REPORT

Ecology Assessment Report - Lot 82 Plan BWR205

Q-4500-15-RP-1228

Australia Pacific LNG Upstream

This report provides an overview of the environmental and ecological values for the Site contained within Lot 82 on Plan BWR205 associated with DT1411.

Revision	Date	Description	Originator	Checked	QA/Eng	Approved
0	31/03/2014	Issued for Use	C Zappone	C Dyason	R Pappalardo	A Schimpf

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1. Introduction

This report provides a description of the ecological values found within Lot 82 on BWR205 herein referred to as 'the Site'. The results are based on an initial desktop assessment followed by a field survey to confirm the vegetation communities, flora and fauna species, habitat values and areas of disturbance.

This report has been prepared by Claud Zappone, Field Environmental Advisor for Origin Energy. The field surveys were conducted by a team of ecologists led by Claud Zappone, Field Environmental Advisor for Origin Energy, under direction from Principal Ecologist Anje Schimpf, Senior Field Environmental Advisor for Origin Energy.

Scott Baker (Ecologist for Origin Energy) has been approved to undertake ecological surveys by Commonwealth Department of the Environment (formerly the Department of Sustainability, Environment, Water, Population and Communities) in writing on 17/12/2012.

1.1. Scope of Works

An ecological assessment survey was required to be carried out on Lot 82 on BWR205, located with PL267. The survey was confined to a buffer of 150m from the edge of proposed Essential Petroleum Activities, and a buffer of 200m from the edge of Petroleum Activities associated with Coal Seam Gas (CSG) infrastructure only, which consists of RoW disturbances and four CSG lease disturbances within the southern portion of the property. Therefore, the survey assessment does not provide a representation of the whole property.

1.2. Definitions & Abbreviations

1.2.1. Definitions

Table 1: Definitions

Term	Definition
Project	Australia Pacific LNG Project
Ramsar	Convention on Wetlands of International Importance (the Ramsar Convention) was signed in Ramsar, Iran on 2 February 1971. The Ramsar Convention aims to halt the worldwide loss of wetlands and to conserve, through wise use and management, those that remain. The Convention encourages member countries to nominate sites containing representative, rare or unique wetlands, or that are important for conserving biological diversity, to the List of Wetlands of International Importance (Ramsar sites).
Trimble	Trimble integrates positioning technologies such as GPS, laser and optical with application software, wireless communications and services to provide innovative positioning solutions for applications such as surveying, construction and engineering.

1.2.2. Abbreviations

Table 2: Abbreviations

Abbreviation	Description
BoM	Bureau of Meteorology
C	*Taxon considered 'Least Concern' conservation status under the Nature Conservation Act 1992*
CSG	Coal Seam Gas
DoE	Department of the Environment (Commonwealth)
DNRM	Department of Natural Resources and Mines
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (Commonwealth)
EH	Essential Habitat
EHP	Department of Environment and Heritage Protection (Qld) (formally DERM and EPA)

Abbreviation	Description
EPBC	*Environmental Protection Biodiversity and Conservation Act 1999 (C'th)*
ESA	Environmentally Sensitive Area
GIS	Geographic Information System
GPS	Global Positioning System
LC	Vegetation which has a biodiversity status of 'Least Concern'
LNG	Liquefied Natural Gas
LP/ LP Act	Land Protection (Pest and Stock Route Management) Act 200 (Qld).
m	metres
MNES	Matters of National Environmental Significance
NC	Vegetation which has a Biodiversity status of 'No Concern'
NC Act	Nature Conservation Act 1992 (Qld)
OC	Vegetation which has a biodiversity status of 'Of Concern'
RE	Regional Ecosystem
REDD	Regional Ecosystem Description Database
RoW	Right of Way (tracks and associated pipeline disturbance)
TAR	Type A restricted plant
TEC	Threatened Ecological Communities
WoNS	Weed of National Significance

1.2.3. Revision History

Table 3: Revision History

Revision	Date	Description

1.2.4. Document References

Table 4: Associated Document References

Document Number	Title
	Australian Weeds Committee (2012) *Weeds of National Significance*, Australian Weeds Committee. http://www.weeds.org.au/WoNS/
	BoM (2014) Bureau of Meteorology - *Climate statistics for Australian Locations*. Australian Government, Canberra. http://www.bom.gov.au/climate/averages/tables/cw_042023.shtml
	DNRM (2014a) *Regional Ecosystem and Remnant Map—version 6.1 for the purpose of the Vegetation Management Act 1999.* The Department of Natural Resources and Mines, Brisbane. http://www.dnrm.qld.gov.au/land/vegetation-management/vegetation-maps/vegetation-map-request
	DoE (2013a) *Protected Matters Search Tool.* Department of the Environment. Canberra. http://www.environment.gov.au/epbc/pmst/index.html
	DoE (2013b) *Environmental Protection and Biodiversity Conservation Act 1999,* Department of Sustainability, Environment, Water, Population and Communities. http://www.environment.gov.au/epbc/about/index.html
	DoE (2009a) *Species Profile and Threats Database* (EPBC Act List of Threatened Ecological Communities). Department of the Environment, Water, Heritage and the Arts, Canberra. http://www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl
	EHP (2012a). *Regional Ecosystem Land Zone definitions*, Department of Environment and Heritage Protection, Brisbane. http://www.ehp.qld.gov.au/ecosystems/biodiversity/regional-ecosystems/land_zone_definitions.html
	EHP (2012b) *Wildlife Online*. Department of Environment and Heritage Protection, Brisbane. http://www.ehp.qld.gov.au/wildlife/wildlife-online/
	EHP (2012c) *Map of Referable Wetlands*. Department of Environment and Heritage Protection, Brisbane. http://www.ehp.qld.gov.au/ecosystems/wetlands/referable-wetlands-maps.html
	Neldner, V.J., Wilson, B. A., Thompson, E.J. and Dillewaard, H.A. (2012). *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland*. Version 3.1.Updated September 2012. Queensland Herbarium, Environmental Protection Agency, Brisbane.128 pp.
	Queensland Parliamentary Counsel (2002) *Land Protection (Pest and Stock Route Management) Act,* Queensland Government, Brisbane. http://www.legislation.qld.gov.au/legisltn/current/l/landprpsrma02.pdf
	Queensland Parliamentary Counsel, (2006) *Nature Conservation (Wildlife) Regulation,* Queensland Government, Brisbane. http://www.legislation.qld.gov.au/LEGISLTN/CURRENT/N/NatureConWiR06.pdf
	Sattler, P.S., and Williams, R.D (eds.) (1999). *The Conservation Status of Queensland's Bioregional Ecosystems*. Environmental Protection Authority, Brisbane.
Q-LNG01-15-MP-0109	Australian Pacific LNG (2011) *Environmental Constraints Planning and Field Development Protocol.*

2. Site Context

Table 5: Site Context

Bioregion	The Site is located in the Barakula Province (11.27) within the Brigalow Belt south bioregion. The Barakula Province comprises of dissected low Jurassic sandstone and laterised sandstone hills, plateau remnants and scarps, interspersed with and surrounded by undulating plains. In low hilly country, the predominant vegetation is an open forest/woodland of narrow-leaved ironbark (*Eucalyptus crebra*), spotted gum (*Corymbia citriodora*), white cypress pine (*Callitris glaucophylla*), and bulloak (*Allocasuarina leuhmanii*) with dusky-leaved iron bark (*Eucalyptus fibrosa* subsp. *nubila*) narrow-leaved white mahogany (*Eucalyptus tenuipes*), budgeroo (*Lysicarpus angustifolius*) and thready-barked she-oak (*Casuarina inophloia*) characteristic of crests and scarps. Several communities are associated with different soils and local landforms on the undulating plains; brigalow (*Acacia harpophylla*) – belah (*Casuarina cristata*) open-forest was most extensive on grey cracking clay soils with poplar box (*Eucalyptus populnea*) and river red gum (*Eucalyptus camaldulensis*) woodland on alluvial plains, narrow-leaved ironbark (*Eucalyptus crebra*), smooth-barked apple (*Angophora leiocarpa*), bulloak (*Allocasuarina leuhmannii*), yellow jacket (*Eucalyptus bloxsomei*), on sandy textured solodic soils and gum-topped box (*Eucalyptus microcarpa*) or *Eucalyptus populnea* or *Eucalyptus crebra*, *Allocasuarina luehmannii* on heavier solodics (Sattler and Williams 1999).
Current land use	The Site consists predominantly of remnant vegetation and is dissected by internal land owner tracks. Selective logging is evident at a minor scale. No pastoral or agricultural activities were observed within the site.
Soils and geology	Queensland Geological Mapping (Chinchilla map sheet SG56-09) depicts the majority of the site within the Jurassic to lower Cretacious Kumbarilla Beds geological unit. Sediments typically comprise clayey liable to quartzose sandstone, siltstone, mudstone and polymictic conglomerate. The balance of the site has been mapped as Pleistocene aged sand and some sandy soil over the Kumbarilla Beds formation. This geology type is typically associated with land zone 7 (EHP 2012a). The site inspection confirmed the site comprises intrusions of recent quaternary alluvial systems comprising of alluvial rivers and creek flats (land zone 3), uniform near level or gently undulating Cainozoic plains with old loamy and sandy soils (land zone 5) and Cainozoic duricrusts formed on a variety of rock types, usually forming scarps (land zone 7). The Site predominantly drains to the north via two mapped 1st order streams and a mapped 3rd order stream, situated within the centre of the property.
Climate	The nearest weather station to the Site is at Miles Post Office (Bureau of Meteorology (BoM) station ID 042023) located approximately 5.5km south of the Site has a mean annual rainfall of 652 mm, with most rain falling between December and February, with August being the driest month. Approximately 7mm of rain fell at Miles in the week preceding the survey (BoM, 2014). The average annual maximum temperature at Miles is 27.1^{o}C (BoM, 2014).

3. Methodology

The methodology employed in compilation of this Ecological Assessment Report consisted of:

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

An explanation of these activities is outlined in this section.

3.1. Desktop and Literature Review

Sources utilised in the desktop and literature review are listed in Table 6 below.

Table 6: Desktop and Literature Review Sources

Database	Co-ordinates or search area	Date of search	Appendix
Environmental Protection Biodiversity and Conservation Act 1999 (*EPBC Act*) Protected Matters Search Tool (DoE 2013a)	Lat –26.58130268 Long 150.24661670	12/02/2014	Appendix B: Results of EPBC Protected Matters Search Tool
Nature Conservation Act 1992 (*NC Act)* Protected Species Lists Wildlife Online Database (EHP 2012b)	Lat –26.58130268 Long 150.24661670	12/02/2014	Appendix C: Wildlife Online Database Search Results
Department of Natural Resources and Mines (DNRM) Vegetation Management Map (DNRM 2014a)	Lot 82 on Plan BWR205	12/02/2014	Appendix D: DNRM Mapped Regional Ecosystems
EHP Map of Environmentally Sensitive Areas – Chapter 5A activities (*EP Act*)	Lat –26.58130268 Long 150.24661670	12/02/2014	Appendix E: EHP Mapping of ESAs and Other Environmental Values on Site
EHP Map of Referable Wetlands and Wetland Protection Areas (EHP 2012c)	Lot 82 on Plan BWR205	12/02/2014	Appendix F: EHP Mapping of Referable Wetlands and Wetland Protection Areas
Queensland Geological Mapping, Chinchilla Map SHEET SG56-09 and 1:250,000 Geological series (1971).	NA	NA	N/A
GISWR_17039_IFI_CD_RevB Disturbance Tracker Map Suite for *DT1406*	NA	NA	N/A

Data searches were conducted using a 10 km buffer around the coordinate -26.58130268, 150.24661670 which corresponds to the approximate centre point of the property.

3.2. Field Survey

Ecological surveys were conducted in accordance with:

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

Field surveys were undertaken between the 21/03/2014 and 24/03/2014.

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 quaternary level of data collection as described in *Neldner et al. (2012)*.

The vegetation community surveys were undertaken within each unique ecosystem encountered within the Site. Vegetation community data was entered into the data fields provided by the Trimble data capture system. A total of 11 formal vegetation community surveys were undertaken within the Site. Ground-truthing of the DNRM RE designation (DNRM 2014) at and surrounding the Site was undertaken via quaternary level and random meanders transect assessments, as defined by *Neldner et al. (2012).*

The locations of the vegetation community survey sites are presented in Appendix A: Site Location and Survey Points.

Relative abundance data was collected for each stratum within the community as per the methodology described in the *Environmental Constraints Planning and Field Development Protocols (Q-LNG01-15-MP-0109 Australia Pacific LNG (2012))*, as presented by the vegetation structure point data sheet of the Trimble unit. Representative photo(s) were taken of the subject vegetation community via the Trimble unit or camera. Photo aspect data was recorded.

Vegetation community polygons were confirmed, mapped and identified in accordance with Queensland regional ecosystem (biodiversity status) (DNRM 2014a) and EPBC threatened ecological community (TEC) criteria (DoE 2009a).

3.2.2. Habitat Surveys

Habitat surveys were undertaken in conjunction with vegetation community survey within the Ecology Survey Buffer. Within each habitat survey, a range of habitat features were recorded on the relevant Trimble data sheet. Where deemed appropriate, representative photo(s) were taken of the given habitat patch via the Trimble unit. Photo aspect data was entered into the relevant data sheet.

3.2.3. Threatened Flora and Fauna Survey

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

Targeted flora searches were undertaken for species highlighted by the database and literature review. Targeted searches were undertaken within the vicinity of a vegetation community survey/habitat feature plots. Searches were only undertaken where field ecologists deemed that the given area would be likely to support a threatened species, based on the habitat being of sufficient value and containing significant habitat attributes to warrant such a search.

Fauna species were recorded opportunistically throughout the survey area.

Targeted threatened flora searches 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 property.

Any observations of threatened species (whether within search areas or opportunistically) were recorded using the Trimble data capture system. Where practicable, photo(s) were taken of the subject threatened species. Any flora specimens deemed as potential threatened species and not conclusively identified by the ecologists were forwarded to the Queensland Herbarium for positive identification (where able).

3.2.4. Exotic Flora and Fauna Survey

Surveys for declared pest flora and fauna species, as defined by the *Land Protection (Pest and Stock Route Management) Act 2002 (LP Act)*, were undertaken opportunistically while traversing the site. All observations of pest species, including abundance data, were recorded using the Trimble data capture system.

3.2.5. Disturbance Survey

Evidence of disturbance at each vegetation community/habitat feature was recorded for type, severity and estimated time of most recent occurrence. The recording of disturbance was also conducted at opportunistic levels where appropriate.

3.2.6. Survey Limitations

A number of factors are considered likely to influence survey results for particular species or species groups. These factors are:

- Timing (seasons) and duration of the survey period
- Weather conditions in the preceding seasons
- Restricted spatial area of the habitats within the Site

The surveys undertaken may not provide a true indication of seasonal habitat utilisation by fauna species within the site. Some cryptic flora species may only be detected during particular flowering periods. The field investigations undertaken were limited to passive techniques (e.g. no live trapping) and were limited to early autumn season. Additional survey effort would be required to provide a more comprehensive inventory of species, both threatened and common.

4. Results and Discussions

This section includes the results of the database and literature review. Some information is contained in the appendices sections and is referenced below.

4.1. Desktop and Literature Review

Results of the desktop and literature review can be found in Appendices B-F, as listed in Table 6.

4.2. Field Survey

Results of field surveys are detailed in the following sections. A comprehensive list of flora and fauna species identified during the field survey is included in Appendix G: List of Flora and Fauna Species Identified on Site.

4.2.1. Commonwealth Environmental Matters

Field survey results for Commonwealth environmental matters (MNES, TECs, threat-listed species) are outlined in Table 7.

Table 7: Commonwealth Environmental Matters – Field Survey Results

Commonwealth environmental matters	Present (Y/N)	Location	Description	Status	Condition	Comments
TECs	N	-	-	-	-	-
EPBC threat-listed flora	N	-	-	-	-	-
EPBC threat-listed fauna	N	-	-	-	-	-
Migratory species	N	-	-	-	-	-
Marine species	Y	Centre of property	*Grallina cyanoleuca* (Australian magpie-lark)	Listed marine species under the *EPBC Act*.	NA	Seen and heard during bird point survey.

*Status taken from DoE 2013b

4.2.2. Queensland Environmental Matters

4.2.2.1. Field Survey Results

Field survey results for State environmental matters (EVNT etc) is outlined in Table 8.

Table 8: State Environmental Matters – Field Survey Results

State environmental matters	Present (Y/N)	Location	Description*	Status*	Comments
Endangered regional ecosystems	NA	-	NA	-	-
Of concern regional ecosystems	NA	-	NA	-	-
NC Act listed flora (EVNT)	NA	-	NA	-	-
NC Act listed fauna (EVNT)	NA	-	NA	-	-
Type A restricted plants	Y	-	*Cymbidium canaliculatum* (black orchid).	Type A restricted plant	*Cymbidium canaliculatum* found as individuals at 3 locations within the surveyed area.

*Status and description taken from DNRM 2014a and EHP2012b

4.2.2.2. Ground Truthed Regional Ecosystems

DNRM mapping identified two (2) separate homogenous REs as being present within the site. Ground truthing has determined DNRM mapping to be partially accurate in this instance. Results of ground truthed Regional Ecosystems observed on the site are presented in Table 9.

Table 9: Ground Truthed Regional Ecosystems

RE ID	Status (biodiversity)*	Short description	Condition
11.3.14	No Concern at Present	*Eucalyptus* spp., *Angophora* spp., *Callitris* spp. woodland on alluvial plains.	Intact remnant vegetation confined to mapped streams associated with alluvial gullies.
11.5.1	No Concern at Present	*Eucalyptus crebra* and/or *E. populnea, Callitris glaucophylla, Angophora leiocarpa, Allocasuarina luehmannii* woodland on Cainozoic sand plains/remnant surfaces.	Intact remnant vegetation associated with a drainage depression located north-west within the survey area.
11.5.20	No Concern at Present	*Eucalyptus moluccana* and/or *E. microcarpa/ E. woollsiana +/- E. crebra* woodland on Cainozoic sand plains.	Intact remnant vegetation associated with a drainage depression located north-east within the survey area.
11.7.4	No Concern at Present	*Eucalyptus decorticans* and/or *Eucalyptus spp., Corymbia spp., Acacia spp., Lysicarpus angustifolius* woodland on Cainozoic lateritic duricrust.	The majority of the survey area presents this type of vegetation associated with hill slopes and rises. The vegetation is intact, with evidence of selective logging.
11.7.7	No Concern at Present	*Eucalyptus fibrosa* subsp. *nubila +/- Corymbia* spp. +/- *Eucalyptus* spp. woodland on Cainozoic lateritic duricrust.	Intact remnant vegetation associated with hill slopes and rises, with evidence of selective logging.

*Status taken from DNRM 2014a

All ground truthed regional ecosystems are represented schematically in Appendix H: Ground Truthed Regional Ecosystems.

4.2.2.2.1. Mature Regrowth

DNRM mapping did not identify mature regrowth being present on site. This was found to be correct, with no mature regrowth being present within the Site.

Table 10: Ground Truthed Mature Regrowth

Mature Regrowth	Description*	Condition
NA	-	-

*Description taken from DNRM 2014a

4.2.2.3. Other Significant Species

One Type A restricted plant was observed during the investigation, *Cymbidium canaliculatum* (black orchid). *C. canaliculatum* was observed as individual plants at 3 locations. Refer to Appendix I: Ground Truthed NC Act Threat Listed and Other Significant Species Present on Site for the location of each record.

4.2.2.4. Other Environmental Values

Other values presented in this section provide further environmental context only for the site.

The majority of the site contains contiguous intact remnant vegetation containing an abundance of habitat features comprising mature hollow bearing trees/stags, hollow logs, fallen and windrowed timber stockpiles.

Two mapped 1st order streams are present and situated in the centre of the property. These features both drain to the north into a 2nd order stream north of the property. A 3rd order stream is also present which also drains to the north-east within the property.

4.2.2.5. Weeds and Pests

Distribution of Weeds of National Significance (WoNS), Class 1, 2 and 3 species declared under the *LP Act* and pest fauna on site has been mapped based on field survey results. Appendix J: Ground Truthed Weeds and Pest Fauna Present on Site is a schematic of the field surveyed weeds and pests. Pest flora and fauna encountered during the field survey are listed in Table 11.

Table 11: Pest Flora Recorded During the Ecological Field Survey on Site

Scientific Name	Common Name	Status*	Area of Occurrence
**Opuntia stricta*	prickly pear	WoNS and Declared Class 2 weed (*LP Act*)	Sparsely scattered individuals present within survey area.
**Opuntia tomentosa*	velvety- tree pear	WoNS and Declared Class 2 weed (*LP Act*)	Sparsely scattered individuals present within survey area. Some mature (to 3m height).

*Status taken from Australian Weeds Committee 2012

4.2.3. Disturbance

The majority of the Site contains remnant vegetation which has been selectively logged. The intensity of logging varied throughout the site, with the most intense logging activities observed within the north-eastern portion. The property is dissected by internal unsealed access tracks and perimeter tracks that have been previously cleared. Windrowed timber and isolated felled logs were observed regularly adjacent to access tracks. The Site has also been recently burned and recruitment of native vegetation was observed.

5. Conclusions

As a result of the desktop and field assessments undertaken for the Site, the following ecological values were identified:

- one (1) species of bird, Australian magpie-lark (*Grallina cyanoleuca*) a listed Marine species under the EPBC Act
- no State threat-listed flora or fauna species were identified during the investigation.
- one (1) Type A restricted plant species, *Cymbidium canaliculatum* (black orchard), was recorded on three (3) occasions throughout the Site
- habitat suitable for threat-listed reptiles was observed during the survey. Areas of remnant vegetation were observed to contain mature habitat trees with hollows. Cleared areas also contain windrowed timber which fringes remnant vegetation and may provide passage for species through the Site.
- two (2) Class 2 declared weed species under the *LP* Act were observed on the Site. **Opuntia tomentosa* (velvety pear tree) and **Opuntia stricta* (prickly pear) occur sparsely throughout the Site. These species are also listed as WoNS.

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 approval conditions.

Appendix A: Site Location and Survey Points

Legend

- Survey Point

Queensland Waterways Zoning

Risk of Impact

- 1 - Low
- 2 - Moderate
- 3 - High
- 4 - Major

Boundary

- Survey Area
- Site Location
- Surveyed Cadastral

Source Information:
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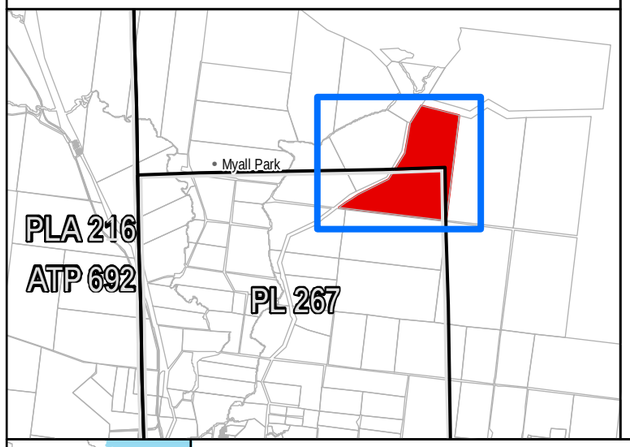

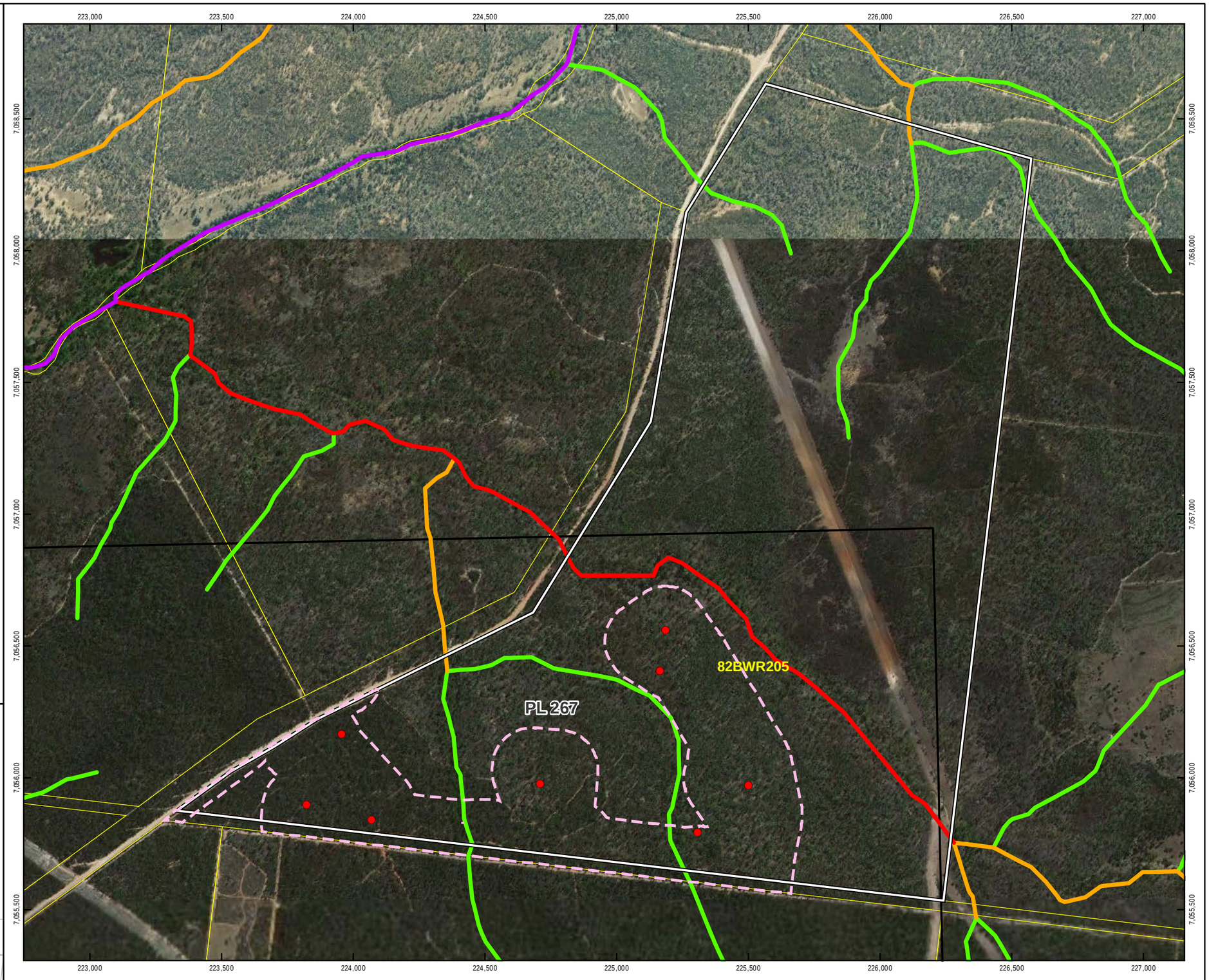

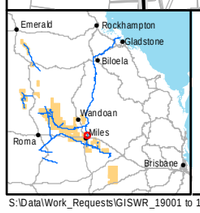

N

Scale 1:15,000 (at A3)

0 250 500 1,000

Metres

Coordinate System: GDA 1994 MGA Zone 56

Rev	Description	Drawn	Check	QA	Approved	Date
0	Issued For Use	ALM	SB	SAH	CZ	31/03/2014
A	Issued For Review	ALM	SB	SAH		26/03/2014

origin

Appendix A:
Site Location and Survey Points
Date: 31 March 2014

Map Number	Doc No	Rev
1 of 1	Q-4500-15-RP-1228	0
	Map ID GISWR_19436_A_Rev0	

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Appendix B: Results of EPBC Protected Matters Search Tool

The search of the EBPC protected matters database was carried out on 12/02/2014

Australian Government

Department of the Environment

EPBC Act Protected Matters Report

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

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

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 12/02/14 12:38:14

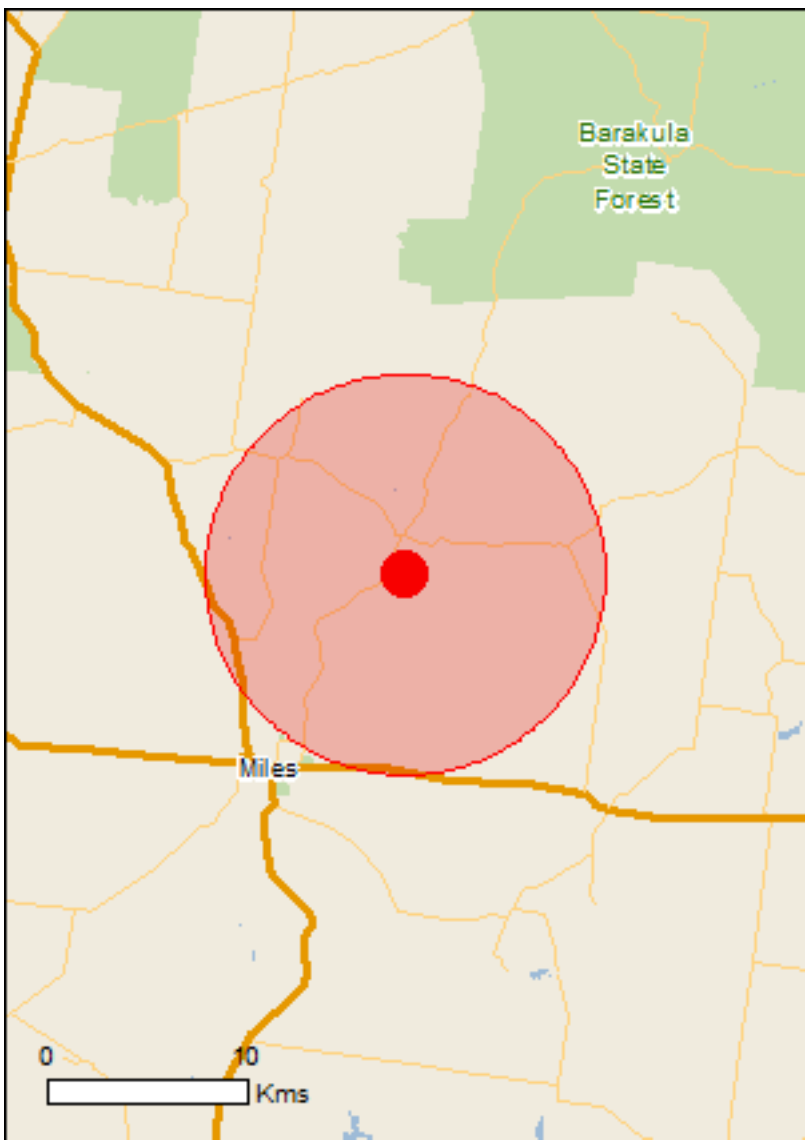
Summary

Details

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

Caveat

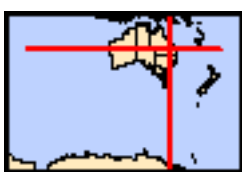
Acknowledgements



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates

Buffer: 10.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	19
Listed Migratory Species:	10

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 Terrestrial:	None
Commonwealth Reserves Marine	None

Extra Information

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

Place on the RNE:	None
State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	22
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 may 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
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Fish		
Maccullochella peelii Murray Cod [66633]	Vulnerable	Species or species

Name	Status	Type of Presence
		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 may 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](#) Belson's Panic [2406]	Vulnerable	Species or species habitat may occur within area
[Homoranthus decumbens](#) a shrub [55186]	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

Listed Migratory Species	[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.	
Name	Threatened	Type of Presence
Migratory Marine Birds		
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Hirundapus caudacutus		
White-throated Needletail [682]		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 may 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]		Species or species habitat known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat likely to 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]	Endangered*	Species or species habitat may 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 area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat likely to 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 may occur within area

Name	Threatened	Type of Presence
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 may occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

Invasive Species	[Resource Information]

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

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

Name	Status	Type of Presence
Bufo marinus Cane Toad [1772]		Species or species habitat likely to occur within area
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area

Coordinates

-26.5813 150.24662

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 C: Wildlife Online Database Search Results

The search of the Wildlife Online database was carried out on 12/02/2014

Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Status: All
Records: All
Date: All
Latitude: 26.5813
Longitude: 150.2466
Distance: 10
Email: tiegan.howell@originenergy.com.au
Date submitted: Wednesday 12 Feb 2014 08:33:38
Date extracted: Wednesday 12 Feb 2014 08:40:21

The number of records retrieved = 266

Disclaimer

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

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

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

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			5
animals	amphibians	Hylidae	*Litoria peronii*	emerald spotted treefrog		C		1
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		2
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		6
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		1
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		1
animals	amphibians	Limnodynastidae	*Limnodynastes fletcheri*	barking frog		C		1
animals	amphibians	Limnodynastidae	*Notaden bennettii*	holy cross frog		C		1
animals	amphibians	Limnodynastidae	*Limnodynastes salmini*	salmon striped frog		C		1
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		1
animals	amphibians	Myobatrachidae	*Crinia deserticola*	chirping froglet		C		1
animals	birds	Acanthizidae	*Acanthiza pusilla*	brown thornbill		C		4
animals	birds	Acanthizidae	*Acanthiza apicalis*	inland thornbill		C		8
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		5
animals	birds	Acanthizidae	*Gerygone albogularis*	white-throated gerygone		C		11
animals	birds	Acanthizidae	*Acanthiza chrysorrhoa*	yellow-rumped thornbill		C		8
animals	birds	Acanthizidae	*Acanthiza uropygialis*	chestnut-rumped thornbill		C		1
animals	birds	Acanthizidae	*Chthonicola sagittata*	speckled warbler		C		5
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		15
animals	birds	Acanthizidae	*Acanthiza apicalis albiventris*	inland thornbill (eastern form)		C		1
animals	birds	Acanthizidae	*Acanthiza nana*	yellow thornbill		C		9
animals	birds	Acanthizidae	*Gerygone fusca*	western gerygone		C		5
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		5
animals	birds	Accipitridae	*Milvus migrans*	black kite		C		2
animals	birds	Accipitridae	*Elanus axillaris*	black-shouldered kite		C		2
animals	birds	Accipitridae	*Accipiter fasciatus*	brown goshawk		C		2
animals	birds	Accipitridae	*Aviceda subcristata*	Pacific baza		C		5
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		2
animals	birds	Accipitridae	*Accipiter cirrocephalus*	collared sparrowhawk		C		1
animals	birds	Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler		C		1
animals	birds	Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar		C		2
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		2
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		9
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		10
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		8
animals	birds	Apodidae	*Hirundapus caudacutus*	white-throated needletail		C		2
animals	birds	Ardeidae	*Ardea modesta*	eastern great egret		C		3
animals	birds	Ardeidae	*Egretta garzetta*	little egret		C		1
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		7
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		4
animals	birds	Artamidae	*Artamus superciliosus*	white-browed woodswallow		C		1
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		12
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		6
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		15
animals	birds	Artamidae	*Cracticus tibicen*	Australian magpie		C		20
animals	birds	Artamidae	*Artamus minor*	little woodswallow		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		23
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		23
animals	birds	Cacatuidae	*Calyptorhynchus lathami*	glossy black-cockatoo		V		1
animals	birds	Cacatuidae	*Calyptorhynchus funereus*	yellow-tailed black-cockatoo		C		1
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		13
animals	birds	Cacatuidae	*Cacatua sanguinea*	little corella		C		3
animals	birds	Cacatuidae	*Eolophus roseicapillus*	galah		C		26
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		10
animals	birds	Campephagidae	*Coracina tenuirostris*	cicadabird		C		5
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		1
animals	birds	Campephagidae	*Lalage sueurii*	white-winged triller		C		3
animals	birds	Casuariidae	*Dromaius novaehollandiae*	emu		C		1
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		3
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		5
animals	birds	Charadriidae	*Elseyornis melanops*	black-fronted dotterel		C		1
animals	birds	Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork		NT		1
animals	birds	Columbidae	*Geopelia cuneata*	diamond dove		C		1
animals	birds	Columbidae	*Geopelia striata*	peaceful dove		C		15
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		19
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		1
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		6
animals	birds	Columbidae	*Columba livia*	rock dove	Y			6
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		5
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		21
animals	birds	Corcoracidae	*Corcorax melanorhamphos*	white-winged chough		C		7
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		9
animals	birds	Corvidae	*Corvus sp.*					3
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		29
animals	birds	Corvidae	*Corvus bennetti*	little crow		C		2
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		2
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		1
animals	birds	Cuculidae	*Eudynamys orientalis*	eastern koel		C		5
animals	birds	Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo		C		2
animals	birds	Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo		C		2
animals	birds	Cuculidae	*Chalcites osculans*	black-eared cuckoo		C		1
animals	birds	Cuculidae	*Cacomantis pallidus*	pallid cuckoo		C		3
animals	birds	Estrildidae	*Neochmia modesta*	plum-headed finch		C		3
animals	birds	Estrildidae	*Lonchura punctulata*	nutmeg mannikin	Y			1
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		6
animals	birds	Estrildidae	*Stagonopleura guttata*	diamond firetail		C		1
animals	birds	Estrildidae	*Taeniopygia guttata*	zebra finch		C		2
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		8
animals	birds	Falconidae	*Falco berigora*	brown falcon		C		3
animals	birds	Gruidae	*Grus rubicunda*	brolga		C		1
animals	birds	Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra		C		19
animals	birds	Halcyonidae	*Todiramphus sanctus*	sacred kingfisher		C		8

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Hirundinidae	*Petrochelidon ariel*	fairy martin		C		5
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		11
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		2
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		15
animals	birds	Maluridae	*Malurus lamberti*	variegated fairy-wren		C		4
animals	birds	Megaluridae	*Cincloramphus mathewsi*	rufous songlark		C		2
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		9
animals	birds	Meliphagidae	*Nesoptilotis leucotis*	white-eared honeyeater		C		12/1
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		13
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		27
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		3
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		12
animals	birds	Meliphagidae	*Ptilotula penicillatus*	white-plumed honeyeater		C		5
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		11
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		12
animals	birds	Meliphagidae	*Melithreptus brevirostris*	brown-headed honeyeater		C		6/1
animals	birds	Meliphagidae	*Gavicalis virescens*	singing honeyeater		C		1
animals	birds	Meliphagidae	*Manorina flavigula*	yellow-throated miner		C		6
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		7
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		21
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		8
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		30
animals	birds	Monarchidae	*Myiagra inquieta*	restless flycatcher		C		1
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		5
animals	birds	Motacillidae	*Anthus novaeseelandiae*	Australasian pipit		C		4
animals	birds	Nectariniidae	*Dicaeum hirundinaceum*	mistletoebird		C		9
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		6
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		4
animals	birds	Otididae	*Ardeotis australis*	Australian bustard		C		6
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		14
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		1
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		17
animals	birds	Pardalotidae	*Pardalotus punctatus*	spotted pardalote		C		3
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		28
animals	birds	Passeridae	*Passer domesticus*	house sparrow	Y			3
animals	birds	Pelecanidae	*Pelecanus conspicillatus*	Australian pelican		C		1
animals	birds	Petroicidae	*Petroica goodenovii*	red-capped robin		C		5
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		4
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		7
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		2
animals	birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant		C		1
animals	birds	Phalacrocoracidae	*Phalacrocorax carbo*	great cormorant		C		3
animals	birds	Phasianidae	*Coturnix ypsilophora*	brown quail		C		2
animals	birds	Phasianidae	*Coturnix pectoralis*	stubble quail		C		1
animals	birds	Podargidae	*Podargus strigoides*	tawny frogmouth		C		5
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		13
animals	birds	Pomatostomidae	*Pomatostomus temporalis temporalis*	grey-crowned babbler (eastern)		C		1
animals	birds	Psittacidae	*Melopsittacus undulatus*	budgerigar		C		1
animals	birds	Psittacidae	*Northiella haematogaster*	blue bonnet		C		1
animals	birds	Psittacidae	*Aprosmictus erythropterus*	red-winged parrot		C		16
animals	birds	Psittacidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		14
animals	birds	Psittacidae	*Platycercus adscitus palliceps*	pale-headed rosella (southern form)		C		1
animals	birds	Psittacidae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet		C		9
animals	birds	Psittacidae	*Platycercus adscitus*	pale-headed rosella		C		15
animals	birds	Psittacidae	*Psephotus varius*	mulga parrot		C		2
animals	birds	Psittacidae	*Alisterus scapularis*	Australian king-parrot		C		1
animals	birds	Psittacidae	*Psephotus haematonotus*	red-rumped parrot		C		1
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		2
animals	birds	Rhipiduridae	*Rhipidura leucophrys leucophrys*	willie wagtail (southern)		C		1
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		23
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		15
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		2
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		3
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		2
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		7
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		2
animals	birds	Turnicidae	*Turnix velox*	little button-quail		C		1
animals	birds	Tytonidae	*Tyto javanica*	eastern barn owl		C		2
animals	mammals	Canidae	*Canis lupus dingo*	dingo				1
animals	mammals	Canidae	*Canis lupus familiaris*	dog	Y			1
animals	mammals	Emballonuridae	*Saccolaimus flaviventris*	yellow-bellied sheathtail bat		C		1
animals	mammals	Macropodidae	*Macropus rufogriseus*	red-necked wallaby		C		2
animals	mammals	Macropodidae	*Macropus giganteus*	eastern grey kangaroo		C		2
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		1
animals	mammals	Molossidae	*Mormopterus beccarii*	Beccari's freetail bat		C		1
animals	mammals	Muridae	*Hydromys chrysogaster*	water rat		C		1
animals	mammals	Petauridae	*Petaurus breviceps*	sugar glider		C		1
animals	mammals	Phalangeridae	*Trichosurus vulpecula*	common brushtail possum		C		1
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		C	V	3
animals	mammals	Potoroidae	*Aepyprymnus rufescens*	rufous bettong		C		1
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		C		4
animals	mammals	Vespertilionidae	*Scotorepens greyii*	little broad-nosed bat		C		1
animals	reptiles	Agamidae	*Amphibolurus muricatus*	jacky lizard		C		1
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		3
animals	reptiles	Agamidae	*Pogona vitticeps*			C		1
animals	reptiles	Diplodactylidae	*Lucasium steindachneri*	Steindachner's gecko		C		1
animals	reptiles	Diplodactylidae	*Strophurus taenicauda*	golden-tailed gecko		NT		2/2
animals	reptiles	Elapidae	*Pseudechis guttatus*	spotted black snake		C		1
animals	reptiles	Gekkonidae	*Gehyra dubia*			C		2
animals	reptiles	Gekkonidae	*Heteronotia binoei*	Bynoe's gecko		C		2
animals	reptiles	Scincidae	*Lygisaurus foliorum*			C		2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Scincidae	*Morethia taeniopleura*	fire-tailed skink		C		1
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		1
animals	reptiles	Scincidae	*Ctenotus robustus*			C		1
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		2
plants	higher dicots	Asteraceae	*Flaveria trinervia*		Y			1/1
plants	higher dicots	Asteraceae	*Ozothamnus diotophyllus*			C		3/3
plants	higher dicots	Asteraceae	*Rutidosis murchisonii*			C		3/3
plants	higher dicots	Asteraceae	*Coronidium oxylepis subsp. lanatum*			C		1/1
plants	higher dicots	Asteraceae	*Senecio pinnatifolius var. pinnatifolius*			C		1/1
plants	higher dicots	Asteraceae	*Sonchus oleraceus*	common sowthistle	Y			1/1
plants	higher dicots	Asteraceae	*Olearia ramulosa*			C		1/1
plants	higher dicots	Caesalpiniaceae	*Petalostylis labicheoides*			C		1/1
plants	higher dicots	Capparaceae	*Capparis lasiantha*	nipan		C		1/1
plants	higher dicots	Casuarinaceae	*Allocasuarina luehmannii*	bull oak		C		1/1
plants	higher dicots	Chenopodiaceae	*Dysphania rhadinostachya subsp. inflata*			C		1/1
plants	higher dicots	Chenopodiaceae	*Sclerolaena muricata*			C		1/1
plants	higher dicots	Crassulaceae	*Bryophyllum delagoense*		Y			1/1
plants	higher dicots	Ericaceae	*Leucopogon biflorus*			C		1/1
plants	higher dicots	Euphorbiaceae	*Euphorbia hirta*		Y			1/1
plants	higher dicots	Fabaceae	*Hardenbergia violacea*			C		1/1
plants	higher dicots	Fabaceae	*Zornia*			C		1/1
plants	higher dicots	Fabaceae	*Chorizema parviflorum*	eastern flame pea		C		1/1
plants	higher dicots	Geraniaceae	*Geranium solanderi var. solanderi*	native geranium		C		1/1
plants	higher dicots	Goodeniaceae	*Brunonia australis*	blue pincushion		C		1/1
plants	higher dicots	Haloragaceae	*Gonocarpus urceolatus*			C		2/2
plants	higher dicots	Lamiaceae	*Westringia cheelii*			C		2/2
plants	higher dicots	Lamiaceae	*Prostanthera sp. (Baking Board V.Hando 135)*			C		1/1
plants	higher dicots	Lamiaceae	*Prostanthera cryptandroides subsp. euphrasioides*			C		1/1
plants	higher dicots	Malvaceae	*Hibiscus sturtii*			C		1/1
plants	higher dicots	Malvaceae	*Sida sp. (Musselbrook M.B.Thomas+ MRS437)*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia juncifolia*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia ixiophylla*			C		7/7
plants	higher dicots	Mimosaceae	*Acacia triptera*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia conferta*			C		2/2
plants	higher dicots	Mimosaceae	*Acacia aprepta*	Miles mulga		C		1/1
plants	higher dicots	Mimosaceae	*Acacia macradenia*	zig-zag wattle		C		1/1
plants	higher dicots	Mimosaceae	*Acacia semilunata*	crescent-leaved wattle		C		3/3
plants	higher dicots	Mimosaceae	*Acacia spectabilis*	pilliga wattle		C		1/1
plants	higher dicots	Mimosaceae	*Acacia crassa subsp. crassa*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia deanei subsp. deanei*			C		1/1
plants	higher dicots	Mimosaceae	*Acacia falcata*	sickle wattle		C		1/1
plants	higher dicots	Mimosaceae	*Acacia leiocalyx subsp. leiocalyx*			C		1/1
plants	higher dicots	Myrsinaceae	*Lysimachia arvensis*		Y			1/1
plants	higher dicots	Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark		C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus tereticornis subsp. tereticornis*			C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus fibrosa subsp. fibrosa*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Myrtaceae	*Eucalyptus fibrosa subsp. nubila*			C		1/1
plants	higher dicots	Myrtaceae	*Leptospermum polygalifolium*	tantoon		C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca nodosa*			C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca squamophloia*			C		1/1
plants	higher dicots	Myrtaceae	*Melaleuca densispicata*			C		1/1
plants	higher dicots	Myrtaceae	*Eucalyptus chloroclada*	Baradine red gum		C		2/2
plants	higher dicots	Myrtaceae	*Eucalyptus exserta*	Queensland peppermint		C		2/2
plants	higher dicots	Myrtaceae	*Eucalyptus elegans*			C		4/4
plants	higher dicots	Myrtaceae	*Lysicarpus angustifolius*	budgeroo		C		1/1
plants	higher dicots	Oxalidaceae	*Oxalis radicosa*			C		1/1
plants	higher dicots	Rhamnaceae	*Cryptandra armata*			C		1/1
plants	higher dicots	Rutaceae	*Boronia occidentalis*			C		2/2
plants	higher dicots	Rutaceae	*Boronia bipinnata*	rock boronia		C		1/1
plants	higher dicots	Sapindaceae	*Dodonaea biloba*			C		5/5
plants	higher dicots	Sapindaceae	*Dodonaea macrossanii*			C		3/3
plants	higher dicots	Sapindaceae	*Dodonaea peduncularis*			C		1/1
plants	higher dicots	Scrophulariaceae	*Linaria maroccana*		Y			1/1
plants	higher dicots	Scrophulariaceae	*Misopates orontium*	lesser snapdragon	Y			1/1
plants	higher dicots	Solanaceae	*Solanum ferocissimum*			C		2/2
plants	higher dicots	Solanaceae	*Solanum parvifolium subsp. parvifolium*			C		1/1
plants	higher dicots	Solanaceae	*Solanum nemophilum*			C		1/1
plants	higher dicots	Verbenaceae	*Glandularia aristigera*		Y			1/1
plants	monocots	Juncaceae	*Juncus psammophilus*			C		2/2
plants	monocots	Juncaceae	*Juncus usitatus*			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	*Bothriochloa bladhii subsp. bladhii*			C		1/1
plants	monocots	Poaceae	*Cenchrus ciliaris*		Y			1/1
plants	monocots	Poaceae	*Melinis repens*	red natal grass	Y			1/1
plants	monocots	Poaceae	*Urochloa mosambicensis*	sabi grass	Y			1/1
plants	monocots	Poaceae	*Sporobolus creber*			C		2/2
plants	monocots	Poaceae	*Cleistochloa subjuncea*			C		1/1
plants	monocots	Poaceae	*Thyridolepis xerophila*			C		1/1
plants	monocots	Poaceae	*Aristida caput-medusae*			C		1/1
plants	monocots	Poaceae	*Chrysopogon fallax*			C		1/1
plants	monocots	Potamogetonaceae	*Potamogeton tricarinatus*	floating pondweed		C		2/2

CODES

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

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

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

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

Appendix D: DNRM Mapped Regional Ecosystems

This Appendix provides an overview of DNRM mapped regional ecosystems.

Legend

DNRM Stream Order

Vegetation Management Act RE v6.1 (2011) DNRM

Remnant Vegetation (Biodiversity Status)

- Of Concern Dominant
- No Concern at Present

Vegetation Management Act HVR v2.1 (2011) DNRM

High Value Regrowth

- Containing Endangered Regional Ecosystems
- Containing Of Concern Regional Ecosystems
- Is a Least Concern Regional Ecosystem

Boundary

- Survey Area
- Site Location
- Surveyed Cadastral

Source Information:
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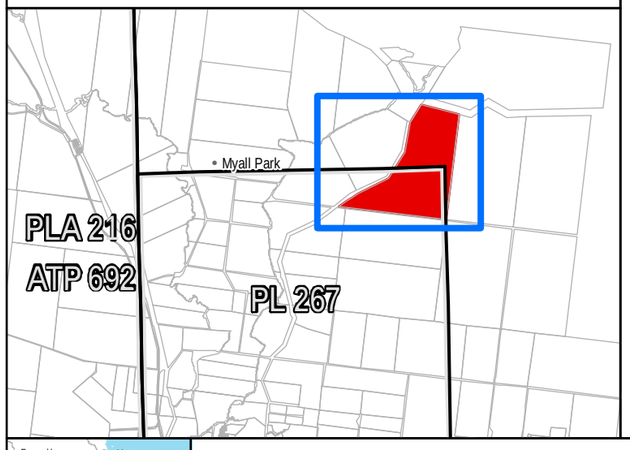

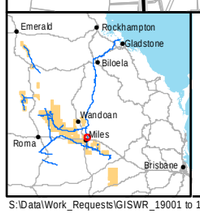

N

Scale 1:15,000 (at A3)

0 250 500 1,000

Metres

Coordinate System: GDA 1994 MGA Zone 56

Rev	Description	Drawn	Check	QA	Approved	Date
0	Issued For Use	ALM	SB	SAH	CZ	31/03/2014
A	Issued For Review	ALM	SB	SAH		26/03/2014

origin

Appendix D:
DNRM Mapped Regional Ecosystems
Date: 31 March 2014

Map Number 1 of 1

Doc No Q-4500-15-RP-1228

Map ID GISWR_19436_D_Rev0

Rev 0

S:\Data\Work_Requests\GISWR_19001 to 19500\GISWR_19436\Rev0\GISWR_19436_D_Rev0.mxd

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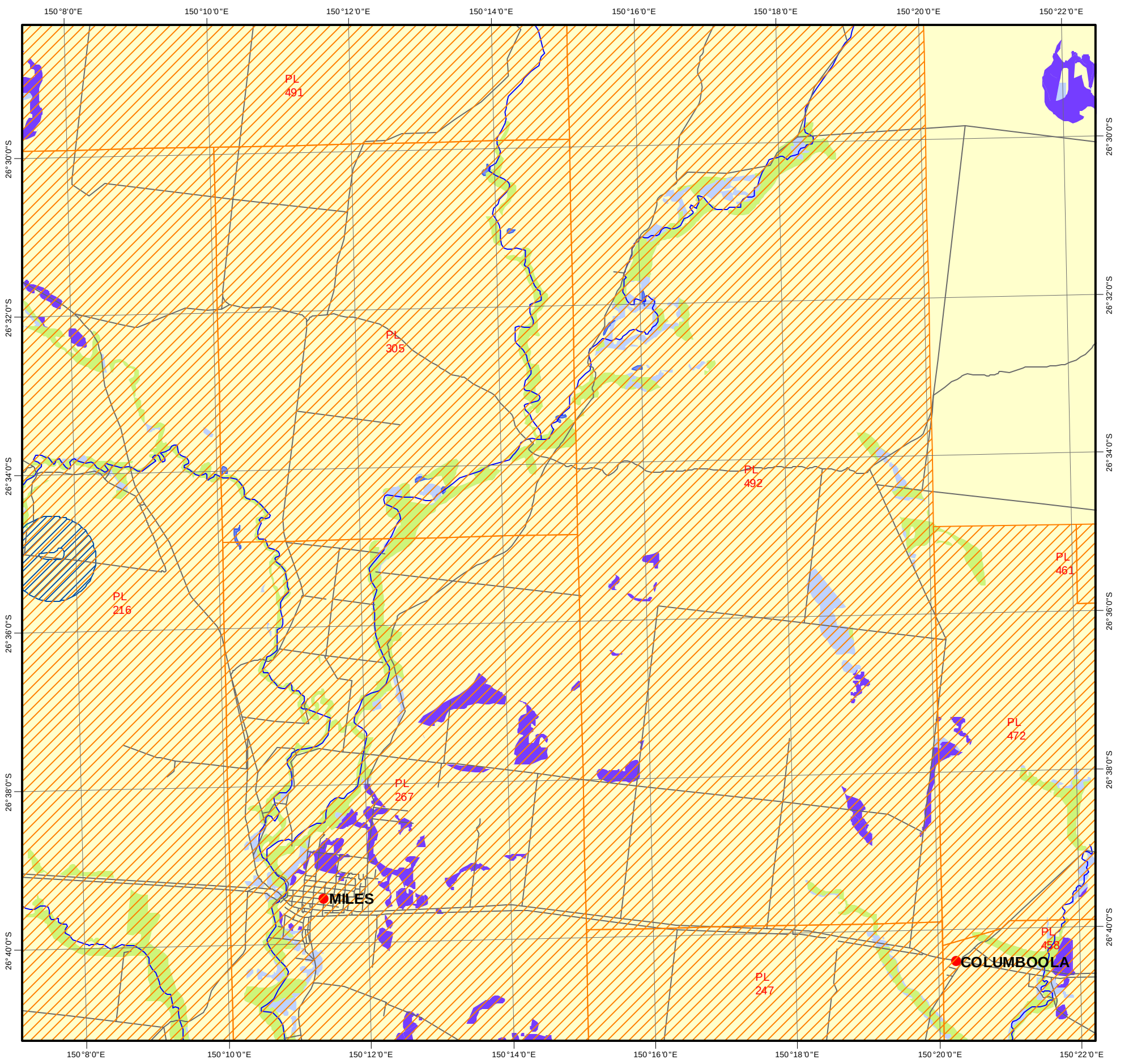
Appendix E: EHP Mapping of ESAs and Other Environmental Values on Site



ENVIRONMENTALLY SENSITIVE AREAS - non-mining resource activities (EP Act)

Requested By: TIEGAN.HOWELL@ORIGINENERGY.COM.AU

Date: 12 Feb 14 Time: 08.38.41

Centred on point position:
Latitude: -26.5813 Longitude: 150.2466
(decimal degrees)

Petroleum Leases

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

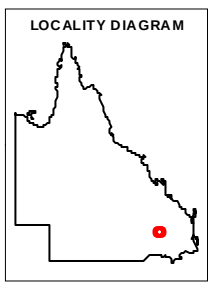
CATEGORY B
- World Heritage Areas
- Queensland Heritage Register Places
- Ramsar Sites
- Cultural Heritage Registered Areas and DLA's other than Stanbroke
- Special Forestry Areas
- Fish Habitat Areas
- Koala Plan
- Coordinated Conservation Areas
- Endangered Regional Ecosystems (remnant and mature regrowth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

CATEGORY C
- Essential Habitat
- Nature Refuges
- Resources Reserves
- State Forests
- Timber Reserves
- Of Concern Regional Ecosystems (remnant biodiversity status)

OTHERS
- Towns
- Roads
- © Pitney Bowes Software Pty Ltd 2014
- Rivers
- Springs
- Referable Wetlands
- Dominant Wetlands (51-100%)
- Subdominant Wetlands (0-50%)
- Queensland

Queensland Government

LOCALITY DIAGRAM



N

0 1300 2600 3900 5200 6500 m

This product is projected into GDA 1994 MGA Zone 56

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Regional ecosystem mapping (remnant biodiversity status) may incorporate amendments, resulting from property level assessments, to the release version of the mapping available on QGIS.

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 or subject to 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 present, some themes/layers may be obscured by others. Ordering in the Legend does not accurately reflect the order by which themes are displayed.

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

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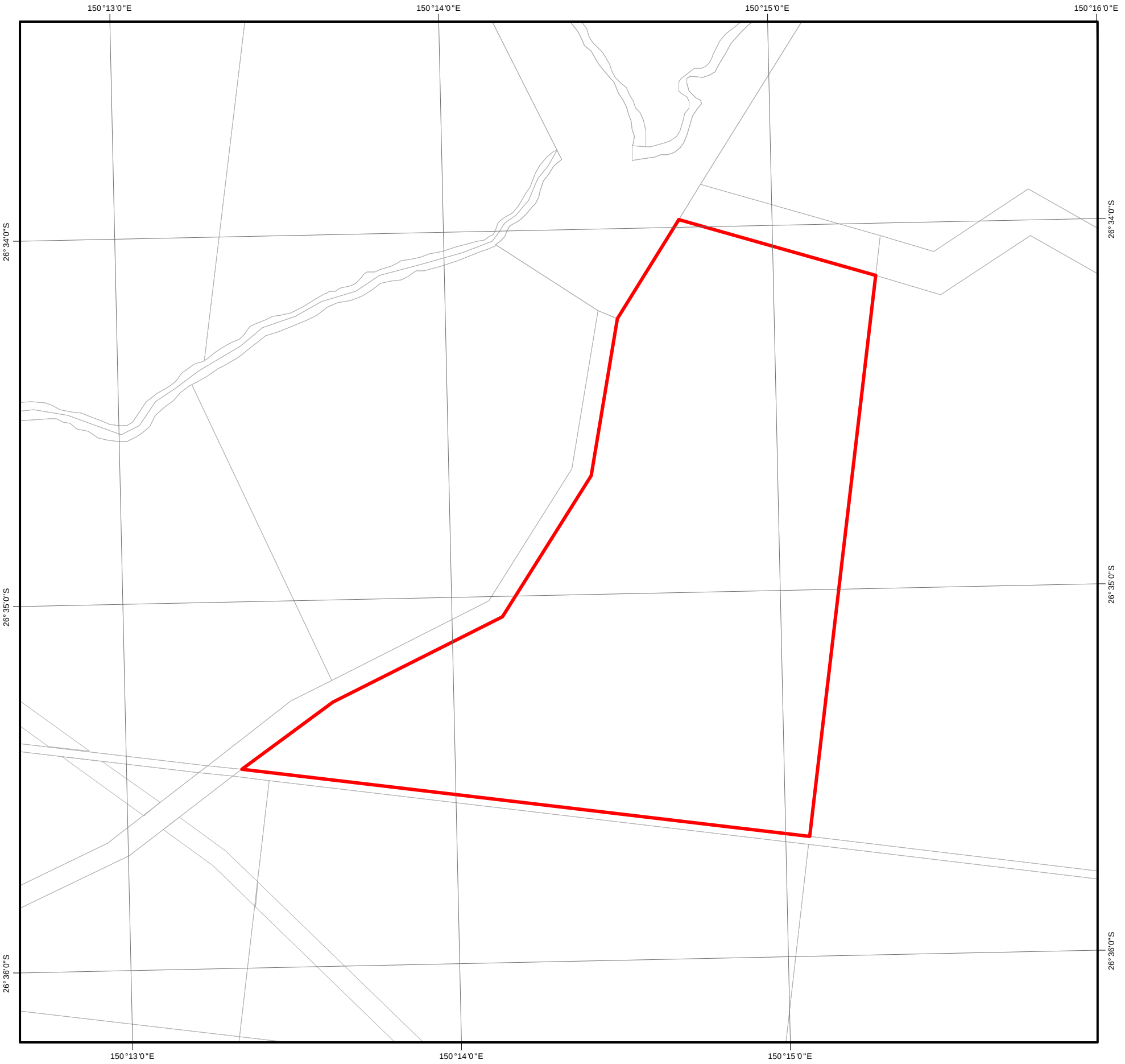
Appendix F: EHP Mapping of Referable Wetlands and Wetland Protection Areas



Map of Referable Wetlands
Wetland Protection Areas

Requested By: TIEGAN.HOWELL@ORIGINENERGY.COM.AU
Date: 12 Feb 14 Time: 08.37.55

Centred on Lot on Plan:
82 BWR205

Selected Land Parcel

Cadastral Boundary

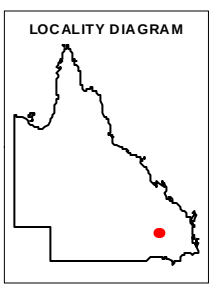
Wetland Protection Areas

HES Wetland

Trigger Area

Queensland Government

LOCALITY DIAGRAM



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0 290 580 870 1160 1450 m

This product is projected into GDA 1994 MGA Zone 56

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.

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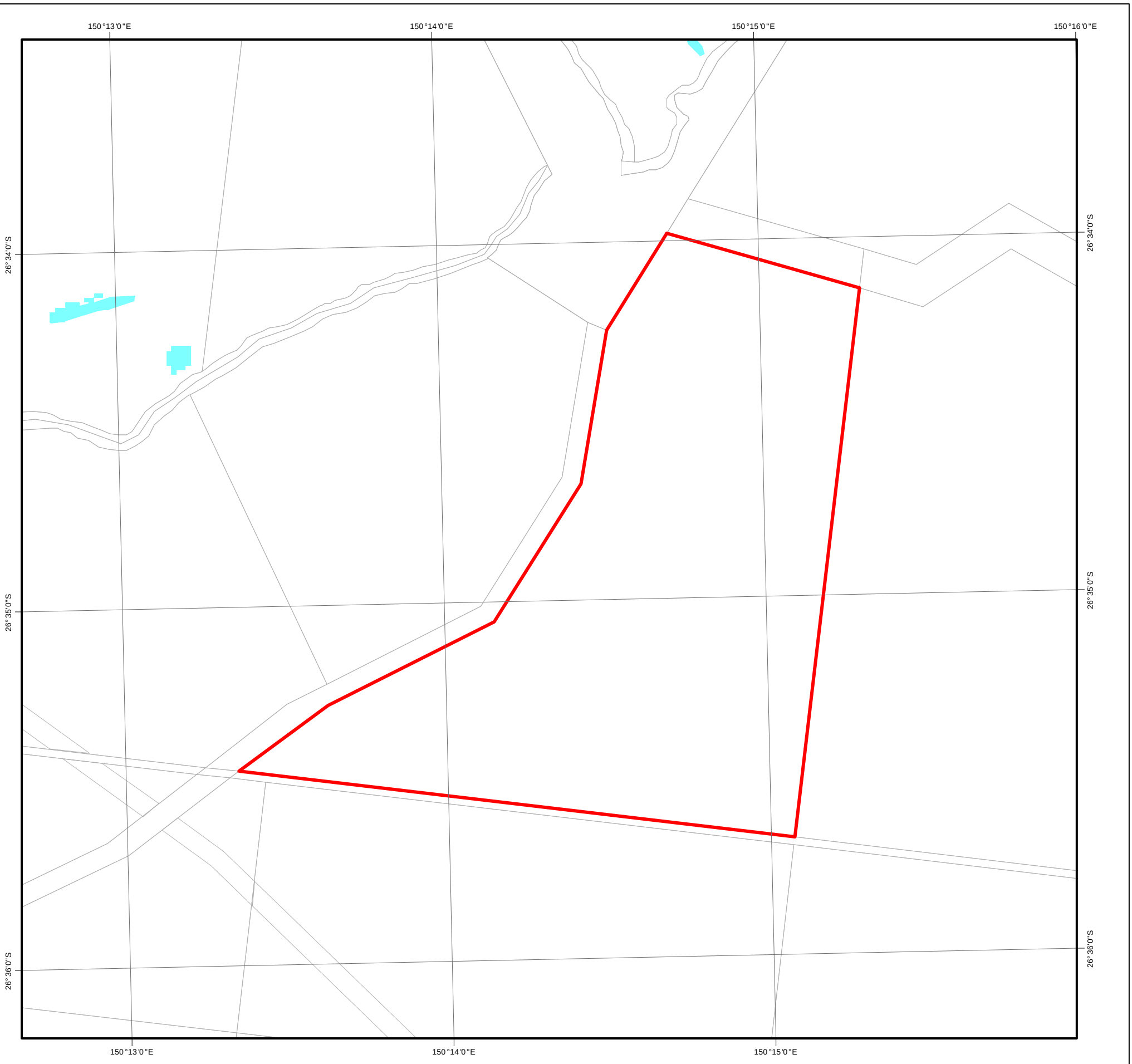


Map of Referable Wetlands for the Environmental Protection Act 1994

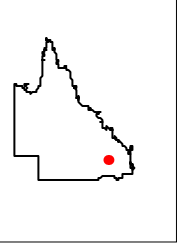
Requested By: TIEGAN.HOWELL@ORIGINENERGY.COM.AU
Date: 12 Feb 14 Time: 08.37.56

Centred on Lot on Plan:
82 BWR205

- **Selected Land Parcel**
- **Cadastral Boundary**
- **HES Wetland GBR Catchments**
- **HES Wetland**
- **GES Wetland**

Queensland Government

LOCALITY DIAGRAM



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0 290 580 870 1160 1450 m

This product is projected into GDA 1994 MGA Zone 56

Note:
This map shows the location of wetlands on the Map of Referable Wetlands which are defined under the Environmental Protection Regulation 2008.

Wetlands are assessed for ecological significance using the environmental values for wetlands in section 81A of the Environmental Protection Regulation 2008. Wetlands are considered either High Ecological Significance (HES) or of General Ecological Significance (GES) for the purposes of the environmental values.

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.

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Appendix G: List of Flora and Fauna Species Identified on Site

This Appendix provides a full list of all flora and fauna species recorded during the field surveys.

Family	Scientific name	Common name	Legislative status (*NC Act*, *LP Act*)°	Legislative status (*EPBC Act*)^
Flora				
Adiantaceae	*Cheilanthes sieberi*	mulga fern	LC	
Apiaceae	*Platysace ericoides*	heath platysace	LC	
Asteraceae	*Chrysocephalum apiculatum*	yellow buttons	LC	
Asteraceae	*Ozothamnus diotophyllus*	heath everlasting	LC	
Cactaceae	**Opuntia stricta*	prickly pear	Class 2	
Cactaceae	**Opuntia tomentosa*	velvety-tree pear	Class 2	
Casuarinaceae	*Allocasuarina luehmannii*	bull oak	LC	
Cupressaceae	*Callitris glaucophylla*	white cypress pine	LC	
Cyperaceae	*Fimbristylis dichotoma*	common fringe-rush	LC	
Cyperaceae	*Gahnia aspera*	rough saw-sedge	LC	
Cyperaceae	*Lepidosperma laterale*	variable sword-sedge	LC	
Ericaceae	*Agiortia pleiosperma*	beard heath	LC	
Ericaceae	*Melichrus urceolatus*	cream urn heath	LC	
Euphorbiaceae	*Petalostigma pubescens*	quinine tree	LC	
Fabaceae	*Senna artemisioides*	butter-bush	LC	
Halagoraceae	*Gonocarpus urceolatus*	rock raspwort	LC	
Lamiaceae	*Prostanthera cryptandroides subsp. euphrasioides*	a mint bush	LC	
Lamiaceae	*Westringia cheelii*	a westringia	LC	
Lomandraceae	*Lomandra leucocephala*	wooly mat-rush	LC	
Lomandraceae	*Lomandra longifolia*	long-leaved mat-rush	LC	
Lomandraceae	*Lomandra multiflora*	many-headed mat-rush	LC	
Loranthaceae	*Amyema linophylla* subsp. *orientalis*	bulloak mistletoe	LC	
Malvaceae	*Hibiscus sturtii*	desert rose	LC	
Mimosaceae	*Acacia conferta*	crowded-leaf wattle	LC	
Mimosaceae	*Acacia harpophylla*	brigalow	LC	
Mimosaceae	*Acacia ixiophylla*	umbrella wattle	LC	
Mimosaceae	*Acacia julifera*	a wattle	LC	
Mimosaceae	*Acacia leiocarpa*	early-flowering black wattle	LC	
Mimosaceae	*Acacia semilunata*	half-moon wattle	LC	
Mimosaceae	*Acacia spectabilis*	glory wattle, Kogan wattle	LC	
Myoporaceae	*Eremophila debilis*	winter apple	LC	
Myrtaceae	*Angophora leiocarpa*	smooth-barked apple	LC	

Family	Scientific name	Common name	Legislative status (*NC Act, LP Act)*°	Legislative status (*EPBC Act)*^
Myrtaceae	*Corymbia tessellaris*	Moreton Bay ash	LC	
Myrtaceae	*Corymbia trachyphloia*	brown bloodwood	LC	
Myrtaceae	*Eucalyptus chloroclada*	Barradine red gum	LC	
Myrtaceae	*Eucalyptus crebra*	narrow-leaved ironbark	LC	
Myrtaceae	*Eucalyptus fibrosa* subsp. *nubila*	dusky ironbark	LC	
Myrtaceae	*Eucalyptus populnea*	poplar box	LC	
Myrtaceae	*Eucalyptus woollsiana*	gum-topped box	LC	
Myrtaceae	*Leptospermum polygalifolium*	wild may	LC	
Myrtaceae	*Lysicarpus angustifolium*	budgeroo	LC	
Myrtaceae	*Melaleuca linariifolia*	river tea-tree	LC	
Myrtaceae	*Melaleuca nodosa*	prickly-leaved paperbark	LC	
Orchidaceae	*Cymbidium canaliculatum*	black orchid	Type A restricted plant	
Phormiaceae	*Dianella revoluta*	spreading flax-lily	LC	
Pittosporaceae	*Pittosporum angustifolium*	weeping pittosporum	LC	
Poaceae	*Ancistrachne unciliata*	hooky grass	LC	
Poaceae	*Aristida caput-medusae*	many-headed wiregrass	LC	
Poaceae	*Aristida leptopoda*	white speargrass	LC	
Poaceae	*Aristida ramosa*	a wire grass	LC	
Poaceae	*Enneapogon nigricans*	black heads grass	LC	
Poaceae	*Eragrostis sororia*	woodland love grass	LC	
Poaceae	**Melinis repens*	red natal grass	*	
Poaceae	*Panicum decompositum*	native millet	LC	
Poaceae	*Panicum effusum*	hairy panic	LC	
Proteaceae	*Grevillea striata*	beefwood	LC	
Proteaceae	*Hakea lorea*	bootlace oak	LC	
Proteaceae	*Hakea purpurea*	needlewood	LC	
Proteaceae	*Persoonia sericea*	silky geebung	LC	
Rubiaceae	*Psydrax oleifolia*	myrtle tree	LC	
Rutaceae	*Boronia bipinnata*	rock boronia	LC	
Rutaceae	*Boronia glabra*	a boronia	LC	
Rutaceae	*Geijera parviflora*	wilga	LC	
Rutaceae	*Philotheca difformis*	small-leaved wax flower	LC	
Sapindaceae	*Dodonaea boroniifolia*	fern-leaf hopbush	LC	
Sapindaceae	*Dodonaea heteromorpha*	maple-fruited hopbush	LC	
Sapindaceae	*Dodonaea pedunculata*	a hopbush	LC	
Sapindaceae	*Dodonaea triquetra*	common hopbush	LC	

Uncontrolled when printed unless issued and stamped Controlled Copy.

Family	Scientific name	Common name	Legislative status (*NC Act, LP Act)*°	Legislative status (*EPBC Act)*^
Sapindaceae	*Dodonaea vestita*	a hopbush	LC	
Solanaceae	*Solanum ellipticum*	potato bush	LC	
Solanaceae	*Solanum esuriale*	potato weed	LC	
Solanaceae	*Solanum tetrathecum*	a solanum	LC	
Fauna				
Artamidae	*Cracticus nigrogularis*	pied butcherbird	C	
Artamidae	*Strepera graculina*	pied kurrawong	C	
Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike	C	
Corcoracidae	*Struthidea cinerea*	apostlebird	C	
Corvidae	*Corvus orru*	torresian crow	C	
Cracticidae	*Cracticus tibicen*	Australian magpie	C	
Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra	C	
Meliphagidae	*Manorina melanocephala*	noisy miner	C	
Meliphagidae	*Nesoptilotis leucotis*	white-eared honeyeater	C	
Monarchidae	*Grallina cyanoleuca*	magpie-lark	C	Listed marine
Pachycephalidae	*Pachycephala rufiventris*	rufous whistler	C	
Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler	C	
Psittaculidae	*Platycercus adscitus*	pale-headed rosella	C	
Rhipiduridae	*Rhipidura albiscapa*	grey fantail	C	
Rhipiduridae	*Rhipidura leucophrys*	willie wagtail	C	
Varanidae	*Varanus sp.*	a goanna	C	

*Introduced species

°Status taken from DoE (2013b)

^Status taken from EHP (2012b)

Appendix H: Ground Truthed Regional Ecosystems and Mature Regrowth

This Appendix provides mapping of all field validated GTRE and Mature Regrowth surveyed on site.

Legend

Ground Truthed Regional Ecosystem

- No Concern at Present

Boundary

- Survey Area
- Site Location
- Surveyed Cadastral

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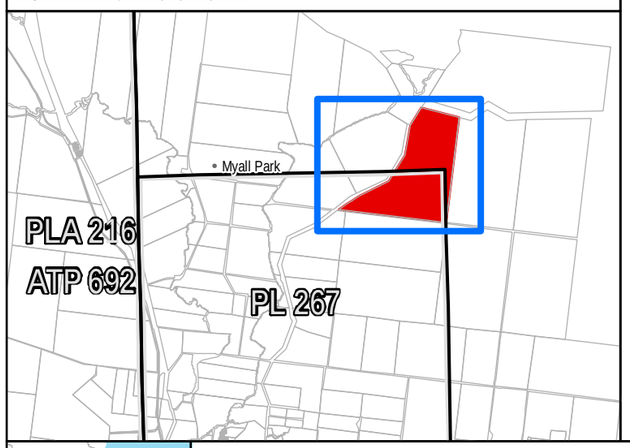

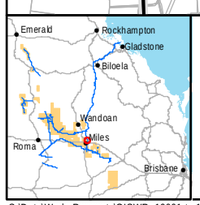

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Metres

Coordinate System: GDA 1994 MGA Zone 56

Rev	Description	Drawn	Check	QA	Approved	Date
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A	Issued For Review	ALM	SB	SAH		26/03/2014

origin

Appendix H:

Ground Truthed Regional Ecosytems and Mature Regrowth

Date: 31 March 2014

Map Number	Doc No	Rev
1 of 1	Q-4500-15-RP-1228	0
	Map ID GISWR_19436_H_Rev0	

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Appendix I: Ground Truthed NC Act Threat Listed and Other Significant Species Present on Site

This Appendix provides mapping of all field validated *NC Act* threat listed species recorded on site.

Legend

Type A Flora

▲ *Cymbidium canaliculatum*

Boundary

- Survey Area
- Site Location
- Surveyed Cadastral

Source Information:
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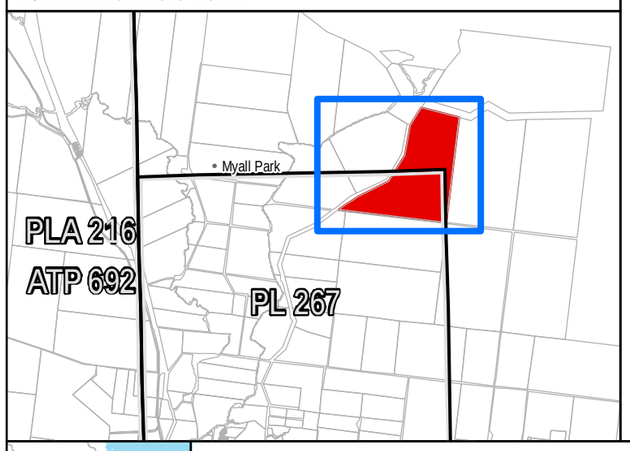

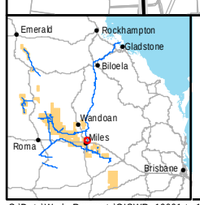

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Scale 1:15,000 (at A3)

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Coordinate System: GDA 1994 MGA Zone 56

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A	Issued For Review	ALM	SB	SAH		26/03/2014

origin

Appendix I:
Ground Truthed NC Act Threat Listed and Other Significant Species Present on Site
Date: 31 March 2014

Map Number	Doc No	Rev
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	Map ID GISWR_19436_I_Rev0	

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Appendix J: Ground Truthed Weeds and Pest Fauna Present on Site

This Appendix provides mapping of all ground truthed weeds and pest fauna surveyed on site.

Legend

Class 2 Pest Flora

- *Opuntia stricta*
- *Opuntia tomentosa*

Boundary

- Survey Area
- Site Location
- Surveyed Cadastral

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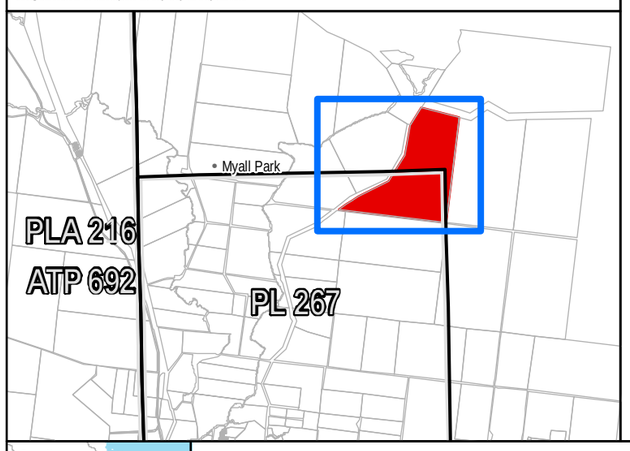

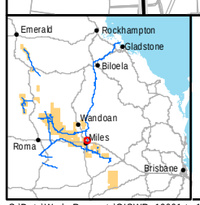

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Metres

Coordinate System: GDA 1994 MGA Zone 56

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A	Issued For Review	ALM	SB	SAH		26/03/2014

origin

Appendix J:
Ground Truthed Weeds Present on Site
Date: 31 March 2014

Map Number	Doc No	Rev
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	Map ID GISWR_19436_J_Rev0	

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