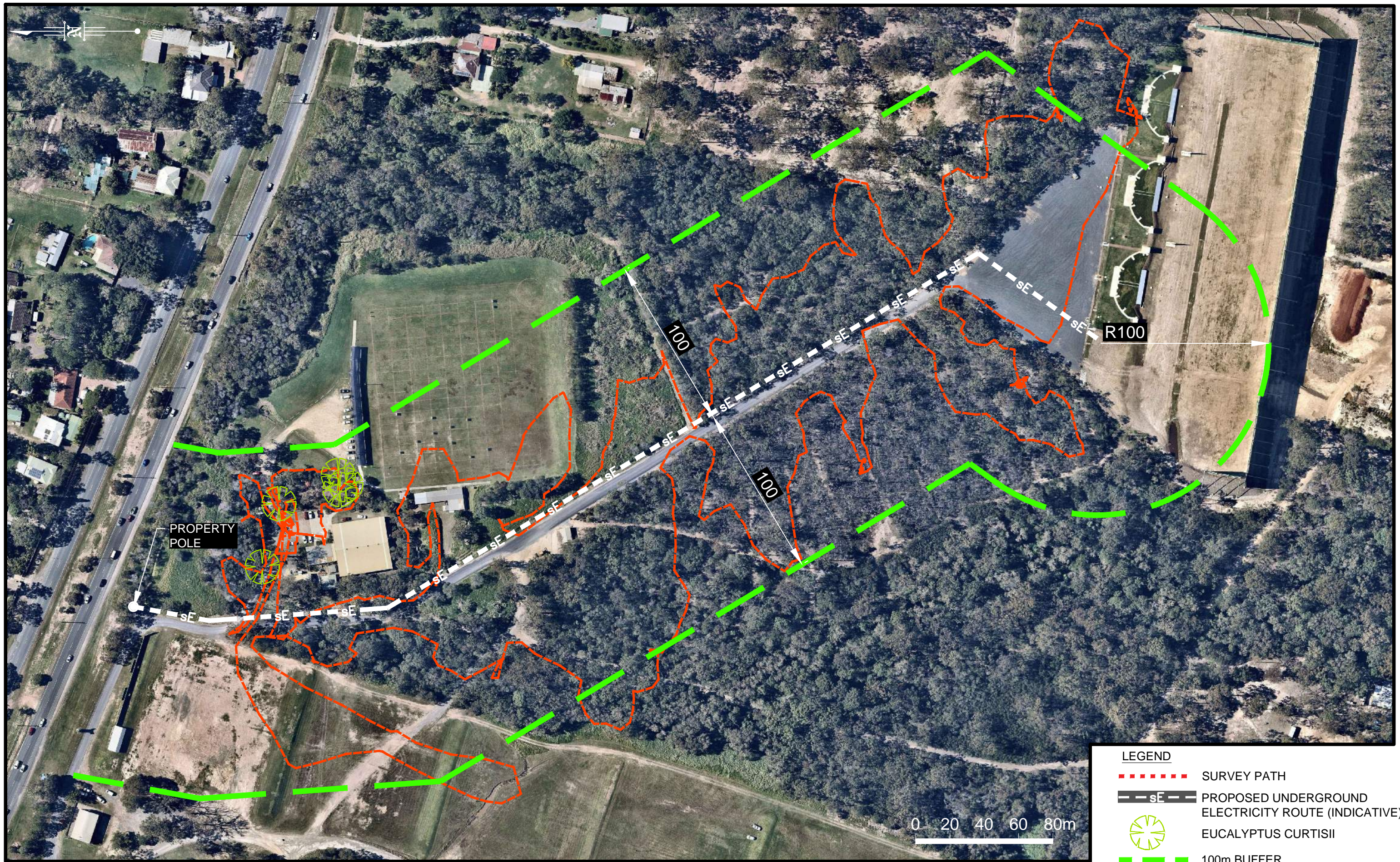
Project:
BELMONT CLAY TARGET RANGE
UNDERGROUND POWER
PROTECTED PLANTS SURVEY

Client:
MODE DESIGN
 Title:
SITE LOCATION PLAN

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LEGEND

- - - - SURVEY PATH
- sE PROPOSED UNDERGROUND ELECTRICITY ROUTE (INDICATIVE)
- EUCALYPTUS CURTISII
- 100m BUFFER



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Project:
BELMONT CLAY TARGET RANGE
 UNDERGROUND POWER
 PROTECTED PLANTS SURVEY

Client:
MODE DESIGN

Title:
SURVEY PATH

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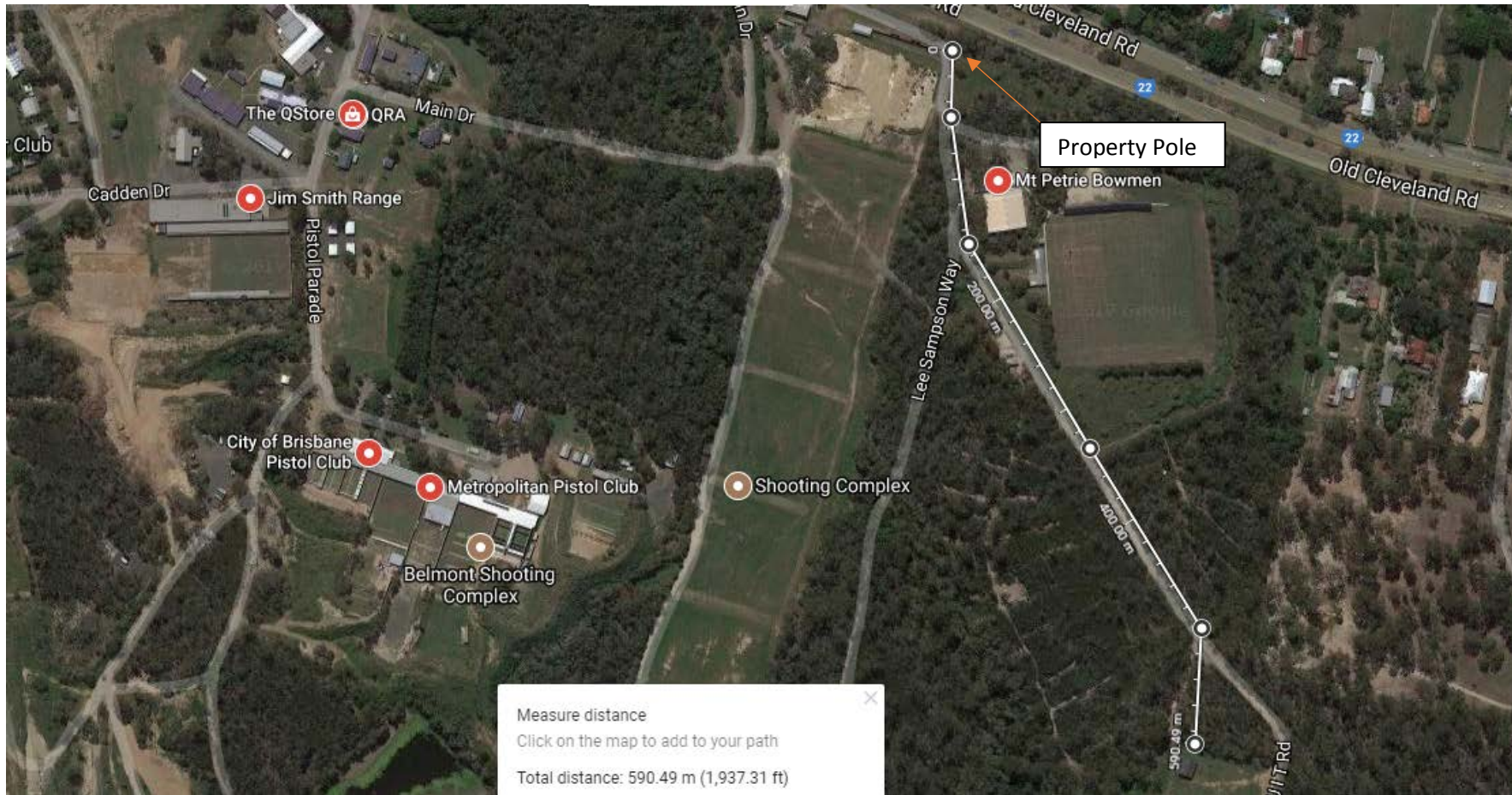
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APPENDIX A

PROPOSED DISTURBANCE AREA



APPENDIX B

EPBC PROTECTED MATTERS REPORT



EPBC Act Protected Matters Report

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

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: 02/08/17 13:19:15

[Summary](#)

[Details](#)

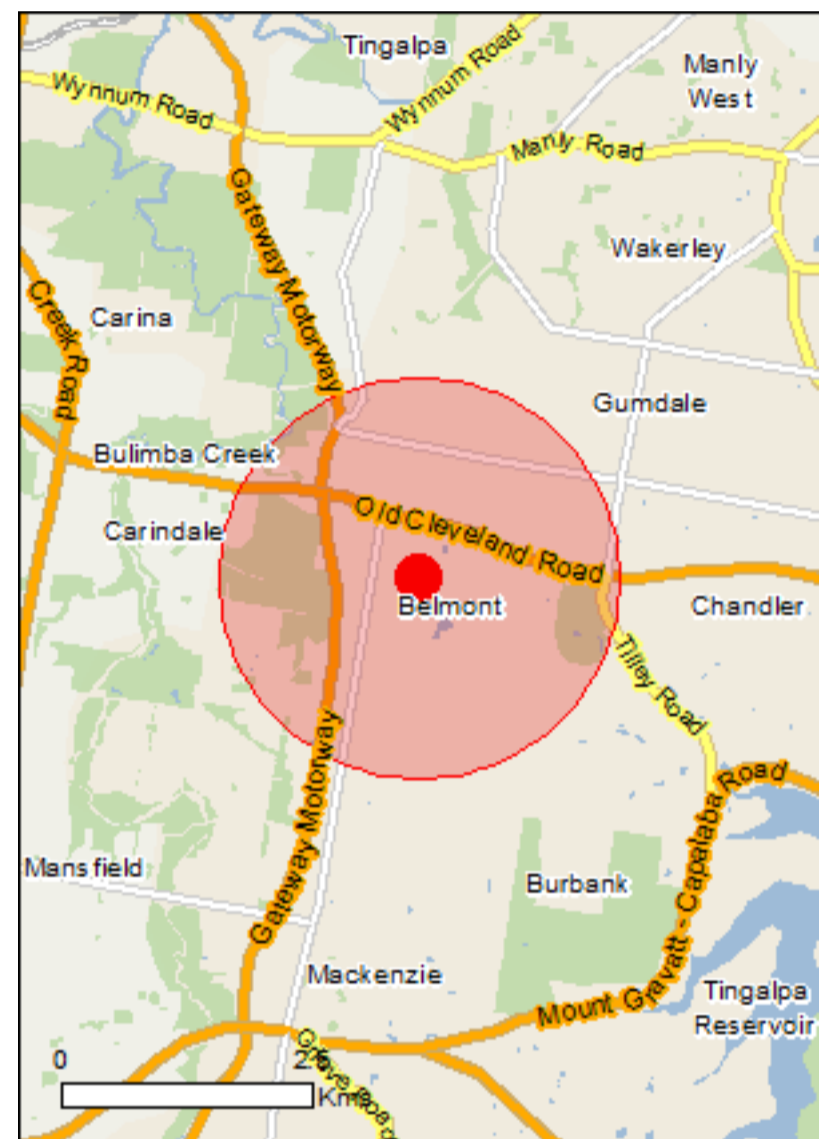
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 2.0Km



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:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	31
Listed Migratory Species:	16

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:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	23
Whales and Other Cetaceans:	None
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:	None
Regional Forest Agreements:	None
Invasive Species:	44
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)

[\[Resource Information \]](#)

Name	Proximity
Moreton bay	Within 10km of Ramsar

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 likely to occur within area

Listed Threatened Species

[\[Resource Information \]](#)

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Erythrorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	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
Poephila cincta cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Corchorus cunninghamii Native Jute [14659]	Endangered	Species or species habitat likely to occur within area
Cryptocarya foetida Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat may occur within area
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat likely to occur within area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Saiphos reticulatus 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		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may 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
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur 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 likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within

Name	Threatened	Type of Presence 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

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 likely 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
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species

Name	Threatened	Type of Presence
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		habitat may occur within area Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may 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
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
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
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

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
------	--------	------------------

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

Name	Status	Type of Presence
<p><i>Sus scrofa</i> Pig [6]</p>		<p>habitat likely to occur within area</p> <p>Species or species habitat likely to occur within area</p>
<p><i>Vulpes vulpes</i> Red Fox, Fox [18]</p>		<p>Species or species habitat likely to occur within area</p>
Plants		
<p><i>Alternanthera philoxeroides</i> Alligator Weed [11620]</p>		<p>Species or species habitat likely to occur within area</p>
<p><i>Annona glabra</i> Pond Apple, Pond-apple Tree, Alligator Apple, Bullock's Heart, Cherimoya, Monkey Apple, Bobwood, Corkwood [6311]</p>		<p>Species or species habitat may occur within area</p>
<p><i>Anredera cordifolia</i> Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]</p>		<p>Species or species habitat likely to occur within area</p>
<p><i>Asparagus aethiopicus</i> Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]</p> <p><i>Asparagus africanus</i> Climbing Asparagus, Climbing Asparagus Fern [66907]</p>		<p>Species or species habitat likely to occur within area</p> <p>Species or species habitat likely to occur within area</p>
<p><i>Cabomba caroliniana</i> Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]</p> <p><i>Chrysanthemoides monilifera</i> Bitou Bush, Boneseed [18983]</p>		<p>Species or species habitat likely to occur within area</p> <p>Species or species habitat may occur within area</p>
<p><i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i> Bitou Bush [16332]</p>		<p>Species or species habitat likely to occur within area</p>
<p><i>Cryptostegia grandiflora</i> Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]</p> <p><i>Dolichandra unguis-cati</i> Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]</p>		<p>Species or species habitat likely to occur within area</p> <p>Species or species habitat likely to occur within area</p>
<p><i>Eichhornia crassipes</i> Water Hyacinth, Water Orchid, Nile Lily [13466]</p>		<p>Species or species habitat likely to occur within area</p>
<p><i>Hymenachne amplexicaulis</i> Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]</p>		<p>Species or species habitat likely to occur within area</p>
<p><i>Lantana camara</i> Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]</p> <p><i>Opuntia</i> spp. Prickly Pears [82753]</p>		<p>Species or species habitat likely to occur within area</p> <p>Species or species habitat likely to occur within area</p>
<p><i>Parthenium hysterophorus</i> Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]</p>		<p>Species or species habitat likely to occur within area</p>

Name	Status	Type of Presence
Prosopis spp. Mesquite, Algaroba [68407]		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
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		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
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		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
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat likely to occur within area

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

-27.5091 153.13263

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

WILDNET ON-LINE REPORT



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point

Species: All

Type: All

Status: All

Records: All

Date: All

Latitude: -27.5091

Longitude: 153.1326

Distance: 2

Email: michele.d@lar.net.au

Date submitted: Wednesday 02 Aug 2017 13:16:16

Date extracted: Wednesday 02 Aug 2017 13:20:02

The number of records retrieved = 248

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 nasuta</i>	striped rocketfrog		C		1
animals	birds	Acanthizidae	<i>Smicronis brevirostris</i>	weebill		C		12
animals	birds	Acanthizidae	<i>Gerygone olivacea</i>	white-throated gerygone		C		8
animals	birds	Acanthizidae	<i>Sericornis frontalis</i>	white-browed scrubwren		C		1
animals	birds	Accipitridae	<i>Haliastur sphenurus</i>	whistling kite		C		1
animals	birds	Accipitridae	<i>Accipiter cirrocephalus</i>	collared sparrowhawk		C		7
animals	birds	Accipitridae	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle		C		1
animals	birds	Accipitridae	<i>Aviceda subcristata</i>	Pacific baza		C		3
animals	birds	Accipitridae	<i>Accipiter fasciatus</i>	brown goshawk		C		1
animals	birds	Accipitridae	<i>Pandion cristatus</i>	eastern osprey		SL		1
animals	birds	Accipitridae	<i>Elanus axillaris</i>	black-shouldered kite		C		4
animals	birds	Accipitridae	<i>Haliastur indus</i>	brahminy kite		C		1
animals	birds	Accipitridae	<i>Aquila audax</i>	wedge-tailed eagle		C		1
animals	birds	Acrocephalidae	<i>Acrocephalus australis</i>	Australian reed-warbler		C		6
animals	birds	Aegothelidae	<i>Aegotheles cristatus</i>	Australian owlet-nightjar		C		1
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		21
animals	birds	Anatidae	<i>Anas castanea</i>	chestnut teal		C		1
animals	birds	Anatidae	<i>Chenonetta jubata</i>	Australian wood duck		C		23
animals	birds	Anatidae	<i>Anas platyrhynchos</i>	northern mallard	Y			9
animals	birds	Anatidae	<i>Cygnus atratus</i>	black swan		C		3
animals	birds	Anhingidae	<i>Anhinga novaehollandiae</i>	Australasian darter		C		2
animals	birds	Anseranatidae	<i>Anseranas semipalmata</i>	magpie goose		C		2
animals	birds	Apodidae	<i>Hirundapus caudacutus</i>	white-throated needletail		SL		6
animals	birds	Ardeidae	<i>Ardea intermedia</i>	intermediate egret		C		4
animals	birds	Ardeidae	<i>Ixobrychus dubius</i>	Australian little bittern		C		1
animals	birds	Ardeidae	<i>Ardea alba modesta</i>	eastern great egret		C		2
animals	birds	Ardeidae	<i>Nycticorax caledonicus</i>	nankeen night-heron		C		2
animals	birds	Ardeidae	<i>Egretta novaehollandiae</i>	white-faced heron		C		12
animals	birds	Ardeidae	<i>Bubulcus ibis</i>	cattle egret		C		20
animals	birds	Ardeidae	<i>Ardea pacifica</i>	white-necked heron		C		1
animals	birds	Artamidae	<i>Cracticus tibicen</i>	Australian magpie		C		21
animals	birds	Artamidae	<i>Strepera graculina</i>	pieb currawong		C		1
animals	birds	Artamidae	<i>Cracticus nigrogularis</i>	pieb butcherbird		C		19
animals	birds	Artamidae	<i>Artamus leucorhynchus</i>	white-breasted woodswallow		C		6
animals	birds	Artamidae	<i>Artamus superciliosus</i>	white-browed woodswallow		C		1
animals	birds	Artamidae	<i>Cracticus torquatus</i>	grey butcherbird		C		18
animals	birds	Burhinidae	<i>Burhinus grallarius</i>	bush stone-curlew		C		1
animals	birds	Cacatuidae	<i>Eolophus roseicapilla</i>	galah		C		15
animals	birds	Cacatuidae	<i>Cacatua sanguinea</i>	little corella		C		2
animals	birds	Cacatuidae	<i>Cacatua sp.</i>					1
animals	birds	Cacatuidae	<i>Cacatua galerita</i>	sulphur-crested cockatoo		C		16
animals	birds	Campephagidae	<i>Lalage leucomela</i>	varied triller		C		1
animals	birds	Campephagidae	<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike		C		25
animals	birds	Campephagidae	<i>Coracina tenuirostris</i>	cidcabird		C		8
animals	birds	Charadriidae	<i>Vanellus miles</i>	masked lapwing		C		1
animals	birds	Charadriidae	<i>Vanellus miles novaehollandiae</i>	masked lapwing (southern subspecies)		C		10

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Charadriidae	<i>Elseyornis melanops</i>	black-fronted dotterel		C		2
animals	birds	Cisticolidae	<i>Cisticola exilis</i>	golden-headed cisticola		C		9
animals	birds	Climacteridae	<i>Cormobates leucophaea metastasis</i>	white-throated treecreeper (southern)		C		1
animals	birds	Columbidae	<i>Columba livia</i>	rock dove	Y			1
animals	birds	Columbidae	<i>Lopholaimus antarcticus</i>	topknot pigeon		C		1
animals	birds	Columbidae	<i>Streptopelia chinensis</i>	spotted dove	Y			22
animals	birds	Columbidae	<i>Geopelia humeralis</i>	bar-shouldered dove		C		14
animals	birds	Columbidae	<i>Ocyphaps lophotes</i>	crested pigeon		C		23
animals	birds	Columbidae	<i>Geopelia striata</i>	peaceful dove		C		13
animals	birds	Coraciidae	<i>Eurystomus orientalis</i>	dollarbird		C		13
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		28
animals	birds	Cuculidae	<i>Cacomantis variolosus</i>	brush cuckoo		C		9
animals	birds	Cuculidae	<i>Chalcites minutillus barnardi</i>	little bronze-cuckoo		C		8
animals	birds	Cuculidae	<i>Chalcites lucidus</i>	shining bronze-cuckoo		C		1
animals	birds	Cuculidae	<i>Eudynamys orientalis</i>	eastern koel		C		12
animals	birds	Cuculidae	<i>Cacomantis flabelliformis</i>	fan-tailed cuckoo		C		1
animals	birds	Cuculidae	<i>Scythrops novaehollandiae</i>	channel-billed cuckoo		C		10
animals	birds	Cuculidae	<i>Centropus phasianinus</i>	pheasant coucal		C		15
animals	birds	Cuculidae	<i>Cuculus optatus</i>	oriental cuckoo		SL		1
animals	birds	Cuculidae	<i>Chalcites basalus</i>	Horsfield's bronze-cuckoo		C		1
animals	birds	Dicruridae	<i>Dicrurus bracteatus</i>	spangled drongo		C		14
animals	birds	Estrildidae	<i>Lonchura punctulata</i>	nutmeg mannikin	Y			1
animals	birds	Estrildidae	<i>Taeniopygia bichenovii</i>	double-barred finch		C		13
animals	birds	Estrildidae	<i>Neochmia temporalis</i>	red-browed finch		C		1
animals	birds	Halcyonidae	<i>Dacelo novaeguineae</i>	laughing kookaburra		C		23
animals	birds	Halcyonidae	<i>Todiramphus sanctus</i>	sacred kingfisher		C		19
animals	birds	Halcyonidae	<i>Todiramphus macleayii</i>	forest kingfisher		C		1
animals	birds	Hirundinidae	<i>Hirundo neoxena</i>	welcome swallow		C		21
animals	birds	Hirundinidae	<i>Petrochelidon ariel</i>	fairy martin		C		1
animals	birds	Hirundinidae	<i>Petrochelidon nigricans</i>	tree martin		C		6
animals	birds	Jacanidae	<i>Irediparra gallinacea</i>	comb-crested jacana		C		4
animals	birds	Laridae	<i>Sternula albifrons</i>	little tern		SL		1
animals	birds	Maluridae	<i>Malurus cyaneus</i>	superb fairy-wren		C		1
animals	birds	Maluridae	<i>Malurus lamberti</i>	variegated fairy-wren		C		11
animals	birds	Maluridae	<i>Malurus melanocephalus</i>	red-backed fairy-wren		C		10
animals	birds	Megaluridae	<i>Megalurus timoriensis</i>	tawny grassbird		C		7
animals	birds	Megapodiidae	<i>Alectura lathamii</i>	Australian brush-turkey		C		1
animals	birds	Meliphagidae	<i>Caligavis chrysops</i>	yellow-faced honeyeater		C		23
animals	birds	Meliphagidae	<i>Plectorhyncha lanceolata</i>	striped honeyeater		C		6
animals	birds	Meliphagidae	<i>Melithreptus albogularis</i>	white-throated honeyeater		C		16
animals	birds	Meliphagidae	<i>Philemon citreogularis</i>	little friarbird		C		3
animals	birds	Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater		C		5
animals	birds	Meliphagidae	<i>Acanthorhynchus tenuirostris</i>	eastern spinebill		C		7
animals	birds	Meliphagidae	<i>Entomyzon cyanotis</i>	blue-faced honeyeater		C		5
animals	birds	Meliphagidae	<i>Anthochaera phrygia</i>	regent honeyeater		E	CE	1
animals	birds	Meliphagidae	<i>Lichmera indistincta</i>	brown honeyeater		C		8

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meliphagidae	<i>Philemon corniculatus</i>	noisy friarbird		C		14
animals	birds	Meliphagidae	<i>Ptilotula penicillata</i>	white-plumed honeyeater		C		1
animals	birds	Meliphagidae	<i>Manorina melanocephala</i>	noisy miner		C		25
animals	birds	Meliphagidae	<i>Myzomela sanguinolenta</i>	scarlet honeyeater		C		17
animals	birds	Meropidae	<i>Merops ornatus</i>	rainbow bee-eater		C		18
animals	birds	Monarchidae	<i>Monarcha melanopsis</i>	black-faced monarch		SL		4
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		23
animals	birds	Monarchidae	<i>Myiagra rubecula</i>	leaden flycatcher		C		5
animals	birds	Nectariniidae	<i>Dicaeum hirundinaceum</i>	mistletoebird		C		8
animals	birds	Neosittidae	<i>Daphoenositta chrysoptera</i>	varied sittella		C		2
animals	birds	Oriolidae	<i>Sphecotheres vieilloti</i>	Australasian figbird		C		12
animals	birds	Oriolidae	<i>Oriolus sagittatus</i>	olive-backed oriole		C		13
animals	birds	Pachycephalidae	<i>Pachycephala pectoralis</i>	golden whistler		C		14
animals	birds	Pachycephalidae	<i>Colluricincla megarhyncha</i>	little shrike-thrush		C		1
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		10
animals	birds	Pachycephalidae	<i>Colluricincla harmonica</i>	grey shrike-thrush		C		22
animals	birds	Pardalotidae	<i>Pardalotus striatus</i>	striated pardalote		C		20
animals	birds	Pardalotidae	<i>Pardalotus punctatus</i>	spotted pardalote		C		6
animals	birds	Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian pelican		C		6
animals	birds	Petroicidae	<i>Petroica rosea</i>	rose robin		C		9
animals	birds	Petroicidae	<i>Eopsaltria australis</i>	eastern yellow robin		C		2
animals	birds	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	great cormorant		C		7
animals	birds	Phalacrocoracidae	<i>Phalacrocorax varius</i>	ped cormorant		C		2
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		13
animals	birds	Phalacrocoracidae	<i>Phalacrocorax sulcirostris</i>	little black cormorant		C		16
animals	birds	Phasianidae	<i>Coturnix ypsilophora</i>	brown quail		C		1
animals	birds	Pittidae	<i>Pitta versicolor</i>	noisy pitta		C		1
animals	birds	Podargidae	<i>Podargus strigoides</i>	tawny frogmouth		C		6
animals	birds	Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian grebe		C		8
animals	birds	Psittacidae	<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet		C		4
animals	birds	Psittacidae	<i>Platycercus adscitus</i>	pale-headed rosella		C		18
animals	birds	Psittacidae	<i>Parvipsitta pusilla</i>	little lorikeet		C		4
animals	birds	Psittacidae	<i>Trichoglossus haematodus moluccanus</i>	rainbow lorikeet		C		25
animals	birds	Psophodidae	<i>Psophodes olivaceus</i>	eastern whipbird		C		2
animals	birds	Ptilonorhynchidae	<i>Sericulus chrysocephalus</i>	regent bowerbird		C		1
animals	birds	Rallidae	<i>Fulica atra</i>	Eurasian coot		C		1
animals	birds	Rallidae	<i>Gallinula tenebrosa</i>	dusky moorhen		C		23
animals	birds	Rallidae	<i>Porphyrio melanotus</i>	purple swamphen		C		23
animals	birds	Rallidae	<i>Amauornis moluccana</i>	pale-vented bush-hen		C		14
animals	birds	Rallidae	<i>Gallirallus philippensis</i>	buff-banded rail		C		1
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail		C		18
animals	birds	Rhipiduridae	<i>Rhipidura rufifrons</i>	rufous fantail		SL		3
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys</i>	willie wagtail		C		21
animals	birds	Scolopacidae	<i>Gallinago hardwickii</i>	Latham's snipe		SL		2
animals	birds	Strigidae	<i>Ninox strenua</i>	powerful owl		V		2
animals	birds	Strigidae	<i>Ninox boobook</i>	southern boobook		C		5

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Sturnidae	<i>Acridotheres tristis</i>	common myna	Y			7
animals	birds	Sturnidae	<i>Sturnus vulgaris</i>	common starling	Y			2
animals	birds	Threskiornithidae	<i>Threskiornis spinicollis</i>	straw-necked ibis			C	8
animals	birds	Threskiornithidae	<i>Plegadis falcinellus</i>	glossy ibis			SL	2
animals	birds	Threskiornithidae	<i>Threskiornis molucca</i>	Australian white ibis			C	17
animals	birds	Threskiornithidae	<i>Platalea regia</i>	royal spoonbill			C	3
animals	birds	Threskiornithidae	<i>Platalea flavipes</i>	yellow-billed spoonbill			C	1
animals	birds	Timaliidae	<i>Zosterops lateralis</i>	silveryeye			C	26
animals	mammals	Acrobatidae	<i>Acrobates pygmaeus</i>	feathertail glider			C	1/1
animals	mammals	Leporidae	<i>Lepus europaeus</i>	European brown hare	Y			3
animals	mammals	Petauridae	<i>Petaurus australis australis</i>	yellow-bellied glider (southern subspecies)			C	1/1
animals	mammals	Petauridae	<i>Petaurus norfolcensis</i>	squirrel glider			C	2
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala			V V	301
animals	mammals	Pseudocheiridae	<i>Pseudocheirus peregrinus</i>	common ringtail possum			C	1
animals	ray-finned fishes	Melanotaeniidae	<i>Rhadinocentrus ornatus</i>	ornate rainbowfish				1
animals	reptiles	Boidae	<i>Morelia spilota</i>	carpet python			C	2
animals	reptiles	Chelidae	<i>Emydura macquarii macquarii</i>	Murray turtle			C	1
animals	reptiles	Elapidae	<i>Demansia vestigiata</i>	lesser black whipsnake			C	1/1
animals	reptiles	Elapidae	<i>Cacophis harriettae</i>	white-crowned snake			C	1/1
animals	reptiles	Scincidae	<i>Carlia vivax</i>	tussock rainbow-skink			C	1
animals	reptiles	Scincidae	<i>Lampropholis delicata</i>	dark-flecked garden sunskink			C	1
animals	reptiles	Typhlopidae	<i>Anilius ligatus</i>	robust blind snake			C	1/1
fungi	sac fungi	Candelariaceae	<i>Candelaria concolor</i>				C	1/1
fungi	sac fungi	Cladiaceae	<i>Cladia muelleri</i>				C	1/1
fungi	sac fungi	Graphidaceae	<i>Dictyographa</i>				C	1/1
fungi	sac fungi	Graphidaceae	<i>Graphis</i>				C	1/1
fungi	sac fungi	Haematommaceae	<i>Haematomma persoonii</i>				C	2/2
fungi	sac fungi	Lecanoraceae	<i>Lecanora caesiorubella</i>				C	2/2
fungi	sac fungi	Lecanoraceae	<i>Lecanora argentata</i>				C	2/2
fungi	sac fungi	Lecideaceae	<i>Malcolmiella</i>				C	1/1
fungi	sac fungi	Micareaceae	<i>Micarea</i>				C	1/1
fungi	sac fungi	Mycocaliciaceae	<i>Stenocybe</i>				C	1/1
fungi	sac fungi	Parmeliaceae	<i>Bulbothrix tabacina</i>				C	1/1
fungi	sac fungi	Parmeliaceae	<i>Parmotrema</i>				C	1/1
fungi	sac fungi	Parmeliaceae	<i>Parmotrema crinitum</i>				C	1/1
fungi	sac fungi	Parmeliaceae	<i>Parmotrema tinctorum</i>				C	3/3
fungi	sac fungi	Parmeliaceae	<i>Austroparmelina conlabrosa</i>				C	1/1
fungi	sac fungi	Pertusariaceae	<i>Pertusaria elliptica</i> var. <i>elliptica</i>				C	1/1
fungi	sac fungi	Pertusariaceae	<i>Ochrolechia subpallescens</i>				C	1/1
fungi	sac fungi	Pertusariaceae	<i>Pertusaria</i>				C	1/1
fungi	sac fungi	Pertusariaceae	<i>Pertusaria pertusella</i>				C	1/1
fungi	sac fungi	Physciaceae	<i>Buellia</i>				C	1/1
fungi	sac fungi	Physciaceae	<i>Physcia</i>				C	1/1
fungi	sac fungi	Physciaceae	<i>Heterodermia</i>				C	1/1
fungi	sac fungi	Physciaceae	<i>Buellia dissa</i>				C	2/2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
fungi	sac fungi	Physciaceae	<i>Heterodermia speciosa</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Dirinaria confluens</i>			C		2/2
fungi	sac fungi	Physciaceae	<i>Dirinaria applanata</i>			C		9/9
fungi	sac fungi	Physciaceae	<i>Physcia minor</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Buellia dialyta</i>			C		1/1
fungi	sac fungi	Physciaceae	<i>Buellia curatellae</i>			C		2/2
fungi	sac fungi	Teloschistaceae	<i>Protoblastenia</i>			C		1/1
fungi	sac fungi	Trichotheliaceae	<i>Porina</i>			C		1/1
plants	ferns	Lindsaeaceae	<i>Lindsaea ensifolia subsp. agatii x L.microphylla</i>			C		1/1
plants	ferns	Lindsaeaceae	<i>Lindsaea</i>			C		1/1
plants	higher dicots	Apocynaceae	<i>Alyxia ruscifolia</i>			C		1/1
plants	higher dicots	Araliaceae	<i>Astrotricha umbrosa</i>			C		1/1
plants	higher dicots	Araliaceae	<i>Astrotricha longifolia</i>	star hair bush		C		1/1
plants	higher dicots	Bignoniaceae	<i>Pandorea floribunda</i>			C		1/1
plants	higher dicots	Celastraceae	<i>Denhamia silvestris</i>			C		1/1
plants	higher dicots	Celastraceae	<i>Denhamia celastroides</i>	broad-leaved boxwood		C		1/1
plants	higher dicots	Dilleniaceae	<i>Hibbertia diffusa</i>			C		2/2
plants	higher dicots	Elaeocarpaceae	<i>Elaeocarpus obovatus</i>	blueberry ash		C		1/1
plants	higher dicots	Euphorbiaceae	<i>Croton insularis</i>	Queensland cascarilla		C		2/2
plants	higher dicots	Fabaceae	<i>Pultenaea euchila</i>	orange pultenaea		C		1/1
plants	higher dicots	Fabaceae	<i>Indigofera australis subsp. australis</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Hovea acutifolia</i>			C		1/1
plants	higher dicots	Fabaceae	<i>Derris involuta</i>	native derris		C		1/1
plants	higher dicots	Goodeniaceae	<i>Dampiera sylvestris</i>	blue dampiera		C		1/1
plants	higher dicots	Gyrostemonaceae	<i>Codonocarpus attenuatus</i>			C		1/1
plants	higher dicots	Lamiaceae	<i>Westringia eremicola</i>	slender westringia		C		1/1
plants	higher dicots	Lamiaceae	<i>Clerodendrum tomentosum</i>			C		1/1
plants	higher dicots	Loranthaceae	<i>Dendrophthoe vitellina</i>	long-flowered mistletoe		C		1/1
plants	higher dicots	Loranthaceae	<i>Amyema congener subsp. congener</i>			C		1/1
plants	higher dicots	Mimosaceae	<i>Acacia juncifolia</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Sannantha collina</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Corymbia intermedia</i>	pink bloodwood		C		1/1
plants	higher dicots	Myrtaceae	<i>Rhodamnia rubescens</i>			C		1/1
plants	higher dicots	Myrtaceae	<i>Leptospermum polygalifolium</i>	tantoon		C		1/1
plants	higher dicots	Myrtaceae	<i>Eucalyptus seeana</i>	narrow-leaved red gum		C		1/1
plants	higher dicots	Passifloraceae	<i>Passiflora suberosa subsp. litoralis</i>		Y			1/1
plants	higher dicots	Rutaceae	<i>Acronychia pauciflora</i>	soft acronychia		C		1/1
plants	higher dicots	Rutaceae	<i>Acronychia imperforata</i>	beach acronychia		C		1/1
plants	higher dicots	Rutaceae	<i>Zieria furfuracea subsp. gymnocarpa</i>			E		20/20
plants	higher dicots	Rutaceae	<i>Pentaceras australe</i>	bastard crow's ash		C		1/1
plants	higher dicots	Sapindaceae	<i>Cupaniopsis parvifolia</i>	small-leaved tuckeroo		C		1/1
plants	higher dicots	Solanaceae	<i>Solanum stelligerum</i>	devil's needles		C		4/4
plants	higher dicots	Symplocaceae	<i>Symplocos harroldii</i>	hairy hazelwood			NT	1/1
plants	higher dicots	Verbenaceae	<i>Lantana montevidensis</i>	creeping lantana	Y			1/1
plants	lower dicots	Menispermaceae	<i>Stephania japonica var. discolor</i>			C		1/1
plants	lower dicots	Monimiaceae	<i>Wilkiea huegeliana</i>	veiny wilkiea		C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	monocots	Alismataceae	<i>Sagittaria platyphylla</i>	sagittaria	Y			1/1
plants	monocots	Araceae	<i>Gymnostachys anceps</i>	settler's flax		C		1/1
plants	monocots	Cyperaceae	<i>Fuirena ciliaris</i>			C		1/1
plants	monocots	Marantaceae	<i>Thalia geniculata</i>		Y			1/1
plants	monocots	Orchidaceae	<i>Spiranthes australis</i>					1/1
plants	monocots	Orchidaceae	<i>Microtis parviflora</i>	slender onion orchid		C		1/1
plants	monocots	Poaceae	<i>Digitaria parviflora</i>			C		1/1
plants	monocots	Poaceae	<i>Digitaria longiflora</i>			C		1/1
plants	monocots	Poaceae	<i>Cymbopogon refractus</i>	barbed-wire grass		C		2/2
plants	monocots	Poaceae	<i>Paspalidium distans</i>	shotgrass		C		1/1
plants	monocots	Poaceae	<i>Digitaria diminuta</i>			C		1/1
plants	monocots	Poaceae	<i>Panicum effusum</i>			C		1/1
plants	monocots	Poaceae	<i>Hordeum glaucum</i>		Y			1/1
plants	monocots	Poaceae	<i>Panicum simile</i>			C		1/1
plants	monocots	Poaceae	<i>Digitaria violascens</i>	bastard summergrass	Y			1/1
plants	monocots	Poaceae	<i>Paspalum scrobiculatum</i>	ditch millet		C		1/1
plants	monocots	Poaceae	<i>Aristida benthamii</i> var. <i>benthamii</i>			C		1/1
plants	monocots	Poaceae	<i>Eragrostis spartinoides</i>			C		1/1
plants	monocots	Poaceae	<i>Aristida queenslandica</i> var. <i>queenslandica</i>			C		2/2

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.

APPENDIX D

REGULATED VEGETATION REPORT



Vegetation management report

For Lot: 1 Plan: RP169229

Current as at 02/08/2017

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Overview

IMPORTANT INFORMATION- As a result of the new *Planning Act 2016*, which commenced on 3 July 2017, there are a number of changes to the Vegetation Management Framework. These changes include;

- Exemptions from the Vegetation Management Framework, commonly known as exemptions and detailed in the Sustainable Planning Regulations 2012, are now known as "exempt clearing works", and are detailed in the Planning Regulations Schedule 21; and
- Self-assessable vegetation clearing codes are now known as "accepted development vegetation clearing codes". However, as there are 15 self-assessable vegetation clearing codes available for use that will not be re-named as a result of the recent changes, the term self-assessable vegetation clearing code will be used throughout this report.

Vegetation clearing is predominantly regulated under the *Vegetation Management Act 1999* (VMA) and the *Planning Act 2016* (PA). A development permit is required to clear where the clearing is not exempt clearing work through the Planning Regulation 2017, or where it cannot be carried out under a self-assessable vegetation clearing code or an area management plan under the VMA.

Many routine vegetation management activities can be carried out as exempt clearing work listed in the Planning Regulation 2017, or through an self-assessable vegetation clearing code or an area management plan (AMP). Other activities may require you to apply for a development permit under the *Planning Act 2016*. The requirements for a development permit depend on the type of vegetation, the land tenure (e.g. freehold or leasehold land), the location, and the extent and purpose of the proposed clearing.

Please be aware that other requirements for clearing and managing vegetation may apply, even if the activity is not regulated by the Vegetation Management framework. Prior to commencing the clearing of vegetation, it is important to confirm that no other requirements apply under other legislation, including:

- Local laws in your local government area;
- Other State legislation, such as Protected Plants under the *Nature Conservation Act 1992* (NCA);
- The Commonwealth Government's *Environmental Protection and Biodiversity Act 1999* (EPBC).

Please see section 6 for contact details of other agencies you should confirm requirements with before commencing vegetation clearing.

Please note that the requirements for clearing Category C or Category R areas are located in the self-assessable vegetation clearing codes (SAVCC) for managing Category C and Category R vegetation respectively.

The information in this report will assist you to determine the options for managing vegetation on your property. Based on the lot on plan details you have supplied, this report provides the following detailed information:

- *Vegetation management framework* - an explanation of the options that may be available to manage vegetation on your property.
- *Property details* - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s), catchment(s), coastal or non coastal status, and any applicable area management plans associated with your property.
- *Vegetation management details for the specified Lot on Plan* - specific information about your property including vegetation categories, regional ecosystems, watercourses, wetlands, essential habitat, land suitability and protected plants.
- *Contact information*.
- *Maps* - a series of colour maps to assist in identifying regulated vegetation on your property including:
 - regulated vegetation management map;
 - vegetation management supporting map;
 - land suitability map;
 - coastal/non coastal map;
 - protected plants map.
- *Other legislation contact information*.

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1. Vegetation management framework

The *Vegetation Management Act 1999* (VMA), the Vegetation Management Regulation 2012, the *Planning Act 2016* and the Planning Regulation 2017, in conjunction with associated policies and codes, form the Vegetation Management Framework. This framework regulates the management and clearing of assessable vegetation in Queensland.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenure types as defined under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA.

Managing or clearing vegetation may require permits under these laws.

The information provided in Sections 2 and 3 of this report, as well as the maps provided in Section 5, will assist you to determine whether your proposed clearing is:

- exempt clearing works;
- requires notification and compliance with a self-assessable vegetation clearing code or area management plan;
- requires a development permit; and/or
- in a high risk area and is therefore subject to the protected plants legislative framework (see section 3.7 of this report).

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

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under the VM Regulation 2012; and
- a mangrove.

Although vegetation management laws may allow clearing, there may be other state, local or Commonwealth laws that apply, such as the Queensland Government's [Nature Conservation Act 1992](#) (see [Protected Plants](#)) and the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act regulates matters of national environmental significance, such as threatened species and ecological communities. You may need to obtain approval under the EPBC Act if your proposed clearing could have a significant impact on matters of national environmental significance. Further details are available at www.environment.gov.au.

1.1 Exempt Clearing Work

The vegetation management framework allows clearing for certain purposes without approval, known as an exempt clearing work. Exempt clearing work provisions under the *Planning Act 2016* were formerly called exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 5.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work, or exempt from the VMA. For all other land tenures, contact DNRM before commencing clearing to ensure that the proposed activity is exempt clearing work. Please see Section 4 for DNRM's contact details.

A range of routine property management activities are considered exempt clearing work. A list of these is available at <https://www.qld.gov.au/environment/land/vegetation/exemptions/>.

Although vegetation management laws may allow clearing as exempt clearing work, there may be other state, local or Commonwealth laws that apply. For example, a clearing permit under the *Nature Conservation Act 1992* may be required for clearing protected plants. These requirements apply irrespective of the classification of the vegetation under the vegetation management framework. In addition, clearing that is exempt clearing work may not apply in an area subject to a development permit, a covenant, an environmental offset, an Exchange Area, a Restoration Notice, or an area mapped as Category A. Landholders considering clearing in any of these areas should contact DNRM prior to clearing to clarify if any conditions apply in the area that affect the use of the provisions for exempt clearing work.

1.2 Self-assessable vegetation clearing codes

Some clearing activities can be undertaken using a self-assessable vegetation clearing code and notification process. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/vegetation/codes/>

If you intend to clear vegetation under a self-assessable vegetation clearing code, you must notify DNRM before commencing. The information in this report will assist you to complete the online notification form.

Please note that a self-assessable vegetation clearing code cannot be used in an area mapped as Category A.(see section 5.1)

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

1.3 Area management plans

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

If an area management plan applies to your property, it will be listed in Section 2.2 of this report.

To clear under an existing AMP, you must notify the DNRM before clearing starts and follow the conditions listed in the AMP. You can download the area management plan notification form and obtain a copy of the relevant AMP at

<https://www.qld.gov.au/environment/land/vegetation/area-plans/>

1.4 Development permits

If your proposed clearing is not exempt clearing work, or is not permitted under a self-assessable vegetation clearing code, or an AMP, you may be able to apply for a development permit. Information on how to apply for a development permit is available at

<https://www.qld.gov.au/environment/land/vegetation/applying/>

2. Property details

2.1 Tenure

All of the lot, plan and tenure information associated with property Lot: 1 Plan: RP169229 (Calculated area in Hectares - 501.32ha), including links to relevant Smart Maps, are listed in Table 1. The tenure of the property (whether it is freehold, leasehold, or other) may be viewed by clicking on the Smart Map link(s) provided.

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

Lot	Plan	Tenure	Link to property on SmartMap
1	RP169229	Freehold	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=1\RP169229
B	RP170328	Easement	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=B\RP170328
P	SP163158	Easement	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=P\SP163158
G	SP242313	Easement	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=G\SP242313
A	RP171885	Easement	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=A\RP171885
F	SP242313	Easement	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=F\SP242313
E	SP242313	Easement	http://globe.information.qld.gov.au/cgi-bin/SmartMapgen.py?q=E\SP242313

The tenure of the land may affect whether the clearing is considered exempt clearing work.

Some self-assessable vegetation clearing codes apply only to freehold and leasehold land granted for grazing and agricultural purposes.

2.2 Property location

Table 2 provides a summary of the locations for property Lot: 1 Plan: RP169229, in relation to natural and administrative boundaries.

Table 2: Property location

Local Government(s)
Brisbane City

Bioregion(s)	Subregion(s)
Southeast Queensland	Burringbar - Conondale Ranges

Catchment(s)
Logan-Albert
Brisbane

For the purposes of the Self-assessable vegetation clearing codes and the State Development Assessment Provisions (SDAP), this property is regarded as *
Coastal

*See also Map 5.4

Area Management Plan(s): Nil

3. Vegetation management details for Lot: 1 Plan: RP169229

3.1 Vegetation categories

Vegetation categories are shown on the regulated vegetation management map in section 5.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

Table 3: Vegetation categories for subject property

Vegetation category
Category B
Category X
Category Water

Table 4

Category	Colour on Map	Description	Requirements
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	There may be special conditions that apply in a Category A area. Before clearing, contact DNRM to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Clearing may be considered exempt clearing work, or can be undertaken after notifying under a self-assessable vegetation clearing code or an Area Management Plan, or may require a Development Permit.
C	light blue	High-value regrowth areas	Clearing may be considered exempt clearing work, or can be undertaken after notifying under the self-assessable vegetation clearing code for Managing Category C Regrowth vegetation.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the priority reef catchment areas	Clearing may be considered exempt clearing work, or can be undertaken after notifying under the self-assessable vegetation clearing code for Managing Category R Regrowth vegetation.
X	white	Clearing is considered accepted development on freehold land, indigenous land and leasehold land for agriculture and grazing purposes. Contact DNRM to clarify whether a development permit is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A Development Permit may be required for some State land tenures.

3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 5.2 and are listed in Table 5.

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

Table 5: Regional ecosystems present on subject property

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description
12.11.3	Least concern	B	2.11	Eucalyptus siderophloia, E. propinqua +/- E. microcorys, Lophostemon confertus, Corymbia intermedia, E. acmenoides open forest on metamorphics +/- interbedded volcanics
12.11.5	Least concern	B	322.51	Corymbia citriodora subsp. variegata, Eucalyptus siderophloia, E. major open forest on metamorphics +/- interbedded volcanics
12.3.11	Of concern	B	23.07	Eucalyptus tereticornis +/- Eucalyptus siderophloia, Corymbia intermedia open forest on alluvial plains usually near coast
non-rem	None	X	152.55	None
water	None	Water	1.48	None

Please note:

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

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

- exempt clearing work
- self assessable vegetation clearing codes
- performance outcomes in State Development Assessment Provisions (SDAP).

Some clearing purposes are limited to a particular group of regional ecosystems (e.g. encroachment) and some self-assessable vegetation clearing codes allow clearing only in certain regional ecosystems.

3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 5.2.

3.4 Wetlands

There are no vegetation management wetlands present on this property.

3.5 Essential habitat

Protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA), and includes endangered or vulnerable wildlife.

Essential habitat identifies areas in which species of wildlife that are Endangered or Vulnerable under the *Nature Conservation Act 1992* for which suitable habitat occurs on the lot, or where they have been known to occur up to 1.1

kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 5.2.

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

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

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

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

3.5.1 Category A and/or Category B

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

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
29186	<i>Phascolarctos cinereus</i> (southeast Queensland bioregion)	Koala	V	Open eucalypt forest and woodland that has: a) multiple strata layers containing <i>Eucalyptus</i> , <i>Corymbia</i> , <i>Angophora</i> , <i>Lophostemon</i> or <i>Melaleuca</i> trees that-at 1.3 metres above the ground-have a diameter both greater and less than 30 centimetres; and b) at least 1 of the following species: <i>Eucalyptus tereticornis</i> , <i>E. fibrosa</i> , <i>E. propinqua</i> ; <i>E. umbra</i> , <i>E. grandis</i> , <i>E. microcorys</i> , <i>E. tindaliae</i> , <i>E. resinifera</i> , <i>E. populnea</i> , <i>E. robusta</i> , <i>E. nigra</i> , <i>E. racemosa</i> , <i>E. crebra</i> , <i>E. exserta</i> , <i>E. seeana</i> , <i>Lophostemon confertus</i> , <i>L. suaveolens</i> , <i>Melaleuca quinquenervia</i> .	Sea level to 1000m.	no soil information	None
3235	<i>Zieria furfuracea</i> subsp. <i>gymnocarpa</i>	None	E	open forest of <i>Lophostemon confertus</i> , <i>Eucalyptus crebra</i> , <i>Eucalyptus carnea</i> , <i>Acacia disparrima</i> , or <i>Eucalyptus propinqua</i> , <i>E. microcorys</i> , <i>Corymbia intermedia</i> , or <i>Eucalyptus propinqua</i> , <i>E. crebra</i> , <i>E. umbra</i> , <i>Corymbia intermedia</i> , or <i>Eucalyptus acmenoides</i> , <i>E. drepanophylla</i> , <i>E. propinqua</i> , <i>E. microcorys</i> ; open eucalypt forest with occasional rainforest elements; woodland of <i>Eucalyptus crebra</i> , <i>Acacia disparrima</i> and <i>Mallotus philippensis</i>	0 to 200 m	no soil information	gully or hill slope

Label	Regional Ecosystem (mandatory unless otherwise specified)
29186	12.3.3, 12.3.4, 12.3.6, 12.3.7, 12.3.10, 12.3.11, 12.5.2, 12.5.3, 12.8.14, 12.9-10.4, 12.9-10.7, 12.9-10.17, 12.11.5, 12.11.18, 12.12.12
3235	12.11.5

3.5.2 Category C

Table 7: Essential habitat in Category C

No records

3.6 Land suitability

Land suitability mapping and information is required if you are applying to clear vegetation for high-value or irrigated high-value agriculture. Land suitability assessment addresses the capacity of land to sustain specific land uses such as cropping, irrigated agriculture and forestry.

A land suitability map for this property is provided in section 5.3. The map provides detailed land suitability, agricultural land classification, or soil and land resource mapping data where it is available.

The land suitability project that applies to this property is shown in Table 8 and Table 9.

Table 8: Land suitability project details for this property

Project name	Project code	Start date	Scale
Soil Landscapes of Brisbane and South East Environs (ZAA)	ZAA	1987-01-01 00:00:00	100000

Table 9: Available land suitability project reports for this property

Project name	Availability of report
Soil Landscapes of Brisbane and South East Environs (ZAA)	CSIRO report. Available at www.publications.qld.gov.au

3.7 Protected plants (administered by the Department of Environment and Heritage Protection (DEHP))

In Queensland, all plants that are native to Australia are protected plants under the *Nature Conservation Act 1992* (NCA), with clearing of protected plants in the wild regulated by the [Nature Conservation \(Wildlife Management\) Regulation 2006](#). These requirements apply irrespective of the classification of the vegetation under the *Vegetation Management Act 1999*.

Prior to clearing, if the plants proposed to be cleared are in the wild (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) and the exemptions under the [Nature Conservation \(Wildlife Management\) Regulation 2006](#) are not applicable to the proposed clearing, you must check the flora survey trigger map to determine if any part of the area to be cleared is within a high risk area. The trigger map for this property is provided in section 5.5. The exemptions relate to:

- imminent risk of death or serious injury (refer s261A)
- imminent risk of serious damage to a building or other structure on land, or to personal property (refer s261B)
- *Fire and Emergency Service Act 1990* (refer 261C)
- previously cleared areas (refer s261ZB)
- maintenance activities (refer s261ZC)
- firebreak or fire management line (refer s261ZD)
- self-assessable vegetation clearing code (refer s261ZE)
- conservation purposes (refer s261ZG)
- authorised in particular circumstances (refer s385).

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

If the proposed area to be cleared is shown as blue (i.e. high risk) on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken in accordance with the flora survey guidelines. The main objective of a flora survey is to locate any endangered, vulnerable or near threatened plants (EVNT plants) that may be present in the clearing impact area.

If a flora survey identifies that EVNT plants are not present within the clearing impact area or clearing within 100m of EVNT plants can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to

the Department of Environment and Heritage Protection, with a copy of the flora survey report, at least one week prior to clearing. The clearing must be conducted within two years after the flora survey report was submitted.

If a flora survey identifies that EVNT plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [application form clearing permit](#).

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

Further information on protected plants is available at

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/>

For assistance on the protected plants flora survey trigger map for this property, please contact the Department of Environment and Heritage Protection at palm@ehp.qld.gov.au.

3.8 Emissions Reduction Fund (ERF)

The ERF is an Australian Government scheme which offers incentives for businesses and communities across the economy to reduce emissions.

Under the ERF, farmers can earn money from activities such as planting (and keeping) trees, managing regrowth vegetation and adopting more sustainable agricultural practices.

The purpose of a project is to remove greenhouse gases from the atmosphere. Each project will provide new economic opportunities for farmers, forest growers and land managers.

Further information on ERF is available at <https://www.qld.gov.au/environment/land/state/use/carbon-rights/>.

4. Contact information for DNRM

For further information on vegetation management:

Phone 135VEG (135 834)

Email vegetation@dnrm.qld.gov.au

Visit www.dnrm.qld.gov.au/our-department/contact-us/vegetation-contacts to submit an online enquiry.

For contact details for other State and Commonwealth agencies, please see the "Other relevant legislation contacts list" in Section 6.

5. Maps

The maps included in this report may also be requested individually at:

<https://www.dnrm.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

and

<http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/map-request.php>

Regulated vegetation management map

The regulated vegetation management map shows vegetation categories to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

Vegetation management supporting map

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

Land suitability map

The land suitability map assists with identifying the land suitability category under the high value and irrigated high value agriculture vegetation clearing purpose.

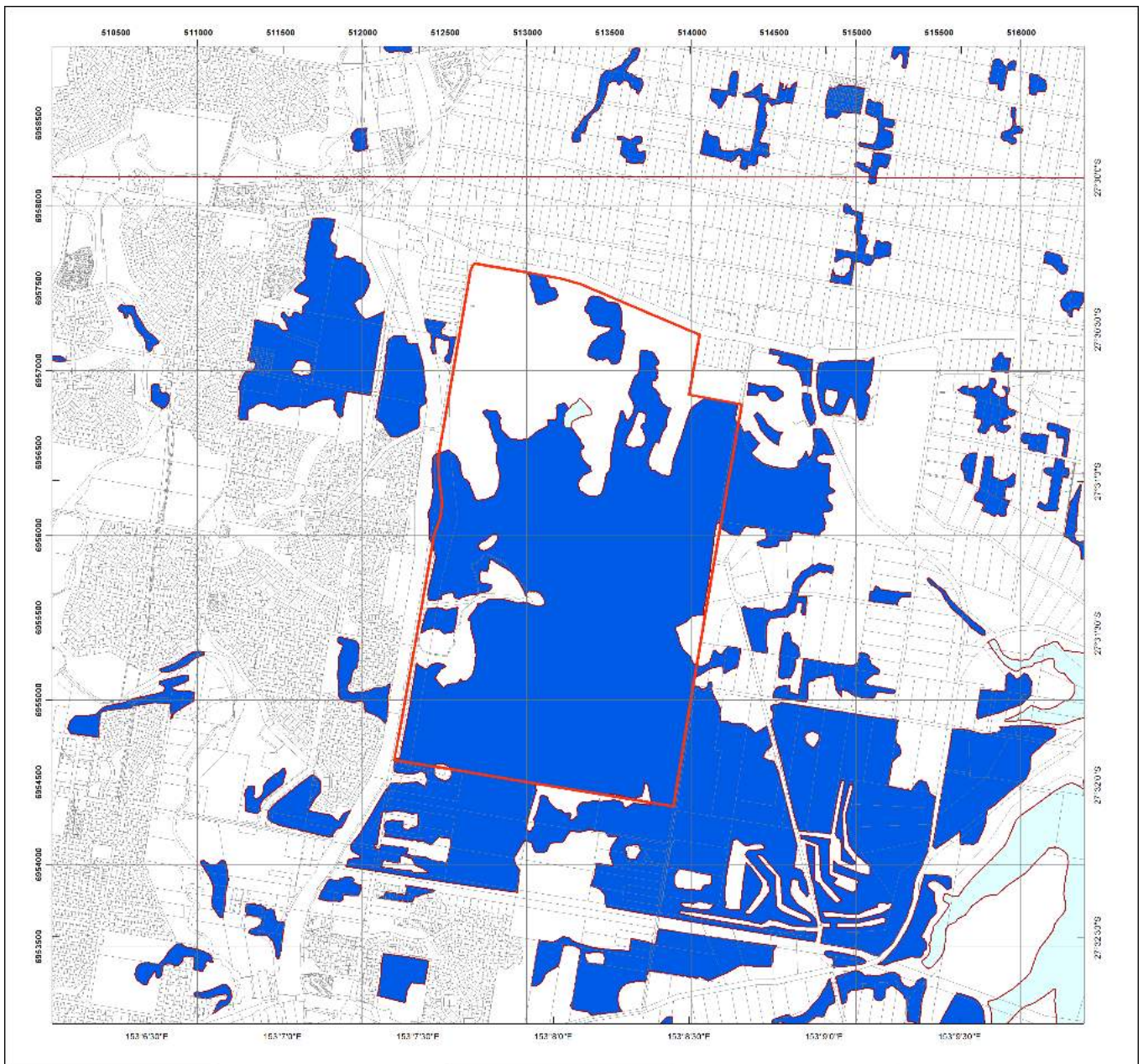
Coastal/non coastal map

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

Protected plants map

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

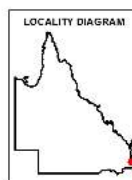
5.1 Regulated vegetation management map



Regulated Vegetation Management Map

Legend

- Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Area not categorised
- Cadastral line
- Property boundaries shown are provided as a locational aid only



This product is projected into:
GDA 1994 MGA Zone 56

Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Natural Resources and Mines makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

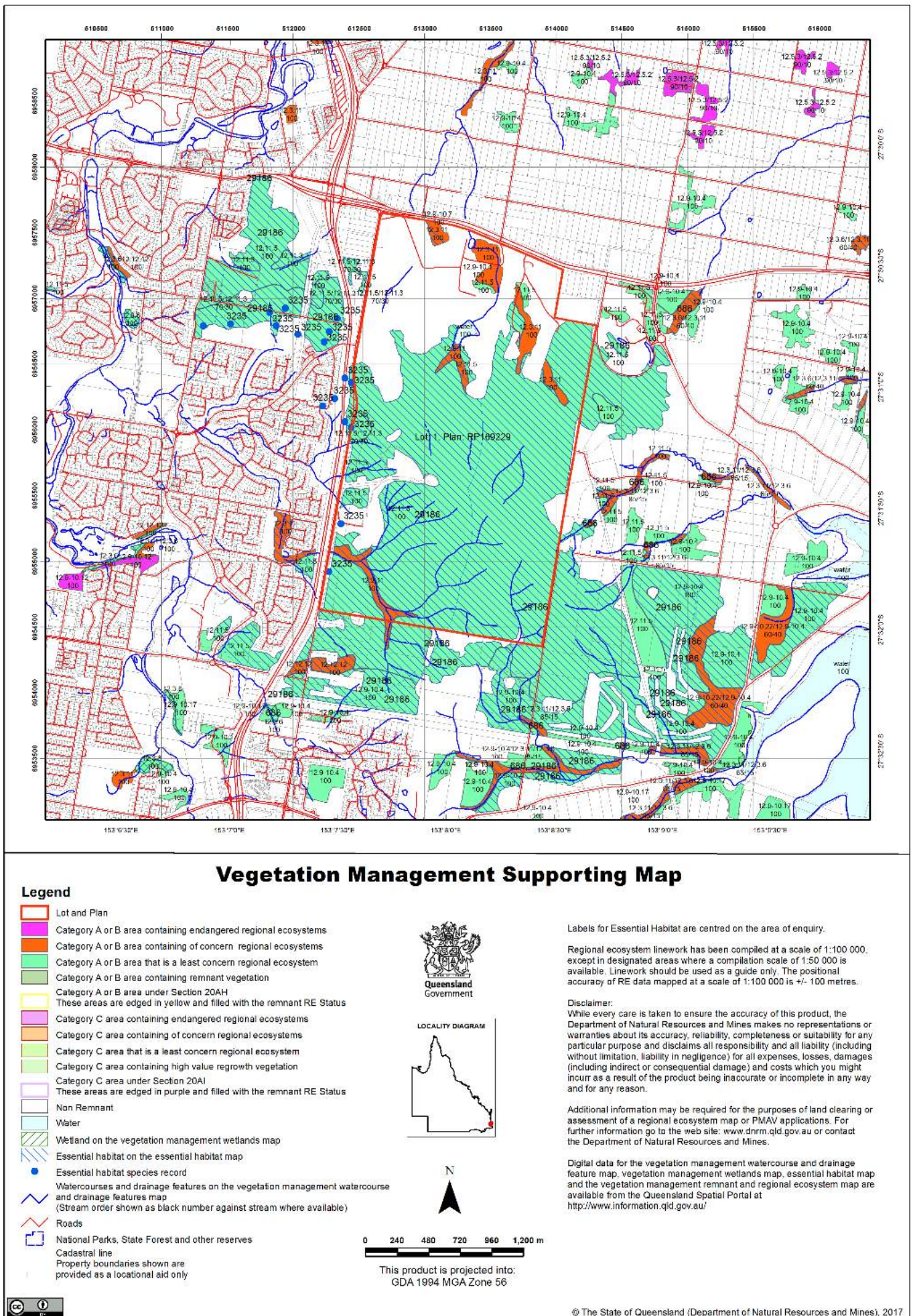
Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: www.dnrm.qld.gov.au or contact the Department of Natural Resources and Mines.

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

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



5.2 Vegetation management supporting map








5.3 Land suitability map



Land Suitability Overview Map

Legend

-  Lot and Plan
-  Cadastral Boundaries
-  Land suitability mapping 1:100,000 scale or better (Category 2 or 3*)
-  Land suitability mapping greater than 1:100,000 scale (Category 4)
-  No mapping available (Category 4)

* Category 3 applies to applications where there is some land resource mapping or information available however it either does not cover the entire area, or the land suitability mapping and information does not identify the land as suitable for the proposed crop and management systems.

Disclaimer

All persons and organisations by using this map take all responsibility for assessing the relevance and accuracy of the map contents for their purpose and accept all risks associated with its use. The State of Queensland (as represented by the Department of Natural Resources and Mines) makes no representations or warranties in relation to the map contents, and, to the extent permitted by law, excludes or limits all warranties relating to correctness, accuracy, reliability, completeness or currency and all disclaims all liability for any direct, indirect and consequential costs, losses, damages and expenses incurred in any way (including but not limited to that arising from negligence) in connection with any use of or reliance on the map contents.



0 240 480 720 960 1,200 m

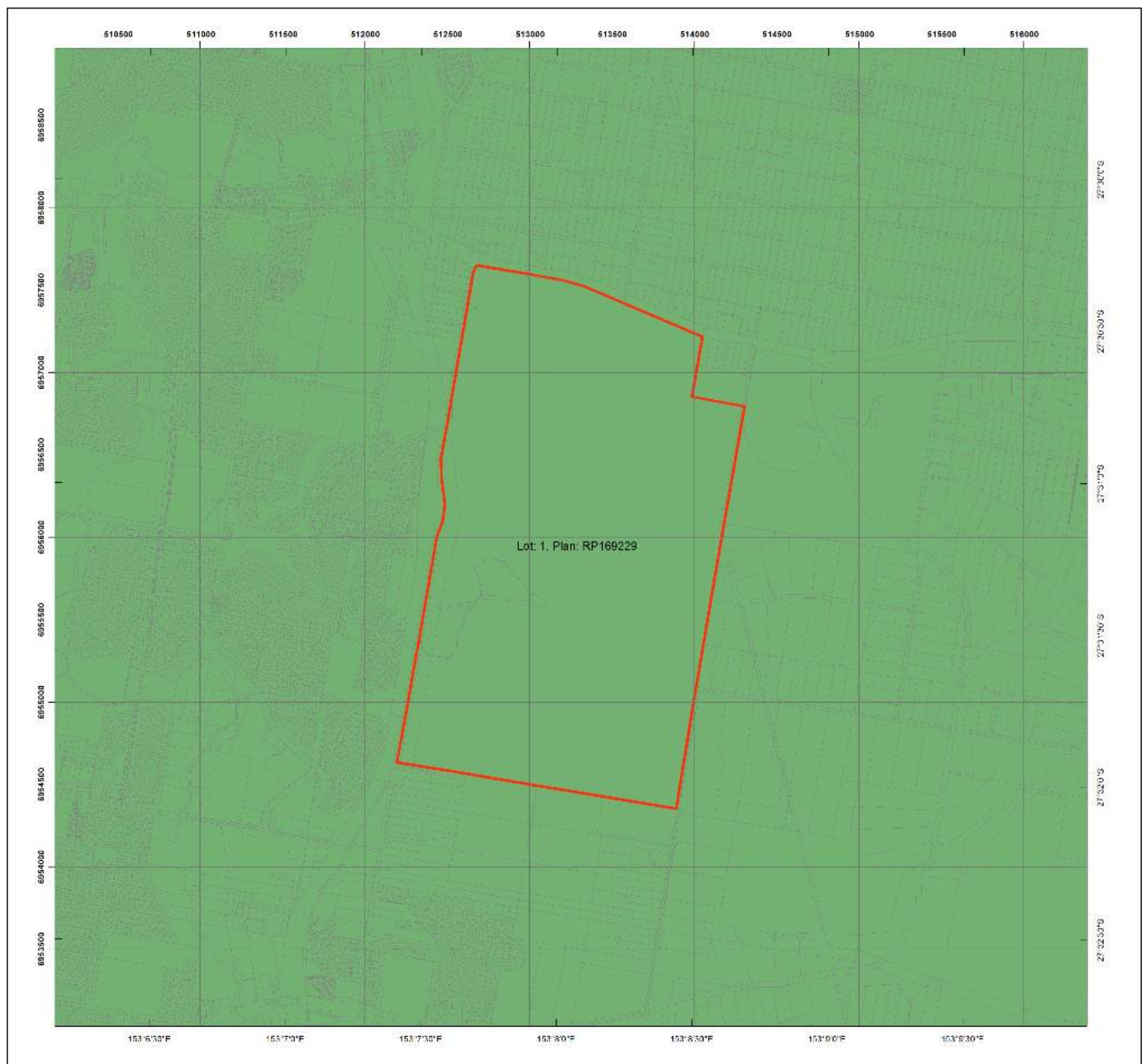
This product is projected into:
GDA 1994 MGA Zone 56

Important information

The Land Suitability Overview Map assists with identifying the Land Suitability category under the high value and irrigated high value agriculture vegetation clearing purpose. This map provides detailed land suitability, agricultural land classification, or soil and land resource mapping data where it is available on the selected lots. Where no data is available, the maps will be blank, with no mapping visible.

Further information on these categories is available in the Guideline for applying to clear for high-value or irrigated high-value agriculture (www.dnrm.qld.gov.au).

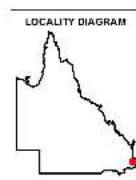
5.4 Coastal/non coastal map



Coastal/Non Coastal Map

Legend

- Lot and Plan
- Coastal
- Non Coastal
- Cadastral line
- Property boundaries shown are provided as a locational aid only



This product is projected into:
GDA 1994 MGA Zone 58



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5.5 Protected plants map administered by DEHP



Protected Plants Flora Survey Trigger Map

Legend

- Lot and Plan
- High risk area
- Cadastral line
Property boundaries shown are provided as a locational aid only
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:
GDA 1994 MGA Zone 56

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

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Heritage Protection at palm@ehp.qld.gov.au

Disclaimer:
While every care is taken to ensure the accuracy of the data used to generate this product, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damages) and costs which might be incurred as a consequence of reliance on the data, or as a result of the data being inaccurate or incomplete in any way and for any reason.

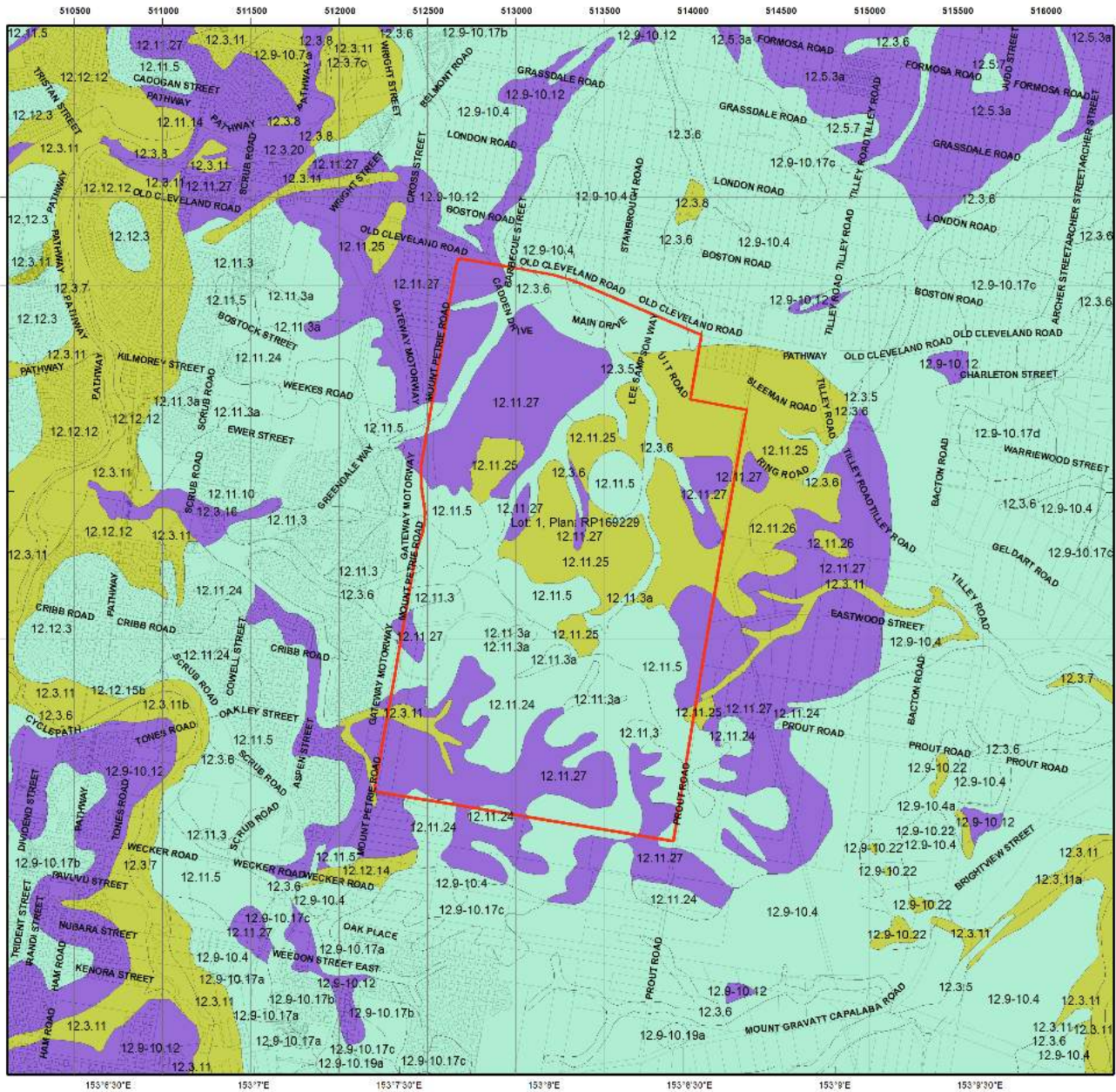
6. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
Interference with overland flow Earthworks, significant disturbance	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Natural Resources and Mines (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dnrm.qld.gov.au
Indigenous Cultural Heritage	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (Queensland Government)	Ph: 13 QGOV (13 74 68) www.datsip.qld.gov.au
Mining and environmentally relevant activities Infrastructure development (coastal) Heritage issues Protected plants and protected areas ¹	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i> <i>Nature Conservation Act 1992</i>	Department of Environment and Heritage Protection (Queensland Government)	Ph: 13 QGOV (13 74 68) www.ehp.qld.gov.au
Interference with fish passage in a watercourse, mangroves Forestry activities	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i> ²	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) www.daf.qld.gov.au
Matters of National Environmental Significance including listed threatened species and ecological communities	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of the Environment (Australian Government)	Ph: 1800 803 772 www.environment.gov.au
Development and planning processes	<i>Planning Act 2016</i>	Department of Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dilgp.qld.gov.au
State Development	<i>State Development and Public Works Organisation Act 1971</i>	Department of State Development (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dsd.qld.gov.au
Local government requirements	<i>Local Government Act 2009</i>	Local government	Contact your relevant local government office

1. In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#), which endeavours to ensure that protected plants (whether whole plants or protected plants parts) are not illegally removed from the wild, or illegally traded. Prior to clearing, you should check the flora survey trigger map to determine if the clearing is within a high-risk area by visiting www.ehp.qld.gov.au. For further information or assistance on the protected plants flora survey trigger map for your property, please contact the Department of Environment and Heritage Protection on 13QGOV (13 74 68) or email palm@ehp.qld.gov.au.

2. Contact the Department of Agriculture and Fisheries before clearing:

- Any sandalwood on state-owned land (including leasehold land)
- On freehold land in a 'forest consent area'
- More than five hectares on state-owned land (including leasehold land) containing commercial timber species listed in parts 2 or 3 of Schedule 6 of the Vegetation Management Regulation 2012 and located within any of the following local government management areas-Banana, Bundaberg Regional, Fraser Coast Regional, Gladstone Regional, Isaac Regional, North Burnett Regional, Somerset Regional, South Burnett Regional, Southern Downs Regional, Tablelands Regional, Toowoomba Regional, Western Downs Regional.



Pre-clearing Regional Ecosystems

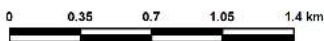
Biodiversity Status

- Lot and Plan
- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Water
- Cadastral Boundaries

LOCALITY DIAGRAM



N

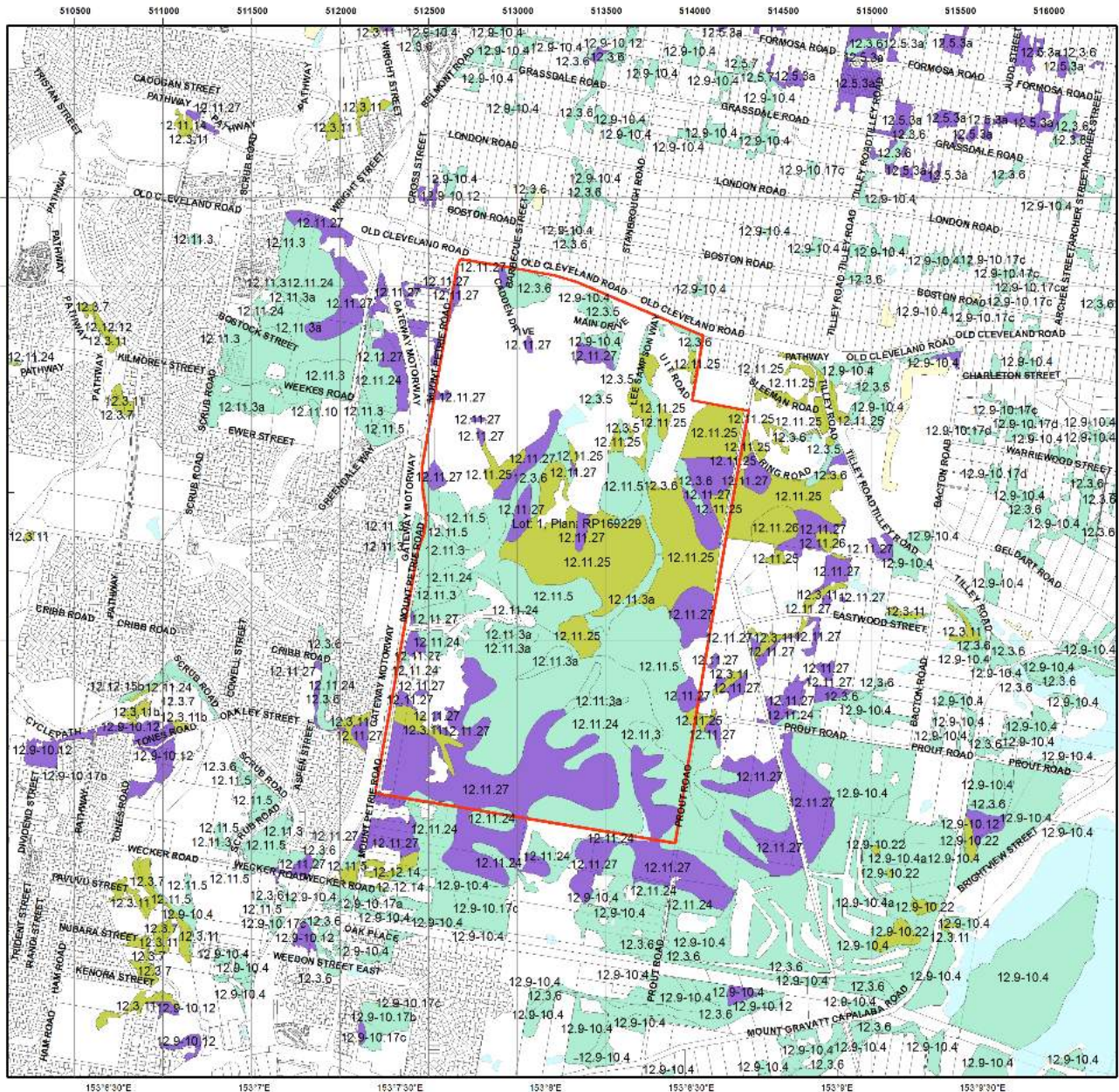


This product is projected into GDA 1994 MGA Zone 56

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 6 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species, e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.



Remnant 2015 Regional Ecosystems

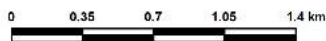
Biodiversity Status

- Lot and Plan
- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water
- Cadastral Boundaries

LOCALITY DIAGRAM



N



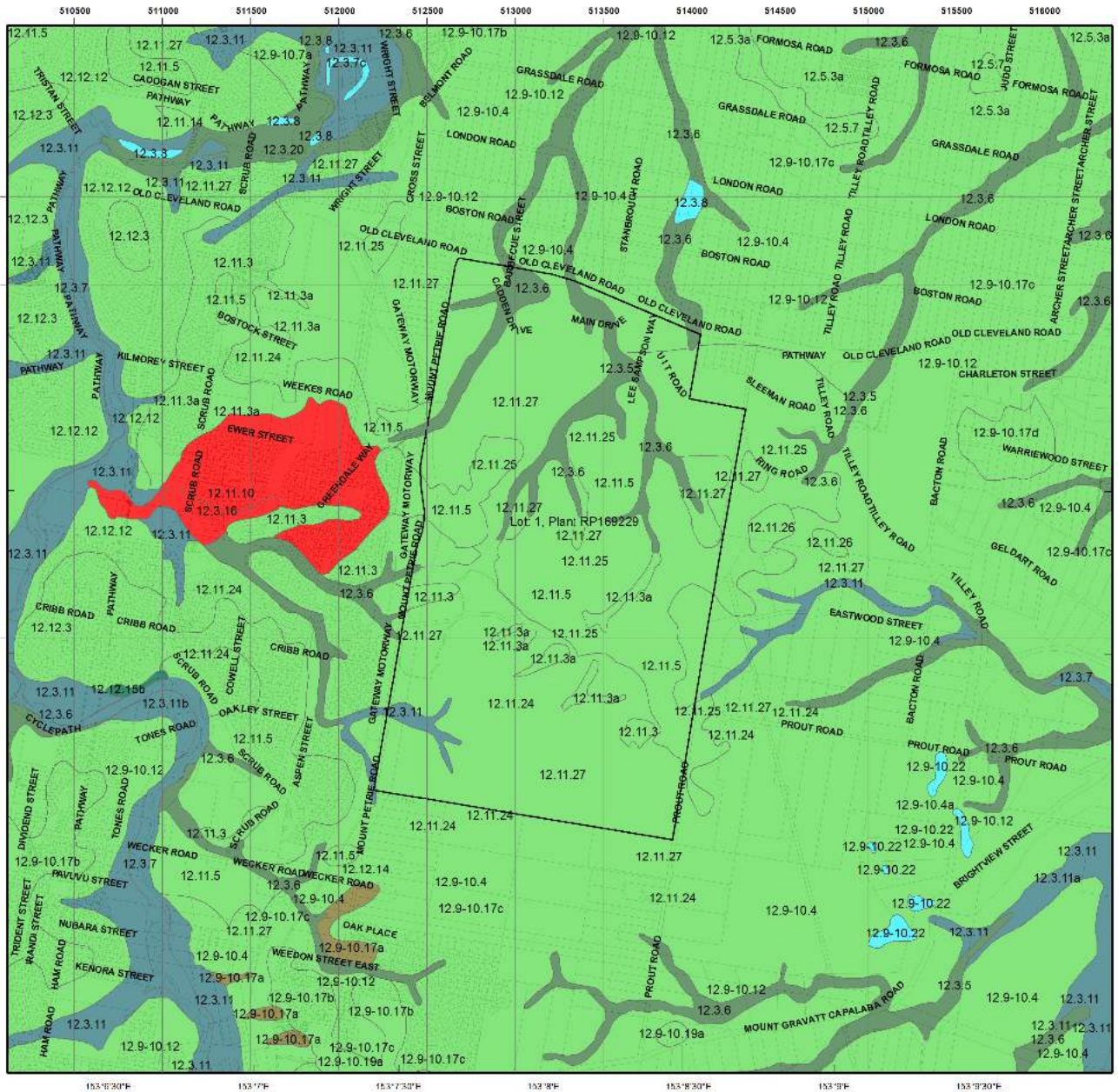
This product is projected into GDA 1994 MGA Zone 56

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community - the dominant canopy species, e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

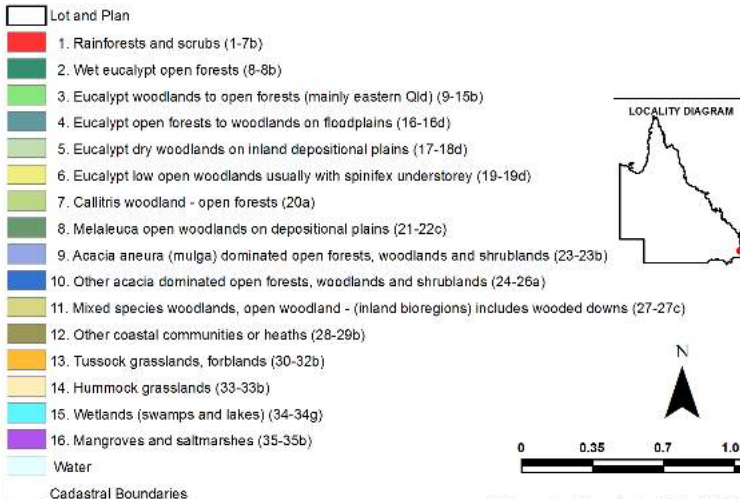
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.



Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups BVG5M Description (BVG1M codes)

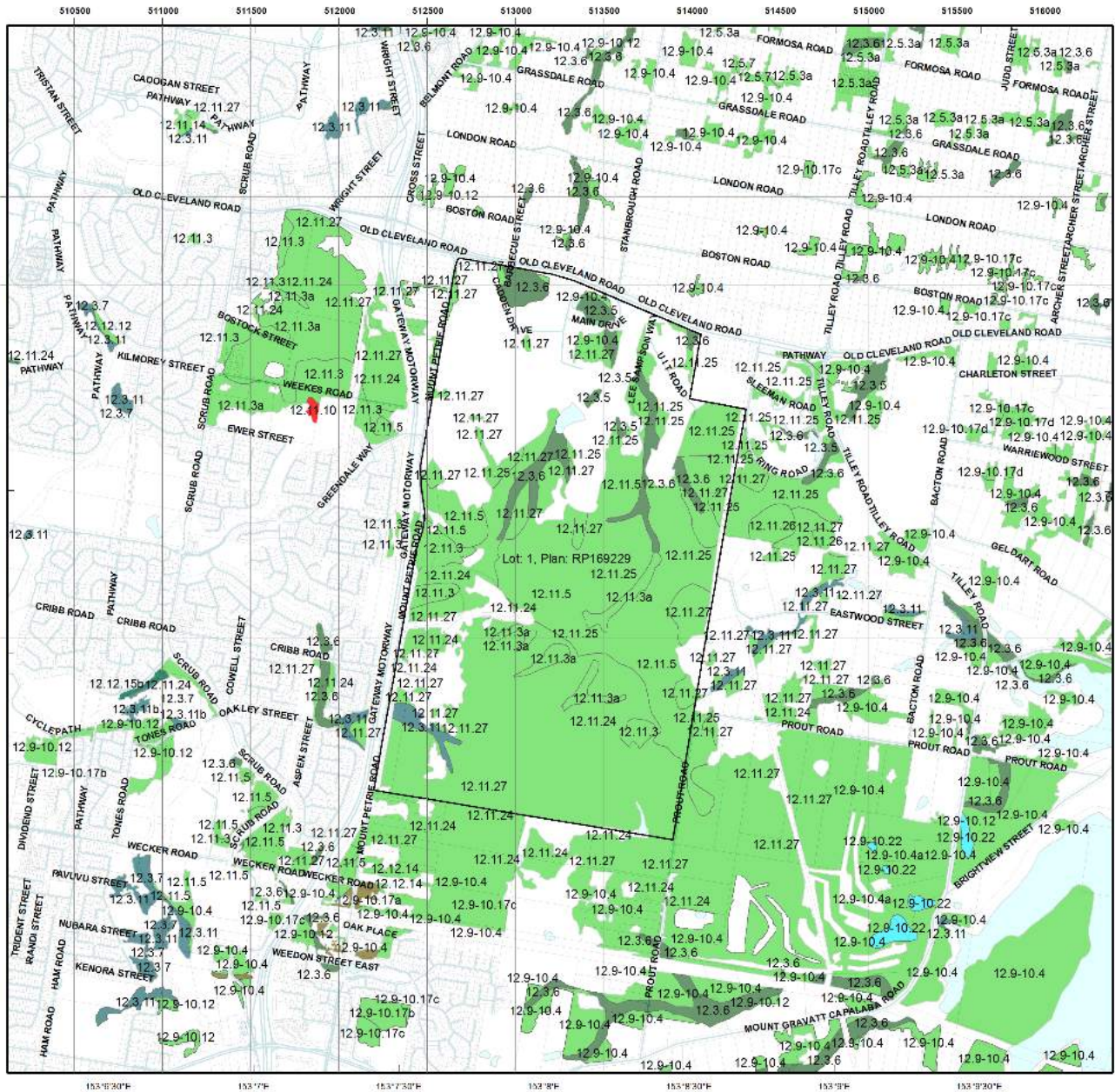


Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

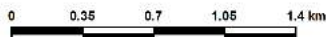
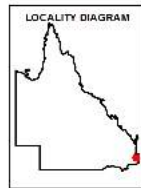
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.



Remnant 2015 Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups BVG5M Description (BVG1M codes)

- Lot and Plan
- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 MGA Zone 56

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community - the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.

APPENDIX E

MICHELE DEVEZE CV

Michele Deveze

Senior Ecologist

Bachelor of Science Botany – 2000

Associate Diploma of Applied Science (Forestry) – 1986

Michele is an environmental scientist with over twenty-five years' experience in ecological assessment and research including five years in consulting. Specific expertise includes, regional ecosystem mapping; vegetation, habitat and soil assessment; plant species identification; local, Queensland and federal environmental legislation; monitoring and evaluation (strategies and on ground); environmental offsets; and research design and implementation. Michele also has experience in project management, team management, leading field teams, and mentoring graduates and students.

PROFESSIONAL EXPERTISE

Environmental Surveys and Reporting
Ecological Assessments
Vegetation Management Reports (VMR)
Flora and habitat studies
Vegetation Management Plans (VMP)
Environmental Management Plans (EMP)

Ecological Rehabilitation Plans
Threatened Species Management Plans (SMP)
Environmental policy and legislative frameworks
Biocondition Assessment
Assessment of remnant vegetation and re-mapping
Environmental Offset planning

EXPERIENCE

Michele's relevant experience includes the following:

Senior Ecologist – Lambert & Rehbein

- **Belmont Shooting Complex - Department of State Development, for the Commonwealth Games 2018:**
 - Ecology Survey (fauna, flora, habitat and vegetation):
 - proposed location of a new clay target shooting area
 - proposed location of a new 25 metre target shooting range
 - Protected Plant Survey:
 - proposed location of a new clay target shooting area
 - proposed location of a new 25 metre target shooting range
 - Survey and preparation of a Koala tree Offset Plan.
- **Chandler Velodrome - Department of State Development, for the Commonwealth Games 2018:**
 - Ecology Survey (fauna, flora, habitat and vegetation);
 - Protected Plant Survey; and
 - Survey and preparation of a Koala Tree Offset Plan.

- **Department of Housing and Public Works proposed construction of a dwelling at 9 Billabong Way, Tewantin, Noosa Shire:**
 - Bushfire Hazard Assessment and Bushfire Management Plan.
- **21 Lot subdivision in Calamvale:**
 - Survey and preparation of Ecological Assessment.
- **4 lot subdivision in The Gap:**
 - Preparation of Bushfire Hazard Assessment and Bushfire Management Plan;
 - Survey and preparation of Rehabilitation Plan.
- **60 Lot subdivision in Kenmore:**
 - Research and prepare Bushfire Hazard Assessment and Bushfire Management Plan.

Senior Ecologist – Wesfarmers-Greencap/Environment and Licensing Professionals

- **Adani Australia Pty Ltd – Carmichael Coal Project:**
 - Extensive risk assessed targeted random traverse survey for weeds and pest animals;
 - Preparation of site specific Pest Management Plans and Fire Management Plans:
- **Wesfarmers – Curragh Mine:**
 - Biocondition Assessment of Brigalow retention, revegetation and management areas;
- **Cuesta Coal Pty Ltd – Morelands Project:**
 - Baseline, desktop and field surveys for flora, fauna, regional ecosystems, biodiversity, environmental condition and ecosystem structure and function;
 - Prepare survey reports, EIS chapters, EPBC Referral, Regional Ecosystem amendment application, Pest and Weed Management Plan;
- **Belridge Enterprises Pty Ltd/Goondicum Resources Pty/Ltd – Goondicum Ilmenite Project:**
 - Baseline desktop and field surveys for flora, fauna, regional ecosystems, biodiversity, environmental condition and offset liability, and ecosystem structure and function;
 - Prepare survey reports, EPBC referral, Environmental Authority amendment applications, Final Landuse Rehabilitation Plan; review Surface and Groundwater Monitoring Program;
- **Queensland Industrial Minerals Pty Ltd – Wateranga Project:**
 - Baseline desktop and field surveys for flora, fauna, regional ecosystems, biodiversity, environmental condition, and ecosystem structure and function;
 - Prepare survey reports, Environmental Management Plan chapters, assessment of offset liability;
- **U & D Mining Industry (Australia) Pty Ltd – Meteor Downs South Project:**
 - Production of a Species Management Program for EPBC conservation significant species;

Queensland Government

Senior Botanist –Queensland Herbarium:

- Map Regional Ecosystems using remote sensing techniques, and ground truth mapped Regional Ecosystems and Wetlands;

- Plant and Regional ecosystem identification;

Vegetation Management Officer:

- Ground truth Regional Ecosystems and prepare map amendment applications;
- Prepare and distribute a Field Guide to structural plant species for Regional Ecosystems in South East Queensland;

Forest Environmental Officer:

- Conduct field surveys and prepare a proposal to designate a part of Allies Creek State Forest as a Scientific Area to protect an undescribed Eucalypt and a relict heath vegetation community;
- Interpret and apply Forest Environmental Management protocols including Regional Ecosystem identification, and Endangered, Vulnerable and Near Threatened (EVNT) plant identification;

Rural Lands Protection Extension Officer:

- Identify pest plant specimens.



APPENDIX F

FIELD SURVEY PLANT SPECIES DATA

Scientific Name	Common Name	Exotic	Form	Comments	Pest Status Qld	Pest Status WoNS	BCC
<i>Acacia disparrima</i>	Hickory Wattle		shrub				
<i>Acacia fimbriata</i>	Brisbane Wattle		shrub	planted?			
<i>Acmena smithii</i>	Lilly Pilly		tree	planted			
<i>Ageratina riparia*</i>	Mistflower	*	herb		Invasive		
<i>Ageratum houstonianum*</i>	Billy goat weed	*	herb				SIL
<i>Allocasuarina littoralis</i>	Black She Oak		shrub	planted			
<i>Alphitonia excelsa</i>	Pink Ash		tree				
<i>Angophora leiocarpa</i>	Smooth barked apple		tree				
<i>Aristida sp.</i>			grass				
<i>Babingtonia virgata</i>	Heath Myrtle			planted?			
<i>Boronia rosmarinifolia</i>	Forest Boronia		shrub				
<i>Buckinghamia celsissima</i>	Ivory Curl Flower		tree	planted?			
<i>Capillipedium sp.</i>	Scented Grass						
<i>Casuarina glauca</i>	Swamp She Oak		tree	planted			
<i>Celtis sinensis*</i>	Chinese Celtis	*	tree		Restricted Invasive 3		Class R
<i>Chloris virgata*</i>	Feather Finger Grass	*	grass				
<i>Cinnamomum camphora*</i>	Camphor Laurel	*	tree		Restricted Invasive 3		
<i>Cirsium vulgare*</i>	Spear Thistle	*	herb				SIL
<i>Citharexylum spinosum *</i>	Fiddlewood	*					
<i>Corymbia intermedia</i>	Pink Bloodwood		tree	planted			

Scientific Name	Common Name	Exotic	Form	Comments	Pest Status Qld	Pest Status WoNS	BCC
<i>Corymbia torelliana</i> ¹	Cadaghi		tree	planted			Class R
<i>Corymbia trachyphloia</i>	Brown Bloodwood						
<i>Crotalaria medicaginea</i>	Trefoil Rattlepod		herb				
<i>Cymbopogon refractus</i>	Barbed Wire Grass		grass				
<i>Cynodon dactylon</i> *	Couch Grass	*	grass				
<i>Dichordia repens</i>	Kidney Weed						
<i>Dietes</i> sp.			lily	planted			
<i>Dodonaea viscosa</i>	Hop Bush		shrub				
<i>Duranta repens</i> *	Duranta	*			Invasive		
<i>Eucalyptus acmenoides</i>	White Mahogany						
<i>Eucalyptus curtisii</i>	Plunkett Mallee		tree	planted?			
<i>Eucalyptus fibrosa</i>	Broad-Leaved Red Ironbark		tree				
<i>Eucalyptus microcorys</i>	Tallowood		tree				
<i>Eucalyptus propinqua</i>	Grey Gum		tree				
<i>Eucalyptus racemosa</i>	Scribbly Gum		tree				
<i>Eucalyptus siderophloia</i>	Grey Ironbark		tree				
<i>Eucalyptus tereticornis</i>	Forest Red Gum		tree				
<i>Ficus macrophylla</i>	Moreton Bay Fig						
<i>Gahnia sieberiana</i>	Red Fruited Saw Sedge						
<i>Glochidion ferdinandi</i>	Cheese Tree		tree				
<i>Gnaphalium</i> sp.	Cudweed		herb				

¹ Off-site native invasive

Scientific Name	Common Name	Exotic	Form	Comments	Pest Status Qld	Pest Status WoNS	BCC
<i>Gomphocarpus physocarpus</i> *	Balloon Cotton Bush	*	herb				
<i>Gompholobium pinnatum</i>	Wedge Pea		shrub				
<i>Goodenia rotundifolia</i>			scrambler				
<i>Grevillea banksii</i>			shrub	planted			
<i>Grevillea robusta</i>	Silky Oak			planted			
<i>Hibbertia stricta</i>			vine				
<i>Hibiscus splendens</i>			shrub				
<i>Ipomoea cairica</i> *	Mile a Minute	*	vine		Invasive		Class R
<i>Lantana camara</i> *	Lantana	*	shrub		Restricted Invasive 3	WoNS	Class R
<i>Leptospermum petersonii</i>	Lemon Scented Ti-Tree		shrub	planted?			
<i>Leucopogon juniperinus</i>	Prickly Heath		shrub				
<i>Lobelia purpurascens</i>	Whiteroot		herb				
<i>Lomandra sp.</i>	Lomandra		grass				
<i>Lophostemon confertus</i>	Brush Box		tree	planted			
<i>Lophostemon suaveolens</i>	Swamp Box		tree				
<i>Melaleuca leucadendra</i>	Weeping Paperbark		tree	planted?			
<i>Melaleuca nodosa</i>	Prickly-Leaved Paperbark	*					
<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark		tree				
<i>Melaleuca salicina</i> syn <i>Callistemon salignus</i>	White Bottlebrush			planted?			

Scientific Name	Common Name	Exotic	Form	Comments	Pest Status Qld	Pest Status WoNS	BCC
<i>Melaleuca viminalis</i> syn. <i>Callistemon viminalis</i>	Weeping Red Bottlebrush		shrub	planted?			
<i>Melinis repens</i> *	Red natal grass	*					Class R
<i>Musa</i> sp.*	Banana	*					
<i>Nerium oleander</i> *	Oleander	*					Class R
<i>Ottochloa gracillima</i>	Graceful Grass						
<i>Panicum decompositum</i>	Native Millet						
<i>Panicum maximum</i> *	Green Panic Grass	*	grass				
<i>Parsonsia straminea</i>	Monkey Rope		vine				
<i>Paspalum mandiocanum</i> *	Broad-Leaved Paspalum	*	grass		Invasive		
<i>Passiflora suberosa</i> *	Corky Passionflower	*	vine		Invasive		
<i>Philodendron</i> sp.*		*	herb				
<i>Phytolacca octandra</i> *	Inkweed	*	herb				
<i>Pinus</i> sp.*		*	tree				Class R
<i>Poa labillardieri</i>	Tussock Grass		grass				
<i>Ptilothrix deusta</i>	Feather Sedge		grass				
<i>Ricinus communis</i> *	Castor oil plant	*			Invasive		Class R
<i>Sansevieria trifasciata</i> *	Mother In Laws Tongue	*			Invasive		Class R
<i>Schoenus melanostachys</i>			grass				
<i>Setaria</i> sp.*		*	grass				
<i>Sida cordifolia</i> *	Flannel Weed	*	small shrub				
<i>Solanum americanum</i> *	Black Nightshade	*	herb				Class R

Scientific Name	Common Name	Exotic	Form	Comments	Pest Status Qld	Pest Status WoNS	BCC
<i>Solanum mauritianum</i> *	Wild Tobacco	*	shrub		Invasive		Class R
<i>Solanum torvum</i> *	Devils Fig	*	shrub				Class R
<i>Soliva sessilis</i> *	Bindi-eye	*	herb				SIL
<i>Sphagneticola trilobata</i> *	Singapore Daisy	*	herb		Restricted Invasive 3		Class R
<i>Stachytarpheta</i> sp.*	Snakeweed	*	herb		Invasive		SIL
<i>Syagrus romanzoffiana</i> *	Cocos Palm	*	palm		Invasive		Class R
<i>Syzygium australe</i>	Brush Cherry		tree	planted			
<i>Syzygium luehmannii</i>	Riberry, Small Leaved Lilly Pilly		tree	planted			
<i>Tecoma stans</i> *	Tecoma	*	shrub		Restricted Invasive 3		Class R
<i>Themeda australis</i>	Kangaroo Grass		grass				
<i>Xanthorrhoea</i> sp.	Grass tree			planted?			
<i>Xanthostemon chrysanthus</i>	Golden Penda		tree	planted			