Australia Pacific LNG

Ecology Assessment Report
Condabri Central
Lot 1 and 2 SP245919
(Formerly Lot 2BWR573)

Q-4500-15-RP-0002

Rev	Date	Details	Originator	Checked	Approved
0	13/07/2011	Final	CE	JS	EM
1	31/01/2012	Amendment to Lot Number	NT	LW	AW

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Tables

1. Introduction

This report has been completed by Boobook Ecological Consultants approved by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) in writing on the 28th of June 2011.

The field surveys were conducted by a team of ecologists lead by Craig Eddie, approved by DSEWPaC in writing on the 31st of March 2011, Principal Ecologist for Boobook Ecological Consultants.

The Lot and Plan number in this report was updated on the 31/01/2012 to reflect amendments by DSEWPaC.

2. Site Context

Condabri Central comprises Lot 1 and 2 on Plan SP245919 (formerly Lot 2 on Plan BWR573) and is a 1027ha property that is located approximately 15 km south of Miles and 15 km north north east of Condamine in southern inland Queensland. The property was formerly known as 'Kooralbyn'. Condabri Central is situated within two provinces of the Brigalow Belt Bioregion, these being Province 26 (Southern Downs) and Province 31 (Eastern Darling Downs). The property is accessed via the Leichhardt Highway which borders its western side, and McLennnans Road which borders its southern side. Condabri Central lies within PL265.

Previous land use on the property has been agricultural, primarily cropping and grazing of domestic livestock. The majority of native vegetation on the property has been cleared, however, small patches of remnant vegetation are present, mainly in the form of shade lines, isolated clumps and narrow riparian strips. Patches of regrowth of varying age are also present.

Soils on the property range from grey or black cracking clays to loams or sands over brown, black or red mottled, yellowish brown clays. The topography is generally flat or gently undulating interspersed by occasional minor watercourses. Sandy Gully runs through the northwestern corner of the property and drains into Dogwood Creek along the western boundary. Several unnamed minor watercourses are present along the southern boundary of the property.

The closest weather station to the site is Roma, with a climate consisting of yearly average temperatures ranging from a maximum of 34.1 in January to a minimum of 3.9 in July. The annual rainfall of Roma for 2010 was 582.5mm, with the highest rainfall occurring in February (90.3mm) and the lowest occurring in July (24.2mm).

Information within this report only refers to the portion of Lot 1 and 2 on plan SP245919 that is situated on the eastern side of the Leichhardt Highway. A preliminary broad-scale assessment of the property was presented in the report "Assessment of Existing Terrestrial Ecological Values: Gas Processing Facility Sites" (BAAM, 2009).

3. Methodology

3.1 Desktop and Literature Review

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

- *Nature Conservation Act 1992* (NCA) Protected Species Lists
- *Environmental Protection Biodiversity and Conservation 1999* (EPBC) Protected Matters Search Tool
- Department of Environment and Resource Management Regional Ecosystem Mapping
- Geosciences Australia Waterways mapping
- Department of Environment and Resource Management Regional Ecosystem version 6.0b digital GIS layer
- Department of Environment and Resource Management Wildnet database
- Department of Environment and Resource Management Referrable Wetlands database
- Queensland Herbarium HERBRECS database
- Queensland Museum database
- Hando, R. and Hando, V. (1997) *Going Bush With Chinchilla Nats*. Second Edition. Chinchilla Field Naturalists' Club, Chinchilla.

Data searches were conducted using a 2.4km buffer around the approximate centre point of the property.

3.2 Field Survey

Scouting surveys are to be conducted in general accordance with the *BioCondition – A Condition Assessment Framework for Terrestrial Biodiversity in Queensland – Assessment Manual – Version 2.1* (Biocondition Manual)(DERM, 2011) and the *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland* (Neldner et al 2005).

3.2.1 *Vegetation Community Surveys*

General baseline botanical surveys were undertaken to describe dominant flora and vegetation community structure throughout the survey site. Botanical surveys are consistent with the tertiary or quaternary level of data collection as described in *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland* (Neldner et al, 2005).

Vegetation community polygons were confirmed, mapped and identified in accordance with Queensland Regional Ecosystem (Biodiversity Status) and EPBC Threatened Ecological Community criteria. Areas of remnant vegetation were clearly distinguished from areas of regrowth vegetation that does not satisfy remnant regional ecosystem or EPBC Threatened Ecological Community criteria.

3.2.2 *Habitat Survey*

Habitat surveys were conducted within each Vegetation Community Survey location within the aforementioned Vegetation Community Area. A range of habitat features, such as log abundance, hollow tree size class and abundance are noted.

3.2.3 *Threatened Flora and Fauna surveys*

'Threatened' species are those listed under the *Environment Protection Biodiversity Conservation Act* 1999 and the *Nature Conservation (Wildlife) Regulation* 2006.

Targeted flora and fauna searches were undertaken within the vicinity of a Vegetation Community Survey/Habitat Feature plot should field ecologists deem the given area to be of sufficient potential value to a threatened species to warrant such a search.

Targeted threatened species surveys were also conducted in additional locations based on incidental field observations of high quality habitat or identification of distinct ecological features through preliminary review of mapping and other background information for the property.

3.2.4 *Exotic Flora and Fauna Surveys*

Environmental and declared pest (as defined by the *Land Protection (Pest and Stock Route Management)* Act 2002) populations were noted and abundance recorded at the time of the survey.

3.2.5 *Disturbance Surveys*

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 level where appropriate.

4. Results and Discussion

In order to develop an understanding of the ecology at Condabri Central, a detailed Desktop and Literature Review and Field Ecological Scouts have been performed by a certified ecologist. The results are detailed below.

4.1 Desktop and Literature Review

Data sources used for desktop searches for Condabri Central are listed in section 1.1. A summary of results follows.

4.1.1 *Matters of National Environmental Significance*

A search for Matters of National Environmental Significance under the *Environment Protection and Biodiversity Conservation Act 1999* (hereafter EPBC) was most recently performed on Wednesday, 23 March 2011. This search lists Threatened Ecological Communities, EPBC Listed Flora, EPBC Listed Fauna, Migratory Species, Pest Fauna, Weeds of National Significance (WONS) and RAMSAR sites. The results of these searches can be seen below. For raw data see Attachment 1.

4.1.1.1 Threatened Ecological Communities

The results of the EPBC Protected Matters search for Threatened Ecological Communities and their likelihood of occurrence at this site can be seen below in Table 1.

Table 1 EPBC Protected Matters search tool results for Threatened Ecological Communities predicted to occur at Condabri Central and their Likelihood of Occurrence

Name	Status	Likelihood of Occurrence
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
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and derived Native Grassland	Critically Endangered	Community likely to occur within area
Brigalow (*Acacia harpophylla* dominant and co-dominant)	Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area

4.1.1.2 Listed Flora

The results of the EPBC Protected Matters search for Listed Flora Species and their likelihood of occurrence at this site can be seen below in Table 2.

Table 2 EPBC Protected Matters search tool results for Listed Flora predicted to occur at Condabri Central and their Likelihood of Occurrence

Scientific Name	Common Name	Status	Likelihood of Occurrence
Westringia parvifolia	-	Vulnerable	Species or species habitat likely to occur within area

4.1.1.3 Listed Fauna

The results of the EPBC Protected Matters search for Listed Fauna Species and their likelihood of occurrence at this site can be seen below in Table 3.

Table 3 EPBC Protected Matters search tool results for Listed Fauna predicted to occur at Condabri Central and their Likelihood of Occurrence

Class	Scientific Name	Common Name	Status	Likelihood of Occurrence
Birds	*Erythrotriorchis radiatus*	Red Goshawk	Vulnerable	Species or species habitat likely to occur within area
	Geophaps scripta scripta	Squatter Pigeon (southern)	Vulnerable	Species or species habitat likely to occur within area
	Neochmia ruficauda ruficauda	Star Finch (eastern). Star Finch (southern)	Endangered	Species or species habitat likely to occur within area
	Rostratula australis	Australian Painted Snipe	Vulnerable	Species or species habitat may occur within area
Fish	*Maccullochella peelii peelii*	Murray Cod, Cod, Goodoo	Vulnerable	Species or species habitat may occur within area
Mammals	*Chalinolobus dwyeri*	Large-eared Pied Bat, Large Pied Bat	Vulnerable	Species or species habitat may occur within area
	Nyctophilus corbeni (as *timoriensis* south-eastern form)	South-eastern Long-eared Bat	Vulnerable	Species or species habitat may 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
	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 likely to occur within area

4.1.1.4 Migratory Species

The results of the EPBC Protected Matters search for Listed Migratory Species and their likelihood of occurrence at this site can be seen below in Table 4.

Table 4 EPBC Protected Matters search tool results for Migratory Species predicted to occur at Condabri Central and their Likelihood of Occurrence

Scientific Name	Common Name	Likelihood of Occurrence
Apus pacificus	Fork-tailed Swift	Species or species habitat may occur within area
Ardea modesta (as *A. alba*)	Eastern Great Egret (as Great Egret, White 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
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	Species or species habitat may occur within area
Nettapus coromandelianus albipennis	Australian Cotton Pygmy-goose	Species or species habitat may occur within area
Rostratula australis (as *R. benghalensis s. lat.*)	Australian Painted Snipe	Species or species habitat may occur within area

4.1.1.5 Marine Species

Listed marine species that were identified during the desktop analysis and their likelihood of occurrence can be found below in Table 5. This data was sourced from the EPBC Protected Matters Search Tool.

Table 5 EPBC Protected Matters search tool results for Marine Species predicted to occur at Condabri Central and their Likelihood of Occurrence

Class	Scientific Name	Common Name	Likelihood of Occurrence
Bird	*Apus pacificus*	Fork-tailed swift	Species or species habitat may occur within area

	Ardea modesta (as *A. alba*)	Eastern Great Egret (as Great Egret, White 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, Japanese 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
	Merops ornatus	Rainbow Bee-eater	Species or species habitat may occur within area
	Nettapus coromandelianus albipennis	Australian Cotton Pygmy-goose	Species or species habitat may occur within area
	Rostratula australis (as *R. benghalensis s. lat.*)	Australian Painted Snipe	Species or species habitat may occur within area

4.1.1.6 Weeds of National Significance

All Weeds of National Significance and other non-native plants that are considered to pose a particularly significant threat to biodiversity identified from the EPBC Protected Matters Search Tool are listed in Table 6 below.

Table 6 EPBC Protected Matters search tool results for weeds predicted to occur at Condabri Central and their Likelihood of Occurrence

Scientific Name	Common Name	Likelihood of Occurrence
Acacia nilotica subsp. *indica*	Prickly Acacia	Species or species habitat may occur within area
Alternanthera philoxeroides	Alligator weed	Species or species habitat may occur within area
Lantana camara	Lantana	Species or species habitat may occur within area
Parthenium hysterophorus	Parthenium weed	Species or species habitat likely to occur within area

4.1.1.7 Pest Fauna

All pest fauna identified from the EPBC Protected Matters Search Tool are listed in Table 7 below.

Table 7 EPBC Protected Matters search tool results for Pest Fauna species predicted to occur at Condabri Central and their Likelihood of Occurrence

Scientific Name	Common Name	Likelihood of Occurrence
Capra hircus	Goat	Species or species habitat may occur within area
Felis catus	Cat	Species or species habitat likely to occur within area
Oryctolagus cuniculus	Rabbit	Species or species habitat likely to occur within area
Sus scrofa	Pig	Species or species habitat may occur within area
Vulpes vulpes	Red Fox	Species or species habitat likely to occur within area

4.1.1.8 Wetland Ecosystems

Internationally significant wetlands that were identified through desktop analysis (EPBC Protected Matters Search) include a RAMSAR listed wetland known as Narran Lake Nature Reserve. This wetland has been assessed as having a low risk of impact during operation as it is located 500km downstream (over 450km south west) of the proposed site (see Volume 5, Attachment 17 of the APLNG EIS, Aquatic Ecology, Water Quality and Geomorphology Impact Assessment).

4.1.2 *Nature Conservation Act*

A desktop search for species protected under the *Nature Conservation Act 1992* that may be present on Condabri Central was also performed. The results can be seen below. For raw data see Attachment 1 and 2.

4.1.2.1 Listed Flora

No flora listed as endangered, vulnerable or near threatened were identified within the search area containing Condabri Central. Three species of least concern native flora were identified within the search (see Attachment 2).

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4.1.2.2 Listed Fauna

No fauna listed as endangered, vulnerable, rare or near threatened were identified within the search area containing Condabri Central. One species of least concern native fauna was identified within the search (see Attachment 2).

4.1.3 *Regional Ecosystem*

A search of the DERM RE Mapping was most recently performed on Wednesday, 23rd 2011 for Lot 1 and 2 on plan SP245919 (formerly 2BWR573). A schematic detailing the location of RE polygons associated with the site can be seen below in Figure 1.

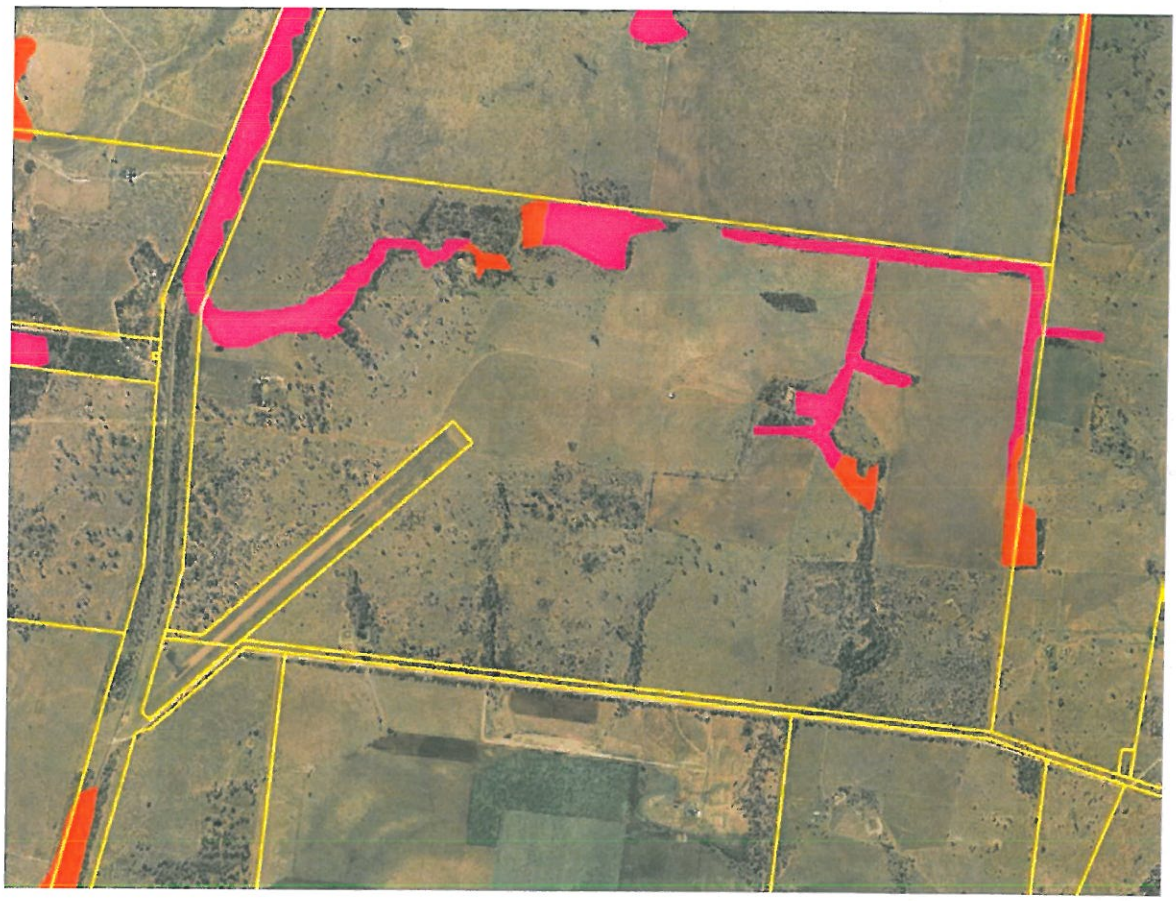

Figure 1 Regional Ecosystems identified for the Condabri Central utilising DERM RE mapping

Pink: Endangered Remnant

Orange: Of Concern Remnant

4.1.3.1 Endangered Regional Ecosystems

All endangered regional ecosystems identified during the desktop analysis (using the DERM RE version 6.0b GIS layer) and their description can be found below in Table 8.

Table 8 Endangered Regional Ecosystems mapped as present on Condabri Central

RE code	General description	Description
11.3.1	*Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains	Open-forest dominated by *Acacia harpophylla* and/or *Casuarina cristata* (particularly in southern parts), with or without scattered emergent *Eucalyptus* spp. such as *E. coolabah*, *E. largiflorens*, *E. populnea*, *E. orgadophila*, and *E. woollsiana*. A low tree layer dominated by *Geijera parviflora* and *Eremophila mitchellii* is usually present. The vegetation sometimes occurs as low open-forest or woodland. Tree height generally about 11-15m and the low tree (to tall shrub) understorey layer is between 2 and 8m high (where present). Ground cover is generally sparse. Associated with Cainozoic alluvial plains which may be occasionally flooded. Landforms range from level to very gently sloping plains, alluvial flats, drainage floors, back-swamps and abandoned channels. Associated soils are predominantly deep to very deep cracking clays, sometimes with gilgai or texture contrast soils with sandy surface (particularly where *Eucalyptus populnea* is present).
11.4.12	*Eucalyptus populnea* woodland on Cainozoic clay plains	*Eucalyptus populnea* predominates forming a distinct but discontinuous canopy (12-19m high). Scattered *Eucalyptus* spp. may be present at some sites, but most frequently *E. populnea* alone forms the canopy. Scattered trees such as *Callitris glaucophylla* and *Acacia excelsa* may also be present and occasionally form a distinct low tree layer (8-10m high) There is generally a low tree/tall shrub layer (4-8m high) dominated by *Eremophila mitchellii*, *Acacia pendula* and *Geijera parviflora*. A low shrub layer may occur, particularly on upper slopes. The ground layer is generally open but may be moderately dense in disturbed areas. The perennial grasses *Aristida* spp. and *Eragrostis* spp. are usually dominant, and forbs are conspicuous. Occurs on eroding edge of Tertiary clay plains.

11.4.3	*Acacia harpophylla* and/or *Casuarina cristata* shrubby open forest on Cainozoic clay plains	Open-forest dominated by *Acacia harpophylla* and/or *Casuarina cristata*. *Acacia harpophylla* (10-16m high) predominates forming a fairly continuous canopy with varying densities of *Casuarina cristata* (14-18m high), forming part of the canopy or emerging above it. *Casuarina cristata* may be dominant or form pure stands particularly in the south of the bioregion (subregions 33, 36). *Eucalyptus* spp. such as *E. orgadophila*, *E. populnea*, *E. microcarpa*, *Eucalyptus woollsiana*, *E. cambageana* and *E. thozetiana* (on shallower soils and upper slopes) may be scattered through the canopy or occur as emergents up to 22m high. *Brachychiton rupestris* may also be present in places. An open to dense, tall shrub layer is present, and is dominated by *Eremophila mitchellii* and/or *Geijera parviflora*. Low shrubs are often present, occasionally forming a distinct layer dominated by species such as *Carissa ovata* and *Alectryon diversifolius*. Tree/shrub height may range from 3-8 m. *Melaleuca bracteata* may be present in low-lying areas. The ground layer is sparse to open, and composed of grasses and forbs. Occurs on Cainozoic clay plains with cracking clay soils which are often with a weak gilgai microrelief. The plains may be flat to gently undulating. Soils are often cracking clay which are usually deep to very deep, often self mulching, and sometimes with surface stone. Texture contrast soils and other clays may also be present in places.

4.1.3.2 Of Concern Regional Ecosystems

All Of Concern regional ecosystems identified during the desktop analysis (using the DERM RE version 6.0b GIS layer) and their description can be found below in Table 9.

Table 9 Of Concern Regional Ecosystems mapped as present on Condabri Central through desktop analysis

RE code	General description	Description
11.3.2	*Eucalyptus populnea* woodland on alluvial plains	*Eucalyptus populnea* woodland to open-woodland. *E. melanophloia* may be present and locally dominant. There is sometimes a distinct low tree layer dominated by species such as *Geijera parviflora*, *Eremophila mitchellii*, *Acacia salicina*, *Acacia pendula*, *Lysiphyllum* spp., *Cassia brewsteri*, *Callitris glaucophylla* and *Acacia excelsa*. The ground layer is grassy dominated by a range of species depending on soil and management conditions. Species include *Bothriochloa decipiens*, *Enteropogon acicularis*, *Aristida ramosa* and *Tripogon loliiformis*. Occurs on Cainozoic alluvial plains with variable soil types including texture contrast, deep uniform clays, massive earths and sometimes cracking clays.

4.1.3.3 Not Of Concern Regional Ecosystem

All Not Of Concern regional ecosystems identified during the desktop analysis (using the DERM RE version 6.0b GIS layer) and their description can be found below in Table 10.

Table 10 Not Of Concern Regional Ecosystems mapped as present on Condabri Central through desktop analysis

RE code	General description	Description
11.5.1	*Eucalyptus crebra, Callitris glaucophylla, Angophora leiocarpa, Allocasuarina luehmannii* woodland on Cainozoic sand plains/remnant surfaces	*Eucalyptus crebra* and/or *E. populnea* +/- *Angophora leiocarpa* +/- *E. woollsiana* (in south of bioregion) dominate the woodland (to open-woodland) canopy. A low tree layer dominated by *Allocasuarina luehmannii* +/- *Melaleuca decora* +/- *Callitris glaucophylla* +/- *C. endlicheri* is usually present. In some areas *Allocasuarina luehmannii* low woodland is the dominant layer. The ground cover is usually sparse and dominated by perennial grasses. Occurs on Cainozoic sandplains, especially outwash from weathered sandstones. Duplex soils with sandy surfaces.
11.5.1a	Sub-Category of 11.5.1	*Eucalyptus populnea* woodland with *Allocasuarina luehmannii* low tree layer.

4.2 Field Survey

Field surveys were conducted on 25 June 2010, 24 - 26 November 2010 and 28-29 March 2011. These field surveys were conducted by a team of ecologists lead by Craig Eddie, the Principal Ecologist for Boobook Ecological Consulting. The results of these surveys have been summarised below.

4.2.1 *Matters of National Environmental Significance*

Field survey results concerning MNES (protected under the EPBC Act) such as threatened ecological communities, listed flora, listed fauna, migratory species, weeds and pest fauna can be seen below.

4.2.1.1 Threatened Ecological Communities

Threatened Ecological Communities identified during the field survey are listed in Table 11 below.

Table 11 Threatened Ecological Communities identified during field survey and their likelihood of occurrence

Name	Status	Likelihood of Occurrence
Brigalow (*Acacia harpophylla* dominant and co-dominant)	Endangered	Confirmed

No examples of other Threatened Ecological Communities identified within the desktop assessment (Table 1) were identified on the property during the field scouting.

4.2.1.2 Listed Flora

No flora listed under the EPBC Act 1999 were detected during the field survey. Potentially suitable habitat is present for at least one species of flora not identified within the EPBC

Protected Matters Search Tool (Table 12). Targeted searches were undertaken for this species, however, none were detected.

Table 12 EPBC protected flora species potentially occurring at Condabri Central based on field survey results

Scientific Name	Common Name	Status	Likelihood of Occurrence
Homopholis belsonii	Belson's Panic Grass	Vulnerable	Possible, potentially suitable habitat present (e.g. brigalow shade lines)

4.2.1.3 Listed Fauna

No fauna listed as threatened under the EPBC Act 1999 were detected during the field survey. Potentially suitable habitat was confirmed as being present during the field survey for four EPBC listed fauna species. These are listed below in Table 13.

Table 13 EPBC protected fauna species potentially occurring at Condabri Central based on field survey results

Scientific Name	Common Name	Status	Likelihood of Occurrence
Egernia rugosa	Yakka Skink	Vulnerable	Possible, some suitable habitat features identified (e.g. large hollow logs in remnant and non-remnant vegetation, sink holes/tunnel erosion)
Furina dunmalli	Dunmall's Snake	Vulnerable	Possible, some suitable habitat features identified (e.g. logs in remnant vegetation)
Paradelma orientalis	Brigalow Scaly-foot	Vulnerable	Possible, some suitable habitat features identified (e.g. logs in remnant vegetation, fallen bark)
Rostratula australis	Australian Painted Snipe	Vulnerable	Possible, some suitable habitat features identified (eg. well vegetated dam and adjoining swampy area)

4.2.1.4 Migratory Species

No fauna listed as migratory species under the EPBC Act 1999 were detected during the field survey. Based on the presence of suitable habitat and known distributions, potential exists for seven species of EPBC migratory fauna species to occur at Condabri Central. These are listed below in Table 14.

Table 14 EPBC protected fauna species occurring or potentially occurring at Condabri Central based on field survey results

Scientific Name	Common Name	Likelihood of Occurrence
Apus pacificus	Fork-tailed swift	Possible, may overfly site between Sept-March
Ardea Ibis	Cattle Egret	Possible, in pasture but generally uncommon in Miles area
Ardea modesta	Eastern Great Egret	Possible, at dams and temporary puddles/pools in watercourses
Gallinago hardwickii	Latham's Snipe, Japanese Snipe	Possible, some suitable habitat features identified (e.g. well vegetated dam and adjoining swampy area)
Hirundapus caudacutus	White-throated Needletail	Possible, may overfly site between Sept-March
Merops ornatus	Rainbow Bee-eater	Possible, may overfly site between Sept-March and potentially could breed in parts of the property with sandy substrates
Rostratula australis	Australian Painted Snipe	Possible, some suitable habitat features identified (e.g. well vegetated dam and adjoining swampy area)

4.2.1.5 Weeds

No Weeds of National Significance were encountered during the field survey. All other non-native flora encountered during the field survey is listed in Table 15 below.

Table 15 Non-native flora recorded during the ecological field survey at Condabri Central

Scientific Name	Common Name	Likelihood of Occurrence
Alternanthera pungens	Khaki Burr	Confirmed
Alternanthera sessilis	Sessile Joyweed	Confirmed
Anagallis arvensis	Scarlet Pimpernel, Blue Pimpernel	Confirmed
Argemone ochroleuca	Mexican Poppy	Confirmed
Bidens pilosa	Cobbler's Pegs	Confirmed
Carthamus lanatus	Saffron Thistle	Confirmed
Centaurea melitensis	Maltese Cockspur	Confirmed

Cereus uruguayensis	Apple Cactus	Confirmed
Chloris gayana	Common Rhodes Grass	Confirmed
Chloris virgata	Feathertop Rhodes Grass	Confirmed
Cirsium vulgare	Spear Thistle	Confirmed
Conyza bonariensis	Fleabane	Confirmed
Cyclospermum leptophyllum	Slender Celery, Wild Carrot	Confirmed
Cynodon dactylon	Couch Grass	Confirmed
Echinochloa colona	Awnless Barnyard Grass	Confirmed
Emex australis	Goathead Burr	Confirmed
Eragrostis cilianensis	Stinkgrass	Confirmed
Eragrostis curvula	African Lovegrass	Confirmed
Eragrostis trichophora	Hairy-flowered Lovegrass	Confirmed
Gomphocarpus physocarpus	Balloon Cotton Bush	Confirmed
Gomphrena celosioides	Soft Khaki Weed, Gomphrena Weed	Confirmed
Hypochaeris glabra	Smooth Catsear, Flatweed	Confirmed
Lactuca serriola	Prickly Lettuce, Wild Lettuce	Confirmed
Lepidium bonariense	Argentine Peppercress	Confirmed
Malva parviflora	Small-flowered mallow	Confirmed
Opuntia aurantiaca	Tiger Pear	Confirmed
Opuntia tomentosa	Velvet tree pear	Confirmed
Opuntia stricta	Prickly pear	Confirmed
Paspalum dilatatum	Paspalum	Confirmed
Pennisetum ciliare	Buffel Grass	Confirmed
Phyla canescens	Lippia, Condamine Couch	Confirmed
Physalis sp. (infertile)	A Gooseberry/Ground Cherry	Confirmed
Polygonum aviculare	Knotweed	Confirmed
Portulaca pilosa	Pigweed	Confirmed

Portulaca oleracea	Pigweed	Confirmed
Sida rhombifolia	Paddy's Lucerne	Confirmed
Solanum nigrum	Blackberry Nightshade	Confirmed
Soliva sp.	A jo-jo weed	Confirmed
Sisymbrium thellungii	African Turnipweed	Confirmed
Sonchus oleraceus	Common Sowthistle	Confirmed
Tagetes minuta	Stinking Roger	Confirmed
Urochloa mosambicensis	Sabi Grass	Confirmed
Verbena aristigera	Mayne's Pest	Confirmed
Verbena litoralis	Common Verbena	Confirmed
Xanthium occidentale	Noogoora Burr	Confirmed
Xanthium spinosum	Bathurst Burr	Confirmed

Of the 53 species of non-native plant recorded during the field survey at Condabri Central, three species are listed as Class 2 pests under the *Land Protection (Pest and Stock Route) Act 2002*, these being *Opuntia aurantiaca*, *O. tomentosa* and *O. stricta*. *O. tomentosa* and *O. stricta* occur throughout the property in low abundance. *O. aurantiaca* was only observed in brigalow shade lines along the northern and eastern boundaries of the property.

4.2.1.6 Pest Fauna

Pest fauna species identified during the field survey are listed in Table 16 below.

Table 16 Pest fauna species identified during the ecological field survey at Condabri Central

Scientific Name	Common Name	Occurrence
Mus musculus	House mouse	Confirmed
Oryctolagus cuniculus	Rabbit	Confirmed
Rhinella marina	Cane toad	Confirmed

House Mouse was found at Boobook site number CNI171. Cane Toads were found sheltering underground debris (e.g. logs) at Boobook sites CNI178 and CNI179. Burrows of rabbits were observed on 25/6/2010 at Boobook site CNI123. Dead rabbits were common in the central part of the property during the survey conducted on 25 November 2001 (e.g. Boobook survey sites CNQ44 and CNQ45).

4.2.2 *Nature Conservation Act*

Field survey results concerning Nature Conservation Act listed flora and fauna can be seen below.

4.2.2.1 Listed Flora

Flora scheduled as threatened under the *Nature Conservation Act 1992* and recorded during the field survey are listed below in Table 17.

Table 17 Nature Conservation Act Listed flora identified during field survey and their observed distribution

Class	Family	Scientific Name	Common Name	Conservation Status	Likelihood of Occurrence
Higher dicots	Solanaceae	*Solanum stenopterum*	Winged nightshade	V	Confirmed

V = vulnerable

One population of Winged Nightshade *Solanum stenopterum* was located along the southern boundary of Condabri Central Lot 1 and 2 on plan SP245919 (formerly 2BWR573) at (Boobook field site CNI173) on 26/11/2010. A re-scout of this location on 28 and 29/03/2011 detected another seven individuals (mostly seedlings). This population is growing among dense grass along the edge of a minor watercourse. The site has been previously cleared but adjoins remnant Poplar Box *Eucalyptus populnea* woodland.

Figure 2: Locations of *Solanum stenopterum* confirmed from field scout of Condabri Central

Targeted searches were undertaken for *Eleocharis blakeana*, *Zornia pallida*, *Rutidosis lanata* and *Gonocarpus urceolatus*, which are known from the broader Miles area (Queensland herbarium, Herbrecs data), however, no populations of these species were detected at Condabri Central.

4.2.2.2 Listed Fauna

No fauna scheduled as endangered, vulnerable, rare or near threatened under the *Nature Conservation Act 1992* was identified during the field survey at Condabri Central. However, potentially suitable habitat was recorded for 14 species that are listed in Table 18 below.

Table 18 Nature Conservation Act scheduled threatened fauna potentially occurring at Condabri Central based on field survey results

Scientific Name	Common Name	Status	Likelihood of Occurrence
Accipiter novaehollandiae	Grey Goshawk	Near threatened	Possible, may overfly site but unlikely to nest on property
Calyptorhynchus lathami	Glossy Black-cockatoo	Vulnerable	Possible, potential habitat features identified (food plants e.g. *Casuarina cristata*)
Chalinolobus picatus	Little Pied Bat	Near threatened	Possible, some suitable habitat features identified (e.g. hollow trees)
Cyclorana verrucosa	Rough Frog	Near threatened	Possible, some suitable habitat features identified (e.g. swampy area adjoining dam along southern boundary)
Egernia rugosa	Yakka Skink	Vulnerable	Possible, some suitable habitat features identified (e.g. large hollow logs in remnant and non-remnant vegetation, sink holes/tunnel erosion)
Ephippiorhynchus asiaticus	Black-necked Stork	Near threatened	Possible, some suitable habitat features identified (e.g. dams)
Grantiella picta	Painted Honeyeater	Vulnerable	Possible, potential habitat features identified (food plants e.g. *Amyema cambagei, A. congener)*)

Furina dunmalli	Dunmall's Snake	Vulnerable	Possible, some suitable habitat features identified (e.g. logs in remnant vegetation)
Hemiaspis damelii	Grey Snake	Endangered	Possible, some suitable habitat features identified (e.g. logs in remnant and non-remnant vegetation)
Jalmenus eubulus	Pale Imperial Hairstreak	Vulnerable	Possible, some suitable habitat features identified (food plants e.g. mature *Acacia harpophylla*)
Lophoictinia isura	Square-tailed Kite	Near threatened	Possible, may overfly site but unlikely to nest on property
Melithreptus gularis	Black-chinned Honeyeater	Near threatened	Possible, some suitable habitat identified (e.g. remnant vegetation long minor watercourses)
Paradelma orientalis	Brigalow Scaly-foot	Vulnerable	Possible, some suitable habitat features identified (e.g. logs in remnant vegetation)
Strophurus taenicauda	Golden-tailed Gecko	Near threatened	Possible, potential habitat features identified (e.g. loose bark on trees in remnant vegetation)

Possible habitat values identified for fauna species throughout Condabri Central during ecological scouting include water features such as gilgais, ephemeral pools and streams, as well as terrestrial habitat values such as logs, hollow bearing trees and loose bark.

4.2.2.3 Other Significant Flora and Fauna

Fauna of regional conservation significance recorded during the field survey include Speckled Warbler, Grey-crowned Babbler, Shingleback and Yellow-spotted Monitor. All of these species were identified as being of regional significance within the Australia Pacific LNG Environmental Impact Statement (EIS) (see Volume 2 Gas Fields, Chapter 8, Terrestrial Ecology). Evidence of Koala (tree scratches) was reported by BAAM Pty. Ltd. (Assessment of Existing Terrestrial Ecological Values: Gas Processing Facility Sites). This species is culturally significant under the *Nature Conservation Act 1992* and regionally significant in the bioregion.

The Dulacca Woodland Snail *Adclarkia dulacca* was recorded by BAAM Pty. Ltd. at Condabri Central (Assessment of Existing Terrestrial Ecological Values: Gas Processing Facility Sites). This species is pending listing as Endangered under the *EPBC Act 1999*.

Flora of regional conservation significance recorded during the field survey include Yarran *Acacia omalophylla* which was identified as being of regional significance within Australia Pacific LNG EIS (see Volume 2 Gas Fields, Chapter 8, Terrestrial Ecology).

A species of native witchweed *Striga parviflora* was recorded in a clearing at Boobook field site CNI158. This species was not listed in a comprehensive inventory of flora for the Chinchilla-Miles district (Hando and Hando 1997) and is known from only two collections for the Darling Downs pastoral district (Queensland Herbarium, Herbrecs data).

Two species of Type A Restricted Plant were recorded, these being Kurrajong *Brachychiton populneus* at Boobook field site CNI165 and Black Orchid *Cymbidium canaliculatum* at Boobook field site CNI303.

4.2.3 *Regional Ecosystems*

All regional ecosystems identified during the field survey on Lot 1 and 2 on plan SP245919 (formerly 2BWR573) and their conservation status can be found below. A schematic of the field updated RE polygons can be seen below in Figure 3.

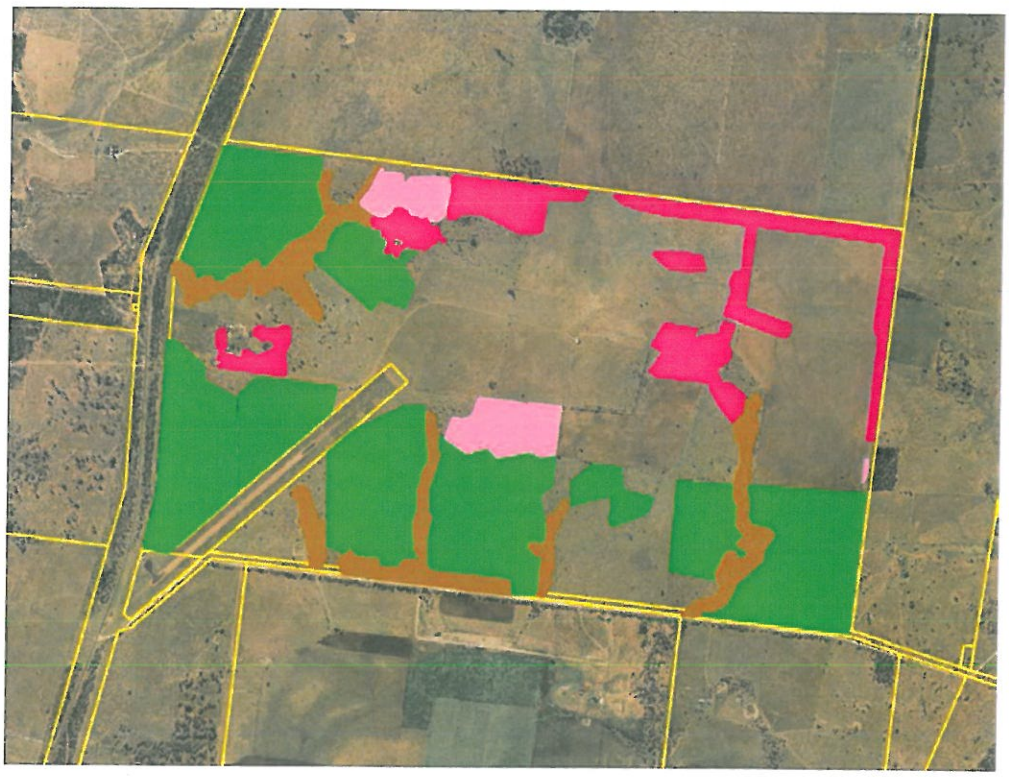

Figure 3 Field validated regional ecosystem communities present at Condabri Central

Light Pink: Endangered Regrowth

Pink: Endangered Remnant

Green: Scattered Regrowth

Brown: Of Concern Remnant

4.2.3.1 Endangered Regional Ecosystems

All endangered regional ecosystems identified and mapped during the field survey and a description of these sites can be found below in Table 19.

Table 19 Endangered Regional Ecosystems identified to be present on Condabri Central through ecological field survey

RE code	General description	Description
11.4.3	*Acacia harpophylla* and/or *Casuarina cristata* shrubby open forest on Cainozoic clay plains	Open-forest dominated by *Acacia harpophylla* and/or *Casuarina cristata*. *Acacia harpophylla* (10-16m high) predominates forming a fairly continuous canopy with varying densities of *Casuarina cristata* (14-18m high), forming part of the canopy or emerging above it. *Casuarina cristata* may be dominant or form pure stands particularly in the south of the bioregion (subregions 33, 36). *Eucalyptus* spp. such as *E. orgadophila*, *E. populnea*, *E. microcarpa*, *Eucalyptus woollsiana*, *E. cambageana* and *E. thozetiana* (on shallower soils and upper slopes) may be scattered through the canopy or occur as emergents up to 22m high. *Brachychiton rupestris* may also be present in places. An open to dense, tall shrub layer is present, and is dominated by *Eremophila mitchellii* and/or *Geijera parviflora*. Low shrubs are often present, occasionally forming a distinct layer dominated by species such as *Carissa ovata* and *Alectryon diversifolius*. Tree/shrub height may range from 3-8 m. *Melaleuca bracteata* may be present in low-lying areas. The ground layer is sparse to open, and composed of grasses and forbs. Occurs on Cainozoic clay plains with cracking clay soils which are often with a weak gilgai microrelief. The plains may be flat to gently undulating. Soils are often cracking clay which are usually deep to very deep, often self mulching, and sometimes with surface stone. Texture contrast soils and other clays may also be present in places.
11.4.10	*Eucalyptus populnea* or *E. woollsiana*, *Acacia harpophylla*, *Casuarina cristata* open-forest to woodland on margins of Cainozoic clay plains	Woodland dominated by *Eucalyptus populnea* and/or *E. woollsiana* or sometimes *E. moluccana* (or the closely related *E. microcarpa*) with an understorey of *Acacia harpophylla* or *Casuarina cristata*. Associated with the edges of Cainozoic clay plains, on the lower parts of the plain around its dissecting edges and on natural discharge areas where the clay plains meet higher landforms. Occurs on deep, texture contrast soils.
11.4.12	*Eucalyptus populnea* woodland on Cainozoic clay plains	*Eucalyptus populnea* predominates forming a distinct but discontinuous canopy (12-19m high). Scattered *Eucalyptus spp.* may be present at some sites, but most frequently *E. populnea* alone forms the canopy. Scattered trees such as *Callitris glaucophylla* and *Acacia excelsa* may also be present and occasionally form a distinct low tree layer (8-10m high) There is generally a low tree/tall shrub layer (4-8m high) dominated by *Eremophila mitchellii*, *Acacia pendula* and *Geijera parviflora*. A low shrub layer may occur, particularly on upper slopes. The ground layer is generally open but may be moderately dense in disturbed areas. The perennial grasses *Aristida spp.* and *Eragrostis spp.* are usually dominant, and forbs are conspicuous. Occurs on eroding edge of Tertiary clay plains.

4.2.3.2 Of Concern Regional Ecosystems

All Of Concern regional ecosystems identified and mapped during the field survey and a description of these sites can be found below in Table 20.

Table 20 Of Concern Regional Ecosystems identified to be present on Condabri Central through ecological field survey

RE code	General description	Description
11.3.2	*Eucalyptus populnea* woodland on alluvial plains	*Eucalyptus populnea* woodland to open-woodland. *E. melanophloia* may be present and locally dominant. There is sometimes a distinct low tree layer dominated by species such as *Geijera parviflora*, *Eremophila mitchellii*, *Acacia salicina*, *Acacia pendula*, *Lysiphyllum* spp., *Cassia brewsteri*, *Callitris glaucophylla* and *Acacia excelsa*. The ground layer is grassy dominated by a range of species depending on soil and management conditions. Species include *Bothriochloa decipiens*, *Enteropogon acicularis*, *Aristida ramosa* and *Tripogon loliiformis*. Occurs on Cainozoic alluvial plains with variable soil types including texture contrast, deep uniform clays, massive earths and sometimes cracking clays.
11.5.13	*Eucalyptus populnea* +/- *Acacia aneura* +/- *E. melanophloia* woodland on Cainozoic sandplains/remnant surfaces	*Eucalyptus populnea* predominates forming a distinct but discontinuous canopy (14-20m high). *E. melanophloia* may be present, and may codominate or dominate localised areas. A low tree layer (8-10m high) may be present and dominated by a range of species such as *Callitris glaucophylla* with scattered *Acacia excelsa* and *A. aneura* (western parts of subregion 29). There is generally a low tree/tall shrub layer (4-8m high) dominated by *Eremophila mitchellii* and *Geijera parviflora*. Shrubs are absent or very sparse. The ground cover is moderately dense to dense, and dominated by perennial grasses. *Bothriochloa decipiens*, *Themeda triandra*, *Aristida ramosa* and *Enteropogon acicularis* are the most frequent dominant grasses. Occurs on gently undulating plains formed from unconsolidated Cainozoic deposits. Usually associated with shallow to moderately deep, loamy duplex soils or shallow to moderately deep, uniform, clay loam to deep red earth soils.

4.2.3.3 Not Of Concern Regional Ecosystems

All Not Of Concern regional ecosystems identified and mapped during the field survey and a description of these sites can be found below in Table 21.

Table 21 Not of Concern Regional Ecosystems identified to be present on Condabri Central through ecological field survey

RE code	General description	Description

11.3.18	*Eucalyptus populnea, Callitris glaucophylla, Allocasuarina luehmannii* shrubby woodland on alluvium.	*Eucalyptus populnea* and/or *E. melanophloia* dominate the woodland canopy. Other canopy tree species that may be present include *Callitris glaucophylla, E. crebra* (can be locally dominant), *E. chloroclada* and *Angophora leiocarpa*. A low tree layer dominated by *Allocasuarina luehmannii, Callitris glaucophylla, Geijera parviflora* and/or *Eremophila mitchellii* and sometimes *Alstonia constricta* is often present. The ground cover is usually open to sparse and dominated by perennial grasses such as *Bothriochloa decipiens, Enteropogon acicularis, Triraphis mollis, Eragrostis lacunaria* and *Aristida* spp. Occurs on levees, higher alluvial plains and terraces associated with drainage lines. The soils are mainly deep, uniform red sands, or deep, texture contrast soils with a sandy, thick surface horizon overlying neutral, blocky to massive subsoil's. Small areas occur on red massive earths and alluvial soils
11.3.19	*Callitris glaucophylla, Corymbia* spp. and/or *Eucalyptus melanophloia* open-forest to woodland on Cainozoic alluvial plains	*Callitris glaucophylla* woodland usually with codominant eucalypts including *Corymbia tessellaris, C. clarksoniana* form a well-defined but discontinuous open-forest to woodland canopy (10-14m high). Other trees such as *Eucalyptus melanophloia, Angophora melanoxylon* or *E. populnea* may also occur in the canopy as an emergent tree layer (12-25m high). Scattered tall shrubs, such as *Acacia excelsa, Alstonia constricta* and *Callitris glaucophylla* are often present. The ground layer is sparse to dense, depending on the tree density, and is dominated by grasses. Dominant or common grasses include *Heteropogon contortus, Eriachne helmsii, Aristida holathera, Aristida calycina* var. *praealta* and *Perotis rara*. *Setaria surgens* may become locally prominent in badly disturbed areas. The forb diversity is relatively low but may become seasonally prominent. Occurs on rises associated with the levees and higher alluvial plains and terraces of major river systems. The soils are deep to very deep, earthy sands and associated sandy-surfaced texture contrast soils and siliceous sands.
11.5.1	*Eucalyptus crebra, Callitris glaucophylla, Angophora leiocarpa, Allocasuarina luehmannii* woodland on Cainozoic sandplains/remnant surfaces	*Eucalyptus crebra* and/or *E. populnea* +/- *Angophora leiocarpa* +/- *E. woollsiana* (in south of bioregion) dominate the woodland (to open-woodland) canopy. A low tree layer dominated by *Allocasuarina luehmannii* +/- *Melaleuca decora* +/- *Callitris glaucophylla* +/- *C. endlicheri* is usually present. In some areas *Allocasuarina luehmannii* low woodland is the dominant layer. The ground cover is usually sparse and dominated by perennial grasses. Occurs on Cainozoic sandplains, especially outwash from weathered sandstones. Duplex soils with sandy surfaces.
11.5.4	*Eucalyptus crebra, Callitris glaucophylla, C. endlicheri, E. chloroclada, Angophora leiocarpa* on Cainozoic sandplains/remnant surfaces. Deep sands.	*Eucalyptus crebra, Callitris glaucophylla, E. chloroclada, Angophora leiocarpa*, +/- *A. floribunda* woodland to open-forest with a low tree layer dominated by species such as *Allocasuarina luehmannii, A. inophloia* and *Callitris endlicheri*. Localised areas dominated *by E. rhombica*. Occurs on Cainozoic sandplains with deep sandy soils

Note that the occurrences of the Not of Concern regional ecosystems are for point locations. These REs are not extensive enough on the property to map as individual polygons.

4.2.4 *Wetland Ecosystems*

There are small swampy areas associated with a dam/minor watercourse along the southern boundary (Boobook field site CNI160) and at a dam associated with Sandy Gully near the northern boundary of the property (Boobook field site CNI178). Small gilgais are common within a brigalow shade line along the northern boundary of the property (e.g. Boobook sites CNI113, CNI114, CNI117 and CNI118). These survey sites can be seen in attachment 6 below. No other wetlands were identified during the field survey.

The western boundary of the property is mapped by DERM as a referrable wetland, however, the portion of the property on the western side of the Leichhardt Highway was not field assessed and is not considered in the scope of this report.

4.2.5 *Disturbance*

Existing disturbances on the property include substantial areas of cleared land, parts of which have been previously cultivated and cropped. The entire property has been grazed. Numerous internal vehicle tracks and fence lines are present throughout. Other infrastructure associated with grazing and cropping are present including a homestead, sheds, stock yards and dams.

5. Recommendations

- Where possible infrastructure should be sited in existing clearings and minimise clearing in areas of regrowth of endangered regional ecosystems.
- Avoid clearing of remnant brigalow woodland wherever practical and utilise existing gaps for positioning of linear infrastructure.
- Avoid disturbance to all other remnant REs (including endangered, of concern and least concern REs) due to the potential that they may support multiple species of significant fauna
- Minimise clearing of vegetation along watercourses and utilise existing crossings for positioning of linear infrastructure.
- Avoid disturbance to the population of Winged Nightshade *Solanum stenopterum* along the southern boundary of the property.
- Minimise disturbance to gilgais along northern boundary of property.
- A fauna spotter should be engaged prior to and during construction to identify potential habitat features of significance to fauna (e.g. large hollow logs, hollow trees) including within existing clearings.

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6. Attachments

Appendix A - **Results of EPBC Protected Matters Search Tool conducted on 23 March 2011**

Appendix B - **Results of Wildnet Search conducted on 23 March 2011**

Class	Family	Scientific Name	Common Name	Conservation status
Higher dicots	Mimosaceae	*Acacia omalophylla*	-	C
Monocots	Hemerocallidaceae	*Dianella longifolia var. stupata*	-	C
Monocots	Orchidaceae	*Cymbidium suave*	-	C
Birds	Cacatuidae	*Eolophus roseicapillus*	Galah	C

Appendix C - **Results of DERM Referrable Wetland search conducted on 04 July 2011**

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Appendix D - **Fauna recorded at the Condabri Central during field survey**

Fauna recorded at Condabri Central

KEY: * = non-native species; LC = least concern.

CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Amphibians	Bufonidae	*Rhinella marina*	Cane Toad*		
Amphibians	Hylidae	*Litoria caerulea*	Green Tree Frog	LC	
Amphibians	Hylidae	*Litoria fallax*	Eastern Dwarf Tree Frog	LC	
Amphibians	Hylidae	*Litoria latopalmata*	Broad-palmed Rocketfrog	LC	
Amphibians	Hylidae	*Litoria peronii*	Peron's Tree Frog	LC	
Amphibians	Hylidae	*Litoria rubella*	Red Tree Frog	LC	
Amphibians	Limnodynastidae	*Limnodynastes fletcheri*	Long-thumbed Frog	LC	
Amphibians	Myobatrachidae	*Uperoleia rugosa*	Wrinkled Toadlet/Chubby Gungan	LC	
Birds	Acanthizidae	*Acanthiza chrysorrhoa*	Yellow-rumped Thornbill	LC	
Birds	Acanthizidae	*Acanthiza nana*	Yellow Thornbill	LC	
Birds	Acanthizidae	*Acanthiza uropygialis*	Chestnut-rumped Thornbill	LC	
Birds	Acanthizidae	*Chthonicola sagittata*	Speckled Warbler	LC	

CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Birds	Acanthizidae	*Smicrornis brevirostris*	Weebill	LC	
Birds	Accipitridae	*Accipiter cirrocephalus*	Collared Sparrowhawk	LC	
Birds	Accipitridae	*Aquila audax*	Wedge-tailed Eagle	LC	
Birds	Accipitrdae	*Haliastur sphenurus*	Whistling Kite	LC	
Birds	Anatidae	*Anas gracilis*	Grey Teal	LC	
Birds	Anatidae	*Anas superciliosa*	Pacific Black Duck	LC	
Birds	Anatidae	*Chenonetta jubata*	Australian Wood Duck	LC	
Birds	Anatidae	*Dendrocygna eytoni*	Plumed Whistling Duck	LC	
Birds	Anhingidae	*Anhinga novaehollandiae*	Australasian Darter	LC	
Birds	Ardeidae	*Nycticorax caledonicus*	Nankeen Night Heron	LC	
Birds	Artamidae	*Cracticus nigrogularis*	Pied Butcherbird	LC	
Birds	Artamidae	*Cracticus tibicen*	Australian Magpie	LC	
Birds	Artamidae	*Cracticus torquatus*	Grey Butcherbird	LC	
Birds	Cacatuidae	*Cacatua galerita*	Sulphur-crested Cockatoo	LC	

CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Birds	Cacatuidae	*Cacatua sanguinea*	Little Corella	LC	
Birds	Cacatuidae	*Eolophus roseicapillus*	Galah	LC	
Birds	Cacatuidae	*Nymphicus hollandicus*	Cockatiel	LC	
Birds	Campephagidae	*Coracina maxima*	Ground Cuckoo-shrike	LC	
Birds	Campephagidae	*Coracina novaehollandiae*	Black-faced Cuckoo-shrike	LC	
Birds	Columbidae	*Ocyphaps lophotes*	Crested Pigeon	LC	
Birds	Corcoracidae	*Struthidea cinerea*	Apostlebird	LC	
Birds	Corvidae	*Corvus orru*	Torresian Crow	LC	
Birds	Cuculidae	*Centropus phasianinus*	Pheasant Coucal	LC	
Birds	Estrildidae	*Taeniopygia guttata*	Zebra Finch	LC	
Birds	Estrildidae	*Taeniopygia bichenovii*	Double-barred Finch	LC	
Birds	Falconidae	*Falco cenchroides*	Nankeen Kestrel	LC	
Birds	Halcyonidae	*Dacelo novaeguineae*	Laughing Kookaburra	LC	
Birds	Maluridae	*Malurus cyaneus*	Superb Fairy-wren	LC	
Birds	Maluridae	*Malurus lamberti*	Variegated Fairy-wren	LC	

CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Birds	Maluridae	*Malurus leucopterus*	White-winged Fairy-wren	LC	
Birds	Megaluridae	*Cincloramphus mathewsi*	Rufous Songlark	LC	
Birds	Meliphagidae	*Acanthagenys rufogularis*	Spiny-cheeked Honeyeater	LC	
Birds	Meliphagidae	*Lichmera indistincta*	Brown Honeyeater	LC	
Birds	Meliphagidae	*Lichenostomus virescens*	Singing Honeyeater	LC	
Birds	Meliphagidae	*Manorina flavigula*	Yellow-throated Miner	LC	
Birds	Meliphagidae	*Manorina melanocephala*	Noisy Miner	LC	
Birds	Meliphagidae	*Philemon citreogularis*	Little Friarbird	LC	
Birds	Meliphagidae	*Plectorhyncha lanceolata*	Striped Honeyeater	LC	
Birds	Monarchidae	*Grallina cyanoleuca*	Magpie-lark	LC	
Birds	Motacillidae	*Anthus novaeseelandiae*	Australasian Pipit	LC	
Birds	Nectariniidae	*Dicaeum hirundinaceum*	Mistletoebird	LC	
Birds	Oriolidae	*Oriolus sagittatus*	Olive-backed Oriole	LC	
Birds	Otididae	*Ardeotis australis*	Australian Bustard	LC	

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CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Birds	Pachycephalidae	*Pachycephala rufiventris*	Rufous Whistler	LC	
Birds	Pardalotidae	*Pardalotus striatus*	Striated Pardalote	LC	
Birds	Phasianidae	*Coturnix ypsilophora*	Brown Quail	LC	
Birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian Grebe	LC	
Birds	Pomatostomidae	*Pomatostomus temporalis*	Grey-crowned Babbler	LC	
Birds	Psittacidae	*Aprosmictus erythropterus*	Red-winged Parrot	LC	
Birds	Psittacidae	*Northiella haematogaster*	Blue Bonnet	LC	
Birds	Psittacidae	*Platycercus adscitus*	Pale-headed Rosella	LC	
Birds	Psittacidae	*Psephotus haematonotus*	Red-rumped Parrot	LC	
Birds	Psittacidae	*Trichoglossus chlorolepidotus*	Scaly-breasted Lorikeet	LC	
Birds	Ptilonorhynchidae	*Ptilonorhynchus maculatus*	Spotted Bowerbird	LC	
Birds	Rallidae	*Gallinula tenebrosa*	Dusky Moorhen	LC	
Birds	Rhipiduridae	*Rhipidura albiscapa*	Grey Fantail	LC	
Birds	Rhipiduridae	*Rhipidura leucophrys*	Willie Wagtail	LC	
Birds	Turnicidae	*Turnix* sp.	Button-quail unidentified		

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CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Birds	Turnicidae	*Turnix pyrrhothorax*	Red-chested Button-quail	LC	
Insects	Nymphalidae	*Danaus chrysippus petilia*	Lesser Wanderer		
Insects	Nymphalidae	*Euploea core corinna*	Common Crow		
Insects	Nymphalidae	*Junonia villida calybe*	Meadow Argus		
Insects	Nymphalidae	*Tirumala hamata*	Blue Tiger		
Insects	Papilionidae	*Papilio aegeus aegeus*	Orchard Swallowtail		
Insects	Papilionidae	*Papilio demoleus sthenelus*	Chequered Swallowtail		
Insects	Pieridae	*Belenois java teutonia*	Caper White		
Insects	Pieridae	*Catopsilia pomona pomona*	Lemon Migrant		
Mammals	Leporidae	*Oryctolagus cuniculus*	Rabbit*		
Mammals	Macropodidae	*Macropus giganteus*	Eastern Grey Kangaroo	LC	
Mammals	Macropodidae	*Wallabia bicolor*	Swamp Wallaby	LC	
Mammals	Muridae	*Mus musculus*	House Mouse*	LC	
Reptiles	Agamidae	*Pogona barbata*	Common Bearded Dragon	LC	

CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Reptiles	Geckonidae	*Gehyra catenata*	Chain-backed Dtella	LC	
Reptiles	Geckonidae	*Gehyra dubia*	Dubious Dtella	LC	
Reptiles	Gekkonidae	*Heteronotia binoei*	Bynoe's Gecko	LC	
Reptiles	Pygopodidae	*Lialis burtonis*	Burton's Snake-lizard	LC	
Reptiles	Scincidae	*Tiliqua rugosa*	Shingleback	LC	
Reptiles	Scincidae	*Tiliqua scincoides*	Common Blue Tongue	LC	
Reptiles	Scincidae	*Morethia boulengeri*	Boulenger's Skink	LC	
Reptiles	Varanidae	*Varanus panoptes*	Yellow-spotted Monitor	LC	

Appendix E - Flora recorded at Condabri Central during field survey

Flora recorded at Condabri Central

Key: LC = least concern; TAR = Type A Restricted plant; V = vulnerable.

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Acanthaceae	*Brunoniella australis*	Blue Trumpet	LC	
Acanthaceae	*Rostellularia adscendens*	a Justicia	LC	
Adiantaceae	*Cheilanthes sieberi*	Mulga Fern	LC	
Aizoaceae	*Tetragonia tetragonioides*	New Zealand Spinach	LC	
Aizoaceae	*Trianthema triquetra*	Red Spinach	LC	
Amaranthaceae	*Alternanthera denticulata*	Lesser Joyweed	LC	
Amaranthaceae	*Nyssanthes* sp. (infertile)	a Barbed-Wire Weed	LC	
Amaranthaceae	*Ptilotus macrocephalus*	Green Pussytails	LC	
Amaranthaceae	*Ptilotus nobilis* subsp. *semilanatus*	Lambs Tail	LC	
Apiaceae	*Daucus glochidiatus*	Native Carrot	LC	
Apocynaceae	*Carissa ovata*	Currantbush	LC	
Asphodelaceae	*Bulbine alata*	Native Onion	LC	
Asteraceae	*Brachyscome ciliaris*	A Daisy	LC	
Asteraceae	*Calotis cuneifolia*	Purple Burr Daisy	LC	
Asteraceae	*Calotis* sp. (infertile)	a Burr Daisy	LC	
Asteraceae	*Camptacra barbata*	A Daisy	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Asteraceae	*Centipeda minima*	Desert Sneezeweed	LC	
Asteraceae	*Chrysocephalum apiculatum*	Yellow Buttons	LC	
Asteraceae	*Cyanthillium cinereum*	Vernonia	LC	
Asteraceae	*Epaltes australis*	Speading Nut-heads	LC	
Asteraceae	*Peripleura* sp.		LC	
Asteraceae	*Pterocaulon sphacelatum*	Applebush	LC	
Asteraceae	*Pycnosorus globosus*	Billy Buttons, Drumsticks	LC	
Asteraceae	*Rhodanthe polyphylla*	Paper Daisy	LC	
Asteraceae	*Senecio* sp. (infertile)	a Native Fireweed	LC	
Asteraceae	*Sigesbeckia orientalis*	Indian Weed	LC	
Asteraceae	*Vittadinia cuneata*	Fuzzweed	LC	
Asteraceae	*Vittadinia* sp. (infertile)	a fuzzweed	LC	
Asteraceae	*Xerochrysum bracteatum*	Golden Everlasting Daisy	LC	
Boraginaceae	*Ehretia membranifolia*	Weeping Koda, Peach Bush	LC	
Brassicaceae	*Rorippa eustylis*	Dwarf Bitter-cress	LC	
Caesalpiniaceae	*Senna artemisioides* subsp. *zygophylla*	Butter Bush, Desert Cassia	LC	
Campanulaceae	*Pratia concolor*	Poison Pratia	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Campanulaceae	*Wahlenbergia* sp. (infertile)	a bluebell	LC	
Capparaceae	*Capparis lasiantha*	Wait-a-While, Nipan, Split Jack	LC	
Capparaceae	*Capparis mitchellii*	Wild Orange, Bumble Tree	LC	
Caryophyllaceae	*Polycarpaea corymbosa*	Pretty Polly	LC	
Casuarinaceae	*Casuarina cristata*	Belah	LC	
Celastraceae	*Elaeodendron australe var. integrifolium*	Narrow-leaved Red Olive Plum	LC	
Celastraceae	*Maytenus cunninghamii*	Yellow Berry Bush	LC	
Chenopodiaceae	*Atriplex semibaccata*	Berry Saltbush	LC	
Chenopodiaceae	*Cheno*			
Chenopodiaceae	*Einadia nutans*	Climbing Saltbush	LC	
Chenopodiaceae	*Einadia polygonoides*	Dock Saltbush	LC	
Chenopodiaceae	*Einadia trigonos*	Fishweed	LC	
Chenopodiaceae	*Enchylaena tomentosa*	Ruby Saltbush	LC	
Chenopodiaceae	*Maireana microphylla*	Cotton Bush	LC	
Chenopodiaceae	*Rhagodia spinescens*	Thorny Saltbush	LC	
Chenopodiaceae	*Salsola kali*	Roly-poly, Tumbleweed	LC	
Chenopodiaceae	*Sclerolaena birchii*	Galvanised Burr	LC	
Chenopodiaceae	*Sclerolaena muricata*	Black Roly-poly	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Commelinaceae	*Commelina diffusa*		LC	
Commelinaceae	*Commelina* sp.	a Scurvy Weed	LC	
Commelinaceae	*Murdannia graminea*	Slug Herb	LC	
Convolvulaceae	*Dichondra repens*	Kidney Weed	LC	
Convolvulaceae	*Evolvulus alsinoides*	Tropical Speedwell	LC	
Cupressaceae	*Callitris glaucophylla*	White Cypress Pine	LC	
Cyperaceae	*Carex appressa*	Tall Sedge	LC	
Cyperaceae	*Cyperus concinnus*	Trim Sedge	LC	
Cyperaceae	*Cyperus fulvus*	Sticky Flat-sedge	LC	
Cyperaceae	*Cyperus* sp. (infertile)	a sedge	LC	
Cyperaceae	*Cyperus gracilis*	Whisker Grass	LC	
Cyperaceae	*Eleocharis pallens*	Pale Spike-rush	LC	
Cyperaceae	*Eleocharis plana*	Ribbed Spike rush	LC	
Cyperaceae	*Eleocharis* sp. (infertile)	a Spike-rush	LC	
Euphorbiaceae	*Chamaesyce drummondii*	Caustic Weed	LC	
Cyperaceae	*Fimbristylis dichotoma*	Common Fringe-rush	LC	
Fabaceae	*Desmodium* spp.		LC	
Fabaceae	*Indigofera* sp. (infertile)	an Indigo Pea	LC	
Fabaceae	*Rhynchosia minima*	Rhynchosia	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Fabaceae	*Zornia dyctiocarpa*		LC	
Fabaceae	*Zornia muriculata*		LC	
Gentianaceae	*Schenkia australis*	Spiked Centaury	LC	
Goodeniaceae	*Brunonia australis*	Blue Pincushion	LC	
Goodeniaceae	*Goodenia fascicularis*	Silky Goodenia	LC	
Goodeniaceae	*Goodenia glabra*	Smooth Goodenia	LC	
Goodeniaceae	*Scaevola spinescens*	Prickly Fan Flower	LC	
Hydrocharitaceae	*Ottelia ovalifolia*	Swamp Lily, Water Poppy	LC	
Juncaceae	*Juncus usitatus*	Common Rush	LC	
Lamiaceae	*Plectranthus parviflorus*	Cockspur Flower	LC	
Laxmanniaceae	*Thysanotus tuberosus*	Fringed Lily	LC	
Loranthaceae	*Amyema cambagei*	Needle Leaf Mistletoe	LC	
Loranthaceae	*Amyema congener*	Variable Mistletoe	LC	
Loranthaceae	*Lysiana subfalcata*	Northern Mistletoe	LC	
Malvaceae	*Hibiscus brachysiphonius*	Hill Hibiscus	LC	
Malvaceae	*Hibiscus sturtii*	Hill Hibiscus	LC	
Malvaceae	*Sida corrugata*	Variable Sida	LC	
Malvaceae	*Sida hackettiana*	High Sida	LC	
Malvaceae	*Sida* sp. (infertile)	a Flannel Weed	LC	
Marsileaceae	*Marsilea* sp.	Nardoo	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Meliaceae	*Owenia acidula*	Emu Apple	LC	
Mimosaceae	*Acacia decora*	Pretty Wattle	LC	
Mimosaceae	*Acacia excelsa*	Ironwood	LC	
Mimosaceae	*Acacia harpophylla*	Brigalow	LC	
Mimosaceae	*Acacia omalophylla*	Yarran	LC	
Mimosaceae	*Acacia pendula*	Weeping Myall	LC	
Mimosaceae	*Acacia salicina*	Doolan	LC	
Mimosaceae	*Neptunia* sp.	A native sensitive plant	LC	
Myoporaceae	*Eremophila debilis*	Winter Apple	LC	
Myoporaceae	*Eremophila longifolia*	Long-leaved Emu Bush, Berrigan	LC	
Myoporaceae	*Eremophila mitchellii*	False Sandalwood	LC	
Myoporaceae	*Myoporum montanum*	Boobialla	LC	
Myrtaceae	*Corymbia clarksoniana*	Clarkson's Bloodwood	LC	
Myrtaceae	*Corymbia tessellaris*	Carbeen, Moreton Bay Ash	LC	
Myrtaceae	*Eucalyptus* sp. *(camaldulensis/E. tereticornis* group)	River Red Gum/Queensland Blue Gum	LC	
Myrtaceae	*Eucalyptus chloroclada*	Baradine Red Gum	LC	
Myrtaceae	*Eucalyptus populnea*	Poplar box	LC	
Nyctaginaceae	*Boerhavia dominii*	Tar Vine	LC	
Oleaceae	*Jasminum didymum*	Jasmine	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Onagraceae	*Ludwigia peploides*	Water Primrose	LC	
Ophioglossaceae	*Ophioglossum* sp.	Adder's Tongue Fern	LC	
Orchidaceae	*Cymbidium canaliculatum*	Black Orchid	LC	
Oxalidaceae	*Oxalis* sp.	A wood sorrel	LC	
Pittosporaceae	*Pittosporum angustifolium*	Weeping Pittosporum, Gumbi Gumbi	LC	
Pittosporaceae	*Pittosporum spinescens*	Wallaby Apple	LC	
Plantaginaceae	*Plantago* sp.	a Lamb's Tongue	LC	
Poaceae	*Aristida caput-medusae*	Many-headed Wiregrass	LC	
Poaceae	*Aristida* sp. (infertile)		LC	
Poaceae	*Austrostipa verticillata*	Slender Bamboo Grass	LC	
Poaceae	*Bothriochloa bladhii*	Forest Blue Grass	LC	
Poaceae	*Bothriochloa* sp. (infertile)		LC	
Poaceae	*Chloris* sp.		LC	
Poaceae	*Chrysopogon fallax*	Golden Beard Grass	LC	
Poaceae	*Cymbopogon refractus*	Barbed-wire Grass	LC	
Poaceae	*Dactyloctenium radulans*	Buttongrass	LC	
Poaceae	*Dichanthium*	Queensland Blue	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
	sericeum	Grass		
Poaceae	*Enneapogon* sp. (infertile)	Bottle washer grasses	LC	
Poaceae	*Enteropogon* spp. (infertile)	Windmill grasses	LC	
Poaceae	*Eragrostis brownii*	Common Love Grass	LC	
Poaceae	*Eragrostis parviflora*	Weeping Lovegrass	LC	
Poaceae	*Eragrostis* sp.(infertile)		LC	
Poaceae	*Eriochloa crebra*	Cup Grass	LC	
Poaceae	*Heteropogon contortus*	Black Spear Grass	LC	
Poaceae	*Leptochloa fusca*	Bearded Sprangletop, Brown Beetle Grass	LC	
Poaceae	*Panicum* sp. (infertile)	A native panic	LC	
Poaceae	*Paspalidium* sp. (infertile)		LC	
Poaceae	*Paspalum distichum*	Water Couch	LC	
Poaceae	*Sporobolus caroli*	Fairy Grass	LC	
Poaceae	*Sporobolus elongatus*	Slender Rat's Tail Grass	LC	
Poaceae	*Sporobolus* sp. (infertile)		LC	
Poaceae	*Themeda triandra*	Kangaroo Grass	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Polygonaceae	*Persicaria lapathifolia*	Pale Knotweed	LC	
Polygonaceae	*Persicaria orientalis*	Princes Feathers	LC	
Polygonaceae	*Rumex* sp.	A docks	LC	
Potamogetonaceae	*Potamogeton tricarinatus*	Floating Pondweed	LC	
Proteaceae	*Grevillea striata*	Beefwood	LC	
Rhamnaceae	*Ventilago viminalis*	Vine Tree, Supplejack	LC	
Rubiaceae	*Asperula conferta*	Woodruff	LC	
Rubiaceae	*Psydrax odorata*	Shiny-leaved Canthium	LC	
Rubiaceae	*Psydrax oleifolia*	Myrtle Tree	LC	
Rutaceae	*Citrus glauca*	Limebush	LC	
Rutaceae	*Geijera parviflora*	Wilga	LC	
Santalaceae	*Santalum lanceolatum*	Sandalwood	LC	
Sapindaceae	*Alectryon oleifolius*	Boonaree	LC	
Sapindaceae	*Atalaya hemiglauca*	Whitewood	LC	
Sapindaceae	*Dodonaea viscosa* subsp. *spatulata*	Sticky Hopbush	LC	
Scrophulariaceae	*Striga parviflora*	a Native Witchweed	LC	
Solanaceae	*Nicotiana* sp. (infertile)	Tobacco Weed	LC	
Solanaceae	*Solanum coracinum*		LC	
Solanaceae	*Solanum ellipticum*	Potato Bush	LC	

FAMILY	SCIENTIFIC NAME	COMMON NAME	NC ACT STATUS	EPBC ACT STATUS
Solanaceae	*Solanum esuriale*	Quena, Potato Weed	LC	
Solanaceae	*Solanum parvifolium*	A potato bush	LC	
Solanaceae	*Solanum stenopterum*	Winged Nightshade	V	
Sterculiaceae	*Brachychiton populneus*	Kurrajong	LC/TAR	
Zygophyllaceae	*Roepera* sp.	Twinleaf	LC	

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Appendix F - **Map of field survey sites at Condabri Central**

Map of survey sites on Lot 1 and 2 on plan SP245919 (formerly 2BWR573).