Ecology Assessment Report ☒
Pre-clearance Survey Report ☐

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Lot no.	6RP176819
Property name	Allwood PJ & RM (Dunbar)
Disturbance Tracker no.	1024
Origin/Australia Pacific LNG document no.	Q-4500-15-RP-1049
Contractor internal reference no. (if applicable)	41/24732/28/44289
Submitted by (full name of author)	Jessica Newton (Author) Sarah Cross (Job Manager)
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Rev. 0 approved by (name and title)	Signature
Trent Williams - Environmental Approvals Manager	

Origin Energy

Australia Pacific LNG Upstream Phase 1

Ecology Assessment for Lot 6 on RP176819

July 2013

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1. Introduction

This report provides a description of the ecological values found within Lot 6 on RP176819 (the Site) located at Miles, Queensland. The results are based on an initial desktop review followed by an ecological field survey to confirm the vegetation communities, flora and fauna species, habitat values and areas of disturbance within the Site.

The field survey and this report have been completed by Nick Willis (Senior Flora Ecologist, GHD) and Vince Toohey (Fauna Ecologist, GHD). The field survey team lead (Nick Willis) was approved to undertake ecological surveys by Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) in writing on 15/03/2012.

1.1 Scope of works

The purpose of this report is to identify any ecological constraints to development, prior to the design and eventual construction of infrastructure at the Site. This is a requirement under the approval conditions of the Australia Pacific LNG Upstream Phase 1 Project (referred to herein as the Project). This process follows the consistent theme of demonstrating to the Commonwealth Government how impacts to ecological values on Site have been avoided, minimised and mitigated. Specifically, this report addresses the following items:

- Overview of Site context, including climate, geology and land use;
- Identification and description (including mapping) of matters of national environmental significance (MNES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that occur or are of relevance to the Site;
- Identification and description (including mapping) of records of, or potential habitat for, threatened flora and fauna under the Queensland *Nature Conservation Act 1992* (NC Act) and the EPBC Act;
- Identification and description (including mapping) of regional ecosystems (REs) or high value regrowth (HVR) occurring across the Site;
- Identification and description (including mapping) of any category A, B or C environmentally sensitive areas (ESAs) identified on Site; and
- Identification and description (including mapping) of any pest species (i.e. weeds or feral animals) identified on Site.

This report has been prepared based on a comprehensive review of existing available desktop information and field data collected during field work.

1.2 Limitations

This report has been prepared by GHD for Origin Energy and may only be used and relied on by Origin Energy for the purpose agreed between GHD and the Origin Energy as set out in Section 1.1 of this report. GHD otherwise disclaims responsibility to any person other than Origin Energy arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible. The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (including assuming information obtained by GHD from outside sources was correct at the time of issue). GHD disclaims liability arising from any of the assumptions being incorrect.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points. Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.

Site conditions may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

Where any gaps exist, extrapolation of data from surrounding areas and professional judgement will inform the reporting process. Where gaps remain, these will be presented within the report as desktop information only and not as field-verified data.

2. Site

The Site surveyed is held under freehold tenure (refer to Figure 1). The Site is located in the Surat Basin in south-east Queensland, approximately four kilometres north-east of the township of Miles in the Western Downs Regional Council local government area. The Site covers approximately 40 hectares (ha) and is located within the Brigalow Belt (South) Bioregion.

2.1 Bioregion

The Brigalow Belt bioregion occurs over 364,000 km^2 of central Queensland, from Townsville in the north to Narrabri, south of the Queensland-New South Wales border (Sattler and Williams, 1999). The bioregion is named after the once vast brigalow (*Acacia harpophylla*) forests and woodlands that occurred throughout the region (Sattler and Williams, 1999). In addition to remnant brigalow vegetation, other characteristic vegetation of the bioregion includes eucalypt forests and woodlands, grasslands, dry rainforest, cypress pine woodland, semi-evergreen vine thicket and riparian communities (Sattler and Williams, 1999).

Historically, brigalow forests and woodland covered up to six million hectares of the bioregion. However, extensive broadscale clearing, predominantly for agricultural use, has greatly reduced these brigalow communities (Sattler and Williams, 1999).

The Brigalow Belt was divided into two regions, the Brigalow Belt North and Brigalow Belt South, during the development of the Interim Biogeographic Regionalisation of Australia. The Brigalow Belt has been further subdivided into subregions, 27 of which occur in the Brigalow Belt South bioregion.

The geology of the Brigalow Belt South consists predominantly of Jurassic and younger deposits of the great artesian basin and tertiary deposits with elevated basalt flows. The climate of the area is sub-humid (Queensland Water Commission, 2012).

2.2 Land use

The dominant land use in the Surat Basin is agriculture, including broad-acre and horticultural cropping, grazing and lot feeding (Queensland Water Commission, 2012). Other land uses in the region include rural residential, urban, industrial, coal seam gas and conventional petroleum and gas extraction, mining (dominantly coal) and conservation (national parks and State forests) (Queensland Water Commission, 2012).

The predominant land use specific to the Site is a rural lifestyle property.

2.3 Soils and geology

The Site is located in the Surat Basin which extends over 180,000 km^2 in southeast Queensland, continuing southwards to the Coonamble Embayment in New South Wales. It overlies the Bowen Basin and is overlain by younger unconsolidated sediments, alluvium and basalts. The sedimentary units of the Surat Basin interfinger with those of the Clarence-Moreton Basin across the Kumbarilla Ridge to the east. To the west, they interfinger with those of the Eromanga Basin across the Nebine Ridge (Queensland Water Commission, 2012).

The geology of the Site is underlain by the Kumbarilla beds and consists of Jurassic-Cretaceous sandstone, siltstone, mudstone and conglomerate. A small portion adjacent to the southern Site boundary is mapped as old alluvial clay plains and rises (DEHP, 2012a).

Land zones are a simplified geology/substrate-landform classifications used in Queensland, primarily as part of the Regional Ecosystem (RE) framework. Two land zones occur on the Site including land zone four (Tertiary - early Quaternary clay plains) and land zone seven (exposed or shallow covered duricrusts). See Appendix A for a full description of these land zones.

2.4 Climate

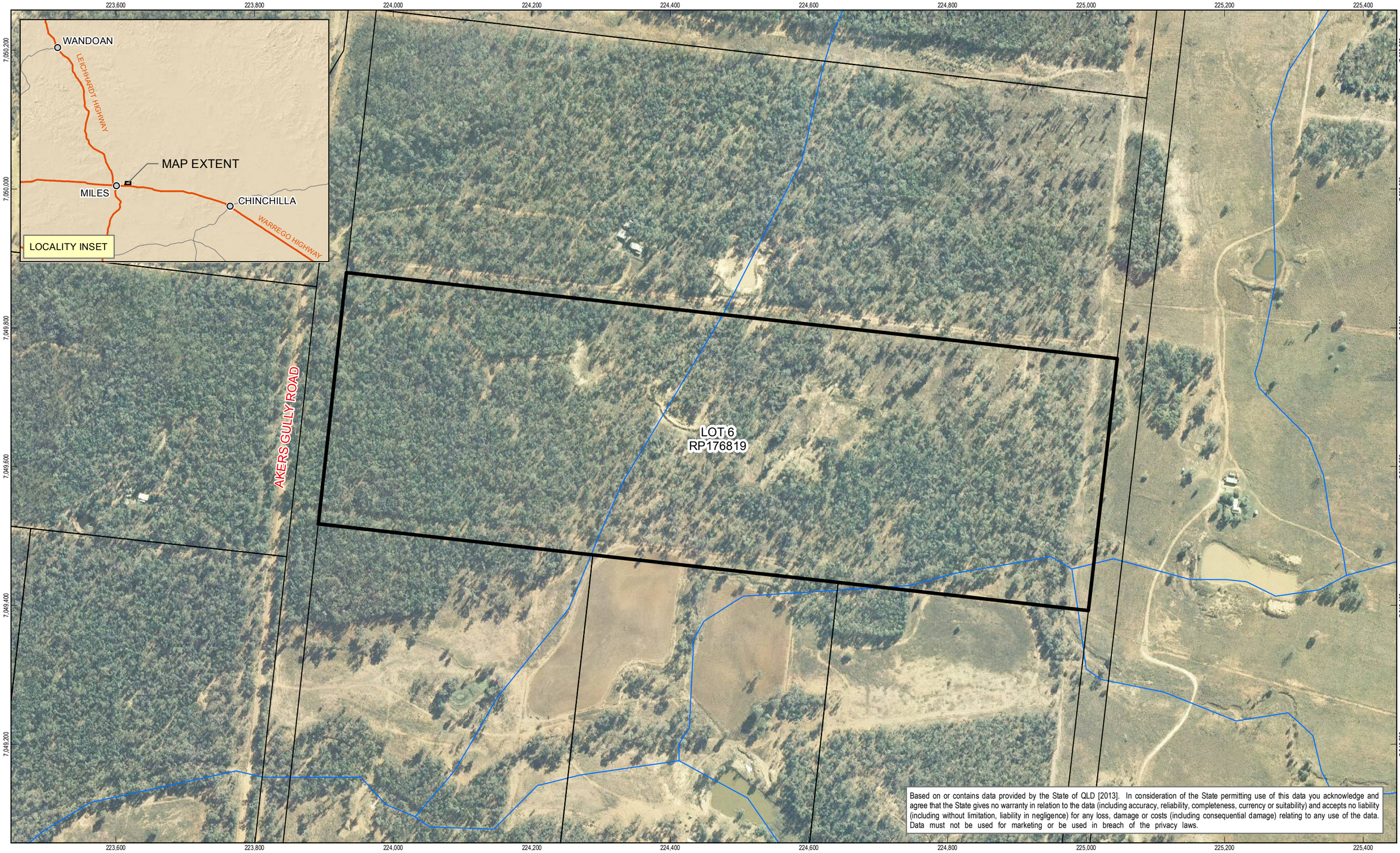
The climate of the region can be characterised as sub-tropical and is typical of south-east Queensland.

The closest Bureau of Meteorology (BoM) weather station is located at the Miles post office (Station number 042023), approximately 6 km south west of the Site. The mean long-term (1981 – 2010) maximum temperature recorded at this station is 27.4^{o}C and the mean annual minimum temperature is 12.7^{o}C (BoM, 2012).

Mean annual rainfall (1981 – 2010) is 640.2 mm with approximately 41% of the annual rainfall occurring in the summer months of December, January and February (BoM, 2012).

2.5 Site description

The Site covers an area of approximately 40 ha and is bordered by Akers Gully Road to the west and the APLNG gas pipeline easement to the east. Rural allotments border the Site to the north and south. The Site is currently used as a rural lifestyle property and is dominated by remnant vegetation with a small amount of regrowth vegetation and some cleared land.



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LEGEND

Watercourse
Cadastre
Property Site

Origin Energy
Terrestrial Ecology Assessment

Job Number	41-24732
Revision	0
Date	12 Jul 2013

Property (Lot 6 RP176819)

Figure 1

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3. Methodology

The methodology employed in the compilation of this survey consisted of the following:

- A desktop and literature review of ecological databases and literature sources as direct references for the survey undertaken; and
- A field survey of the Site.

An explanation of these activities is outlined in the following sections.

3.1 Desktop review

Sources used to obtain information for the desktop and literature review are as follows:

- *Environmental Protection Biodiversity and Conservation Act 1999* (EPBC) Protected Matters Search Tool;
- Department of Environment and Heritage Protection Wildlife (DEHP) Online Database;
- Regional Ecosystem data, version 6.1;
- DEHP Regrowth Vegetation data, version 2.1;
- DEHP Essential Habitat data, version 3.1;
- DEHP Referrable Wetlands;
- DEHP Wetland Maps, version 2.0; and
- Queensland Herbarium Herbrecs database.

Data searches were conducted using a 25 km buffer around the coordinate -26.6583, 150.234, incorporating the Study Area and surrounds. Where databases were not able to be searched using a point search, the cadastral boundary of the property or Lot on Plan number was used.

3.2 Field survey

The ecological survey was conducted in accordance with:

- The Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland. Version 3.2 (Neldner *et al*., 2012); and
- Environmental Constraints Planning and Field Development Protocol (Q-LNG01-15-MP-0109 Australia Pacific LNG, 2011).

The field survey was undertaken on the 27/11/2012. Field assessment survey points are provided in Figure 2 (flora) and Figure 3 (fauna).

3.2.1 Vegetation community survey

Baseline botanical surveys were undertaken to describe dominant flora and vegetation community structure throughout the survey site. Botanical surveys were consistent with the tertiary and quaternary levels of data collection as described in Neldner *et al*. (2012).

Sites for tertiary level assessments were chosen based on RE mapping and an analysis of aerial photo patterns, with the objective of representative coverage. Further to tertiary level assessments, the team conducted quaternary level surveys opportunistically throughout remnant vegetation and within areas of mapped high value regrowth (HVR). The team conducted two tertiary level site assessments and 15 quaternary level site assessments across the Site. Tertiary level assessments were undertaken for this report to gather sufficient

information, including a basal area measure of abundance to confirm and ground truth existing or suspected vegetation community mapping. The information recorded was adjusted accordingly.

During the field survey, vegetation community data was entered into the data fields provided by the Trimble data capture system. The locations of the vegetation community survey sites are presented in Figure 2.

Relative abundance data was collected for each stratum within the community, as per the methodology described in the *Environmental Constraints Planning and Field Development Protocol* (Q-LNG01-15-MP-0109 Australia Pacific LNG (2011)) and as presented by the vegetation structure point data sheet of the Trimble data capture system. Representative photo(s) were taken of the subject vegetation community via the Trimble data capture system. Photo aspect data was entered into the relevant data sheet within the Trimble data capture system.

Vegetation community polygons were confirmed, mapped and identified in accordance with Queensland regional ecosystem (biodiversity status) and EPBC threatened ecological community (TEC) criteria.

3.2.2 Habitat surveys

Habitat surveys were undertaken in conjunction with vegetation community surveys. A total of 13 formal habitat surveys were undertaken across the Site (Figure 3).

Within each habitat survey, a range of habitat features were recorded on the relevant Trimble data form, including:

- Rocks and boulders (estimated per cent cover);
- Rocky outcrops;
- Logs (abundance);
- Trees with hollows (abundance);
- Presence of senescent (old) or dead trees (stags);
- Trees and/or logs with loose bark (abundance);
- Shrub layer (estimated per cent cover);
- Ground cover (estimated per cent cover);
- Leaf litter (per cent cover);
- Termite mounds (abundance);
- Mistletoe (abundance);
- Caves/ledges (abundance); and
- Any additional fauna habitat features.

Where deemed appropriate, representative photos were taken of the given habitat patch via the Trimble data capture system. Photo aspect data was entered into the relevant data sheet within the Trimble data capture system. The collection of this data was in accordance with *Q-LNG01-15-MP-0109 Australia Pacific LNG (2011) Environmental Constraints Planning and Field Development Protocol*.

3.2.3 Conservation significant flora and fauna survey

Conservation significant species are those listed under the EPBC Act 1999 and the *Nature Conservation (Wildlife) Regulation 2006*.

Flora and fauna searches were undertaken during the field survey for species identified as potentially occurring within the Site by the database and literature review. Searches were undertaken within the vicinity of vegetation community survey/habitat feature plots where field ecologists deemed the given area to be of sufficient potential value to a particular species to warrant such a search.

Targeted searches for conservation significant species were also conducted in additional locations based on incidental field observations of high quality habitat or identification of distinct ecological features through the preliminary database and literature review for the Site.

3.2.4 Exotic flora and fauna survey

Exotic flora and fauna assessments were undertaken opportunistically as encountered throughout the duration of the survey. Particular emphasis was placed on identification of pest species regulated under the *Land Protection (Pest and Stock Route Management) Act 2002* and weeds of national significance (WoNS). Pest species records were entered into the Trimble data capture system when encountered.

3.2.5 Disturbance survey

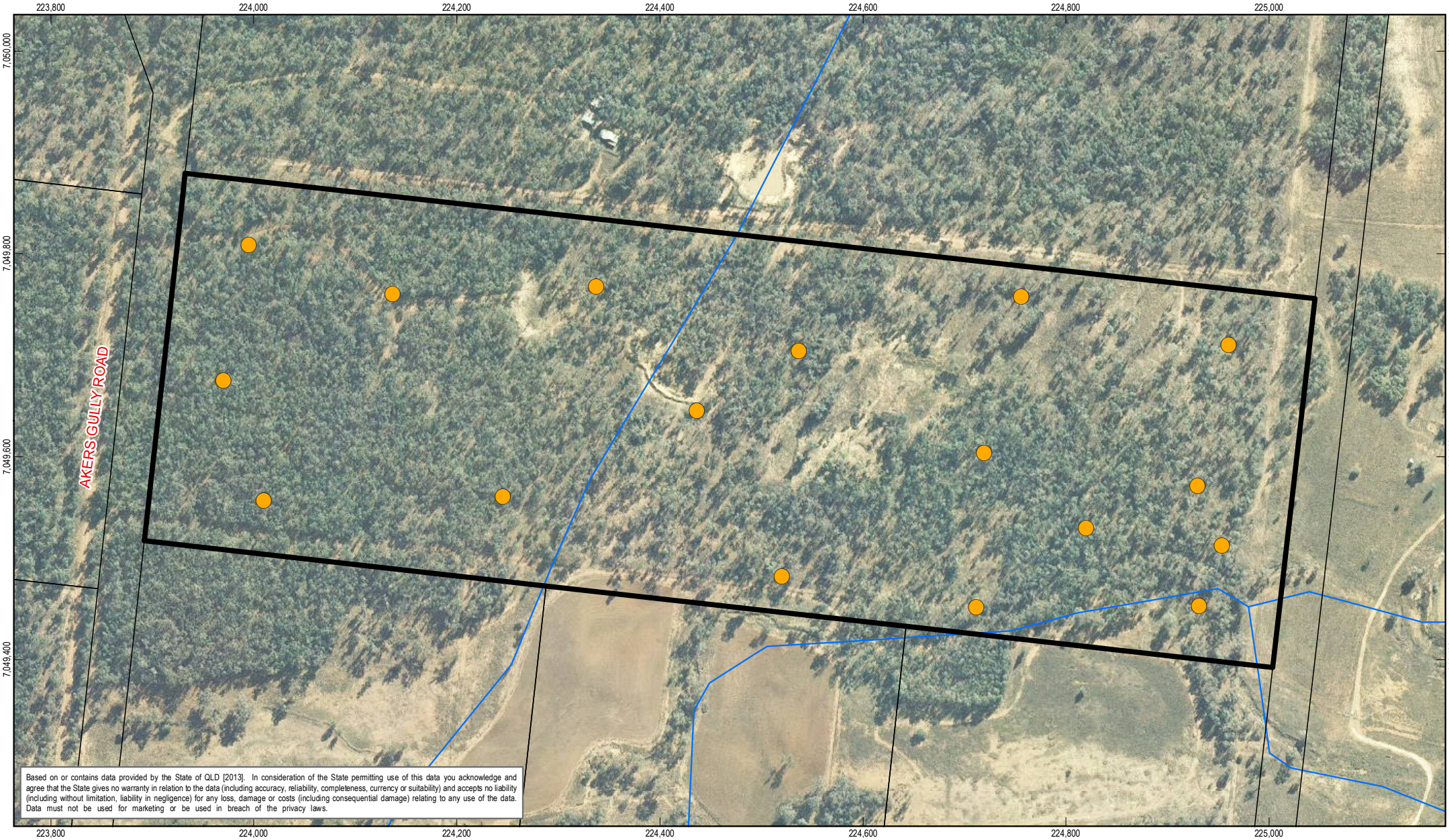
Site disturbances including weed species, anthropogenic impacts, erosion and pest fauna were recorded opportunistically and at each vegetation and habitat assessment site, where evidence was found.

3.2.6 Watercourses and wetlands survey

A number of watercourses are present within the Site, one of which has a dam constructed. No assessment or field verification of these largely ephemeral first order and third order watercourses was carried out during the field survey. Analysis of the condition or flora and fauna likely to occur within these environments has been excluded from this report as a result. Any discussion within this report relevant to the above mentioned watercourses is based on desktop review and professional judgement only.

3.2.7 Survey limitations

A number of factors are considered likely to influence survey results for particular species or genera including the climatic conditions at the time of survey. The field survey for this report was undertaken in November, at the end of the dry season. The timing of the field survey is likely to influence those species which are seasonally present due to migratory patterns. Seasonal climatic conditions experienced also reduced the ability to effectively identify graminoid (grass) flora species, many of which did not contain fertile material to enable positive identification.



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LEGEND

- Flora Site
- Property Site
- Watercourse
- Cadastre

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Terrestrial Flora Survey Sites

Figure 2

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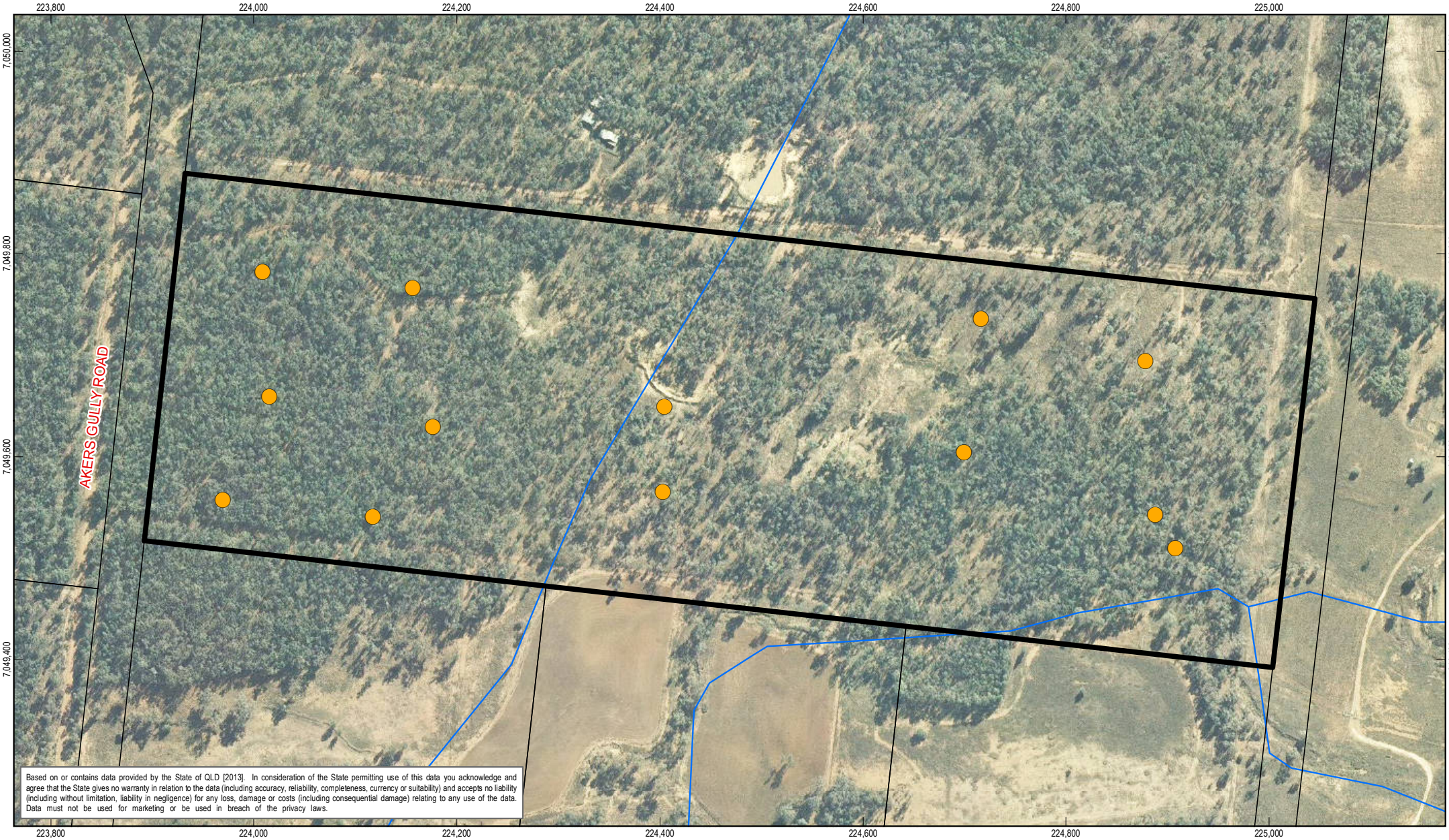

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Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Fauna Habitat Site
- Property Site
- Watercourse
- Cadastre

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Revision	0
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Terrestrial Fauna Survey Sites

Figure 3

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4. Results and discussions

This section includes the results of the desktop review and field survey. Supplementary information is contained in the Appendices and is referenced below.

4.1 Desktop and literature review

Data sources used for desktop review and the coordinates of the search areas are listed in Section 3.1.

4.1.1 Commonwealth environmental matters

The EPBC protected matters database search results concerning MNES (protected under the EPBC Act) such as TECs, threatened flora, threatened fauna, migratory species, marine species, weeds and pest fauna are included in this section. A copy of the EPBC protected matters report is included as Appendix A.

Wetlands of International Significance (Ramsar wetlands)

One wetland of International Significance (Ramsar wetland), the Narran lake nature reserve was identified as occurring downstream of the Site, approximately 400 kilometres outside of the survey area. Due to this significant distance, this wetland will not be discussed further.

Threatened ecological communities

The EPBC protected matters database listed four TECs as having the potential to occur on Site. The status of each TEC and its likelihood of occurrence in the area are listed in Table 1.

Table 1: EPBC Act protected matters search tool results for threatened ecological communities potentially occurring on Site.

Threatened Ecological Community (TEC)	EPBC Act Status	Likelihood of Occurrence
Brigalow (*Acacia harpophylla* dominant and co-dominant)	Endangered	Community known to occur within area
Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community likely to occur within area
Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland	Critically Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area

EPBC listed threatened species

Searches of the EPBC protected matters database identified 22 threatened species as potentially occurring on Site. Since the desktops were undertaken, one of these species, the brigalow scaly-foot (*Paradelma orientalis)* has been de-listed from the EPBC threatened species list. These are listed in Table 2 and Table 3.

Table 2: EPBC Act protected matters search tool results for threatened species potentially occurring on Site

Scientific Name	Common Name	EPBC Act Status	Type of Presence
Plants			
Cadellia pentastylis	ooline	Vulnerable	Species or species habitat likely to occur within area.
Calytrix gurulmundensis	-	Vulnerable	Species or species habitat likely to occur within area.
Homopholis belsonii	-	Vulnerable	Species or species habitat may occur within area.
Pterostylis cobarensis	Cobar greenhood orchid	Vulnerable	Species or species habitat likely to occur within area.
Tylophora linearis	-	Endangered	Species or species habitat may occur within area.
Westringia parvifolia	-	Vulnerable	Species or species habitat likely to occur within area.
Birds			
Erythrotriorchis radiatus	red goshawk	Vulnerable	Species of species habitat likely to occur within area.
Geophaps scripta scripta	squatter pigeon (southern subspecies)	Vulnerable	Species of species habitat likely to occur within area.
Lathamus discolor	swift parrot	Endangered	Species or species habitat may occur within area.
Neochmia ruficauda ruficauda	star finch (eastern and southern subspecies)	Endangered	Species or species habitat likely to occur within area.
Poephila cincta cincta	black-throated finch (southern)	Endangered	Species or species habitat may occur within area.
Rostratula australis	Australian painted snipe	Vulnerable	Species or species habitat likely to occur within area.
Turnix melanogaster	black breasted button quail	Vulnerable	Species or species habitat likely to occur within area.
Mammals			
Chalinolobus dwyeri	large-eared pied bat	Vulnerable	Species or species habitat may occur within area.
Nyctophilus corbeni	south-eastern long-eared bat	Vulnerable	Species or species habitat may occur within area.

Scientific Name	Common Name	EPBC Act Status	Type of Presence
Phascolarctos cinereus (combined QLD, NSW, ACT populations)	koala (combined QLD, NSW, ACT populations)	Vulnerable	Species or species habitat known to occur within area.
Reptiles			
Anomalopus mackayi	five-clawed worm skink, long-legged worm-skink	Vulnerable	Species or species habitat may occur within area.
Delma torquata	collared delma	Vulnerable	Species or species habitat may occur within area.
Denisonia maculata	ornamental snake	Vulnerable	Species or species habitat may occur within area.
Egernia rugosa	yakka skink	Vulnerable	Species or species habitat likely to occur within area.
Furina dunmalli	Dunmall's snake	Vulnerable	Species or species habitat may occur within area.
*Paradelma orientalis**	brigalow scaly-foot	Vulnerable	Species or species habitat known to occur within area.
Fish			
Maccullochella peelii	Murray cod	Vulnerable	Species or species habitat may occur within area.

*De-listed from EPBC threatened species list on May 15, 2013

Migratory species

All migratory species identified from the EPBC protected matters search are listed in Table 3. One threatened species, the painted snipe (*Rostratula benghalensis sensu lato*), is listed under the China-Australia Migratory Bird Agreement as well as being listed as vulnerable under the EPBC Act (under the scientific name *Rostratula australis*).

Table 3 EPBC Act protected matters search tool results for migratory species potentially occurring on Site.

Scientific Name	Common Name	Type of Presence
Apus pacificus	fork-tailed swift	Species or species habitat may occur within area.
Ardea alba	great egret	Species or species habitat may occur within area.
Ardea ibis	cattle egret	Species or species habitat may occur within area.
Haliaeetus leucogaster	white-bellied sea eagle	Species or species habitat likely to occur within area.
Hirundapus caudacutus	white-throated needletail	Species or species habitat may occur within area.
Merops ornatus	rainbow bee-eater	Species or species habitat may occur within area.

Scientific Name	Common Name	Type of Presence
Myiagra cyanoleuca	satin flycatcher	Species or species habitat known to occur in area.
Gallinago hardwickii	Latham's snipe	Species or species habitat may occur within area.
Rhipidura rufifrons	Rufous fantail	Species or species habitat may occur within area.
Rostratula benghalensis sensu lato	painted snipe*	Species or species habitat likely to occur within area.

*Species is listed under a different scientific name on the EPBC Act threatened species list.

Marine species

All marine species identified from the EPBC protected matters search are listed in Table 4. As above, the painted snipe is listed under China-Australia Migratory Bird Agreement as a migratory bird species and under the EPBC Act as a vulnerable species under the scientific name *Rostratula australis*.

Table 4 EPBC Act protected matters search tool results for marine species potentially occurring on Site.

Scientific Name	Common Name	Type of Presence
Anseranas semipalmata	magpie goose	Species or species habitat may occur within area.
Apus pacificus	fork-tailed swift	Species or species habitat may occur within area.
Ardea alba	great egret	Species or species habitat may occur within area.
Ardea ibis	cattle egret	Species or species habitat may occur within area.
Gallinago hardwickii	Latham's snipe	Species or species habitat may occur within area.
Haliaeetus leucogaster	white-bellied sea eagle	Species or species habitat likely to occur within area.
Hirundapus caudacutus	white-throated needletail	Species or species habitat may occur within area.
Lathamus discolor	swift parrot	Species or species habitat may occur within area.
Merops ornatus	rainbow bee-eater	Species or species habitat may occur within area.
Myiagra cyanoleuca	satin flycatcher	Species or species habitat known to occur in area.
Rhipidura rufifrons	Rufous fantail	Species or species habitat may occur within area.
Rostratula benghalensis sensu lato	painted snipe*	Species or species habitat likely to occur within area.

*Species is listed under a different scientific name on the EPBC Act threatened species list.

Weeds and pest flora

All weeds identified from the EPBC protected matters search are listed in Table 5.

Table 5 EPBC Act protected matters search tool results for weed species potentially occurring on Site.

Scientific Name	Common Name	Type of Presence
Acacia nilotica subsp. *indica*	prickly acacia	Species or species habitat may occur within area.
Hymenachne amplexicaulis	hymenachne, olive hymenachne, water stargrass, West Indian grass, West Indian marsh grass	Species or species habitat likely to occur within area.
Parkinsonia aculeata	parkinsonia, Jerusalem thorn, jelly bean tree, horse bean	Species or species habitat likely to occur within area.
Parthenium hysterophorus	parthenium	Species or species habitat likely to occur within area.
Salvinia molesta	salvinia, giant salvinia, aquarium watermoss	Species or species habitat likely to occur within area.

Pest fauna

All pest fauna identified from the EPBC protected matters search are listed in Table 6.

Table 6 EPBC Act protected matters search tool results for pest fauna potentially occurring on Site

Scientific Name	Common Name	Records of Occurrence
Bufo marinus	cane toad	Species or species habitat likely to occur within area.
Felis catus	cat	Species or species habitat likely to occur within area.
Oryctolagus cuniculus	European rabbit	Species or species habitat likely to occur within area.
Sus scrofa	pig	Species or species habitat likely to occur within area.
Vulpes vulpes	red fox	Species or species habitat likely to occur within area.

4.1.1 Queensland environmental matters

Conservation significant species (NC Act)

Database search results of records for State conservation significant flora and fauna species are listed in Table 7 and Table 9 respectively. Copies of the database reports for State significant species are included in Appendix C and Appendix D.

Table 7: NC Act desktop review results for conservation significant flora species potentially occurring on Site.

Scientific Name	Common Name	NC Act Status	EPBC Act Status	Source
Acacia curranii	curly bark wattle	Vulnerable	Vulnerable	Wildlife Online/Herbrecs
Acacia tenuinervis	scrub wattle	Near threatened	-	Wildlife Online/Herbrecs
Callitris baileyi	Bailey's cypress	Near threatened	-	Herbrecs
Cryptandra ciliata	-	Near threatened	-	Herbrecs
Eucalyptus curtisii	Plunkett mallee	Near Threatened	-	Herbrecs
Homopholis belsonii	-	Endangered	Vulnerable	Wildlife Online
Micromyrtus carinata	Gurulmundi heath-myrtle	Endangered	-	Wildlife Online/Herbrecs
Rutidosis lanata	-	Endangered	-	Wildlife Online/Herbrecs
Senna acclinis	rainforest senna	Near threatened	-	Herbrecs

Table 8 NC Act desktop review results for conservation significant flora species potentially occurring on Site.

Scientific Name	Common Name	NC Act Status	EPBC Act Status	Source
Amphibians				
Cyclorana verrucosa	rough collared frog	Near threatened	-	Wildlife Online
Birds				
Accipiter novaehollandiae	grey goshawk	Near threatened	-	Wildlife Online
Calyptorhynchus lathami	glossy black-cockatoo	Vulnerable	-	Wildlife Online
Ephippiorhynchus asiaticus	black-necked stork	Near threatened	-	Wildlife Online
Grantiella picta	painted honeyeater	Vulnerable	-	Wildlife Online
Lophoictinia isura	square-tailed kite	Near threatened	-	Wildlife Online
Melithreptus gularis	black-chinned honeyeater	Near threatened	-	Wildlife Online
Mammals				
Chalinolobus picatus	little pied bat	Near threatened	-	Wildlife Online
Reptiles				
Aspidites ramsayi	woma	Near threatened	-	Wildlife Online
Egernia rugosa	yakka skink	Vulnerable	Vulnerable	Wildlife Online
Furina dunmalli	Dunmall's snake	Vulnerable	Vulnerable	Wildlife Online

Scientific Name	Common Name	NC Act Status	EPBC Act Status	Source
Hemiaspis damelii	grey snake	Endangered	-	Wildlife Online
Paradelma orientalis	brigalow scaly-foot	Vulnerable	-	Wildlife Online
Strophurus taenicauda	golden-tailed gecko	Near threatened	-	Wildlife Online
Insects				
Jalmenus eubulus	pale imperial hairstreak	Vulnerable	-	Wildlife Online

Environmentally sensitive areas

An environmentally sensitive area (ESA) map request from DEHP was most recently performed on 4 December, 2012. A figure detailing the location of mapped ESAs associated with the site is featured in Figure 4.

One category B ESA is mapped by DEHP on Site. This ESA covers the mapped mature regrowth (HVR) that contains an endangered RE on the southern boundary of the property.

Regional Ecosystems

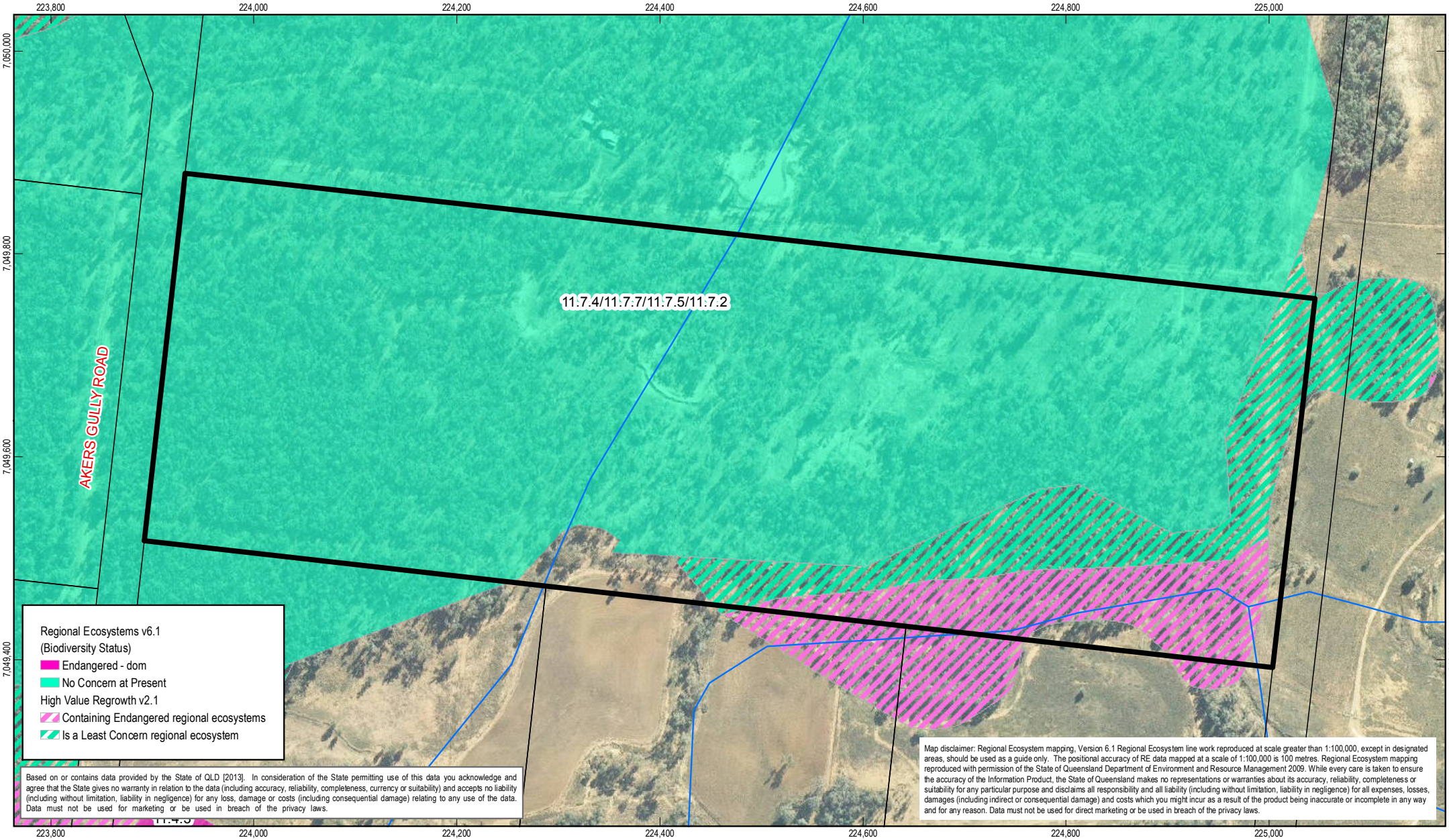
The Queensland Herbarium's certified RE mapping (version 6.1, based on 2006 imagery) shows remnant vegetation occurring across most of the Site.

Four REs with a biodiversity status of no concern at present are mapped as occurring on the Site within a single heterogeneous polygon. This RE unit is mapped as consisting of REs 11.7.4/11.7.7/11.7.5/11.7.2, present at a ratio of 85/5/5/5%. While it is noted that mapped REs with the biodiversity status of no concern at present are not a category defined ESA, habitat within these vegetation communities may still provide refuge for threatened flora and fauna species. REs with a biodiversity status of no concern at present that are mapped on the Site are described in Table 9. DEHP certified RE mapping of the Site is provided in Figure 4.

Table 9: DEHP Mapped Regional Ecosystems with biodiversity status of no concern at present on Site

RE	Short description	Description
11.7.2	*Acacia* spp. woodland on Cainozoic lateritic duricrust. Scarp retreat zone	Monospecific stands of *Acacia* spp. forest/woodland on Cainozoic lateritic duricrusts. *Acacia shirleyi* and or *Acacia catenulata* usually predominate the woodland to low woodland to low open-forest tree canopy (7 – 12 m high). Other *Acacia* spp. that commonly occur and occasionally dominate the tree layer *include A. rhodoxylon, A. burrowii, A. sparsiflora, A. crassa* and *A. blakei*. Emergent eucalypt species such as *Eucalyptus thozetiana*, *E. crebra, E. decorticans* and *E. exserta* may be present. A low shrub layer is sometimes present and dominated by species such as *Acalypha eremorum*, *Croton phebalioides* and *Carissa ovata*. The ground layer is extremely sparse and dominated by grasses such as *Aristida caput-medusae, Paspalidium rarum*, and *Urochloa foliosa*. Forbs are usually rare although *Sida filiformis* may be conspicuous. Occurs on scarps and adjacent tops and slopes of dissected tablelands, mesas and buttes formed from chemically altered sediments and duricrusts. The soils are shallow to very shallow lithosols with surface stone and boulders. The vegetation is often growing in pockets of shallow lithosol soil between bare rock.

RE	Short description	Description
11.7.4	*Eucalyptus decorticans* and/or Eucalyptus spp., *Corymbi*a spp., *Acacia* spp., *Lysicarpus angustifolius* on lateritic duricrust.	Mixed *Eucalyptus* spp. woodland on Cainozoic lateritic duricrusts. There is usually a distinct low tree to tall shrub layer. This vegetation community occurs on low hills and ranges with shallow soils.
11.7.5	Shrubland on natural scalds on deeply weathered coarse-grained sedimentary rocks	Shrubland +/- emergent eucalypts. Characteristic genera include *Calytrix* spp., *Hakea* spp., *Kunzea* spp., *Micromyrtus* spp., *Acacia* spp., *Melaleuca* spp. and (in the ground layer) *Triodia* spp. Often scattered or fringing emergent tree species are present, including *Eucalyptus exserta*, *E. panda, E. curtisii, Corymbia trachyphloia* and *Acacia blakei*. Occurs on shallow soils often associated with natural scalds on Cainozoic lateritic duricrusts and sometimes lithosols derived from quartzose sandstone.
11.7.7	*Eucalyptus fibrosa* subsp. *nubila* +/- *Corymbia* spp. +/- *Eucalyptus* spp. on lateritic duricrust.	*Eucalyptus fibrosa* subsp. *nubila* predominates and forms a distinct but discontinuous open-forest to woodland canopy (22 – 25 m high). *E. crebra* often co-dominates or be locally dominant, particularly on lower slopes. Also includes areas of *Corymbia citriodora* as a codominant. There is usually a low woodland mid layer dominated by *Acacia* spp. or sometimes *Allocasuarina luehmannii* and *Callitris endlicheri*. Scattered tall shrubs may occur, but rarely form a prominent layer. There is usually a moderately dense, low shrub layer developed with a variable floristic composition. This vegetation community usually occurs on low hills and ranges formed from deeply weathered sediments. Soils are usually shallow (<30 cm deep) uniform sands with stone or rocks covering much of the ground surface.



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Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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LEGEND

Watercourse

Cadastre

Property Site

Origin Energy
Terrestrial Ecology Assessment

Job Number 41-24732
Revision 0
Date 12 Jul 2013

DEHP Certified Regional Ecosystem and High Value Regrowth Mapping

Figure 4

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Data source: DNRM: Road/2010, Regional Ecosystem v6.1, High Value Regrowth v2.1, Watercourse/2011, Cadastre/2012; Origin Energy: Imagery/2012. Created by: AF

High Value Regrowth

HVR mapped over the Site which was identified during the desktop review is described in Table 10. DEHP certified HVR mapping of the Site is provided in Figure 5 .

Table 10: High Value Regrowth mapped on Site

HVR	General description
HVR containing endangered REs	Woody regrowth not cleared since December 1989.
HVR that is a least concern RE	Woody regrowth not cleared since December 1989.

Essential habitat

No essential habitat for threatened flora or fauna species is mapped over the Site.

Referable wetlands

No wetland management areas or wetland protection areas are identified as being mapped over the Site by the DEHP referrable wetlands search tool or the DEHP ESA mapping. DEHP referable wetland mapping results are provided in Appendix E.

Weeds and pest fauna

The desktop review (Wildlife Online) identified 38 exotic flora species and 11 exotic fauna species (one amphibian, four mammals and six birds) as having been previously recorded within 25 km of the Site. Of the 49 exotic species records for the area, four are Class 2 declared pest species under the LP Act. Table 11 lists the 49 recorded introduced species and their declaration status under the LP Act. A copy of the Wildlife Online report is included in Appendix B.

Table 11: Weeds and pest fauna potentially present on Site

Scientific Name	Common Name	LP Act Status
Plants		
Alternanthera pungens	khaki weed	-
Argemone ochroleuca subsp. ochroleuca	Mexican poppy	-
Bryophyllum delagoense	mother of millions	Class 2
Bryophyllum x houghtonii	-	Class 2
Cenchrus ciliaris	buffel grass	-
Cenchrus spinifex	-	-
Chenopodium album	fat-hen	-
Cynodon nlemfuensis var. robustus	-	-
Digitaria eriantha cv. Pangola	-	-
Eichhornia crassipes	water hyacinth	Class 2
Eragrostis trichophora	-	-
Euphorbia hirta	-	-
Flaveria trinervia	-	-
Glandularia aristigera	-	-
Gomphrena celosioides	gomphrena weed	-
Hypochaeris albiflora	-	-
Linaria maroccana	-	-

Scientific Name	Common Name	LP Act Status
Lysimachia arvensis	-	-
Megathyrsus maximus var. maximus	-	-
Megathyrsus maximus var. pubiglumis	-	-
Melinis repens	red natal grass	-
Misopates orontium	lesser snapdragon	-
Oenothera curtiflora	-	-
Oenothera lindheimeri	-	-
Opuntia stricta	prickly pear	Class 2
Opuntia tomentosa	velvety tree pear	Class 2
Paspalum urvillei	-	-
Physalis lanceifolia	-	-
Phyla canescens	-	-
Ricinus communis	castor oil plant	-
Rorippa palustris	marsh cress	-
Schinus molle var. areira	pepper tree	-
Setaria parviflora	-	-
Setaria sphacelata	-	-
Sisyrinchium spp.	scourweed	-
Sonchus oleraceus	common sowthistle	-
Urochloa mosambicensis	sabi grass	-
Vicia sativa subsp. nigra	-	-
Amphibians		
Rhinella marina	cane toad	-
Mammals		
Canis familiaris	wild dog	Class 2
Mus musculus	house mouse	-
Oryctolagus cuniculus	European rabbit	Class 2
Vulpes vulpes	red fox	Class 2
Birds		
Columba livia	rock dove	-
Lonchura punctulata	nutmeg mannikin	-
Passer domesticus	house sparrow	-
Streptopelia chinensis	spotted dove	-
Sturnus vulgaris	common starling	-

4.2 Field survey

A field survey was conducted on 27 November 2012. This survey was conducted by two GHD ecologists, led by Nick Willis (Senior Ecologist). The results of the survey are summarised in the following sections.

A full flora and fauna species list compiled during the field survey has been included in Appendix F.

4.2.1 Commonwealth environmental matters

Field survey results concerning MNES (protected under the EPBC Act) such as TECs, threatened flora and fauna, migratory species, weeds and pest fauna are included in the following sections.

Threatened ecological communities

As detailed in Section 4.1.1, four TECs listed under the EPBC Act were identified during the desktop review as having the potential to occur on the Site; however, no TECs were identified during the field survey.

Threatened flora

No EPBC listed threatened flora species were identified during the field survey. Potential habitat is present within the Site for one of the six threatened flora species listed within the EPBC protected matters database search results (*Homopholis belsonii*). A likelihood of occurrence assessment for EPBC protected flora species based on field survey findings is provided in Table 12.

Threatened fauna

No EPBC listed threatened fauna species were identified during the field survey. Potential habitat is present within the Site for nine of the seventeen threatened fauna species listed within the EPBC Protected Matters database search results (large-eared pied bat, collared delma, ornamental snake, yakka skink, Dunmall's snake, squatter pigeon, south-eastern long-eared bat, koala and Australian painted snipe). The brigalow scaly foot (identified within the EPBC Protected Matters database search results) is no longer a listed threatened species under the EPBC Act and therefore is not considered within this section.

A likelihood of occurrence assessment for EPBC protected species is provided in Table 12. The following categories have been used in the assessment:

- Unlikely to occur – No habitat present, no food source etc.;
- Potential to occur – Some habitat values, or most habitat values but in poor condition;
- Likely to occur – Most habitat values in good condition with linkages to other areas of key habitat or mapped essential habitat or known occurrences of species; and
- Known to occur - Observed during survey.

Table 12: Likelihood of occurrence for EPBC Act protected species based on field survey results.

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
Flora				
Cadellia pentastylis	ooline	Vulnerable	This species may occur within dry rainforest or sclerophyll woodland habitats. Within these habitats, it is often locally dominant or emergent. Ooline occurs from the western edge of the New South Wales north-west slopes to Carnarvon Range and Callide Valley (south-west of Rockhampton) in Queensland (TSSC, 2008a).	Unlikely to occur. No previous records within 25 km of the Site. Species distribution does not incorporate the Site. Marginally suitable habitat occurs on the Site.
Calytrix gurulmundensis	-	Vulnerable	The extent of occurrence of *Calytrix gurulmundensis* is less than 100 km2. Restricted to south-eastern Queensland, Calytrix gurulmundensis is known from the Gurulmundi, Guluguba and Barakula areas, north west of Toowoomba. The species is recorded as occurring in open shrubland with sparse, stunted Eucalyptus, Casuarina and Acacia spp. and in Triodia hummock grassland with scattered shrubs. The habitat at Gurulmundi State Forest is consistent with Queensland Regional Ecosystem Shrubland Community RE 11.7.5. This species grows on the tops of low, heavily eroded, laterised sandstone ridges on Tertiary formations. The soils are well-drained, usually shallow and either gravelly, sandy clay or sandy in texture (Craven, 1987).	Unlikely to occur. No previous records within 25 km of the Site. Species distribution does not incorporate the Site. No suitable habitat occurs on the Site.
Homopholis belsonii	Belson's panic	Vulnerable	This species occurs at elevations from 200 to 520 m within dry woodland habitats on poor soils (often basalt derived), mostly in rocky hills supporting Eucalyptus albens (white box) and wilga woodland or alluvial areas supporting belah and poplar box woodland. It is also associated with brigalow and roadside vegetation. *Homopholis belsonii* occurs within the south eastern Brigalow belt in Queensland. It has been recorded at a number of locations in the Darling Downs, from Toowoomba to just west of Miles (TSSC, 2008b)	Potential to occur. Four previous records within 25 km of the Site (Herbrecs). Species distribution incorporates the Site. Potentially suitable habitat occurs in the Site.

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
Pterostylis cobarensis	Cobar greenhood orchid	Vulnerable	Cobar Greenhood Orchid is known chiefly from the Nyngan–Cobar–Bourke district in the far western plains of NSW. It has also been located in the Darling Downs. The species inhabits eucalypt woodland, open mallee, or Callitris shrubland on low stony ridges and slopes with skeletal sandy-loam soils. Associated species include *Eucalyptus morrisii, E. viridis, E. intertexta, E. vicina, Callitris glaucophylla, Geijera parviflora, Casuarina cristata, Acacia doratoxylon, Senna spp*., and *Eremophila spp*. (TSSC, 2008c)	Unlikely to occur. No previous records within 25 km of the Site. Species distribution does not incorporate the Site. Marginally suitable habitat occurs on the Site.
Tylophora linearis	-	Endangered	*Tylophora linearis* has rarely been collected and is known from eight localities in the Dubbo area and Mt Crow near Barraba in NSW, and "Myall Park" near Glenmorgan in Queensland. *Tylophora linearis* grows in dry scrub, open forest and woodlands associated with *Melaleuca uncinata, Eucalyptus fibrosa, E. sideroxylon, E. albens, Callitris endlicheri, C. glaucophylla, Allocasuarina luehmannii, Acacia hakeoides, A. lineata*, Myoporum spp., and Casuarina spp. (TSSC, 2008d)	Unlikely to occur. No previous records within 25 km of the Site. Species distribution does not incorporate the Site. Suitable habitat occurs on the Site.
Westringia parvifolia	-	Vulnerable	This species is known from four collections near Yelarbon, Inglewood and Goondiwindi in south-east Queensland and from near Yetman in northern New South Wales. This species distribution range is approximately 80 km. This species inhabits areas in association with Baker's mallee (*Eucalyptus bakeri*) and Green mallee (*Eucalyptus viridis*) and between clumps of Spinifex (*Triodia spp*.) on sandy and stony soils (TSSC, 2008e).	Unlikely to occur. No previous records within 25 km of the Site. Species distribution does not incorporate the Site. No suitable habitat occurs on the Site.
Fauna				
Anomalopus mackayi	five-clawed worm-skink, long-legged worm-skink	Vulnerable	In Queensland, this species is known from the upper Condamine River Floodplain from Warwick in the south to the Jimbour region in the north and bordered by the western edge of the granite belt (DSEWPaC, 2012a). This species occurs in blue grass (*Dichanthium sericeum*) and/or Mitchell grass dominated grasslands or mixed	Unlikely to occur. Species has not been recorded within 25 km of the Site. The current distribution of this species does not encompass the

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
			grasslands dominated by other grass species, but still categorised as Queensland RE 11.3.21 (Brigalow Belt Reptiles Workshop, 2010).	Site. No potential habitat on Site.
Chalinolobus dwyeri	large-eared pied bat	Vulnerable	Habitat for this species may be heavily dependent on sandstone outcrops providing roost sites, however, little is known about its habitat and roosting requirements. In south-eastern Queensland, the majority of records for this species are from higher altitude moist tall open forests adjacent to rainforest. This species has been found roosting in unused mine shafts, caves and overhangs as well as disused fairy martin (Hirundo ariel) nests (DSEWPaC, 2012b).	Potential to occur. No previous records exist within 25 km of the Site. Species distribution encompasses the Site. Potentially suitable habitat for this species occurs on Site.
Delma torquata	collared delma	Vulnerable	This species is endemic to Queensland, recorded patchily from the western edges of Brisbane north-west to Blackdown Tableland and inland to the Roma area. The collared delma normally inhabits eucalypt-dominated woodlands and open-forests. Microhabitat for this species is associated with rocky terrain however this species has also been recorded in woodlands with no significant rock components (Wilson, 2005).	Potential to occur. No previous records within 25 km of the Site. Species distribution encompasses the Site. Potentially suitable habitat occurs on Site in the form of eucalypt dominated woodlands and open forests.
Denisonia maculata	ornamental snake	Vulnerable	Suitable habitat for this species occurs in remnant vegetation on, or surrounding gilgai mounds and depressions, with the maintenance of these environments important for the persistence of this species. Habitat for the ornamental snake is likely to be found in brigalow (Acacia harpophylla), gidgee (Acacia cambagei), blackwood (Acacia argyrodendron) and coolabah (Eucalyptus coolabah) dominated vegetation communities as well as grasslands associated with gilgais. The ornamental snake's preferred habitat is within woodlands and open forests associated with moist areas, similar to the habitat of frogs, which are its favoured prey. Microhabitat for this species includes logs, coarse woody debris, and ground litter (DSEWPaC, 2012c).	Potential to occur. No previous records within 25 km of the Site. Species distribution encompasses the Site. Potentially suitable habitat occurs on Site in the form of eucalypt dominated woodlands and open forests.

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
Egernia rugosa	yakka skink	Vulnerable	The yakka skink is endemic to dry open forests, woodlands and rocky areas of central, eastern and north-eastern Queensland. Yakka skinks live in communal burrow complexes, and often take refuge among low vegetation or under timber piles, logs, rocks and in deep rock crevices. The species occurs in a wide variety of vegetation types including poplar box, ironbark, brigalow, white cypress pine, mulga (Acacia aneura), bendee (Acacia catenulata) and lancewood (Acacia shirleyi) woodland and open forest (Wilson 2005; DSEWPaC, 2012d).	Potential to occur. This species has been previously recorded within 25 km of the Site (two records). Species distribution encompasses the Site. Marginal habitat for this species occurs within the Site in the form of woodlands and forests however complex habitat features such as log piles and rocks are limited.
Erythrotriorchis radiatus	red goshawk	Vulnerable	The red goshawk is a naturally uncommon species of eastern and northern Australia. It prefers landscapes containing a mosaic of habitats including coastal and sub-coastal tall open forest, woodland and rainforest edges. Forests of intermediate density are particularly favoured, as are ecotones between variably dense habitats (i.e. ecotone between rainforest and sclerophyll forest). Large bird populations (the primary prey of this species) are also an important determinant of red goshawk habitat utilisation. It generally avoids open habitats, and is only rarely encountered over agricultural land. Nesting occurs in tall trees within one km of permanent water, generally in open, biologically-rich forest or woodland (Marchant and Higgins, 1993; DSEWPaC, 2012e).	Unlikely to occur. Species has not been recorded within 25 km of the Site. The current distribution of this species does not encompass the Site. No potential habitat on Site.
Furina dunmalli	Dunmall's snake	Vulnerable	This species occurs primarily in the Brigalow Belt region in the south-eastern interior of Queensland. This species can also be found south of the border towards Ashford in New South Wales. Habitat includes forest and woodlands on cracking clays and clay loams dominated by brigalow, other wattles, and native cypress. Little is known about its habitat requirement, however it is suggested that fallen timber, ground litter, and cracks in alluvial soils provide shelter for this species (DSEWPaC, 2012f).	Potential to occur. This species has been previously recorded within 25 km of the Site (one record). Species distribution encompasses the Site. Marginal habitat for this species occurs within the Site in the form of woodlands and forests however

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
				complex habitat features such as log piles and rocks are limited.
Geophaps scripta scripta	squatter pigeon (southern subspecies)	Vulnerable	This species' distribution extends from the Burdekin-Lynd divide in central Queensland, west to Longreach, east to the coastline between Proserpine and Gladstone, and throughout south-eastern Queensland. The squatter pigeon is locally abundant within the northern part of its range (i.e. Brigalow Belt (North) and Desert Uplands Bioregions). It is considered to be common in grazing country north of the Tropic of Capricorn. The species occurs in a wide range of habitats wherever there is a grassy understorey. It is often found within close proximity of water bodies (DSEWPaC, 2012g).	Potential to occur. No previous records within 25 km of the Site. Species distribution incorporates the Site. Potentially suitable habitat occurs on Site in the form of woodlands and forests with a grassy understorey.
Lathamus discolor	swift parrot	Endangered	This species breeds only in Tasmania and migrates north through southeast Australia during autumn and winter. It is an irregular visitor to South East Queensland during the winter months. Dry sclerophyll eucalypt woodlands and forests are the main habitat types inhabited by this species (DSEWPaC, 2012h)	Unlikely to occur. Species has not been recorded within 25 km of the Site. The current distribution of this species does not encompass the Site. Habitat for this species occurs on Site however the species is considered unlikely to occur.
Maccullochella peelii	Murray cod	Vulnerable	The Murray cod has a natural distribution and an introduced distribution. The cod's natural distribution occurs within the Murray Darling Basin in the south-eastern Australian region. The species has an introduced distribution in the Cooper Creek system in Queensland and South Australia and the Fitzroy Basin in Queensland. Within this species' known distribution, the Murray cod is known to inhabit a diverse range of habitats including clear rocky streams, slow flowing turbid rivers and billabongs (DSEWPaC, 2012i).	Unlikely to occur. Species has not been recorded within 25 km of the Site. The current distribution of this species does encompass the Site. Limited aquatic habitat is available on Site to support this species.
Neochmia ruficauda ruficauda	star finch	endangered	The distribution of the eastern subspecies of the star finch is poorly known, however it is restricted to eastern	Unlikely to occur. Species has not been recorded

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
			Queensland and is likely to be severely fragmented. Records suggest that the distribution of the eastern subspecies extends north to Bowen, west beyond Winton and south to near Wowan. Areas of permanently occupied habitat or permanent populations have not been identified. An estimate (considered to be of low reliability) puts the extant wild population of the subspecies at 50 birds. The subspecies has disappeared from much of its former eastern and central Queensland range, with scattered records from the 1990s considered likely to be aviary escapes. Habitat preferences include grasslands and grassy woodlands near water, sedgelands, swamps and wetlands. The subspecies is also known from disturbed habitats including farmland (Higgins et al., 2006; DSEWPaC, 2012j).	within 25 km of the Site. The current distribution of this species does not encompass the Site. Habitat for this species occurs on Site however the species is considered unlikely to occur.
Nyctophilus corbeni	south-eastern long-eared bat	Vulnerable	This species is restricted to the Murray-Darling basin and surrounds in south-eastern Australia, in which it is scattered and rarely recorded. Little is known about the biology of these bats. However, it is likely that they roost solitarily under exfoliated bark and in crevices on trees, in a range of inland woodland vegetation types including the following: box, ironbark, cypress pine, brigalow/acacia and she-oak woodlands, and fringing woodland/open forest of river red gum (Eucalyptus camaldulensis) or black box (E. largiflorens) (DSEWPaC, 2012k).	Potential to occur. No previous records within 25 km of the Site. Species distribution incorporates the Site. Suitable habitat for this species occurs on Site in eucalypt forests and woodlands.
Phascolarctos cinereus (combined Qld, NSW, ACT populations)	koala (combined Qld, NSW, ACT populations)	Vulnerable	The koala population listed under the EPBC Act has a distribution extending from Cairns to the southern New South Wales border (and some islands). Koala populations within this area are not continuous - some populations are isolated by cleared land or unsuitable habitat. Koalas inhabit a range of forest, woodland and semi-arid communities usually dominated by eucalypts (DSEWPaC, 2012m).	Potential to occur. No previous records within 25 km of the Site. Species distribution incorporates the Site. Suitable habitat for this species occurs on Site in eucalypt forests and woodlands.

Scientific Name	Common Name	EPBC Status	Habitat and Distribution	Likelihood of Occurrence
Poephila cincta cincta	black-throated finch (southern)	Endangered	This largely sedentary, gregarious bird inhabits grassy open woodland and open forest habitats characterised by trees belonging to the genera Eucalyptus, Corymbia, Acacia and Melaleuca. Generally it occurs in habitats near watercourses or water bodies - almost all recent records of the subspecies south of the tropics have been in riparian areas. Three critical habitat resources are required to support the black-throated finch (southern): Water sources (both natural and artificial) Grass seeds (a mosaic of species that provide forage throughout the year (particularly during the wet season) Trees that provide suitable nesting habitat Existing populations of the black-throated finch (southern) are thought to be highly fragmented (DSEWPaC, 2012n).	Unlikely to occur. Species has not been recorded within 25 km of the Site. The known distribution of this species does not encompass the Site. Habitat for this species occurs on Site however the species is considered unlikely to occur.
Rostratula australis	Australian painted snipe	Vulnerable	The Australian painted snipe has a scattered distribution across eastern and northern Australia. Shallow freshwater wetlands with emergent vegetation are its main habitat and may include lakes, swamps, claypans, inundated / waterlogged grassland, dams, irrigated crop land and sewage ponds. Nesting occurs amongst vegetation in or adjacent to wetlands (DSEWPaC, 2012o; Marchant and Higgins, 1993).	Potential to occur. No previous records within 25 km of the Site. Species distribution incorporates the Site. Potentially suitable habitat for this species occurs on Site particularly around the dams and drainage lines.
Turnix melanogaster	black breasted button quail	Vulnerable	The black-breasted button-quail is known from scattered localities in eastern Queensland and New South Wales from the Byfield region in the north to at least the Border Ranges rainforests, generally east of the Great Dividing Range. However, observations have been recorded on its western slopes up to 300 km inland. Black-breasted button-quail are most frequently reported from dry rainforest and other dense vegetation types including brigalow and belah dominated communities (DSEWPaC, 2012p).	Unlikely to occur. No previous records within 25 km of the Site. Species distribution does not incorporate the Site. Limited suitable habitat for this species occurs within the Site.

Migratory species

No EPBC Act listed migratory species were recorded during field surveys on Site. Many of the migratory species identified as potentially occurring within the Site are widespread, common wetland and woodland species and are likely to be prevalent across the surrounding landscape, wherever suitable habitat is present. The Site provides potential habitat for a number of migratory bird species, due to the presence of dams and drainage lines across the Site. However, it is unlikely that the habitat present on Site constitutes an area of 'important habitat' for migratory species, as defined under the *Matters of National Environmental Significance: Significant impact guidelines 1.1* (DSEWPaC, 2012q).

Marine species

No EPBC Act listed marine species were recorded during field surveys within the Site. The EPBC Act listed marine species identified in the protected matters search results were an identical suite of species to the migratory species identified above. As outlined above, the Site is not likely to provide important areas of habitat for marine species.

4.2.2 Queensland environmental matters

Conservation significant species (NC Act)

Field survey results concerning conservation significant flora and fauna listed under the *Nature Conservation (Wildlife) Regulation 2006* (NC Reg) are discussed below. A likelihood of occurrence assessment for State conservation significant flora and fauna species is provided in Table 14 and Table 15 respectively.

Flora

No flora species of conservation significance listed under the NC Reg were identified during the field survey. A single *Cymbidium canaliculatum* and several *Brachychiton populneus* individuals were identified within the remnant vegetation on the Site (Table 13). Plants within the family Orchidaceae and the genus *Brachychiton* are listed as Type A restricted plants under Schedule 7 of the *Nature Conservation (Administration) Regulation 2006*. A likelihood of occurrence assessment for NC Reg listed flora species with previous records within 25 km of the Site is provided in Table 14.

Table 13 Type A restricted plant species recorded within the Site

Species	Common name	Easting	Northing
Brachychiton populneus	kurrajong	224009	7049557
Brachychiton populneus	kurrajong	224960	7049710
Brachychiton populneus	kurrajong	224718	7049603
Cymbidium canaliculatum	black orchid	Confirmed present – location data not available	

Fauna

No fauna species of conservation significance listed under the NC Reg were identified during the field survey. A likelihood of occurrence assessment for NC Reg listed fauna species with previous records within 25 km of the Site is provided in Table 14.

Table 14: Likelihood of occurrence for Nature Conservation Regulation listed flora species based on field survey results.

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of occurrence
Acacia curranii	curly bark wattle	Vulnerable	*Acacia curranii* is known from the Gurulmundi area in the Darling Downs district Queensland. This species occurs in scattered thickets of around ten plants, in patches of diverse heath scrub with emergent trees. In Queensland, this species grows on deeply weathered sandstone forming red sandy soils (Pickard, 1995).	Unlikely to occur. Fifteen records (Herbrecs) within 25 km of the Site. One previous record (Wildlife Online) recorded within 25 km of the Site. Species distribution incorporates the Site. No suitable habitat occurs within the Site.
Acacia tenuinervis	scrub wattle	Near Threatened	This species occurs in brigalow scrub or eucalypt woodland, on ironstone gravel. In Queensland the species is restricted to a few localities in the south east including near Boondooma and Impey Pastoral Holdings (Maslin et. al, 2001).	Unlikely to occur. Two records (Herbrecs) within 25 km of the Site. Species distribution incorporates the Site. No suitable habitat occurs within the Site (unsuitable soil type).
Callitris baileyi	Bailey's cypress	Near threatened	*Callitris baileyi* grows on rocky slopes, hilly or mountainous areas, in shallow and often clay soils. It is found in eucalypt woodland, commonly associated with ironbark, blue gum and spotted gum. (Stanley & Ross, 1983).	Potential to occur. Two records (Herbrecs) within 25 km of the Site. Species distribution incorporates the Site. Suitable habitat exists on site.
Cryptandra ciliata	-	Near threatened	*Cryptandra ciliata* is a shrub to 0.5 m high. This species is sporadically distributed from Barakula State Forest to west of Theodore. It grows on sandstone ridges and slopes in eucalypt woodland (Bean, 2004).	Unlikely to occur. Four records (Herbrecs) within 25 km of the Site. Species distribution incorporates the Site. Marginal habitat occurs on the site.
Eucalyptus curtisii	Plunkett mallee	Near threatened	This species often occurs in shrub land or open forest on poorly drained soils. It is often present as scattered individuals within a community. It is known to occur on sandy or stony soils, often in sandstone areas. *Eucalyptus curtisii* has a wide but scattered distribution, it is known from Expedition and Isla Gorge National Parks (north of Taroom) through Barakula State Forest (east of Wandoan) to Plunkett Conservation Park, just south of Brisbane	Unlikely to occur. Three records (Herbrecs) within 25 km of the Site. Species distribution incorporates the Site. No suitable habitat occurs within the Site (unsuitable soil type).

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of occurrence
			(Chippendale, 1988).	
Homopholis belsonii	-	Endangered	This species occurs at elevations from 200 to 520 m within dry woodland habitats on poor soils (often basalt derived), mostly in rocky hills supporting Eucalyptus albens (white box) and wilga woodland or alluvial areas supporting belah and poplar box woodland. It is also associated with brigalow and roadside vegetation. *Homopholis belsonii* occurs within the south eastern Brigalow belt in Queensland. It has been recorded at a number of locations in the Darling Downs, from Toowoomba to just west of Miles (TSSC, 2008b)	Potential to occur. Four previous records within 25 km of the Site (Herbrecs). Species distribution incorporates the Site. Potentially suitable habitat occurs in the Site.
Micromyrtus carinata	Gurulmundi heath-myrtle	Endangered	The species is endemic to a small area north west of Gurulmundi, on the crest of the Great Dividing Range, Queensland. This species grows in heathland or woodland in shallow sandy soils (Bean, 1997).	Unlikely to occur. Three records (Herbrecs) within 25 km of the Site. Three records (Wildlife Online) within 25 km of the Site. Species distribution incorporates the Site. No suitable habitat occurs within the Site.
Rutidosis lanata	-	Endangered	This species has been recorded from a few locations on the western darling downs, near Meandarra and north of Jackson. It is known to occur within remnant roadside vegetation, on sandy ridges and sandy clay flats, in the understorey of Eucalyptus and Acacia communities (Holland, 1994).	Potential to occur. Five records (Herbrecs) within 25 km of the Site. Seven records (Wildlife Online) within 25 km of the Site. Species distribution incorporates the Site. Potentially suitable habitat occurs within the Site.
Senna acclinis	rainforest cassia	Near threatened	This species is restricted to the central and northern coastal forests of New South Wales and Queensland (Williams, 1998). This species grows in or on the edges of subtropical and dry rainforest (DEH, 2012a).	Unlikely to occur. One record (Herbrecs) within 25 km of the Site. Species distribution incorporates the Site. No suitable habitat occurs within the Site.

Table 15: Likelihood of occurrence for Nature Conservation Regulation listed fauna species based on field survey results.

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of Occurrence
Amphibians				
Cyclorana verrucosa	rough-collared frog	Near threatened	The rough-collared frog is located through southern Queensland and northern New South Wales. Habitat for this species includes areas near seasonal ponds, creeks, and claypans in open country (Tyler and Knight, 2011).	Likely to occur. Three records (Wildlife Online) within 25 km of the Site. Potentially suitable habitat for this species is likely to occur within and adjacent to natural and artificial waterbodies present within the Site.
Birds				
Accipiter novaehollandiae	grey goshawk	Near threatened	The grey goshawk occurs throughout coastal northern, eastern and southern Australia. This species prefers wooded habitats including rainforests, forests, tall woodlands and riparian forest (Pizzey and Knight, 2007).	Potential to occur. One record (Wildlife Online) within 25 km of the Site. Potentially suitable habitat for this species occurs across the Site, particularly in remnant vegetation.
Calyptorhynchus lathami	glossy black-cockatoo	Vulnerable	The glossy black-cockatoo occurs from the central Queensland coast south to eastern Victoria. Food source for this species includes Allocasuarina and Casuarina spp. in forests, woodlands, timbered watercourses and rocky ridge areas. This species also occurs in eucalypts, native cypress and brigalow scrub (Pizzey and Knight, 2007).	Potential to occur. Two records (Wildlife Online) within 25 km of the Site. Potentially suitable habitat for this species occurs across the Site, although Casuarina abundance is low across the Site, and large hollows are limited.
Ephippiorhynchus australis	black-necked stork	Near threatened	The black-necked stork inhabits the northern regions of Australia from Broome in West Australia across the top end and down the south-eastern coastline of Queensland and New South Wales. This species' habitat includes freshwater marshes and lakes, pools in open forest and large rivers and flooded grasslands and irrigated lands (Pizzey and Knight, 2007).	Potential to occur. Three records (Wildlife Online) within 25 km of the Site. Potentially suitable habitat for this species occurs within the Site, particularly in the artificial waterbodies present.
Erythrotriorchis radiatus	red goshawk	Endangered	The red goshawk is a naturally uncommon species of eastern and northern Australia. It prefers landscapes containing a mosaic of habitats including coastal and sub-coastal tall open forest, woodland and rainforest	Unlikely to occur. Species has not been recorded within 25 km of the Site.

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of Occurrence
			edges. Forests of intermediate density are particularly favoured, as are ecotones between variably dense habitats (i.e. ecotone between rainforest and sclerophyll forest). Large bird populations (the primary prey of this species) are also an important determinant of red goshawk habitat utilisation. It generally avoids open habitats, and is only rarely encountered over agricultural land. Nesting occurs in tall trees within one km of permanent water, generally in open, biologically-rich forest or woodland (Marchant and Higgins, 1993; DSEWPaC, 2012e).	The current distribution of this species does not encompass the Site. No potential habitat on Site.
Geophaps scripta scripta	squatter pigeon (southern)	Vulnerable	This species' distribution extends from the Burdekin-Lynd divide in central Queensland, west to Longreach, east to the coastline between Proserpine and Gladstone, and throughout south-eastern Queensland. The squatter pigeon is locally abundant within the northern part of its range (i.e. Brigalow Belt (North) and Desert Uplands Bioregions). It is considered to be common in grazing country north of the Tropic of Capricorn. The species occurs in a wide range of habitats wherever there is a grassy understorey. It is often found within close proximity of water bodies (DSEWPaC, 2012g).	Potential to occur. No previous records within 25 km of the Site. Species distribution incorporates the Site. Potentially suitable habitat occurs on Site in the form of woodlands and forests with a grassy understorey.
Grantiella picta	painted honeyeater	Vulnerable	The painted honeyeater occurs throughout east and northern Australia with the movements of this species influenced by rainfall and fruiting of mistletoes. The species inhabits eucalypt forests and woodlands, black box woodland along watercourses, box-ironbark – yellow-gum woodlands with which mistletoe is typically associated (Pizzey and Knight, 2007).	Likely to occur. Three records (Wildlife Online) within 25 km of the Site. Suitable habitat for this species occurs on Site. Mistletoe is present within remnant and regrowth vegetation across the Site.
Lophoictinia isura	square-tailed kite	Vulnerable	The square-tailed kite is found throughout Australian mainland, primarily within 250 km of the coast and rarely inland along watercourses and in central Australia. This species is known to inhabit heathlands, woodlands, forests, tropical and subtropical rainforests, hills and gorges (Pizzey and	Likely to occur. One record (Wildlife Online) within 25 km of the Site. Potentially suitable habitat for this species occurs across the Site.

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of Occurrence
			Knight, 2007).	
Melithreptus gularis	black-chinned honeyeater	Near threatened	The black-chinned honeyeater occurs on inland slopes of the Great Dividing Range in eastern Australia (DSEWPaC, 2012). This species occurs within drier eucalypt forests and woodlands, within timber lined watercourses often with no shrub layer (Pizzey and Knight, 2007).	Likely to occur. Two records (Wildlife Online) within 25 km of the Site. Potentially suitable habitat for this species occurs across the Site.
Neochmia ruficauda ruficauda	star finch	Endangered	The distribution of the eastern subspecies of the star finch is poorly known, however it is restricted to eastern Queensland and is likely to be severely fragmented. Records suggest that the distribution of the eastern subspecies extends north to Bowen, west beyond Winton and south to near Wowan. Areas of permanently occupied habitat or permanent populations have not been identified. An estimate (considered to be of low reliability) puts the extant wild population of the subspecies at 50 birds. The subspecies has disappeared from much of its former eastern and central Queensland range, with scattered records from the 1990s considered likely to be aviary escapes. Habitat preferences include grasslands and grassy woodlands near water, sedgelands, swamps and wetlands. The subspecies is also known from disturbed habitats including farmland (Higgins et al., 2006; DSEWPaC, 2012j).	Unlikely to occur. Species has not been recorded within 25 km of the Site. The current distribution of this species does not encompass the Site. Habitat for this species occurs on Site however the species is considered unlikely to occur.
Insects				
Jalmenus eubulus	pale imperial hairstreak	Vulnerable	The species is found in Queensland and New South Wales, restricted in Queensland to the seasonally sub-humid central and southern areas of the state. This species is known to only breed in old-growth forest or woodland and does not appear to colonise regrowth habitats following disturbance. Suitable habitat includes by brigalow (Acacia harpophylla) and bulloke (Casuarina cristata) on clay soils on flat to	Unlikely to occur. One record (Wildlife Online) within 25 km of the Site. No suitable habitat occurs within the Site.

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of Occurrence
			gently undulating plains (DEH, 2012b).	
Mammals				
Chalinolobus picatus	little pied bat	Near threatened	The little pied bat occurs throughout central Queensland and into north west New South Wales. In central western Queensland, this species is found in the greatest relative abundance in riverine open forest communities. A variety of woodland and open forest habitats are utilised by this species. Roosting habitat includes tree hollows, caves and abandoned buildings and mines (Churchill, 2008).	Potential to occur. One record (Wildlife Online) within 25 km of the Site. Potentially suitable habitat occurs across the Site although tree hollows and exfoliating bark were limited.
Nyctophilus corbeni	eastern long-eared bat	Vulnerable	This species is restricted to the Murray-Darling basin and surrounds in south-eastern Australia, in which it is scattered and rarely recorded. Little is known about the biology of these bats. However, it is likely that they roost solitarily under exfoliated bark and in crevices on trees, in a range of inland woodland vegetation types including the following: box, ironbark, cypress pine, brigalow/acacia and she-oak woodlands, and fringing woodland/open forest of river red gum (Eucalyptus camaldulensis) or black box (E. largiflorens) (DSEWPaC, 2012k).	Potential to occur. No previous records within 25 km of the Site. Species distribution incorporates the Site. Suitable habitat for this species occurs on Site in eucalypt forests and woodlands.
Reptiles				
Aspidites ramsayi	woma	Near threatened	The woma is widespread throughout arid and semi-arid Australia. In Queensland, this species occurs in dry subtropics from the Northern Territory border to the Yuleba, Surat and St George area, in the western margins of the Brigalow Belt. Within the Brigalow Belt, this species occurs on black soils and in stony ridge country in brigalow woodlands and grasslands (DEHP, 2011).	Unlikely to occur. One record (Wildlife Online) within 25 km of the Site. Marginally suitable habitat is present within the Site in Eucalyptus/Acacia woodlands.
Egernia rugosa	yakka skink	Vulnerable	The yakka skink is endemic to dry open forests, woodlands and rocky areas of central, eastern and north-eastern Queensland. Yakka skinks live in communal burrow complexes, and often take refuge among low vegetation or under timber piles, logs, rocks and in deep rock crevices. The species occurs	Potential to occur. This species has been previously recorded within 25 km of the Site (two records). Species distribution encompasses the Site.

Scientific Name	Common Name	NC Act Status	Habitat and Distribution	Likelihood of Occurrence
			in a wide variety of vegetation types including poplar box, ironbark, brigalow, white cypress pine, mulga (*Acacia aneura*), bendee (Acacia catenulata) and lancewood (*Acacia shirleyi*) woodland and open forest (Wilson 2005; DSEWPaC, 2012d).	Marginal habitat for this species occurs within the Site in the form of woodlands and forests however complex habitat features such as log piles and rocks are limited.
Furina dunmalli	Dunmall's snake	Vulnerable	This species occurs primarily in the Brigalow Belt region in the south-eastern interior of Queensland. This species can also be found south of the border towards Ashford in New South Wales. Habitat includes forest and woodlands on cracking clays and clay loams dominated by brigalow, other wattles, and native cypress. Little is known about its habitat requirement, however it is suggested that fallen timber, ground litter, and cracks in alluvial soils provide shelter for this species (DSEWPaC, 2012f).	Potential to occur. This species has been previously recorded within 25 km of the Site (one record). Species distribution encompasses the Site. Marginal habitat for this species occurs within the Site in the form of woodlands and forests however complex habitat features such as log piles and rocks are limited.
Paradelma orientalis	brigalow scaly-foot	Vulnerable	The distribution of the brigalow scaly-foot extends from Nebo in the north, Boyne Island in the east, Wyaga in the south and Idalia National Park in the west. This species is found in a wide variety of open forest habitats on several soil types. The brigalow scaly-foot is found in sclerophyll open forests and woodlands, including brigalow, narrow-leaved ironbark, poplar box, cypress pine and belah dominated communities (DSEWPaC, 2012l).	Likely to occur. This species has previously been recorded within 25 km of the Site (one record). Species distribution incorporates the Site. Potentially suitable habitat for this species occurs on Site.
Strophurus taenicauda	golden-tailed gecko	Near threatened	The golden-tailed gecko occurs through south-east and coastal central Queensland. Most records of this species are from the Brigalow Belt bioregion. It inhabits open woodland habitats, mainly dry sclerophyll woodland featuring a mix of ironbarks (Eucalyptus spp.), brigalow (*Acacia harpophylla*) and cypress pine (*Callitris spp*.) (Wilson, 2005).	Potential to occur. Twenty one records (Wildlife Online) within 25 km of the Site. Potential habitat for this species occurs on Site within mixed Eucalyptus, Callitris and Acacia woodlands although exfoliating bark was minimal throughout the Site.

Environmentally sensitive areas

The distribution of ESA's on Site has been assessed through the field survey. The single Category B ESA mapped over HVR containing an endangered RE on the Site's south-eastern boundary was assessed as being incorrectly mapped. This assessment is discussed in detail in the section below (High Value Regrowth). As the HVR containing an endangered RE was observed to be consistent with HVR containing an of concern RE, it can subsequently be concluded that no ESAs are present within the Site.

No Concern at Present REs

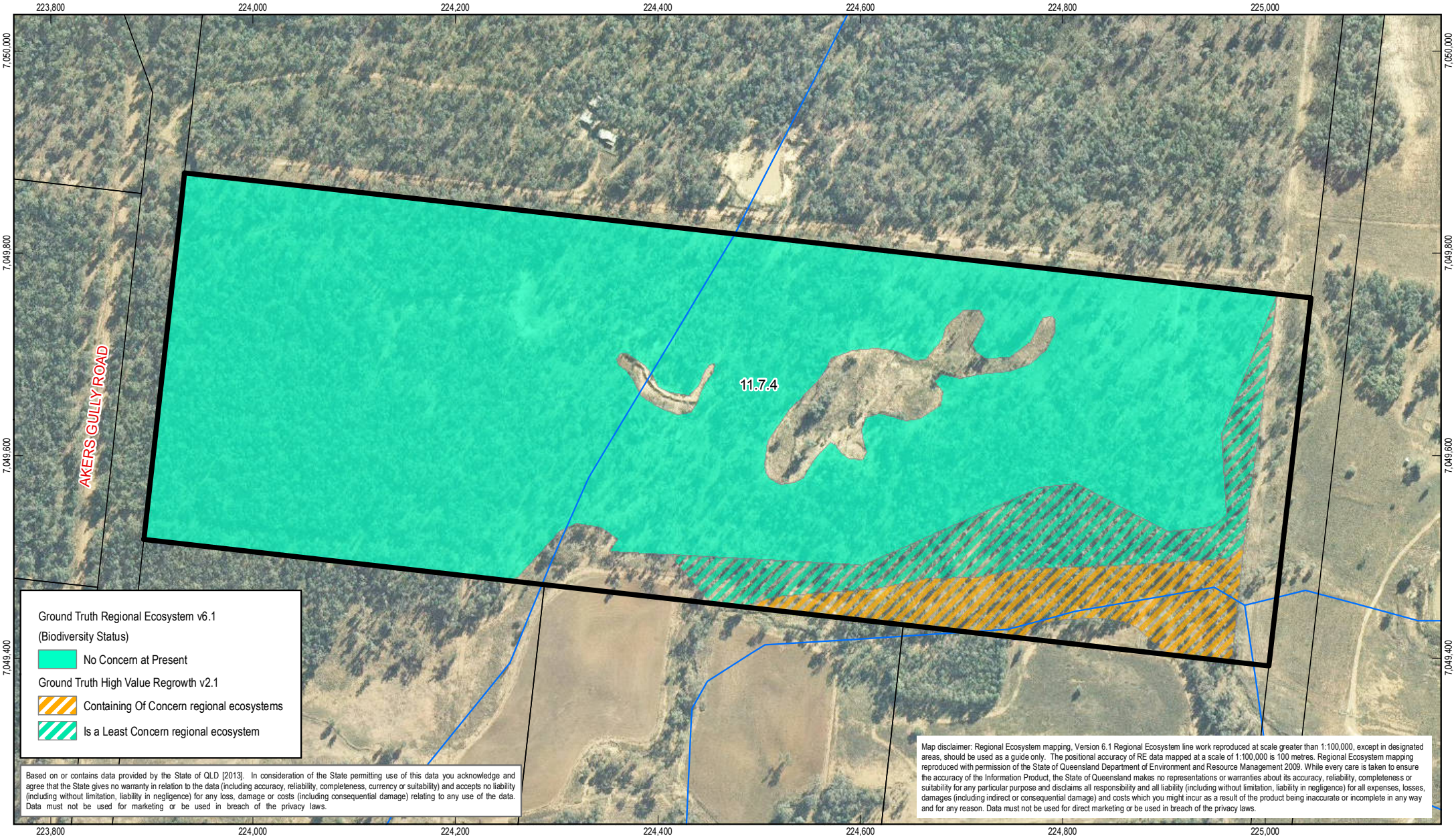
Four REs with a biodiversity status of no concern at present are mapped by DEHP as occurring within a large heterogeneous polygon across most of the Site. During the field survey two tertiary level assessments and a number of quaternary level assessments (Neldner *et al*., 2012) were undertaken within this remnant unit in order to verify the mapped RE type and status. The result of this assessment was that the RE unit was found to be mapped incorrectly. Field assessment found that only one RE type was present within the mapped remnant vegetation community. The vegetation in the RE unit was observed to be a woodland community dominated in the northern and western extents of the Site by *Eucalyptus fibrosa* subsp. *nubila* to an average height of 15 metres, with *Eucalyptus crebra* also present in the canopy. The eastern and southern extent of the Site was characterised by a 15 m high woodland community dominated by *Eucalyptus populnea*. Throughout the remnant vegetation *Callitris glaucophylla* was present in the mid stratum, with a range of shrub species and native grasses in the lower strata. Based on this assessment the entire heterogenous polygon was found to consist of only RE 11.7.4 (described in Table 9), with none of the other mapped REs observed to be present within the Site. Field validated RE and HVR mapping is provided as Figure 5.

High value regrowth

A description of mapped HVR assessed during the field survey is presented in Table 16. Field validated RE and HVR mapping is provided as Figure 5.

Table 16: HVR verified as being present on Site

HVR	General description	Condition and Values
HVR containing endangered REs	Contains *Eucalyptus populnea* and *Casuarina cristata* woodland regrowth. No *Acacia harpophylla* is present.	A unit of HVR containing endangered REs is mapped adjacent to and overlapping the southern boundary of the Site. This vegetation community was observed to be a regenerating community consistent with RE 11.4.2 (biodiversity status - of concern). Minor disturbance due to past land use (e.g. selective clearing) and edge effects have reduced the condition of the HVR which was observed to be of moderate condition.
HVR that is a least concern RE	Contains Eucalyptus populnea woodland with scattered *Eucalyptus crebra* and *Callitris glaucophylla*.	This unit of HVR was observed to have developed to an advanced stage and was considered to have reached remnant status of RE 11.7.4.



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0 50 100 150 200

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Watercourse

Cadastre

Property Site

Origin Energy
Terrestrial Ecology Assessment

Ground Truth Regional Ecosystem and High Value Regrowth Mapping

Figure 5

Job Number 41-24732
Revision 0
Date 12 Jul 2013

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Data source: DNRM: Road/2010, Regional Ecosystem v6.1 (Ground Truth by GHD July 2013), High Value Regrowth v2.1 (Ground Truth by GHD July 2013), Watercourse/2011, Cadastre/2012; Origin Energy: Imagery/2012. Created by: AF

Weeds and pests

The Site is currently actively managed for rural lifestyle, with a low level of disturbance to the majority of the property. However, a low number of exotic flora species were recorded during the field survey. Three Class 2 declared weed species listed under the LP Reg were identified during the field survey (). These species recorded in low densities throughout the Site, whilst an isolated patch of *Bryophyllum delagoense* was recorded in the northern corner of the Site, adjacent to Akers Gully Road (Table 17). Two of these species are also listed as WoNS.

Table 17 Weeds observed within the Site

Scientific Name	Common Name	LP Act Status	WONS	Likelihood of occurrence
Opuntia stricta	prickly pear	Class 2	✓	Confirmed present
Opuntia tomentosa	velvety tree pear	Class 2	✓	Confirmed present
Bryophyllum delagoense	mother of millions	Class 2		Confirmed present

Pest fauna

No pest fauna species were observed on Site during the field survey. Pest fauna species considered likely to be present are listed in Table 18.

Table 18 Pest fauna species with potential to occur within the Site

Scientific Name	Common Name	LP Act Status	Likelihood of occurrence
Canis lupus familiaris	dog	Class 2	Likely to occur. Species recorded within 25 km of the Site, and is likely to be localised to widespread in the region and occasionally present.
Felis catus	cat	-	Likely to occur. No previous records within 25 km of the Site. Species likely to be localised to widespread in the region and occasionally present.
Oryctolagus cuniculus	European Rabbit	-	Likely to occur. Species recorded within 25 km of the Site, and is likely to be localised to widespread in the region and occasionally present.
Rhinella marina (syn. *Bufo marinus*).	cane toad	-	Likely to occur. Species recorded within 25 km of the Site, and is likely to be localised to widespread in the region and common.
Sus scrofa	pig	-	Likely to occur. No previous records within 25 km of the Site. Species likely to be localised to widespread in the region and occasionally present.
Vulpes vulpes	red fox	Class 2	Likely to occur. Species recorded within 25 km of the Site, and is likely to be localised to widespread in the region and common.

4.2.1 Watercourses and wetland ecosystems

Field verification of watercourses and wetland ecosystems was not undertaken during the field survey. The following assessment is based on analysis of desktop results and professional judgement.

A first order drainage line intersects the Site and contains a single dam of moderate capacity towards the centre of the property. A third order watercourse is mapped traversing the south eastern corner of the Site, and was observed to be dry at the time of the field survey. Neither of these watercourses was observed to hold significant aquatic habitat.

4.2.2 Disturbance

The Site has been subject to varying degrees of disturbance over recent decades. Disturbance on the Site includes historic clearing of vegetation and invasion by weed and pest species. The level of disturbance from exotic flora and fauna observed is consistent with that of the broader area.

Evidence was observed within remnant vegetation on Site of selective timber harvesting practises and a frequent burning regime. This has resulted in a limited number of mature habitat trees and limited large fallen woody debris. The Site in general exhibits a low level of current disturbance and was observed to be actively regenerating from past disturbance, and therefore beginning to provide increasing habitat for flora and fauna species.

5. Conclusions and recommendations

The desktop review and field survey identified a number of Commonwealth and State significant ecological values as confirmed to be present and potentially present within the Site. Overall, the Site offers a moderate level of ecological value, as much of the Site contains remnant vegetation. A summary of the terrestrial ecology values present on Site include:

- No EPBC Act listed threatened fauna species was recorded from the Site. Based on desktop review and the field survey, the Site was considered to have the potential to provide habitat for one threatened flora species and ten threatened fauna species (three mammal, five reptile and two bird species) under the EPBC Act. Assessment of the likelihood of occurrence for the above mentioned species was based on previous records, the availability of habitat and the known distribution of the species.
- No migratory species were recorded during field survey within the Site. However, the Site is considered to provide potential habitat for eight threatened fauna species listed under the EPBC Act.
- No flora species listed under the NC Reg were identified during the field survey. The desktop review found the Site to provide potential habitat for two conservation significant flora species listed under the NC Reg, based on previous records, current known distribution for recorded species and the presence of suitable, locally occurring habitat.
- Two flora species, *Cymbidium canaliculatum* and *Brachychiton populneus*, which are listed as Type A restricted plants under Schedule 7 of the *Nature Conservation (Administration) Regulation 2006* were identified in a number of locations within the Site.
- No fauna species listed under the NC Reg were recorded during the field survey. The Site was considered to have the potential to provide habitat for eight conservation significant fauna species listed under the NC Reg (six birds, one mammal and one reptile) based on desktop review and field survey. The likelihood of occurrence assessment for the above mentioned species was based on the availability of habitat and the known distribution of the species.
- One no concern at present RE (biodiversity status) was confirmed through field assessments as occurring on Site.
- One unit of mapped least concern HVR was assessed to have obtained remnant status, and one unit of mapped endangered HVR was assessed as being mapped incorrectly and field verified as containing an of concern RE.
- No DEHP wetland management areas or wetland protection areas are mapped as occurring on Site. One first order watercourse and one third order watercourse are mapped within the Site.
- One ESA is mapped by DEHP as occurring on Site. This is the HVR unit containing an endangered RE (category B ESA). However, as field validation assessed that this HVR unit was consistent with of concern RE 11.4.2 regrowth, it has been field validated as a HVR containing an of Concern RE.
- The following Class 2 declared weed species listed under the LP Act were recorded in low densities throughout the Site: *Opuntia stricta* (prickly pear), *Opuntia tomentosa* (velvety tree pear) and *Bryophyllum delagoense* (mother of millions). The two Opuntia species are also listed as WoNS. Additional exotic flora species were also recorded during the field survey. These consisted primarily of weed species that are commonly associated with disturbed areas.

It is recommended that the findings in this report are considered during detailed development planning such that disturbance to the ecological values of the Site and locality may be avoided wherever practical. Where disturbance is unavoidable, impact mitigation measures are to be implemented in accordance with the approved Site environmental management plan and regulatory legislative conditions.

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Appendices

Appendix A – EPBC Protected Matters Search Results

Australian Government

Department of Sustainability, Environment, Water, Population and Communities

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.

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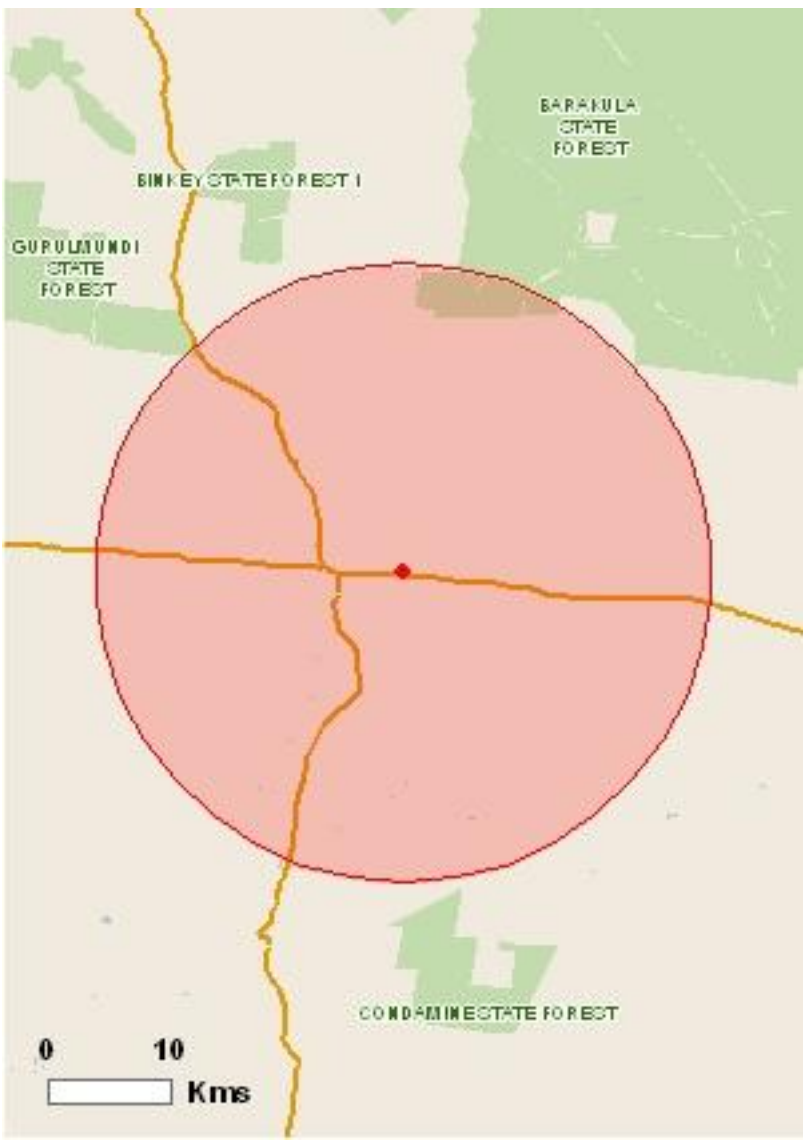
Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements



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Coordinates

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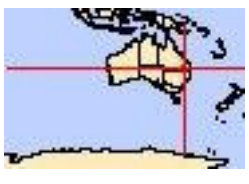

Summary

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 Areas:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	23
Listed Migratory Species:	12

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 and the heritage values of a place on the Register of the National Estate.

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.

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:	12
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

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

Place on the RNE:	1
State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	12
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (RAMSAR) [Resource Information]

Name	Proximity
Narran lake nature reserve	Upstream from 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
Brigalow (Acacia harpophylla dominant and co-dominant)	Endangered	Community known to occur within area
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community likely to occur within area
Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland	Critically Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Erythrotriorchis 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 likely to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat may occur within area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Poephila cincta cincta Black-throated Finch (southern) [64447]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Rostratula australis		
Australian Painted Snipe [77037]	Vulnerable	Species or species habitat likely to occur within area
Turnix melanogaster		
Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Fish		
Maccullochella peelii		
Murray Cod [66633]	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 may occur within area
Nyctophilus corbeni		
South-eastern Long-eared Bat [83395]	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
Plants		
Cadellia pentastylis		
Ooline [9828]	Vulnerable	Species or species habitat likely to occur within area
Calytrix gurulmundensis		
[24241]	Vulnerable	Species or species habitat likely to occur within area
Homopholis belsonii		
[2406]	Vulnerable	Species or species habitat may occur within area
Pterostylis cobarensis		
Cobar Greenhood Orchid [12993]	Vulnerable	Species or species habitat likely to occur within area
Tylophora linearis		
[55231]	Endangered	Species or species habitat may occur within area
Westringia parvifolia		
[4822]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Anomalopus mackayi		
Five-clawed Worm-skink, Long-legged Worm-skink [25934]	Vulnerable	Species or species habitat may occur within area
Delma torquata		
Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Denisonia maculata		
Ornamental Snake [1193]	Vulnerable	Species or species habitat may occur within area
Egernia rugosa		
Yakka Skink [1420]	Vulnerable	Species or species habitat known to occur within area
Furina dunmalli		
Dunmall's Snake [59254]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
[Paradelma orientalis](#) Brigalow Scaly-foot [59134]	Vulnerable	Species or species habitat known to 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
[Ardea alba](#) Great Egret, White Egret [59541]		Breeding likely to occur within area
[Ardea ibis](#) Cattle Egret [59542]		Species or species habitat may occur within area
Migratory Terrestrial Species		
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
[Hirundapus caudacutus](#) White-throated Needletail [682]		Species or species habitat likely to occur within area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may 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 may occur within area
Migratory Wetlands Species		
[Ardea alba](#) Great Egret, White Egret [59541]		Breeding likely to occur within area
[Ardea ibis](#) Cattle Egret [59542]		Species or species habitat may occur within area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
[Rostratula benghalensis (sensu lato)](#) Painted Snipe [889]	Vulnerable*	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		
[Anseranas semipalmata](#) Magpie Goose [978]		Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Breeding likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may 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 may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Vulnerable*	Species or species habitat likely to occur within area

Extra Information

Places on the RNE [Resource Information]

Note that not all Indigenous sites may be listed.

Name	State	Status
Natural		
Barakula State Forest Area	QLD	Indicative Place

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 Resouces Audit, 2001.

Name	Status	Type of Presence
Frogs		

Name	Status	Type of Presence
Bufo marinus		
Cane Toad [1772]		Species or species habitat likely to occur within area
Mammals		
Felis catus		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Oryctolagus cuniculus		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Sus scrofa		
Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Acacia nilotica subsp. indica		
Prickly Acacia [6196]		Species or species habitat may occur within area
Hymenachne amplexicaulis		
Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Lycium ferocissimum		
African Boxthorn, Boxthorn [19235]		Species or species habitat may occur within area
Parkinsonia aculeata		
Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus		
Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Pinus radiata		
Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Salvinia molesta		
Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area

Coordinates

-26.6583 150.234

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 Heritage and Register of National Estate properties, Wetlands of International 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.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

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.

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:

-Department of Environment, Climate Change and Water, New South Wales
-Department of Sustainability and Environment, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment and Natural Resources, South Australia
-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts
-Environmental and Resource Management, Queensland
-Department of Environment and Conservation, Western Australia
-Department of the Environment, Climate Change, Energy and Water
-Birds Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-SA 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, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
-State Forests of NSW
-Geoscience Australia
-CSIRO
-Other groups and individuals

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

Please feel free to provide feedback via the Contact Us page.

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Appendix B – Wildlife Online Database Search Results

Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Status: All
Records: All
Date: All
Latitude: 26.6583
Longitude: 150.234
Distance: 25
Email: vince.toohey@ghd.com
Date submitted: Friday 23 Nov 2012 11:45:49
Date extracted: Friday 23 Nov 2012 11:50:05

The number of records retrieved = 721

Disclaimer

As the DERM 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	Bufonidae	*Rhinella marina*	cane toad	Y			18
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		11
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		36
animals	amphibians	Hylidae	*Cyclorana verrucosa*	rough collared frog		NT		3
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		21
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		9
animals	amphibians	Hylidae	*Cyclorana novaehollandiae*	eastern snapping frog		C		7
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		2
animals	amphibians	Hylidae	*Litoria peronii*	emerald spotted treefrog		C		4
animals	amphibians	Limnodynastidae	*Neobatrachus sudellae*	meeowing frog		C		1
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		52
animals	amphibians	Limnodynastidae	*Notaden bennettii*	holy cross frog		C		2
animals	amphibians	Limnodynastidae	*Limnodynastes salmini*	salmon striped frog		C		25
animals	amphibians	Limnodynastidae	*Limnodynastes terraereginae*	scarlet sided pobblebonk		C		5
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		9
animals	amphibians	Limnodynastidae	*Limnodynastes fletcheri*	barking frog		C		6
animals	amphibians	Myobatrachidae	*Crinia deserticola*	chirping froglet		C		1
animals	amphibians	Myobatrachidae	*Uperoleia rugosa*	chubby gungan		C		11/1
animals	birds	Acanthizidae	*Acanthiza pusilla*	brown thornbill		C		8
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		12
animals	birds	Acanthizidae	*Gerygone fusca*	western gerygone		C		9
animals	birds	Acanthizidae	*Acanthiza nana*	yellow thornbill		C		22
animals	birds	Acanthizidae	*Acanthiza lineata*	striated thornbill		C		1
animals	birds	Acanthizidae	*Gerygone albogularis*	white-throated gerygone		C		19
animals	birds	Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill		C		26
animals	birds	Acanthizidae	*Acanthiza uropygialis*	chestnut-rumped thornbill		C		5
animals	birds	Acanthizidae	*Chthonicola sagittata*	speckled warbler		C		11
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		54
animals	birds	Acanthizidae	*Acanthiza apicalis albiventris*	inland thornbill (eastern form)		C		1
animals	birds	Acanthizidae	*Acanthiza apicalis*	inland thornbill		C		19
animals	birds	Accipitridae	*Aviceda subcristata*	Pacific baza		C		8
animals	birds	Accipitridae	*Accipiter fasciatus*	brown goshawk		C		9
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		22
animals	birds	Accipitridae	*Accipiter novaehollandiae*	grey goshawk		NT		1
animals	birds	Accipitridae	*Lophoictinia isura*	square-tailed kite		NT		1
animals	birds	Accipitridae	*Circus approximans*	swamp harrier		C		2
animals	birds	Accipitridae	*Elanus axillaris*	black-shouldered kite		C		8
animals	birds	Accipitridae	*Circus assimilis*	spotted harrier		C		3
animals	birds	Accipitridae	*Haliastur indus*	brahminy kite		C		1
animals	birds	Accipitridae	*Milvus migrans*	black kite		C		3
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		11
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		2
animals	birds	Accipitridae	*Hieraaetus morphnoides*	little eagle		C		3
animals	birds	Accipitridae	*Accipiter cirrocephalus*	collared sparrowhawk		C		1
animals	birds	Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler		C		5
animals	birds	Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar		C		8

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Alaudidae	*Mirafra javanica*	Horsfield's bushlark		C		2
animals	birds	Anatidae	*Malacorhynchus membranaceus*	pink-eared duck		C		2
animals	birds	Anatidae	*Dendrocygna arcuata*	wandering whistling-duck		C		3
animals	birds	Anatidae	*Dendrocygna eytoni*	plumed whistling-duck		C		2
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		23
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		29
animals	birds	Anatidae	*Aythya australis*	hardhead		C		5
animals	birds	Anatidae	*Anas rhynchotis*	Australasian shoveler		C		2
animals	birds	Anatidae	*Cygnus atratus*	black swan		C		5
animals	birds	Anatidae	*Anas castanea*	chestnut teal		C		1
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		14
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		21
animals	birds	Apodidae	*Apus pacificus*	fork-tailed swift		C		1
animals	birds	Apodidae	*Hirundapus caudacutus*	white-throated needletail		C		5
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		18
animals	birds	Ardeidae	*Ardea ibis*	cattle egret		C		1
animals	birds	Ardeidae	*Ardea modesta*	eastern great egret		C		14
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		21
animals	birds	Ardeidae	*Ardea intermedia*	intermediate egret		C		7
animals	birds	Ardeidae	*Egretta garzetta*	little egret		C		5
animals	birds	Ardeidae	*Nycticorax caledonicus*	Nankeen night-heron		C		6
animals	birds	Artamidae	*Artamus superciliosus*	white-browed woodswallow		C		2
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		35
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		18
animals	birds	Artamidae	*Artamus minor*	little woodswallow		C		2
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		48
animals	birds	Artamidae	*Artamus personatus*	masked woodswallow		C		2
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		36
animals	birds	Artamidae	*Artamus cyanopterus*	dusky woodswallow		C		1
animals	birds	Artamidae	*Cracticus tibicen*	Australian magpie		C		49
animals	birds	Burhinidae	*Burhinus grallarius*	bush stone-curlew		C		2
animals	birds	Cacatuidae	*Eolophus roseicapillus*	galah		C		65/1
animals	birds	Cacatuidae	*Calyptorhynchus banksii*	red-tailed black-cockatoo		C		2
animals	birds	Cacatuidae	*Calyptorhynchus lathami*	glossy black-cockatoo		V		2
animals	birds	Cacatuidae	*Calyptorhynchus funereus*	yellow-tailed black-cockatoo		C		3
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		38
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		54
animals	birds	Cacatuidae	*Cacatua sanguinea*	little corella		C		10
animals	birds	Campephagidae	*Lalage sueurii*	white-winged triller		C		9
animals	birds	Campephagidae	*Coracina maxima*	ground cuckoo-shrike		C		4
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		1
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		5/1
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		37
animals	birds	Campephagidae	*Coracina tenuirostris*	cicadabird		C		6
animals	birds	Casuariidae	*Dromaius novaehollandiae*	emu		C		6
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		8

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Charadriidae	*Pluvialis fulva*	Pacific golden plover		C		1
animals	birds	Charadriidae	*Vanellus tricolor*	banded lapwing		C		3
animals	birds	Charadriidae	*Elseyornis melanops*	black-fronted dotterel		C		8
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		12
animals	birds	Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork		NT		3
animals	birds	Cisticolidae	*Cisticola exilis*	golden-headed cisticola		C		3
animals	birds	Climacteridae	*Climacteris picumnus*	brown treecreeper		C		3
animals	birds	Climacteridae	*Cormobates leucophaea metastasis*	white-throated treecreeper (southern)		C		1
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		3
animals	birds	Columbidae	*Lopholaimus antarcticus*	topknot pigeon		C		1
animals	birds	Columbidae	*Streptopelia chinensis*	spotted dove	Y			3
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		13
animals	birds	Columbidae	*Geopelia cuneata*	diamond dove		C		6
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		51
animals	birds	Columbidae	*Geopelia striata*	peaceful dove		C		31
animals	birds	Columbidae	*Columba livia*	rock dove	Y			9
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		14
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		51
animals	birds	Corcoracidae	*Corcorax melanorhamphos*	white-winged chough		C		19
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		23
animals	birds	Corvidae	*Corvus sp.*					4
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		77
animals	birds	Corvidae	*Corvus bennetti*	little crow		C		3
animals	birds	Cuculidae	*Chalcites minutillus russatus*	Gould's bronze-cuckoo		C		1
animals	birds	Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo		C		5
animals	birds	Cuculidae	*Chalcites osculans*	black-eared cuckoo		C		1
animals	birds	Cuculidae	*Cacomantis pallidus*	pallid cuckoo		C		12
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		6
animals	birds	Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo		C		4
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		8
animals	birds	Cuculidae	*Eudynamys orientalis*	eastern koel		C		7
animals	birds	Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo		C		4
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		3
animals	birds	Estrildidae	*Neochmia modesta*	plum-headed finch		C		7
animals	birds	Estrildidae	*Lonchura punctulata*	nutmeg mannikin	Y			1
animals	birds	Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin		C		1
animals	birds	Estrildidae	*Stagonopleura guttata*	diamond firetail		C		4
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		28
animals	birds	Estrildidae	*Taeniopygia guttata*	zebra finch		C		7
animals	birds	Falconidae	*Falco berigora*	brown falcon		C		13
animals	birds	Falconidae	*Falco subniger*	black falcon		C		2
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		21
animals	birds	Falconidae	*Falco longipennis*	Australian hobby		C		5
animals	birds	Fregatidae	*Fregata ariel*	lesser frigatebird		C		1
animals	birds	Gruidae	*Grus rubicunda*	brolga		C		3
animals	birds	Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra		C		51

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Halcyonidae	*Todiramphus sanctus*	sacred kingfisher		C		22
animals	birds	Halcyonidae	*Todiramphus macleayii*	forest kingfisher		C		1
animals	birds	Halcyonidae	*Todiramphus pyrrhopygius*	red-backed kingfisher		C		2
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		23
animals	birds	Hirundinidae	*Petrochelidon ariel*	fairy martin		C		12
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		11
animals	birds	Jacanidae	*Irediparra gallinacea*	comb-crested jacana		C		1
animals	birds	Laridae	*Chlidonias hybrida*	whiskered tern		C		1
animals	birds	Laridae	*Gelochelidon nilotica*	gull-billed tern		C		1
animals	birds	Laridae	*Hydroprogne caspia*	Caspian tern		C		1
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		40/1
animals	birds	Maluridae	*Malurus leucopterus*	white-winged fairy-wren		C		5
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		3
animals	birds	Maluridae	*Malurus lamberti*	variegated fairy-wren		C		12
animals	birds	Megaluridae	*Cincloramphus mathewsi*	rufous songlark		C		10
animals	birds	Megaluridae	*Cincloramphus cruralis*	brown songlark		C		2
animals	birds	Meliphagidae	*Sugomel niger*	black honeyeater		C		2
animals	birds	Meliphagidae	*Grantiella picta*	painted honeyeater		V		3
animals	birds	Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater		C		1
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		19
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		45
animals	birds	Meliphagidae	*Manorina flavigula*	yellow-throated miner		C		16
animals	birds	Meliphagidae	*Epthianura tricolor*	crimson chat		C		1
animals	birds	Meliphagidae	*Gavicalis virescens*	singing honeyeater		C		2
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		32
animals	birds	Meliphagidae	*Melithreptus gularis*	black-chinned honeyeater		NT		2
animals	birds	Meliphagidae	*Melithreptus lunatus*	white-naped honeyeater		C		1
animals	birds	Meliphagidae	*Nesoptilotis leucotis*	white-eared honeyeater		C		25/1
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		40
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		72
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		8
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		38/1
animals	birds	Meliphagidae	*Ptilotula penicillatus*	white-plumed honeyeater		C		16
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		31
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		1
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		45
animals	birds	Meliphagidae	*Melithreptus brevirostris*	brown-headed honeyeater		C		11/1
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		23
animals	birds	Monarchidae	*Myiagra inquieta*	restless flycatcher		C		10
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		11
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		72
animals	birds	Motacillidae	*Anthus novaeseelandiae*	Australasian pipit		C		9
animals	birds	Nectariniidae	*Dicaeum hirundinaceum*	mistletoebird		C		35
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		16/2
animals	birds	Oriolidae	*Sphecotheres vieilloti*	Australasian figbird		C		5
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		20

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Otididae	*Ardeotis australis*	Australian bustard		C		13
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		12
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		27
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		47
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		62/1
animals	birds	Pardalotidae	*Pardalotus punctatus*	spotted pardalote		C		6
animals	birds	Passeridae	*Passer domesticus*	house sparrow	Y			5
animals	birds	Pelecanidae	*Pelecanus conspicillatus*	Australian pelican		C		9
animals	birds	Petroicidae	*Petroica rosea*	rose robin		C		2
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		17
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		9
animals	birds	Petroicidae	*Melanodryas cucullata*	hooded robin		C		1
animals	birds	Petroicidae	*Petroica goodenovii*	red-capped robin		C		11
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		9
animals	birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant		C		11
animals	birds	Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant		C		2
animals	birds	Phalacrocoracidae	*Phalacrocorax carbo*	great cormorant		C		9
animals	birds	Phasianidae	*Excalfactoria chinensis*	king quail		C		1
animals	birds	Phasianidae	*Coturnix ypsilophora*	brown quail		C		3
animals	birds	Phasianidae	*Coturnix pectoralis*	stubble quail		C		3
animals	birds	Podargidae	*Podargus strigoides*	tawny frogmouth		C		14
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		10
animals	birds	Pomatostomidae	*Pomatostomus temporalis temporalis*	grey-crowned babbler (eastern)		C		1
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		48
animals	birds	Psittacidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		39/2
animals	birds	Psittacidae	*Platycercus adscitus palliceps*	pale-headed rosella (southern form)		C		1
animals	birds	Psittacidae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet		C		14
animals	birds	Psittacidae	*Psephotus varius*	mulga parrot		C		2
animals	birds	Psittacidae	*Alisterus scapularis*	Australian king-parrot		C		10
animals	birds	Psittacidae	*Glossopsitta pusilla*	little lorikeet		C		4
animals	birds	Psittacidae	*Platycercus adscitus*	pale-headed rosella		C		40
animals	birds	Psittacidae	*Glossopsitta concinna*	musk lorikeet		C		1
animals	birds	Psittacidae	*Psephotus haematonotus*	red-rumped parrot		C		12
animals	birds	Psittacidae	*Melopsittacus undulatus*	budgerigar		C		3
animals	birds	Psittacidae	*Northiella haematogaster*	blue bonnet		C		2
animals	birds	Psittacidae	*Aprosmictus erythropterus*	red-winged parrot		C		35
animals	birds	Psittacidae	*Barnardius zonarius barnardi*	mallee ringneck		C		1
animals	birds	Psophodidae	*Psophodes olivaceus*	eastern whipbird		C		1
animals	birds	Ptilonorhynchidae	*Ptilonorhynchus maculatus*	spotted bowerbird		C		4
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		3
animals	birds	Rallidae	*Porzana pusilla*	Baillon's crake		C		1
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		10
animals	birds	Rallidae	*Porphyrio porphyrio*	purple swamphen		C		2
animals	birds	Rallidae	*Gallirallus philippensis*	buff-banded rail		C		1
animals	birds	Recurvirostridae	*Himantopus himantopus*	black-winged stilt		C		4
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		65

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animals	birds	Rhipiduridae	*Rhipidura leucophrys leucophrys*	willie wagtail (southern)		C		1
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		41
animals	birds	Scolopacidae	*Gallinago hardwickii*	Latham's snipe		C		3
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		8
animals	birds	Strigidae	*Ninox connivens*	barking owl		C		1
animals	birds	Sturnidae	*Sturnus vulgaris*	common starling	Y			5
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		21
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		12
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		9
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		11
animals	birds	Timaliidae	*Zosterops lateralis*	silvereye		C		9
animals	birds	Turnicidae	*Turnix velox*	little button-quail		C		3
animals	birds	Tytonidae	*Tyto javanica*	eastern barn owl		C		3
animals	bony fish	Percichthyidae	*Macquaria ambigua*	golden perch				2
animals	insects	Lycaenidae	*Jalmenus eubulus*	pale imperial hairstreak		V		1
animals	mammals	Canidae	*Vulpes vulpes*	red fox	Y			1
animals	mammals	Canidae	*Canis lupus dingo*	dingo				1
animals	mammals	Canidae	*Canis lupus familiaris*	dog	Y			4
animals	mammals	Dasyuridae	*Antechinus flavipes flavipes*	yellow-footed antechinus (south-east Queensland)		C		1
animals	mammals	Dasyuridae	*Sminthopsis murina*	common dunnart		C		4
animals	mammals	Dasyuridae	*Sminthopsis macroura*	stripe-faced dunnart		C		3
animals	mammals	Dasyuridae	*Sminthopsis crassicaudata*	fat-tailed dunnart		C		1
animals	mammals	Emballonuridae	*Taphozous troughtoni*	Troughton's sheathtail bat		C		1
animals	mammals	Emballonuridae	*Saccolaimus flaviventris*	yellow-bellied sheathtail bat		C		2
animals	mammals	Leporidae	*Oryctolagus cuniculus*	rabbit	Y			2
animals	mammals	Macropodidae	*Macropus parryi*	whiptail wallaby		C		1
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		11
animals	mammals	Macropodidae	*Macropus dorsalis*	black-striped wallaby		C		1
animals	mammals	Macropodidae	*Macropus robustus*	common wallaroo		C		1
animals	mammals	Macropodidae	*Macropus giganteus*	eastern grey kangaroo		C		7
animals	mammals	Macropodidae	*Macropus rufogriseus*	red-necked wallaby		C		4
animals	mammals	Molossidae	*Mormopterus beccarii*	Beccari's freetail bat		C		1
animals	mammals	Muridae	*Mus musculus*	house mouse	Y			5
animals	mammals	Muridae	*Hydromys chrysogaster*	water rat		C		2
animals	mammals	Muridae	*Pseudomys delicatulus*	delicate mouse		C		8
animals	mammals	Ornithorhynchidae	*Ornithorhynchus anatinus*	platypus		C		1
animals	mammals	Petauridae	*Petaurus australis australis*	yellow-bellied glider (southern subspecies)		C		1
animals	mammals	Petauridae	*Petaurus breviceps*	sugar glider		C		2
animals	mammals	Phalangeridae	*Trichosurus vulpecula*	common brushtail possum		C		4
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		C	V	5
animals	mammals	Potoroidae	*Aepyprymnus rufescens*	rufous bettong		C		6/1
animals	mammals	Pseudocheiridae	*Petauroides volans*	greater glider		C		1
animals	mammals	Pteropodidae	*Pteropus scapulatus*	little red flying-fox		C		2
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		C		8

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animals	mammals	Vespertilionidae	*Chalinolobus picatus*	little pied bat		NT		1
animals	mammals	Vespertilionidae	*Chalinolobus gouldii*	Gould's wattled bat		C		1
animals	mammals	Vespertilionidae	*Nyctophilus geoffroyi*	lesser long-eared bat		C		3
animals	mammals	Vespertilionidae	*Vespadelus vulturnus*	little forest bat		C		6
animals	mammals	Vespertilionidae	*Nyctophilus gouldi*	Gould's long-eared bat		C		2
animals	mammals	Vespertilionidae	*Scotorepens sp.*					1
animals	mammals	Vespertilionidae	*Scotorepens balstoni*	inland broad-nosed bat		C		1
animals	mammals	Vespertilionidae	*Scotorepens greyii*	little broad-nosed bat		C		7
animals	reptiles	Agamidae	*Pogona vitticeps*			C		1
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		19
animals	reptiles	Agamidae	*Amphibolurus muricatus*	jacky lizard		C		1
animals	reptiles	Boidae	*Aspidites ramsayi*	woma		NT		1
animals	reptiles	Chelidae	*Chelodina longicollis*	eastern snake-necked turtle		C		3
animals	reptiles	Chelidae	*Wollumbinia latisternum*	saw-shelled turtle		C		1
animals	reptiles	Diplodactylidae	*Diplodactylus vittatus*	wood gecko		C		20/1
animals	reptiles	Diplodactylidae	*Strophurus taenicauda*	golden-tailed gecko		NT		21/2
animals	reptiles	Diplodactylidae	*Nebulifera robusta*	robust velvet gecko		C		1/1
animals	reptiles	Diplodactylidae	*Diplodactylus tessellatus*	tessellated gecko		C		8
animals	reptiles	Diplodactylidae	*Lucasium steindachneri*	Steindachner's gecko		C		13
animals	reptiles	Elapidae	*Furina diadema*	red-naped snake		C		5
animals	reptiles	Elapidae	*Suta dwyeri*			C		5/1
animals	reptiles	Elapidae	*Suta suta*	myall snake		C		5
animals	reptiles	Elapidae	*Denisonia devisi*	De Vis' banded snake		C		7/1
animals	reptiles	Elapidae	*Brachyurophis australis*	coral snake		C		7/1
animals	reptiles	Elapidae	*Vermicella annulata*	bandy-bandy		C		3
animals	reptiles	Elapidae	*Pseudonaja textilis*	eastern brown snake		C		2
animals	reptiles	Elapidae	*Pseudechis guttatus*	spotted black snake		C		4
animals	reptiles	Elapidae	*Demansia psammophis*	yellow-faced whip snake		C		2
animals	reptiles	Elapidae	*Cryptophis boschmai*	Carpentaria whip snake		C		2
animals	reptiles	Elapidae	*Hemiaspis damelii*	grey snake		E		2/1
animals	reptiles	Elapidae	*Furina dunmalli*	Dunmall's snake		V	V	1
animals	reptiles	Gekkonidae	*Gehyra dubia*			C		37/3
animals	reptiles	Gekkonidae	*Gehyra variegata*	tree dtella		C		12
animals	reptiles	Gekkonidae	*Heteronotia binoei*	Bynoe's gecko		C		38/1
animals	reptiles	Pygopodidae	*Paradelma orientalis*	brigalow scaly-foot		V	V	1
animals	reptiles	Pygopodidae	*Pygopus schraderi*			C		7
animals	reptiles	Pygopodidae	*Lialis burtonis*	Burton's legless lizard		C		11/1
animals	reptiles	Pygopodidae	*Delma plebeia*	common delma		C		2/2
animals	reptiles	Scincidae	*Lerista punctatovittata*			C		4
animals	reptiles	Scincidae	*Cryptoblepharus pannosus*	ragged snake-eyed skink		C		3
animals	reptiles	Scincidae	*Eremiascincus fasciolatus*	narrow-banded sand swimmer		C		2
animals	reptiles	Scincidae	*Carlia vivax*			C		5/1
animals	reptiles	Scincidae	*Ctenotus sp.*					3
animals	reptiles	Scincidae	*Morethia sp.*					1
animals	reptiles	Scincidae	*Lerista timida*			C		3
animals	reptiles	Scincidae	*Menetia greyii*			C		3

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animals	reptiles	Scincidae	*Menetia timlowi*			C		2
animals	reptiles	Scincidae	*Ctenotus ingrami*			C		3
animals	reptiles	Scincidae	*Lerista fragilis*			C		1
animals	reptiles	Scincidae	*Ctenotus robustus*			C		8
animals	reptiles	Scincidae	*Egernia striolata*	tree skink		C		4/1
animals	reptiles	Scincidae	*Morethia taeniopleura*	fire-tailed skink		C		5
animals	reptiles	Scincidae	*Anomalopus verreauxii*			C		2
animals	reptiles	Scincidae	*Morethia boulengeri*			C		14/1
animals	reptiles	Scincidae	*Lygisaurus foliorum*			C		5
animals	reptiles	Scincidae	*Carlia pectoralis sensu lato*			C		4
animals	reptiles	Scincidae	*Tiliqua scincoides*	eastern blue-tongued lizard		C		6
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		13
animals	reptiles	Scincidae	*Egernia rugosa*	yakka skink		V	V	2
animals	reptiles	Typhlopidae	*Ramphotyphlops ligatus*			C		3
animals	reptiles	Varanidae	*Varanus panoptes*	yellow-spotted monitor		C		7
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		4
animals	reptiles	Varanidae	*Varanus gouldii*	sand monitor		C		2
fungi	club fungi	Basidiomycota	*Boletus*			C		1/1
plants	conifers	Cupressaceae	*Callitris glaucophylla*	white cypress pine		C		2/1
plants	conifers	Cupressaceae	*Callitris endlicheri*	black cypress pine		C		1
plants	ferns	Adiantaceae	*Cheilanthes sieberi subsp. sieberi*			C		1
plants	ferns	Adiantaceae	*Cheilanthes distans*	bristly cloak fern		C		2
plants	ferns	Marsileaceae	*Marsilea drummondii*	common nardoo		C		1/1
plants	ferns	Ophioglossaceae	*Ophioglossum reticulatum*			C		1/1
plants	higher dicots	Acanthaceae	*Rostellularia adscendens*			C		2
plants	higher dicots	Acanthaceae	*Brunoniella australis*	blue trumpet		C		4
plants	higher dicots	Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		1/1
plants	higher dicots	Acanthaceae	*Rostellularia adscendens var. clementii*			C		1/1
plants	higher dicots	Acanthaceae	*Rostellularia adscendens var. adscendens*			C		1
plants	higher dicots	Amaranthaceae	*Nyssanthes erecta*			C		4
plants	higher dicots	Amaranthaceae	*Ptilotus nobilis subsp. semilanatus*			C		2
plants	higher dicots	Amaranthaceae	*Ptilotus macrocephalus*	green pussytails		C		2/1
plants	higher dicots	Amaranthaceae	*Gomphrena celosioides*	gomphrena weed	Y			1/1
plants	higher dicots	Amaranthaceae	*Alternanthera pungens*	khaki weed	Y			1/1
plants	higher dicots	Amaranthaceae	*Alternanthera nana*	hairy joyweed		C		1/1
plants	higher dicots	Anacardiaceae	*Schinus molle var. areira*	pepper tree	Y			1/1
plants	higher dicots	Apiaceae	*Actinotus gibbonsii*	dwarf flannel flower		C		2/2
plants	higher dicots	Apocynaceae	*Carissa ovata*	currantbush		C		1/1
plants	higher dicots	Apocynaceae	*Marsdenia viridiflora subsp. viridiflora*			C		2
plants	higher dicots	Araliaceae	*Trachymene ochracea*	white parsnip		C		1/1
plants	higher dicots	Asteraceae	*Rutidosis lanata*			E		7/7
plants	higher dicots	Asteraceae	*Calotis cuneifolia*	burr daisy		C		1
plants	higher dicots	Asteraceae	*Flaveria trinervia*		Y			1/1
plants	higher dicots	Asteraceae	*Vittadinia sulcata*	native daisy		C		1/1
plants	higher dicots	Asteraceae	*Euchiton sphaericus*			C		1
plants	higher dicots	Asteraceae	*Glossocardia bidens*	native cobbler's pegs		C		1/1

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plants	higher dicots	Asteraceae	*Minuria integerrima*	smooth minuria		C		1
plants	higher dicots	Asteraceae	*Vittadinia pustulata*			C		2
plants	higher dicots	Asteraceae	*Brachyscome multifida*			C		1/1
plants	higher dicots	Asteraceae	*Hypochaeris albiflora*		Y			1/1
plants	higher dicots	Asteraceae	*Leptorhynchos baileyi*			C		1/1
plants	higher dicots	Asteraceae	*Rutidosis murchisonii*			C		7/7
plants	higher dicots	Asteraceae	*Solenogyne bellioides*			C		2/2
plants	higher dicots	Asteraceae	*Vittadinia constricta*			C		1/1
plants	higher dicots	Asteraceae	*Brachyscome trachycarpa*			C		1/1
plants	higher dicots	Asteraceae	*Ozothamnus diotophyllus*			C		6/6
plants	higher dicots	Asteraceae	*Vittadinia dissecta var. dissecta*			C		1
plants	higher dicots	Asteraceae	*Brachyscome multifida var. dilatata*			C		2/2
plants	higher dicots	Asteraceae	*Leiocarpa semicalva subsp. tenuifolia*			C		1/1
plants	higher dicots	Asteraceae	*Senecio pinnatifolius var. pinnatifolius*			C		1/1
plants	higher dicots	Asteraceae	*Olearia ramulosa*			C		1/1
plants	higher dicots	Asteraceae	*Cassinia laevis*			C		2/1
plants	higher dicots	Asteraceae	*Calotis cuneata*			C		1
plants	higher dicots	Asteraceae	*Sigesbeckia fugax*			C		1/1
plants	higher dicots	Asteraceae	*Sonchus oleraceus*	common sowthistle	Y			1/1
plants	higher dicots	Asteraceae	*Olearia canescens*			C		1/1
plants	higher dicots	Brassicaceae	*Rorippa palustris*	marsh cress	Y			1/1
plants	higher dicots	Byttneriaceae	*Commersonia pedleyi*			C		3/3
plants	higher dicots	Byttneriaceae	*Seringia corollata*			C		1/1
plants	higher dicots	Cactaceae	*Opuntia tomentosa*	velvety tree pear	Y			2
plants	higher dicots	Cactaceae	*Opuntia stricta*		Y			3
plants	higher dicots	Caesalpiniaceae	*Petalostylis labicheoides*			C		1/1
plants	higher dicots	Caesalpiniaceae	*Senna artemisioides subsp. zygophylla*			C		1/1
plants	higher dicots	Caesalpiniaceae	*Senna sophera var. (40Mile Scrub J.R.Clarkson+ 6908)*			C		1/1
plants	higher dicots	Caesalpiniaceae	*Senna coronilloides*			C		1
plants	higher dicots	Caesalpiniaceae	*Senna surattensis*			C		1/1
plants	higher dicots	Caesalpiniaceae	*Senna artemisioides*			C		1/1
plants	higher dicots	Campanulaceae	*Lobelia andrewsii*			C		1/1
plants	higher dicots	Capparaceae	*Apophyllum anomalum*	broom bush		C		1/1
plants	higher dicots	Capparaceae	*Capparis lasiantha*	nipan		C		2/2
plants	higher dicots	Casuarinaceae	*Casuarina cristata*	belah		C		3
plants	higher dicots	Casuarinaceae	*Allocasuarina luehmannii*	bull oak		C		3/1
plants	higher dicots	Celastraceae	*Maytenus bilocularis*			C		1/1
plants	higher dicots	Celastraceae	*Maytenus cunninghamii*	yellow berry bush		C		1/1
plants	higher dicots	Celastraceae	*Elaeodendron australe var. integrifolium*			C		1
plants	higher dicots	Chenopodiaceae	*Maireana decalvans*	black cottonbush		C		1
plants	higher dicots	Chenopodiaceae	*Dysphania rhadinostachya subsp. inflata*			C		2/2
plants	higher dicots	Chenopodiaceae	*Enchylaena tomentosa var. tomentosa*			C		2
plants	higher dicots	Chenopodiaceae	*Sclerolaena bicornis var. horrida*			C		2/1
plants	higher dicots	Chenopodiaceae	*Salsola kali*			C		2
plants	higher dicots	Chenopodiaceae	*Einadia hastata*			C		1

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plants	higher dicots	Chenopodiaceae	*Dysphania valida*			C		1/1
plants	higher dicots	Chenopodiaceae	*Atriplex muelleri*	lagoon saltbush		C		1
plants	higher dicots	Chenopodiaceae	*Chenopodium album*	fat-hen	Y			1/1
plants	higher dicots	Chenopodiaceae	*Salsola australis*			C		1/1
plants	higher dicots	Chenopodiaceae	*Rhagodia parabolica*			C		1
plants	higher dicots	Chenopodiaceae	*Rhagodia spinescens*	thorny saltbush		C		1
plants	higher dicots	Chenopodiaceae	*Sclerolaena birchii*	galvanised burr		C		2
plants	higher dicots	Chenopodiaceae	*Enchylaena tomentosa*			C		2/1
plants	higher dicots	Chenopodiaceae	*Maireana microphylla*			C		1
plants	higher dicots	Chenopodiaceae	*Sclerolaena muricata*			C		1/1
plants	higher dicots	Chenopodiaceae	*Sclerolaena calcarata*	red burr		C		1
plants	higher dicots	Chenopodiaceae	*Maireana enchylaenoides*			C		1
plants	higher dicots	Convolvulaceae	*Evolvulus alsinoides*			C		1
plants	higher dicots	Crassulaceae	*Bryophyllum x houghtonii*		Y			1/1
plants	higher dicots	Crassulaceae	*Bryophyllum delagoense*		Y			2/2
plants	higher dicots	Crassulaceae	*Crassula tetramera*			C		1/1
plants	higher dicots	Dilleniaceae	*Hibbertia stricta*			C		1/1
plants	higher dicots	Ericaceae	*Leucopogon biflorus*			C		2/2
plants	higher dicots	Ericaceae	*Leucopogon mitchellii*			C		3/2
plants	higher dicots	Euphorbiaceae	*Acalypha eremorum*	soft acalypha		C		1/1
plants	higher dicots	Euphorbiaceae	*Croton phebalioides*	narrow-leaved croton		C		1/1
plants	higher dicots	Euphorbiaceae	*Euphorbia drummondii*			C		2
plants	higher dicots	Euphorbiaceae	*Monotaxis macrophylla*			C		3/3
plants	higher dicots	Euphorbiaceae	*Euphorbia hirta*		Y			1/1
plants	higher dicots	Euphorbiaceae	*Ricinus communis*	castor oil bush	Y			1/1
plants	higher dicots	Fabaceae	*Zornia*			C		2/2
plants	higher dicots	Fabaceae	*Crotalaria mitchellii subsp. mitchellii*			C		1/1
plants	higher dicots	Fabaceae	*Hovea longipes*	brush hovea		C		1/1
plants	higher dicots	Fabaceae	*Mirbelia pungens*			C		1/1
plants	higher dicots	Fabaceae	*Desmodium varians*	slender tick trefoil		C		3
plants	higher dicots	Fabaceae	*Dillwynia retorta*			C		1/1
plants	higher dicots	Fabaceae	*Mirbelia aotoides*			C		1/1
plants	higher dicots	Fabaceae	*Swainsona luteola*	dwarf darling pea		C		1/1
plants	higher dicots	Fabaceae	*Zornia dyctiocarpa*			C		1/1
plants	higher dicots	Fabaceae	*Chorizema parviflorum*	eastern flame pea		C		1/1
plants	higher dicots	Fabaceae	*Hardenbergia violacea*			C		2/2
plants	higher dicots	Fabaceae	*Vicia sativa subsp. nigra*		Y			1/1
plants	higher dicots	Fabaceae	*Glycine clandestina var. sericea*			C		1/1
plants	higher dicots	Fabaceae	*Zornia muriculata subsp. muriculata*			C		1/1
plants	higher dicots	Fabaceae	*Glycine clandestina var. clandestina*			C		1/1
plants	higher dicots	Fabaceae	*Cullen patens*	bullamon lucerne		C		1/1
plants	higher dicots	Geraniaceae	*Geranium solanderi var. solanderi*	native geranium		C		1/1
plants	higher dicots	Goodeniaceae	*Goodenia delicata*			C		1/1
plants	higher dicots	Goodeniaceae	*Goodenia disperma*			C		1/1
plants	higher dicots	Goodeniaceae	*Brunonia australis*	blue pincushion		C		1/1
plants	higher dicots	Goodeniaceae	*Scaevola spinescens*	prickly fan flower		C		2/1

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plants	higher dicots	Goodeniaceae	*Goodenia fascicularis*			C		1
plants	higher dicots	Goodeniaceae	*Dampiera adpressa*			C		1/1
plants	higher dicots	Goodeniaceae	*Goodenia gracilis*			C		1/1
plants	higher dicots	Haloragaceae	*Myriophyllum verrucosum*	water milfoil		C		1/1
plants	higher dicots	Haloragaceae	*Gonocarpus urceolatus*			C		7/7
plants	higher dicots	Lamiaceae	*Westringia cheelii*			C		3/3
plants	higher dicots	Lamiaceae	*Prostanthera cryptandroides subsp. euphrasioides*			C		2/2
plants	higher dicots	Lamiaceae	*Prostanthera sp. (Baking Board V.Hando 135)*			C		3/3
plants	higher dicots	Lamiaceae	*Teucrium sp. (Pittsworth A.R.Bean 18338)*			C		1/1
plants	higher dicots	Lamiaceae	*Prostanthera lithospermoides*			C		2/2
plants	higher dicots	Lamiaceae	*Spartothamnella puberula*			C		1/1
plants	higher dicots	Lamiaceae	*Prostanthera*			C		2/2
plants	higher dicots	Lamiaceae	*Prostanthera ringens*			C		2/2
plants	higher dicots	Lentibulariaceae	*Utricularia*			C		1/1
plants	higher dicots	Loranthaceae	*Amyema congener subsp. rotundifolia*			C		1/1
plants	higher dicots	Loranthaceae	*Amyema quandang var. bancroftii*	broad-leaved grey mistletoe		C		2/2
plants	higher dicots	Loranthaceae	*Lysiana exocarpi subsp. tenuis*			C		2/2
plants	higher dicots	Loranthaceae	*Dendrophthoe glabrescens*			C		2/2
plants	higher dicots	Loranthaceae	*Amyema miquelii*			C		1
plants	higher dicots	Malvaceae	*Sida corrugata*			C		2
plants	higher dicots	Malvaceae	*Hibiscus sturtii*			C		1/1
plants	higher dicots	Malvaceae	*Abutilon oxycarpum*			C		3
plants	higher dicots	Malvaceae	*Sida aprica var. aprica*			C		1/1
plants	higher dicots	Malvaceae	*Hibiscus sturtii var. sturtii*			C		1
plants	higher dicots	Malvaceae	*Sida rohlenae subsp. rohlenae*			C		1
plants	higher dicots	Malvaceae	*Sida corrugata var. angustifolia*			C		1/1
plants	higher dicots	Malvaceae	*Sida sp. (Musselbrook M.B.Thomas+ MRS437)*			C		2/2
plants	higher dicots	Meliaceae	*Owenia acidula*	emu apple		C		4/1
plants	higher dicots	Mimosaceae	*Acacia crassa*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia decora*	pretty wattle		C		1
plants	higher dicots	Mimosaceae	*Acacia aprepta*	Miles mulga		C		6/6
plants	higher dicots	Mimosaceae	*Acacia excelsa*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia falcata*	sickle wattle		C		1/1
plants	higher dicots	Mimosaceae	*Acacia jucunda*			C		1
plants	higher dicots	Mimosaceae	*Acacia pendula*	myall		C		1/1
plants	higher dicots	Mimosaceae	*Acacia burrowii*			C		2/2
plants	higher dicots	Mimosaceae	*Acacia conferta*			C		2/2
plants	higher dicots	Mimosaceae	*Acacia curranii*	curly-bark wattle		V	V	1/1
plants	higher dicots	Mimosaceae	*Acacia shirleyi*	lancewood		C		4/3
plants	higher dicots	Mimosaceae	*Acacia triptera*			C		7/5
plants	higher dicots	Mimosaceae	*Acacia everistii*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia hakeoides*	hakea wattle		C		1/1
plants	higher dicots	Mimosaceae	*Acacia leiocalyx*			C		1
plants	higher dicots	Mimosaceae	*Acacia melvillei*			C		3/3
plants	higher dicots	Mimosaceae	*Acacia hyaloneura*			C		1
plants	higher dicots	Mimosaceae	*Acacia ixiophylla*			C		6/6

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Mimosaceae	*Acacia juncifolia*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia macradenia*	zig-zag wattle		C		2/2
plants	higher dicots	Mimosaceae	*Acacia neriifolia*	pechey wattle		C		2/2
plants	higher dicots	Mimosaceae	*Acacia semilunata*	crescent-leaved wattle		C		6/5
plants	higher dicots	Mimosaceae	*Acacia harpophylla*	brigalow		C		4
plants	higher dicots	Mimosaceae	*Acacia microsperma*	bowyakka		C		1/1
plants	higher dicots	Mimosaceae	*Acacia omalophylla*			C		2/2
plants	higher dicots	Mimosaceae	*Acacia sparsiflora*			C		3/3
plants	higher dicots	Mimosaceae	*Acacia spectabilis*	pilliga wattle		C		2/2
plants	higher dicots	Mimosaceae	*Acacia tenuinervis*			NT		2/2
plants	higher dicots	Mimosaceae	*Acacia longispicata*			C		1
plants	higher dicots	Mimosaceae	*Acacia blakei subsp. blakei*			C		4/4
plants	higher dicots	Mimosaceae	*Acacia crassa subsp. crassa*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia deanei subsp. deanei*			C		2/2
plants	higher dicots	Mimosaceae	*Acacia excelsa subsp. excelsa*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia crassa subsp. longicoma*			C		4/2
plants	higher dicots	Mimosaceae	*Acacia julifera subsp. julifera*			C		2/2
plants	higher dicots	Mimosaceae	*Acacia leiocalyx subsp. leiocalyx*			C		3/3
plants	higher dicots	Molluginaceae	*Glinus oppositifolius*			C		1/1
plants	higher dicots	Myoporaceae	*Myoporum acuminatum*	coastal boobialla		C		4
plants	higher dicots	Myoporaceae	*Eremophila debilis*	winter apple		C		1
plants	higher dicots	Myoporaceae	*Eremophila mitchellii*			C		11
plants	higher dicots	Myoporaceae	*Eremophila longifolia*	berrigan		C		1
plants	higher dicots	Myrsinaceae	*Lysimachia arvensis*		Y			2/2
plants	higher dicots	Myrtaceae	*Eucalyptus bakeri*	Baker's mallee		C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark		C		6/4
plants	higher dicots	Myrtaceae	*Calytrix tetragona*	fringe myrtle		C		2/1
plants	higher dicots	Myrtaceae	*Eucalyptus elegans*			C		4/4
plants	higher dicots	Myrtaceae	*Eucalyptus exserta*	Queensland peppermint		C		6/4
plants	higher dicots	Myrtaceae	*Angophora leiocarpa*	rusty gum		C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus populnea*	poplar box		C		8
plants	higher dicots	Myrtaceae	*Eucalyptus tenuipes*	narrow-leaved white mahogany		C		4/3
plants	higher dicots	Myrtaceae	*Harmogia densifolia*			C		1/1
plants	higher dicots	Myrtaceae	*Angophora floribunda*	rough-barked apple		C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca lanceolata*			C		3/3
plants	higher dicots	Myrtaceae	*Melaleuca pallescens*			C		4/4
plants	higher dicots	Myrtaceae	*Micromyrtus carinata*	Gurulmundi heath-myrtle		E		3/2
plants	higher dicots	Myrtaceae	*Micromyrtus sessilis*			C		2/2
plants	higher dicots	Myrtaceae	*Eucalyptus microcarpa*	inland grey box		C		2/1
plants	higher dicots	Myrtaceae	*Eucalyptus woollsiana*			C		3/3
plants	higher dicots	Myrtaceae	*Eucalyptus chloroclada*	Baradine red gum		C		5/5
plants	higher dicots	Myrtaceae	*Homalocalyx polyandrus*			C		1
plants	higher dicots	Myrtaceae	*Melaleuca densispicata*			C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca squamophloia*			C		6/6
plants	higher dicots	Myrtaceae	*Eucalyptus largiflorens*	black box		C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus tereticornis*			C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Myrtaceae	*Eucalyptus longirostrata*			C		1
plants	higher dicots	Myrtaceae	*Lysicarpus angustifolius*	budgeroo		C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus fibrosa subsp. nubila*			C		3/2
plants	higher dicots	Myrtaceae	*Eucalyptus fibrosa subsp. fibrosa*			C		1/1
plants	higher dicots	Myrtaceae	*Corymbia citriodora subsp. variegata*			C		4/4
plants	higher dicots	Myrtaceae	*Corymbia trachyphloia subsp. trachyphloia*			C		2/2
plants	higher dicots	Myrtaceae	*Eucalyptus tereticornis subsp. tereticornis*			C		1/1
plants	higher dicots	Myrtaceae	*Angophora costata*			C		1
plants	higher dicots	Myrtaceae	*Melaleuca nodosa*			C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca decora*			C		1
plants	higher dicots	Myrtaceae	*Kardomia jucunda*			C		4/4
plants	higher dicots	Myrtaceae	*Eucalyptus panda*			C		4/4
plants	higher dicots	Myrtaceae	*Eucalyptus dura*			C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca bracteata*			C		1
plants	higher dicots	Nyctaginaceae	*Boerhavia dominii*			C		2
plants	higher dicots	Oleaceae	*Notelaea microcarpa var. velutina*			C		1/1
plants	higher dicots	Oleaceae	*Jasminum didymum subsp. racemosum*			C		1/1
plants	higher dicots	Oleaceae	*Jasminum simplicifolium subsp. australiense*			C		1/1
plants	higher dicots	Oleaceae	*Jasminum didymum subsp. lineare*			C		2
plants	higher dicots	Onagraceae	*Oenothera curtiflora*		Y			1/1
plants	higher dicots	Onagraceae	*Oenothera lindheimeri*		Y			1/1
plants	higher dicots	Oxalidaceae	*Oxalis perennans*			C		1/1
plants	higher dicots	Oxalidaceae	*Oxalis radicosa*			C		1/1
plants	higher dicots	Oxalidaceae	*Oxalis thompsoniae*			C		1/1
plants	higher dicots	Phyllanthaceae	*Phyllanthus virgatus*			C		2/1
plants	higher dicots	Plantaginaceae	*Plantago cunninghamii*	sago weed		C		1/1
plants	higher dicots	Polygalaceae	*Polygala linariifolia*			C		1/1
plants	higher dicots	Polygonaceae	*Muehlenbeckia florulenta*	lignum		C		1/1
plants	higher dicots	Polygonaceae	*Rumex brownii*	swamp dock		C		1/1
plants	higher dicots	Polygonaceae	*Persicaria attenuata*			C		1/1
plants	higher dicots	Portulacaceae	*Grahamia australiana*			C		2/2
plants	higher dicots	Portulacaceae	*Portulaca*			C		1/1
plants	higher dicots	Portulacaceae	*Calandrinia*			C		1/1
plants	higher dicots	Portulacaceae	*Portulaca bicolor*			C		3/3
plants	higher dicots	Proteaceae	*Hakea purpurea*			C		1/1
plants	higher dicots	Proteaceae	*Persoonia sericea*	silky geebung		C		1/1
plants	higher dicots	Rhamnaceae	*Alphitonia excelsa*	soap tree		C		2/1
plants	higher dicots	Rhamnaceae	*Cryptandra propinqua*			C		1/1
plants	higher dicots	Rhamnaceae	*Cryptandra armata*			C		3/3
plants	higher dicots	Rubiaceae	*Psydrax odorata forma subnitida*			C		1/1
plants	higher dicots	Rubiaceae	*Asperula cunninghamii*	twining woodruff		C		1/1
plants	higher dicots	Rubiaceae	*Psydrax oleifolia*			C		2
plants	higher dicots	Rubiaceae	*Asperula conferta*			C		1
plants	higher dicots	Rubiaceae	*Dentella repens*	dentella		C		1/1
plants	higher dicots	Rutaceae	*Phebalium nottii*	pink phebalium		C		2/2
plants	higher dicots	Rutaceae	*Boronia bipinnata*	rock boronia		C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Rutaceae	*Philotheca difformis subsp. difformis*			C		4/4
plants	higher dicots	Rutaceae	*Boronia occidentalis*			C		5/5
plants	higher dicots	Rutaceae	*Geijera parviflora*	wilga		C		8
plants	higher dicots	Rutaceae	*Zieria aspalathoides subsp. aspalathoides*			C		1/1
plants	higher dicots	Santalaceae	*Santalum lanceolatum*			C		2/1
plants	higher dicots	Sapindaceae	*Dodonaea vestita*			C		1/1
plants	higher dicots	Sapindaceae	*Dodonaea macrossanii*			C		4/4
plants	higher dicots	Sapindaceae	*Dodonaea heteromorpha*			C		2/2
plants	higher dicots	Sapindaceae	*Dodonaea peduncularis*			C		2/2
plants	higher dicots	Sapindaceae	*Alectryon diversifolius*	scrub boonaree		C		1
plants	higher dicots	Sapindaceae	*Dodonaea viscosa subsp. cuneata*			C		1
plants	higher dicots	Sapindaceae	*Dodonaea viscosa subsp. spatulata*			C		1/1
plants	higher dicots	Sapindaceae	*Alectryon oleifolius subsp. elongatus*			C		3
plants	higher dicots	Sapindaceae	*Dodonaea biloba*			C		11/11
plants	higher dicots	Sapindaceae	*Dodonaea triangularis*			C		1/1
plants	higher dicots	Scrophulariaceae	*Glossostigma diandrum*			C		1/1
plants	higher dicots	Scrophulariaceae	*Lindernia sp. (Bribie Island S.T.Blake 7089)*			C		1/1
plants	higher dicots	Scrophulariaceae	*Lindernia alsinoides*			C		1/1
plants	higher dicots	Scrophulariaceae	*Misopates orontium*	lesser snapdragon	Y			1/1
plants	higher dicots	Scrophulariaceae	*Striga curviflora*			C		1/1
plants	higher dicots	Scrophulariaceae	*Linaria maroccana*		Y			1/1
plants	higher dicots	Solanaceae	*Duboisia leichhardtii*			C		1/1
plants	higher dicots	Solanaceae	*Solanum parvifolium subsp. parvifolium*			C		2/2
plants	higher dicots	Solanaceae	*Solanum jucundum*			C		4/4
plants	higher dicots	Solanaceae	*Solanum ferocissimum*			C		2/2
plants	higher dicots	Solanaceae	*Solanum ellipticum*	potato bush		C		2/1
plants	higher dicots	Solanaceae	*Solanum coracinum*			C		1/1
plants	higher dicots	Solanaceae	*Physalis lanceifolia*		Y			1/1
plants	higher dicots	Solanaceae	*Solanum tetrathecum*			C		1/1
plants	higher dicots	Solanaceae	*Solanum nemophilum*			C		2/2
plants	higher dicots	Sterculiaceae	*Brachychiton populneus subsp. trilobus*			C		2/2
plants	higher dicots	Sterculiaceae	*Brachychiton australis*	broad-leaved bottle tree		C		1/1
plants	higher dicots	Verbenaceae	*Phyla canescens*		Y			1/1
plants	higher dicots	Verbenaceae	*Verbena africana*			C		1/1
plants	higher dicots	Verbenaceae	*Glandularia aristigera*		Y			4/1
plants	higher dicots	Viscaceae	*Viscum articulatum*	flat mistletoe		C		1/1
plants	higher dicots	Viscaceae	*Viscum whitei subsp. whitei*			C		1/1
plants	lower dicots	Papaveraceae	*Argemone ochroleuca subsp. ochroleuca*	Mexican poppy	Y			1/1
plants	lower dicots	Ranunculaceae	*Clematis*			C		1/1
plants	monocots	Aponogetonaceae	*Aponogeton queenslandicus*			C		1/1
plants	monocots	Cyperaceae	*Cyperus fulvus*			C		1/1
plants	monocots	Cyperaceae	*Bulbostylis pyriformis*			C		1/1
plants	monocots	Cyperaceae	*Cyperus victoriensis*			C		1/1
plants	monocots	Cyperaceae	*Cyperus*			C		1
plants	monocots	Cyperaceae	*Fimbristylis littoralis*			C		1/1
plants	monocots	Cyperaceae	*Cyperus gracilis*			C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	monocots	Cyperaceae	*Cyperus procerus*			C		1/1
plants	monocots	Cyperaceae	*Eleocharis atricha*	tuber spikerush		C		1/1
plants	monocots	Hemerocallidaceae	*Dianella longifolia var. stenophylla*			C		1
plants	monocots	Hemerocallidaceae	*Dianella longifolia var. stupata*			C		1/1
plants	monocots	Iridaceae	*Sisyrinchium sp. (Peregian P.R.Sharpe 4970)*	scourweed	Y			1/1
plants	monocots	Juncaceae	*Juncus psammophilus*			C		2/2
plants	monocots	Juncaceae	*Juncus subsecundus*			C		1/1
plants	monocots	Juncaceae	*Juncus usitatus*			C		1/1
plants	monocots	Juncaginaceae	*Triglochin dubia*			C		1/1
plants	monocots	Laxmanniaceae	*Lomandra multiflora subsp. multiflora*			C		1
plants	monocots	Orchidaceae	*Cymbidium canaliculatum*			C		1
plants	monocots	Orchidaceae	*Cymbidium suave*			C		1/1
plants	monocots	Orchidaceae	*Pterostylis*			C		1/1
plants	monocots	Orchidaceae	*Pterostylis bicolor*			C		1/1
plants	monocots	Poaceae	*Bothriochloa decipiens var. decipiens*			C		2
plants	monocots	Poaceae	*Aristida jerichoensis var. jerichoensis*			C		1
plants	monocots	Poaceae	*Setaria*			C		1/1
plants	monocots	Poaceae	*Aristida*			C		1
plants	monocots	Poaceae	*Digitaria*			C		1
plants	monocots	Poaceae	*Eulalia aurea*	silky browntop		C		1
plants	monocots	Poaceae	*Melinis repens*	red natal grass	Y			2/1
plants	monocots	Poaceae	*Aristida ramosa*	purple wiregrass		C		2
plants	monocots	Poaceae	*Panicum effusum*			C		3
plants	monocots	Poaceae	*Themeda triandra*	kangaroo grass		C		2
plants	monocots	Poaceae	*Aristida echinata*			C		1/1
plants	monocots	Poaceae	*Cenchrus ciliaris*		Y			6/1
plants	monocots	Poaceae	*Cenchrus spinifex*		Y			1/1
plants	monocots	Poaceae	*Entolasia stricta*	wiry panic		C		1
plants	monocots	Poaceae	*Panicum laevinode*	pepper grass		C		1/1
plants	monocots	Poaceae	*Paspalum urvillei*	vasey grass	Y			1/1
plants	monocots	Poaceae	*Sporobolus caroli*	fairy grass		C		6/3
plants	monocots	Poaceae	*Sporobolus creber*			C		6/5
plants	monocots	Poaceae	*Aristida personata*			C		2
plants	monocots	Poaceae	*Chloris ventricosa*	tall chloris		C		5/2
plants	monocots	Poaceae	*Chrysopogon fallax*			C		2/1
plants	monocots	Poaceae	*Eragrostis brownii*	Brown's lovegrass		C		1/1
plants	monocots	Poaceae	*Eragrostis sororia*			C		2
plants	monocots	Poaceae	*Setaria parviflora*	slender pigeon grass	Y			1/1
plants	monocots	Poaceae	*Setaria sphacelata*		Y			1/1
plants	monocots	Poaceae	*Enneapogon gracilis*	slender nineawn		C		1
plants	monocots	Poaceae	*Homopholis belsonii*			E	V	2/2
plants	monocots	Poaceae	*Paspalidium distans*	shotgrass		C		1/1
plants	monocots	Poaceae	*Paspalidium gracile*	slender panic		C		2
plants	monocots	Poaceae	*Sporobolus sessilis*			C		1/1
plants	monocots	Poaceae	*Tragus australianus*	small burr grass		C		2
plants	monocots	Poaceae	*Cymbopogon refractus*	barbed-wire grass		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	monocots	Poaceae	*Eragrostis lacunaria*	purple lovegrass		C		3
plants	monocots	Poaceae	*Sporobolus elongatus*			C		1/1
plants	monocots	Poaceae	*Sporobolus scabridus*			C		1/1
plants	monocots	Poaceae	*Sporobolus disjunctus*			C		1/1
plants	monocots	Poaceae	*Sporobolus mitchellii*	rat's tail couch		C		1
plants	monocots	Poaceae	*Aristida caput-medusae*			C		6/2
plants	monocots	Poaceae	*Arundinella nepalensis*	reedgrass		C		1
plants	monocots	Poaceae	*Cleistochloa subjuncea*			C		1/1
plants	monocots	Poaceae	*Enneapogon intermedius*			C		1
plants	monocots	Poaceae	*Enneapogon lindleyanus*			C		2
plants	monocots	Poaceae	*Enteropogon acicularis*	curly windmill grass		C		3/1
plants	monocots	Poaceae	*Eragrostis trichophora*		Y			2/2
plants	monocots	Poaceae	*Thyridolepis xerophila*			C		1/1
plants	monocots	Poaceae	*Urochloa mosambicensis*	sabi grass	Y			1/1
plants	monocots	Poaceae	*Ancistrachne uncinulata*	hooky grass		C		1
plants	monocots	Poaceae	*Calyptochloa gracillima*			C		1/1
plants	monocots	Poaceae	*Eragrostis leptostachya*			C		1/1
plants	monocots	Poaceae	*Paspalidium caespitosum*	brigalow grass		C		2
plants	monocots	Poaceae	*Sporobolus actinocladus*	katoora grass		C		2/2
plants	monocots	Poaceae	*Paspalidium albovillosum*			C		2/2
plants	monocots	Poaceae	*Thyridolepis mitchelliana*	mulga mitchell grass		C		1/1
plants	monocots	Poaceae	*Digitaria eriantha cv. Pangola*		Y			1/1
plants	monocots	Poaceae	*Aristida calycina var. praealta*			C		1/1
plants	monocots	Poaceae	*Amphipogon caricinus var. scaber*			C		1/1
plants	monocots	Poaceae	*Dinebra decipiens var. peacockii*			C		1
plants	monocots	Poaceae	*Megathyrsus maximus var. maximus*		Y			1
plants	monocots	Poaceae	*Aristida holathera var. holathera*			C		1/1
plants	monocots	Poaceae	*Cynodon nlemfuensis var. robustus*		Y			1/1
plants	monocots	Poaceae	*Chloris divaricata var. divaricata*	slender chloris		C		3
plants	monocots	Poaceae	*Bothriochloa bladhii subsp. bladhii*			C		1/1
plants	monocots	Poaceae	*Megathyrsus maximus var. pubiglumis*		Y			1/1
plants	monocots	Poaceae	*Dichanthium sericeum subsp. sericeum*			C		2
plants	monocots	Pontederiaceae	*Eichhornia crassipes*	water hyacinth	Y			1/1
plants	monocots	Potamogetonaceae	*Potamogeton tricarinatus*	floating pondweed		C		1/1

CODES

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

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

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

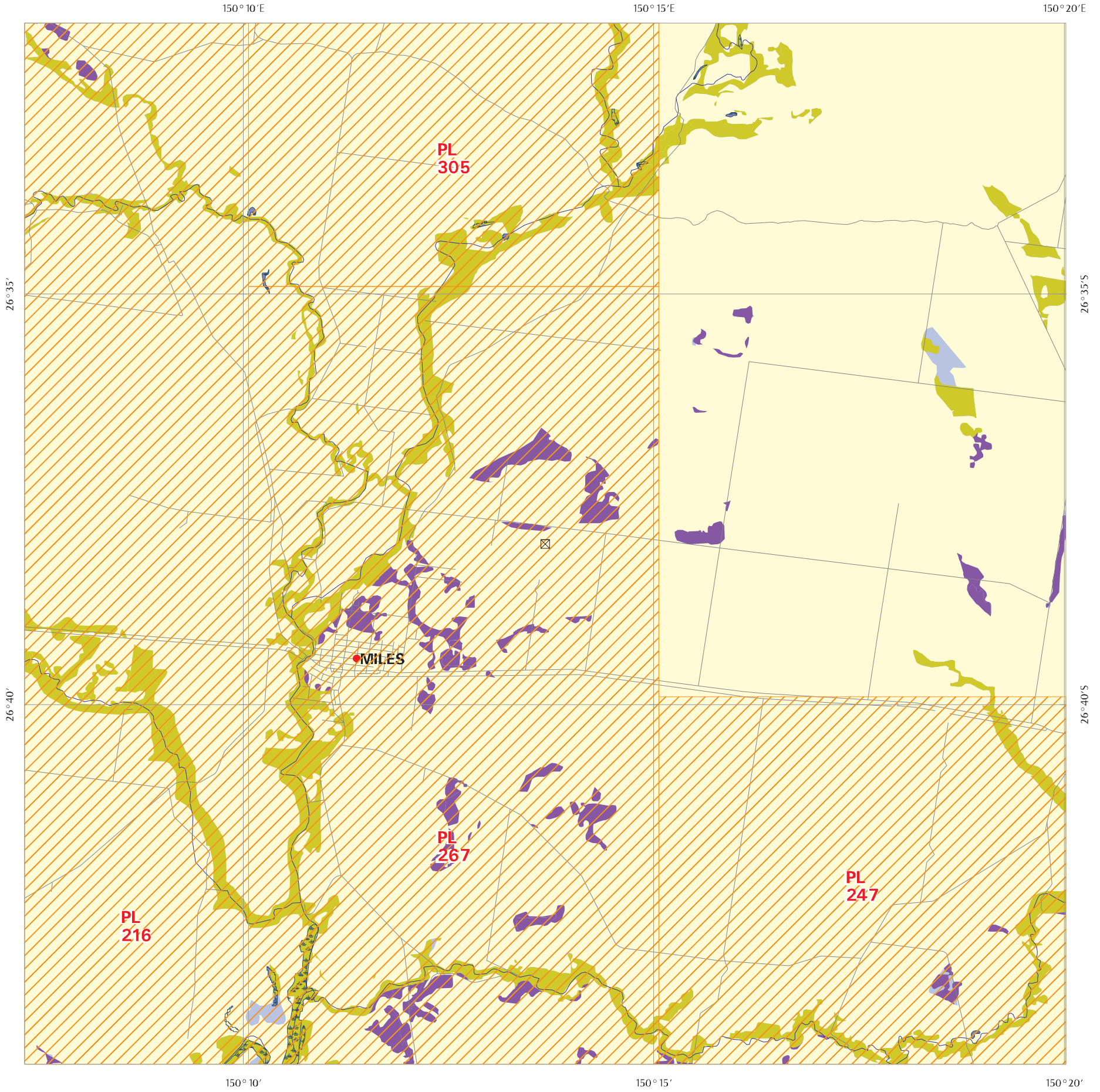
Records – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).
This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

Appendix C – Herbrecs Conservation Significant Flora Records

Status	Botanical_Name	Locality	Long_Decimal	Lat_Decimal	Label
V	*Acacia curranii* (Maiden)	16KM W FROM GURULMUNDI	149.9166667	-26.41666667	16km W from Gurulmundi. Gurulmundi.
V	*Acacia curranii* (Maiden)	GURULMUNDI	150.0833333	-26.41666667	Growing on southern slopes of the Dividing Range. Tall bush with orange flowers.
V	*Acacia curranii* (Maiden)	GURULMUNDI	150.0833333	-26.41666667	Gurulmundi. Shrub 5-6ft. Fibrous bark on older stems.
V	*Acacia curranii* (Maiden)	EX GURULMUNDI, CULTIVATED AT GLENMORGAN	150.0833333	-26.41666667	Gurulmundi. Cultivated at Glenmorgan. Tree to 10ft.
V	*Acacia curranii* (Maiden)	8KM N OF GURULMUNDI ON WOLEEBEE RD	150.0833333	-26.41666667	8km N of Gurulmundi on Woleebee Road. Growing in sandy clay loams. Shrub 1.8-3.0m high, wiry bark, yellow ball flowers.
V	*Acacia curranii* (Maiden)	BETWEEN MILES & WANDOAN	150.0833333	-26.41666667	Between Miles and Wandoan.
V	*Acacia curranii* (Maiden)	MILES	150.0833333	-26.41666667	Miles.
V	*Acacia curranii* (Maiden)	EX GURULMUNDI, CULTIVATED AT GLENMORGAN	150.0833333	-26.41666667	Gurulmundi. Cultivated at Glenmorgan. Small tree to 5 feet with loose fibrous bark curling at the tips. Leaves erect an stems, pale green.
V	*Acacia curranii* (Maiden)	3M W OF GURULMUNDI	150.0833333	-26.41666667	3 miles west of Gurulmundi. On shallow light brown loam. Shrub to 8 feet, branched from the base.
V	*Acacia curranii* (Maiden)	DALBY	150.0833333	-26.41666667	Dalby.
V	*Acacia curranii* (Maiden)	NEAR GILIGULGUL	150.0833333	-26.41666667	Near Giligulgul. In clumps in practically pure stands on poorly drained flats. About 8ft high with greyish green phyllodes.
V	*Acacia curranii* (Maiden)	10.6KM W OF GULULMUNDI FIRE TOWER (EX COLL 26 25 12 149 59 30)	149.9916667	-26.42	10.6km west of Gululmundi Fire Tower. Flat open plain dominated by Melaleuca uncinata, Triodia sp., Acacia curranii, Hakea purpurea and Rulingia sp., Dampiera sp., etc. Pale reddish sand. Locally occasional woodly shrub 4m x 4m. Fruits pale brown. Minni ritchi type bark.
V	*Acacia curranii* (Maiden)	8KM NW OF GURULMUNDI ON HELLHOLE RD (WILDFLOWER TRACK).	149.99	-26.42152778	8km NW of Gurulmundi on Hellhole Rd (Wildflower Track). Plain. Road reserve. Red sand. Heathland. Associated species Melaleuca uncinata, Hakea purpurea, Xanthostemon johnsonii, Commersonia. Bushy shrub to 2m with 'mineritchie' bark over red-brown. Branches angular. Phllodes to 18cm, flattened, needle-like, with minute silky hairs. Pods flat, narrow, 6cm long with coarse white hairs. Common at site. Voucher for Seeds for Life Project.
V	*Acacia curranii* (Maiden)	GURULMUNDI (GPS 26 25 18 149 59 20) (R) (P)	149.9888889	-26.42166667	Gurulmundi, (GPS 26 25 18 149 59 20). Shrubland with Acacia spp. and Melaleuca spp. on red powdery soil. Subshrub to 1.5m high; bark minni-ritchi, reddish; foliage greyish; flowers sulphur-yellow. Very common in area.
V	*Acacia curranii* (Maiden)	DARLING DOWNS	149.9916667	-26.44166667	Darling Downs. On sandy soil forming dense pure stands. Slender shrub up to 4m tall, bark loosely fibrous, the inner reddish, the outer brown peeling off in thin strips.
N	*Acacia tenuinervis* (Pedley)	RYWUNG CA 15M W OF CHINCHILLA	150.4416667	-26.725	Rywung, ca. 15 miles W of Chinchilla. On roadside on rise in clay soils. Rough barked tree.
N	*Acacia tenuinervis* (Pedley)	18.9KM ALONG GREENSWAMP ROAD, WSW OF CHINCHILLA	150.4113889	-26.81166667	18.9km along Greenswamp Road, WSW of Chinchilla. Woodland of Eucalyptus crebra, Acacia tenuinervis, Shrubby understorey. Area severely disturbed several years ago. Sandy loam soil. Tree 8m high. Bark grey, fibrous and furrowed. Flowers bright yellow. Abundant at site.
N	*Callitris baileyi* (C.T.White)	GULUGUBA WILDFLOWER AREA, 30KM NNW OF MILES.	150.08975	-26.40706667	Guluguba Wildflower Area, 30km NNW of Miles. Low open forest (11-15m) of Eucalyptus exserta (d), E crebra and Callitris glaucophylla. Mid dense shrubby understorey dominated by this species with Acacia crassa, Alphitonia excelsa and Petalostigma pubescens. Grassy groundcover
N	*Callitris baileyi* (C.T.White)	NEAR GURULMUNDI NEAR WANDOAN	150.0833333	-26.41666667	Near Gurulmundi near Wandoan. In sandy soil at foor of Great Dividing Range. Light green tree very similar to 5122 and scattered amongst it. Trees much less common and usujally not so tall. (15-20ft).
N	*Cryptandra ciliata* (A.R.Bean)	GURULMUNDI	150.0833333	-26.41666667	Gurulmundi. 0.6m.
N	*Cryptandra ciliata* (A.R.Bean)	GURULMUNDI	150.0833333	-26.41666667	Gurulmundi. In flower May to Hune.
N	*Cryptandra ciliata* (A.R.Bean)	16M FROM MILES RETREAT CK RD	150.25	-26.41666667	Retreat Creek Road, c. 16 miles from Miles. On red brown sandy loam with Spinifex. Shrub, flowers white.
N	*Cryptandra ciliata* (A.R.Bean)	10KM SOUTH-WEST OF GLENROWAN.	150.2124738	-26.42307242	10km south-west of Glenrowan. Undulating plain. Fine sedimentary rocks. Heath understorey with scattered Eucalyptus. Shrub. Site 59B.
N	*Eucalyptus curtisii* (Blakely & C.T.White)	GURULMUNDI 19M N OF MILES	150.0833333	-26.41666667	Gurulmundi, 10 miles north of Miles
N	*Eucalyptus curtisii* (Blakely & C.T.White)	17.7KM N GURULMUNDI ON MILL RD	150.0833333	-26.41666667	17.7km north of Gurulmundi on Mill Road. Small tree 3-3.6m tall; multiply stems, clean stems, green foliage. Growing on rocky hillside on the sandy clay.
N	*Eucalyptus curtisii* (Blakely & C.T.White)	GURALMUNDI AREA 35KM NNW OF MILES	150.0916667	-26.425	Gurulmundi area, 35km NNW of Miles. Flowering heath area, in pockets within low woodland of mixed euc. species. Low milti stemmed euc. reddish branch lets. Locally common.
E	*Homopholis belsonii* (C.E.Hubb.)	PALARDO BETWEEN MILES & ROMA	149.9166667	-26.58333333	Palardo between Miles and Roma. In belar Casuarina lepidophloia forest on dark brown clay. Culms tufted, mostly long, prostrate, flowering branches ascending to 9in., bright green.
E	*Homopholis belsonii* (C.E.Hubb.)	PALARDO BETWEEN MILES AND ROMA	149.9166667	-26.58333333	Palardo, between Miles and Roma. In shade in partly cleared brigalow (Acacia harpophylla) and belar (Casuarina lepidophloia) forest on dark brown clay. Tufted, sub erect or more or less creeping, and ascending to ca. 6in., green.

Status	Botanical_Name	Locality	Long_Decimal	Lat_Decimal	Label
E	*Homopholis belsonii* (C.E.Hubb.)	DRILLHAM SOUTH RD, C. 2.5KM S OF DRILLHAM.	149.9925	-26.65694444	Drillham South Rd, c. 2.5km S of Drillham. Gently undulating terrain. Brown clay substrate. Narrow roadside strip of Acacia harpophylla woodland (<10m wide); ground layer dominated by Pennisetum ciliare, Rhagodia spinescens, Enchylaena tomestosa and Verbena aristigera. Erect grass to 15cm high growing in shaded area under brigalow trees. Rare at site (<50 plants).
E	*Homopholis belsonii* (C.E.Hubb.)	16KM SOUTH SOUTH EAST OF MILES, LOT 2 ON BWR 573.	150.2063055	-26.80137876	16km south south east of Miles, Lot 2 on BWR 573. Mid mature Acacia harpophylla regrowth on gently undulating clay plain; mid brown sandy clays. Narrow strip along cultivation. Grass. 5 populations ranging from <2 sq.m. to 30 sq.m.
E	*Micromyrtus carinata* (A.R.Bean)	GURULMUNDI (R) (GPS 26 25 29 149 58 07)	149.9686111	-26.42472222	Gurulmundi (GPS 26 25 29 149 58 07) Heath dominated by this species. Triodia sp., Homalocalyx polyandrus, Eucalyptus trachyphloia & E. exserta also present. Rock pavement. Shrub 2.5m high with graceful arching branches. Flowers yellow-green.
E	*Micromyrtus carinata* (A.R.Bean)	STATE FOREST 164, FERRETT, NW OF MILES	150.0022814	-26.47489546	State Forest 164, Ferrett, NW of Miles. Open shrub land of Acacia triptera. Very thin pale clay soil over leterised sandstone pavement with well developed crypto. crust. Shrub to 1m. Yellow flowers. Common in area.
E	*Micromyrtus carinata* (A.R.Bean)	'WYONA WILLIWIN', VIA DALWOGAN RD, C. 10KM NW OF MILES.	150.1280556	-26.58444444	'Wyona Williwin', via Dalwogan Rd, c. 10km NW of Miles. Crest of low residual ridge. Pockets of loamy soil over rock. Acacia triptera shrubland with scattered Melaleuca nodosa and Micromyrtus carinata. Shrub with wispy, arching branches; grey, grooved bark; lemon-yellow flowers c. 2mm diameter. Common at site (>100plants) but rare on property. Two other populations noted in vicinity at 26 34 38.6:150 07 46.2 (<10 plants) and 26 34 45:150 07 47(c. 50 plants).
E	*Rutidosis lanata* (A.E.Holland)	8.8KM N OF DRILLHAM	149.9919444	-26.56805556	8.8km N of Drillham. Open woodland of Eucalyptus populnea with Eremophila mitchellii, grassy understorey. Herb 25cm high, flowers yellow. Occasional at site.
E	*Rutidosis lanata* (A.E.Holland)	'MUNDIBULUNGA', VIA DRILLHAM SOUTH RD, C. 5KM SE OF DRILLHAM.	150.0216667	-26.67277778	'Mundibulunga', via Drillham South Rd, c. 5km SE of Drillham. Eucalyptus crebra, E. fibrosa woodland with scattered E. microcarpa; sparse understorey composed of Geijera parviflora, Acacia sparsiflora, Psydrax oleifolia, Alstonia constricta, Solanum ferocissimum, Dodonaea triangularis, Opuntia tomentosa and O. stricta; ground layer composed of Aristida caput-medusae, Calotis cuneifolia, Ancistrachne uncinulata, Digitaria sp., Trianthema triquetra, Einadia hastata, Senecio sp., Evolvulus alsinoides, Solanum nemophilum, Sclerolaena birchii and Rutidosis lanata. Crest of low residual ridge. Grey loamy substrate with some gravel. Adjoins clay plain with cleared Acacia harpophylla/ Casuarina cristata. Erect herb to c. 15cm high; flower bright yellow; discolorous leaves. Common at site.
E	*Rutidosis lanata* (A.E.Holland)	OLD CAMEBY ROAD, MILES. LOT 51 ON RP896380.	150.2391253	-26.70944174	Old Cameby Road, Miles. Lot 51 on RP896380. Road reserve; open forest of eucalypt; DEHP mapped OLC RE, skeletal soils. Herb; 30cm; woody stem; white woolly under leaf; flowers dead on specimen. Found on road reserve, healthy population.
E	*Rutidosis lanata* (A.E.Holland)	7KM SE OF MILES OFF OLD CAMBEY RD.	150.2250472	-26.71101389	7km SE of Miles off Old Cambey Rd. Woodland on clay plain. RE 11.4.10/11.5.1. Herb, sprawling to 30cm. C. 20 individuals at site. Photos with specimen at BRI.
E	*Rutidosis lanata* (A.E.Holland)	'GAVINDALE', ON EASTERN SIDE OF GOOMBI-FAIRYMEADOW RD, BESIDE BRIGALOW SHADE LINE S OF HOMESTEAD, SW OF CHINCHILLA	150.4116667	-26.7625	'Gavindale', on eastern side of Goombi-Fairymeadow road, beside brigalow shade line S of homestead, SW of Chinchilla. Plain, brown loamy clay. Edge of scald along ecotone between Acacia harpophylla, Casuarina cristata, Eucalyptus populnea woodland and Eucalyptus populnea, Allocasuarina luehmannii, E. chloroclada, Callitris glaucophylla woodland. Erect herb to 10cm high; leaves discolorous. Uncommon at site, c. 20 plants within 25m radius and not seen elswhere on property.
N	*Senna acclinis* (F.Muell., Randell)	GURULMUNDI SF 164 OOLINE SCRUB	150.0833333	-26.41666667	Ooline Scrub, State Forest 164, Gurulmundi. Shrub, yellow flowers.

Appendix D – DEHP Mapping of ESA and other Environmental Values



ENVIRONMENTALLY SENSITIVE AREAS - Chapter 5A activities (EP Act)

Requested By: ROBERT.COULSON@GHD.COM
Date: 04 Dec 12 Time: 13.57.52

Centered on point position:
Latitude: -26.634 Longitude: 150.228
(decimal degrees)

Legend

- Petroleum Leases

CATEGORY A

- National Parks
- Conservation Parks
- Forest Reserves
- Wet Tropics World Heritage Area
- Great Barrier Reef Marine Park Region
- Marine Parks other than General Use Zones

CATEGORY B

- World Heritage Areas
- Queensland Heritage Register Places
- Ramsar Sites
- Cultural Heritage Registered Areas and DLA's other than Stanbroke
- Special Forestry Areas
- Fish Habitat Areas
- Koala Plan
- Coordinated Conservation Areas
- Endangered Regional Ecosystems (remnant and mature regrowth (biodiversity status))
- General Use Zones of Marine Parks
- Marine Plants

CATEGORY C

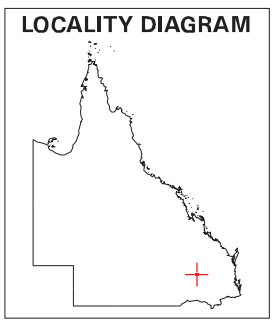
- Essential Habitat
- Referable Wetlands
- Declared Catchment Areas
- Nature Refuges
- Resources Reserves
- State Forests
- Timber Reserves
- Of Concern Regional Ecosystems (remnant and mature regrowth (biodiversity status))

OTHERS

- Towns
- Roads
- © Pitney Bowes Software 2012
- Rivers
- Springs
- Wild River High Preservation Areas
- Wild River Preservation Areas
- Chapter 5A Dominant Wetlands (51-100%)
- Chapter 5A Subdominant Wetlands (0-50%)
- Queensland

Queensland Government

LOCALITY DIAGRAM



0 1000 2000 3000 4000 5000 m

This scale bar is approximate only
Horizontal Datum: Geocentric Datum of Australia 1994 (GDA94)
This product is unprojected and is not suitable for measuring distances

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NOTE TO USER: Themes presented in this map are indicative only. Field survey may be required to verify the 'true' spatial extent and value. Not all environmentally sensitive areas are presented in this map. A user should refer to the particular circumstances relevant to their situation to assess the 'completeness' of themes provided.

The user should note that some boundaries and indicated values are ambient and may change over time (e.g. regional ecosystem boundaries and conservation status, watercourse mapping etc).

The user should be aware that due to multiple overlapping themes/ layers present, some themes/layers may be obscured by others. Ordering in the Legend does not accurately reflect the order by which themes/layers are displayed.

Mature Regrowth vegetation, depicting endangered and of concern regional ecosystems types, was incorporated as of 24/07/2012

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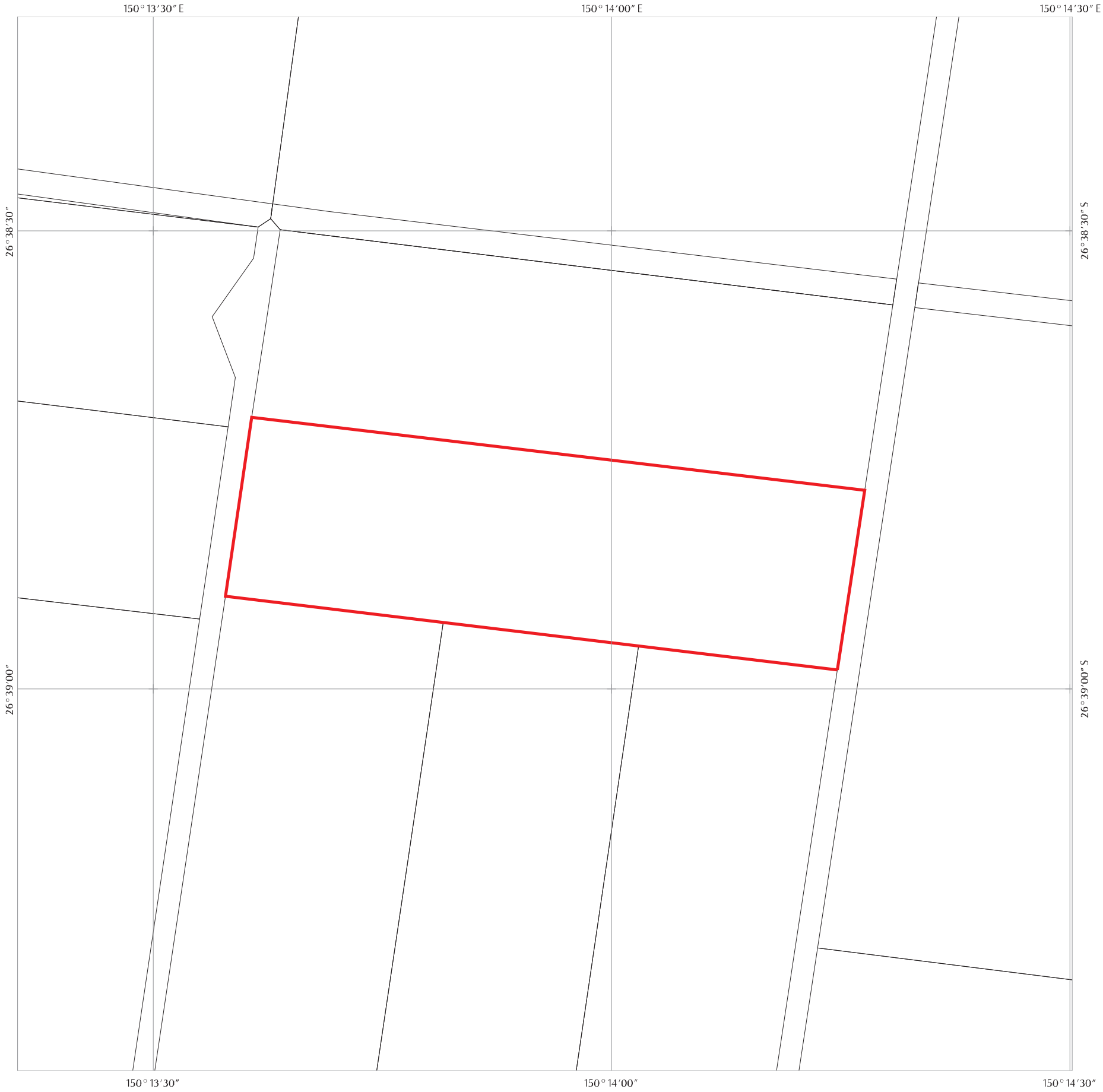
Appendix E – DEHP Referable Wetlands Mapping



Map of Referable Wetlands
Wetland Protection Areas

Requested By: ROBERT.COULSON@GHD.COM
Date: 04 Dec 12 Time: 14.06.35

Centered on Lot on Plan:
6 RP176819

Legend

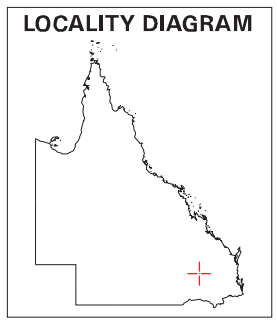
- Selected Land Parcel
- Property Boundary

Wetland Protection Areas

- HES Wetland
- Trigger Area

Queensland Government

LOCALITY DIAGRAM



This scale bar is approximate only
Horizontal Datum: Geocentric Datum of Australia 1994 (GDA94)
This product is unprojected and is not suitable for measuring distances

Note:
This map shows the location of wetland protection areas which are defined under the Environmental Protection Regulation 2008.

Within wetland protection areas, certain types of development involving high impact earthworks are made assessable under Schedule 3 of the Sustainable Planning Regulation 2009.

The Department of Environment and Heritage Protection has been made a concurrence agency under Schedule 7 of the Sustainable Planning Regulation 2009 for assessable development involving high impact earthworks within wetland protection areas.

The policy outcome and assessment criteria for assessing these applications are described in the State Planning Policy 4/11: Protecting Wetlands of High Ecological Significance in Great Barrier Reef Catchments.

This map is produced at a scale relevant to the size of the lot on plan identified and should be printed at A4 size in portrait orientation. Consideration of the effects of mapped scale is necessary when interpreting data at a large scale.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Heritage Protection at <www.ehp.qld.gov.au> or email <planning.support@ehp.qld.gov.au>.

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Appendix F – Flora and Fauna Species Lists

Flora species list

Family	Scientific Name	Common Name	Abundance	Status
Mimosaceae	*Acacia aprepta*	Miles wattle	V	LC
Mimosaceae	*Acacia conferta*	crowded leaf wattle	V	LC
Mimosaceae	*Acacia deanei*	Dean's wattle	V	LC
Mimosaceae	*Acacia excelsa*	ironwood	V	LC
Mimosaceae	*Acacia leiocalyx*	early black wattle	M	LC
Mimosaceae	*Acacia spectabilis*	glory wattle	V	LC
Rhamnaceae	*Alphitonia excelsa*	red ash	V	LC
Apocynaceae	*Alstonia constricta*	bitter bark	S	LC
Loranthaceae	*Amyema quandang* var. *quandang*	grey mistletoe	V	LC
Myrtaceae	*Angophora leiocarpa*	smooth-barked apple	S	LC
Capparaceae	*Apophyllum anomalum*	warrior bush	V	LC
Poaceae	*Aristida caput-medusae*	many headed wire grass	M	LC
Sapindaceae	*Atalaya hemiglauca*	whitewood	V	LC
Chenopodiaceae	*Atriplex leptocarpa*	slender-fruited saltbush	V	LC
Chenopodiaceae	*Atriplex muelleri*	Mueller's saltbush	V	LC
Poaceae	*Austrostipa ramosissima*	stout bamboo grass	V	LC
Sterculiaceae	*Brachychiton populneus*	kurrajong	V	TYPE A
Crassulaceae	*Bryophyllum delagoense**	mother of millions	V	C2
Cupressaceae	*Callitris glaucophylla*	white cypress	M	LC
Asteraceae	*Calotis cuneifolia*	yellow burr daisy	V	LC
Asteraceae	*Calotis lappulacea*	yellow burr-daisy	V	LC
Capparaceae	*Capparis canescens*	wild orange	V	LC
Capparaceae	*Capparis lasiantha*	split jack	V	LC
Apocynaceae	*Carissa ovata*	currant bush	S	LC

Family	Scientific Name	Common Name	Abundance	Status
Asteraceae	*Cassinia laevis*	cough bush	S	LC
Casuarinaceae	*Casuarina cristata*	belah	S	LC
Poaceae	*Cenchrus ciliaris**	buffel grass	M	I
Asteraceae	*Chrysocephalum apiculatum*	yellow buttons	S	LC
Asteraceae	*Cirsium vulgare**	spear thistle	V	I
Myrtaceae	*Corymbia clarksoniana*	Clarkson's bloodwood	S	LC
Orchidaceae	*Cymbidium canaliculatum*	black orchid	V	TYPE A
Poaceae	*Cymbopogon refractus*	barbed wire grass	S	LC
Hemerocallidaceae	*Dianella longifolia*	smooth flax lily	V	LC
Poaceae	*Dichanthium sericeum*	Queensland blue grass	V	LC
Sapindaceae	*Dodonaea triangularis*	hopbush	V	LC
Sapindaceae	*Dodonaea viscosa*	sticky hop bush	V	LC
Chenopodiaceae	*Enchylaena tomentosa*	ruby saltbush	S	LC
Poaceae	*Enteropogon ramosus*	twirly windmill grass	S	LC
Poaceae	*Eragrostis sororia*	woodland lovegrass	V	LC
Scrophulariaceae	*Eremophila debilis*	winter apple	V	LC
Scrophulariaceae	*Eremophila mitchellii*	false sandalwood	V	LC
Myrtaceae	*Eucalyptus coolabah*	coolabah	V	LC
Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark	M	LC
Myrtaceae	*Eucalyptus fibrosa* subsp. *nubila*	broad-leaved ironbark	M	LC
Myrtaceae	*Eucalyptus populnea*	poplar gum	M	LC
Cyperaceae	*Gahnia aspera*	saw sedge	S	LC
Rutaceae	*Geijera parviflora*	wilga	V	LC
Verbenaceae	*Glandularia aristigera**	Mayne's pest	S	I
Goodeniaceae	*Goodenia rotundifolia*	star goodenia	V	LC

Family	Scientific Name	Common Name	Abundance	Status
Proteaceae	*Grevillia striata*	beefwood	V	LC
Proteaceae	*Hakea coriacea*	pink spike hakea	V	LC
Proteaceae	*Hakea lorea*	gnarled corkbark	V	LC
Oleaceae	*Jasminum didymum* subsp. *Lineare*	desert jasmine	V	LC
Juncaceae	*Juncus usitatus*	common rush	S	LC
Laxmanniaceae	*Lomandra confertifolia* subsp. *pallida*	little pal	V	LC
Laxmanniaceae	*Lomandra leucocephala*	woolly-headed matrush	V	LC
Laxmanniaceae	*Lomandra longifolia*	mat rush	V	LC
Laxmanniaceae	*Lomandra multiflora*	many flowered mat rush	V	LC
Laxmanniaceae	*Lomandra patens*	iron grass	V	LC
Chenopodiaceae	*Maireana microphylla*	cotton bush	S	LC
Poaceae	*Megathyrsus maximus**	Guinea grass	S	I
Ericaceae	*Melichrus urceolatus*	cream urn heath	V	LC
Poaceae	*Melinis repens**	red natal grass	S	I
Myoporaceae	*Myoporum acuminatum*	boobialla water bush	V	LC
Oleaceae	*Notelaea microcarpa* var. *microcarpa*	native olive	V	LC
Cactaceae	*Opuntia stricta**	common prickly pear	V	C2, WoNS
Cactaceae	*Opuntia tomentosa**	tree pear	V	C2, WoNS
Meliaceae	*Owenia acidula*	emu apple	V	LC
Picrodendraceae	*Petalostigma pubescens*	quinine bush	V	LC
Pittosporaceae	*Pittosporum angustifolium*	weeping pittosporum	V	LC
Portulacaceae	*Portulaca pilosa*	hairy pigweed	V	LC
Rubiaceae	*Psydrax odorata* forma *odorata*	shiny leaved canthium	V	LC

Family	Scientific Name	Common Name	Abundance	Status
Rubiaceae	*Psydrax oleifolius*	myrtle tree	V	LC
Asteraceae	*Pterocaulon sphacelatum*	fruit salad plant	V	LC
Chenopodiaceae	*Salsola Kali*	soft roly-poly	V	LC
Santalaceae	*Santalum lanceolatum*	blue bush	V	LC
Chenopodiaceae	*Sclerolaena birchii*	galvanised burr	V	LC
Asteraceae	*Senecio brigalowensis*		V	LC
Caesalpiniaceae	*Senna artemisioides* subsp. *zygophylla*	butter bush	V	LC
Malvaceae	*Sida cordifolia*	Paddy's lucerne	S	LC
Solanaceae	*Solanum ellipticum*	potato bush	V	LC
Poaceae	*Sporobolus creber*	western rat's tail grass	V	LC

Abundance: V = Very sparse (<10%), S = Sparse (10-30%), M = Mid-dense (30-70%), D = Dense (70-100%)

* = Exotic species

Status: LC = Least concern under the *Nature Conservation Act 1992*

I = Introduced under the *Nature Conservation Act 1992*

WoNS = Weed of National Significance

C2 = Class 2 Declared Weed Species under the *Land Protection (Pest and Stock Route Management) Act 2002*

TYPE A = Type A restricted plant under the *Nature Conservation (Administration) Regulation 2006*

Fauna species list

Family	Scientific name	Common name	EPBC Act Status	NC Act Status	Abundance
Birds					
Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		LC	1
Corvidae	*Corvus coronoides*	Australian raven		LC	1
Artamidae	*Cracticus tibicen*	Australian magpie		LC	1
Artamidae	*Cracticus torquatus*	grey butcherbird		LC	3
Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra		LC	1
Cacatuidae	*Eolophus roseicapillus*	galah		LC	2
Meliphagidae	*Manorina melanocephala*	noisy miner		LC	30
Pachycephalidae	*Pachycephala pectoralis*	golden whistler		LC	3
Psittacidae	*Platycercus adscitus adscitus*	pale-headed rosella (northern form)		LC	2
Podargidae	*Podargus strigoides*	tawny frogmouth		LC	1
Rhipiduridae	*Rhipidura albiscapa*	grey fantail		LC	1
Rhipiduridae	*Rhipidura rufifrons*	rufous fantail		LC	2
Acanthizidae	*Smicrornis brevirostris*	weebill		LC	10
Corcoracidae	*Struthidea cinerea*	apostlebird		LC	6
Psittaculinae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet		LC	2
Reptiles					
Scincidae	*Carlia sp.*	a carlia		LC	1
Gekkonidae	Gehyra dubia	dubious gecko		LC	3
Hylidae	Litoria fallax	eastern sedgefrog		LC	5

LC = Least concern under the *Nature Conservation Act 1992*

Appendix G – Land Zone Descriptions

Land zone descriptions

Land zone 4: Tertiary-early Quaternary clay deposits, usually forming level to gently undulating plains not related to recent Quaternary alluvial systems. Excludes clay plains formed in-situ on bedrock. Mainly Vertosols with gilgai microrelief, but includes thin sandy or loamy surfaced Sodosols and Chromosols with the same paleo-clay subsoil deposits.

Land zone 7: Cainozoic duricrusts formed on a variety of rock types, usually forming mesas or scarps. Includes exposed ferruginous, siliceous or mottled horizons and associated talus and colluvium, and remnants of these features, for example low stony rises on downs. Soils are usually shallow Rudosols and Tenosols, with minor Sodosols and Chromosols on associated pediments, and shallow Kandosols on plateau margins and larger mesas.

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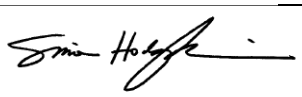
0	Jess N	Simon Hodgkison		S Cross		12/07/2013

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