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ECOLOGICAL MANAGEMENT

SPRINGWATER IRRIGATION AREA AND WATER PIPELINE ECOLOGICAL ASSESSMENT

Report prepared for
Santos GLNG

December 2020

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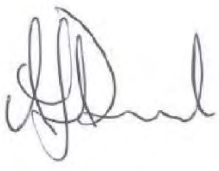

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Date: December 2020

SPRINGWATER IRRIGATION AREA AND WATER PIPELINE ECOLOGICAL ASSESSMENT

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Abbreviations

EA	Environmental Authority
ESA	Environmentally Sensitive Area
DES	Department of Environment and Science
DNR	Department of Natural Resources
RE	Regional Ecosystems
VM Act	Queensland's Vegetation Management Act 1999
TEC	Threatened Ecological Community

1.0 Introduction

1.1 Background and Purpose

Terrestria Pty Ltd has prepared this report for Santos Pty Ltd for the purpose of providing an independent ecological assessment of the water pipeline and pivot irrigation Survey area, Southern Queensland (Project area) (**Figure 1.1**).

The aims of this report are to provide spatially explicit, field-derived ecological data to assist in appropriate location of the water pipeline and pivot irrigation and to provide the background mapping of ecological values to be used in the quantification of impacts to Environmentally Significant Areas (ESAs).

On-ground and desktop assessments have been conducted in accordance with requirements set out within under the Methodology for Assessing Ecological Values (0007-650-PRO-0007). Ecological values that were assessed include:

- Likelihood of occurrence assessment for Flora and Fauna EVNT
- Habitat Assessment for all EVNT Species
- General EVNT flora survey
- RE Mapping for the Project area
- BioCondition sites in all assessment units intersected by the Project area.

1.2 Proposed Works

The water pipeline and pivot irrigation area is shown in **Figure 1.1**.

1.3 General Project Area Description

The water pipeline and irrigation area runs east west along the northern boundary of Hallett State Forest and can be described as a gently undulating landscape with deep sandy soils dominating rises and hill tops and sandy clays dominating the valley floors. Native woodlands are confined to the sandy surfaces being generally white cypress pine, Silver-leaved ironbark and Poplar box woodlands. The cleared areas are dominated by sandy clays derived from fine-grained sediments (Land zone 9), dissected by a minor creek lines that supports narrow alluvial flats dominated by a narrow riparian bands of eucalypt open forest. The Project area has been heavily grazed.

2.0 Methodology

Field and desktop assessments were carried out in accordance with:

- Methodology for Assessing Ecological Values (0007-650-PRO-0007)
- Santo's Procedure for Conducting Vegetation Assessments, Document Number: 0007-650-PRO-0008,
- Procedure for Conducting Preliminary Ecological Desktop Assessments (0007-650-PRO-0009)
- Procedure for Conducting Wetland Assessments (3301-GLNG-4-1.3-0016)
- Guideline for Conducting Vegetation Community Assessments: A Guide to Using the 'Procedure for Vegetation Community Assessments' (0007-650-GDE-0002).

Results from the protected matters search tool have been used to build up a picture of the potential values present on or close to the Project area. The field assessment has identified the existence of these values on-ground and the impact assessment guideline has been used to assess whether proposed actions will have a significant impact on any matters of national environmental significance.

2.1 Desktop Review

Prior to the field investigation, Commonwealth and State wildlife databases were interrogated in order to develop a picture of the likely threatened species occurring within the Project locality. The Queensland DES Wildlife Online database (20 km radius centred on the Project area) and the Commonwealth Department of the Environment and Energy (DoEE) EPBC Protected Matters Search Tool (PMST) results (20 km radius centred on the Project area) were searched for the Project area and surrounds (**Appendix A** and **B**). In addition, the following statutory mapping for the Project area was reviewed in order to build a picture of the distribution of ecological values across the Project area:

- Detailed Surface Geology 1:250,000 (DNR 2015) (**Figure 3.1**); and
- DES's VM Act Regional Ecosystem and Remnant Mapping-Version 11 (**Figure 3.2**).

The results of database and mapping searches were used to inform the field investigation and target species listed under the EPBC Act and/or NC Act. Information gained from this phase of the study has been used to:

- Identify communities and species of significance known from the locality;
- Determine which species of significance are most likely to occur if suitable habitat is located within the Project area. Those species that are known from nearby records and State mapping are considered more likely to occur if suitable habitat is located; and
- Identify significant areas and planning constraints associated with statutory mapping within the Project area.

A desktop database review of existing ecological information was carried out prior to the fieldworks. The results of these searches build up a picture of the species and communities considered under threat that may possibly occur within the locality. Detailed expert profiling of the species and communities is used to assess the likelihood of occurrence of these species within the Project area and likely habitats in which they may occur. This work was used to focus survey efforts and develop field work programs.

2.3 Field Assessments

Ecological surveys using the methods detailed above, were undertaken between 27 August – 1 September 2020. The location of field survey sites are given in **Appendix C** and field data sheets are presented in **Appendix D**.

2.3.1 Nomenclature and taxonomy

Scientific names of flora cited in this report follow Bostock and Holland (2018). Common names for plants are used where helpful and are cited before the scientific name where they are used.

Fauna nomenclature follows the International Ornithological Committee checklist (for birds) and DEHP's WildNet database taxonomy (for all other fauna), unless otherwise noted. Some notable references include; Churchill (2008), Debus (2012), Van dyck et al., (2013), Cogger (2000), Crome and Shields (1992), Marchant and Higgins (1993), Menkhorst and Knight (2004), Pizzey and Knight (2012), Wilson (2015).

0 0.15 0.3 0.6 0.9 1.2 Kilometers

N

LEGEND

Project_area

FIGURE 1.1: Site Location and Project Area Boundary

Springwater Irrigation Area and Water Pipeline Ecological Assessment

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3.0 Results

The results of this report are based on a combination of desktop and site investigations as detailed in Section 2.0, above. Desktop surveys were used to highlight the potential ecological values that may be present within the Project area. These surveys included the integration of current high-quality aerial photography, State regional ecosystem mapping, watercourse, essential habitat and preclearance regional ecosystem mapping to gain an understanding of the likely constraints to gas infrastructure location. These spatially explicit data were loaded into hand-held GPS and tablets to inform field surveys.

3.1 Desktop Results

3.1.1 Threatened Flora Species

Interrogation of the WildNet and Protected Matters databases (20km radius) revealed the possible presence of 10 threatened flora species. The Protected Plants Flora Survey trigger map does not show any areas with a High Risk of containing an EVNT species. Habitat modelling for the threatened species that may possibly occur within the area revealed that the Project area does not provide good quality habitat for any of the species listed.

Table 3.2: Potential a significant impact on listed flora species.

Species	Status		Habitat Preference	Likelihood of Occurrence
	NC Act (1992)	EPBC Act (1999)		
Tylophora linearis (P)	E	E	Found in dry scrublands, open forests and woodlands in association with Broombush (*Melaleuca uncinata*), Broad-leaved Red Ironbark (*Eucalyptus fibrosa*), Grey Ironbark (*E. sideroxylon*), White Box (*E. albens*), Black Cypress Pine (*Callitris endlicheri*), White Cypress Pine (*C. glaucophylla*), Bulloak (*Allocasuarina luehmannii*), Hakea Wattle (*Acacia hakeoides*), Striped Wattle (*A. lineata*), Myoporums (*Myoporum* spp.) and She-oaks (*Casuarina* spp.) at low altitudes and on sedimentary flats.	**Low potential to occur** Marginal habitat for this species occurs within the Project area
Bertya opponens (W/P)	C	V	Found in a broad range of communities including mixed	**Low potential to occur**

Species	Status		Habitat Preference	Likelihood of Occurrence
	NC Act (1992)	EPBC Act (1999)		
			shrublands, Lancewood (*Acacia shirleyi*) woodlands, mallee, Eucalyptus - Acacia open forests with shrubby understorey, Eucalyptus – Callitris open woodlands and semi-evergreen vine thickets, in shallow red soils	Marginal habitat for this species occurs within the Project area
Acacia calanthe (W)	NT		Grows in sand to sandy-clay soil on the lower slopes of steep sandstone hills in dry sclerophyll forest and open forest. Associated with *Corymbia trachyphloia*, *C. maculata*, *Eucalyptus cloeziana*, *E. tenuipes*, *E. crebra*, *E. corynodes*, *C. citriodora*, *C. tessellaris*, *E. fibrosa*, *C. watsoniana*, *Lysicarpus angustifolius*, *Angophora leiocarpa*, *Acacia podalyriifolia*, *Acacia crassa*, *Acacia juncifolia*, *A. caroleae* and *Astrotricha biddulphiana* (Queensland Herbarium 2011).	**Low potential to occur** Marginal habitat for this species occurs within the Project area
Acacia islana (W)	V		Grows on shallow, sandy soil over sandstone. often in open woodlands on sandstone ridgetops or gullies.	**Low potential to occur** Marginal habitat for this species occurs within the Project area
Acacia spania (W)	NT		Grows mostly on rocky sandstone ridges and hills in sandy to loamy soils in eucalypt or Acacia dominated woodland communities.	**Low potential to occur** Marginal habitat for this species occurs within the Project area
Melaleuca irbyana (W)	E		Open eucalypt forest in poorly drained, usually clay, soils RE 11.9.5	**Very Low potential to occur** Small areas of marginal habitat for this species

Species	Status		Habitat Preference	Likelihood of Occurrence
	NC Act (1992)	EPBC Act (1999)		
				occurs within the Project area
Sannantha brachypoda (W)	V		Woodland habitat on sandstone ridges	**Low potential to occur** Marginal habitat for this species occurs within the Project area
Arthraxon hispidus Hairy-joint grass (P)		V	Grows in rainforest and riparian areas.	**Very low potential to occur** Small areas of marginal habitat for this species occurs within the Project area
Eucalyptus beaniana (P)		V	Found in woodlands in shallow, sandy soils on quartzose sandstone ridges	**Low potential to occur** Marginal habitat for this species occurs within the Project area
Xerothamnella herbacea		E	Found in Brigalow (Acacia harpophylla) dominated communities in shaded situations, often in leaf litter and in association with gilgais, on heavy, grey to dark brown clay soils.	**Low potential to occur** Marginal habitat for this species occurs within the Project area

W = WildNet, P = Protected Matters search

3.1.2 Threatened Fauna Species

Interrogation of the WildNet and Protected Matters databases (20 km radius) revealed the possible presence of 21 threatened fauna species, including 8 birds, 6 mammals and 7 reptiles. Habitat modelling for the threatened species that may possibly occur within the area revealed that the Project area provides potential habitat for:

- Red goshawk *Erythrotriorchis radiatus*;
- Squatter Pigeon - southern subspecies (*Geophaps scripta scripta*);
- Short-beaked echidna *Tachyglossus aculeatus*;
- South-eastern Long-eared Bat *Nyctophilus corbeni*;
- Collared Delma *Delma torquata*;
- Dunmall's Snake *Furina dunmalli*;
- Golden-tailed gecko *Strophurus taenicauda*; and
- Yakka Skink *Egernia rugosa.*

Of these species only the Squatter Pigeon, Short-beaked echidna and Golden-tailed gecko have been previously recorded within the vicinity.

Table 3.1: Potential a significant impact on listed fauna species.

Species	Status*		Habitat preference	Likelihood of occurrence
	NC Act	EPBC Act		
Birds				
Australian painted snipe (*Rostratula australis*) (P)	V	V	The Australian Painted Snipe is a secretive, cryptic, crepuscular species that occurs in terrestrial shallow wetlands, both ephemeral and permanent, usually freshwater but occasionally brackish.	**Unlikely to occur** There is no suitable habitat for this species within the survey area. (No database records, predicted to occur on EPBC search tool)
Falco hypoleucos Grey Falcon (P)		V	Usually confined to the arid inland. It inhabits Triodia grassland, Acacia shrubland, and lightly timbered arid woodland	**Unlikely to occur** No habitat for this species is present or close to the site. (No database records, predicted to occur on EPBC search tool)
glossy black-cockatoo (eastern) *Calyptorhynchus lathami lathami* (W)	V		Woodland dominated by Allocasuarina and in open forests. Often confined to remnant Allocasuarina patches surrounded by cleared farmlands.	**Unlikely to occur** Food trees for this species are rare within the project area

Species	Status*		Habitat preference	Likelihood of occurrence
	NC Act	EPBC Act		
Painted Honeyeater *Grantiella picta* (P)		V	Inhabits Boree/ Weeping Myall (*Acacia pendula*), Brigalow (*A. harpophylla*) and Box-Gum Woodlands and Box-Ironbark Forests. A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus Amyema.	**Unlikely to occur** Very small areas of brigalow occur within the Project area, however mistletoes were rare. (No database records, predicted to occur on EPBC search tool)
Star Finch (eastern)(southern) *Neochmia ruficauda ruficauda* (P)		E	The Star Finch occurs mainly in grasslands and grassy woodlands that are located close to bodies of fresh water. It also occurs in cleared or suburban areas such as along roadsides and in towns.	**Unlikely to occur** The presence of native grasses is very limited within the Project area. (No database records, predicted to occur on EPBC search tool)
Red goshawk *Erythrotriorchis radiatus* (P)	E	V	Occurs in woodlands and forests of tropical and warm temperate Australia. It requires large home ranges preferring mosaic habitats that hold a large population of birds and permanent water.	**Possibility of occurrence** Foraging habitat for this species occurs within the Project area This is an extremely uncommon species with only a low possibility to occur in the area. (No database records, predicted to occur on EPBC search tool)
Squatter Pigeon - southern subspecies *Geophaps scripta scripta* (W/P)	V	V	Dry grassy eucalypt woodlands and open forests, also Callitris and Acacia woodlands. Most birds live in sandy sites near permanent water (Frith, 1982; Blakers et al., 1984; and Crome and Shields, 1992). Often observed at cattle yards, dirt tracks and other disturbed areas.	**Possibility of occurrence** There is permanent water available in nearby dams. Habitat suitable for this species is likely to occur across much of the Project area.
white-throated needletail *Hirundapus caudacutus* (W/P)	V	V	Almost exclusively aerial; over a wide variety of habitats.	**Potential fly over**
Mammals				

Species	Status*		Habitat preference	Likelihood of occurrence
	NC Act	EPBC Act		
Greater Glider *Petauroides Volans* (P)	V	V	Wide range of habitats including tall open woodland, eucalypt forests and low woodlands. They do not occur in rainforests. They prefer habitats that are in older forests and have large number of hollows.	**Unlikely to occur** The wooded habitats of the project area do not contain a sufficient density of large hollows to support this species. (No database records, predicted to occur on EPBC search tool)
Koala *Phascolarctos cinereus* (P)	V	V	This species requires eucalypt woodland and forest habitat with suitable food trees (primarily Eucalyptus spp.). Woodlands containing food trees in riparian/alluvial areas are particularly favoured (Melzer et al. 2014). Potential food trees occurring within the Project area include *Eucalyptus tereticornis, E. camaldulensis, E. populnea, E. melanophloia, E. orgadophila* and *E. crebra*.	**Unlikely to Occur** Low quality food trees are sparsely scattered within the remnant vegetation of the project and provide poor quality habitat for this species. (No database records, predicted to occur on EPBC search tool)
Large-eared pied bat *Chalinolobus dwyeri* (P)	V	V	In southern Queensland, this species is associated with higher altitude moist forests and adjacent rainforest	**Unlikely to occur** Low quality habitat for this species occurs in the wooded communities of the Project area There are no significant ranges close to the survey area and it is considered unlikely that this species would occur. (No database records, predicted to occur on EPBC search tool)

Species	Status*		Habitat preference	Likelihood of occurrence
	NC Act	EPBC Act		
Northern quoll *Dasyurus hallucatus* (P)	LC	E	This mammal occurs in a range of habitats but is most abundant in hilly or rocky areas close to permanent water.	**Unlikely to occur** There is very low quality habitat for this species occurs in the wooded communities. There are no significant ranges close to the survey area and it is considered unlikely that this species would occur. (No database records, predicted to occur on EPBC search tool)
short-beaked echidna *Tachyglossus aculeatus* (W)	SL		Lives in forests and woodlands, heath, grasslands and arid environments.	**Possibility of occurrence** Foraging habitat for this species occurs within the Project area
South-eastern Long-eared Bat *Nyctophilus corbeni* (P)	V	V	Occurs in a variety of dry forest habitats including River Red Gum, open woodland, mallee, brigalow and other arid and semi-arid habitats. The preferred habitat is mallee and Callitris woodlands (Pennay et al., 2011), and habitats that have a distinct canopy with a dense, cluttered understorey (Turbill and Ellis, 2006). It roosts in tree hollows or under bark (NSW NPWS, 2003). Surveys suggest the species requires large tracts of forest to occur (Turbill et al., 2008).	**Possibility of occurrence** Habitat for this species occurs within the remnant vegetation of the Project area. There is a paucity of hollow bearing trees within the Project area and the vegetation communities of the disturbance area represent foraging habitat only for this species. (No database records, predicted to occur on EPBC search tool)
Reptiles				

Species	Status*		Habitat preference	Likelihood of occurrence
	NC Act	EPBC Act		
Collared Delma *Delma torquate* (P)	V	V	Occupies a range of eucalypt woodlands and open forests; lives under surface rock and large woody debris (Wilson 2015). The Project area is within the species' known range with several records from locations north-west of Roma	**Possibility of Occurrence** Low quality habitat for this species occurs in the wooded communities on Project area. The absence of surface rock and low quantities of fallen woody material make habitat quality for this species very low. (No database records, predicted to occur on EPBC search tool)
Dunmall's Snake *Furina dunmalli* (P)	V	V	Rarely encountered. Occurs in a variety of habitats including forests to woodlands (including Callitris species) on sandy soils, cracking clay soils with Brigalow scrub, and dry vine scrub. Occurs in the Brigalow Belt in southeast inland Queensland.	**Possibility of Occurrence** The species is little known and appears to have broad habitat requirements that includes fallen woody material for shelter. (No database records, predicted to occur on EPBC search tool)
Fitzroy River turtle *Rheodytes leukops* (W/P)	V	V	Aquatic species showing a clear preference for fast flowing water (near sand banks for egg laying) with a preferred substratum as coarse river sand and gravel.	**Will not occur** No habitat for this species is present or close to the site
Golden-tailed gecko *Strophurus taenicauda* (W)	NT		open woodland and open forest where it shelters under loose bark and hollow limbs.	**Possibility of occurrence** Foraging and roosting habitat for this species occurs within the Project area, particularly under the loose bark associated with Callitris trees
southern snapping turtle *Elseya albagula* (W/P)	CR	CE	Aquatic species, prefers permanent flowing water habitats where there are suitable shelters and refuges (e.g. fallen trees).	**Will not occur** No habitat for this species is present or close to the site

Species	Status*		Habitat preference	Likelihood of occurrence
	NC Act	EPBC Act		
Woma *Aspidites ramsayi* (W)	NT		In the Brigalow Belt region, this species occurs on black soils and in stony ridge country in brigalow Acacia harpophylla woodland and grasslands.	**Very low possibility of occurrence** Very small areas of foraging habitat for this species occurs within the brigalow communities of the Project area
Yakka Skink *Egernia rugosa* (P)	V	V	Lives in a range of woodland and open forests dominated by Eucalyptus, Acacia and Callitris spp.; also grassland with regrowth trees. Requires suitable soils for burrows or shelters in sinkholes, abandoned rabbit warrens or large fallen/piled woody material	**Possibility of occurrence** Low quality habitat for this species occurs in the wooded communities. Soil types are suitable for this species, however there is a paucity of fallen woody material making habitat quality low. (No database records, predicted to occur on EPBC search tool)

W = WildNet, P = Protected Matters search.

3.1.3 Geology

The Detailed surface geology – Queensland (2015) spatial database mapping layer (**Figure 3.1**) identifies the study area as being dominated by large grained lithic sandstones overlaying fine-grained lithic sandstones. The more resistant large-grained sandstones are characterised by low hills and plateaus with deep sandy surfaces (land zone 10) and the underlying geology gives rise to valley bottoms that support deep sandy clays (land zone 9) (**Tables 3.1**).

Table 3.1: Major geology units mapped from the Survey area (source: Detailed surface geology – Queensland, 2015)

Map Symbol/Name	Age	Lithology Description	Land Zone
Jev/b	JURASSIC	Fine to medium-grained quartzose sandstone; fossil wood	9
Jew	JURASSIC	Fine lithic sandstone, siltstone, mudstone, concretionary ironstone oolitic in part	9
Je	EARLY JURASSIC	Labile and sublabile, fine to medium-grained sandstone, carbonaceous mudstone, siltstone and minor coal; local oolitic ironstone	9
Jh	MIDDLE JURASSIC	Pale brown to pale grey, poorly sorted, medium-grained, feldspathic sublabile sandstone (at base) and fine-grained, well-sorted quartzose sandstone (at top); minor dark grey carbonaceous siltstone, mudstone and rare pebble conglomerate	10

3.1.4 Regional Ecosystem Distribution

The distribution of remnant (VM Act) regional ecosystems as mapped by the Queensland Herbarium (V10.1) at a scale of 1:100,000 is shown in **Figure 3.2**. Descriptions from the Regional Ecosystem Description Database (REDD) (version 11) for these regional ecosystems are presented in **Table 3.2.**

The Herbarium 1:100,000 regional ecosystem maps the extant remnant vegetation within the Project area as a mosaic of eucalypt dominated woodlands on sand soils (REs 11.10.7 and RE 11.10.1) and woodlands dominated by white cypress (RE 11.10.9) with very minor sub-dominant occurrences of semi-evergreen vine thicket as part of some heterogenous polygons. There are large areas of non-remnant grazing lands mapped along the alignment.

Table 3.2: State Mapped Regional Ecosystems within the Project Area

RE	Biodiversity status	Description	Area
11.10.1	NCP	*Corymbia citriodora* predominates and forms a distinct but discontinuous woodland (to open forest) canopy (20-30m high). On rocky slopes, *Eucalyptus crebra* and *C. hendersonii* may be scattered throughout the canopy or locally abundant. On flats and footslopes, scattered *E. crebra*, *C. clarksoniana* and *C. tessellaris* may occur. *Corymbia trachyphloia* and *E. cloeziana* often occur on crests and plateaus while *E. apothalassica* and *E. longirostrata* sometimes occur in moister microhabitats. Scattered tall to low shrubs, such as *Acacia leiocalyx*, *Acacia* spp., *Bursaria spinosa* subsp. *spinosa*, *Persoonia falcata*, *Alphitonia excelsa*, *Petalostigma pubescens* and *Xanthorrhoea johnsonii* are usually present and sometimes form a conspicuous layer. The ground layer varies from sparse to moderately dense (depending on the rockiness) and is dominated by perennial grasses. Occurs on hills and ranges, particularly on colluvial lower slopes, formed from medium to coarse-grained sediments (usually sandstone). Associated soils are often texture contrast with a thin sandy or loamy surface horizon and some uniform sandy and lithosol soils. (BVG1M: 10a)	5.31
11.10.7	NCP	*Eucalyptus crebra* and/or *E. melanophloia* +/- *E. populnea* shrubby woodland. *Eucalyptus melanophloia* and/or *E. crebra* predominate and form a distinct but open canopy. *E. populnea* is commonly present and may be locally dominant particularly on lower slopes. A low tree to tall shrub layer usually dominated by a range of species including *Eremophila mitchellii*, *Acacia decora*, *A. longispicata* spp. *longispicata* and *A. excelsa* is present. A low shrub layer with Petalostigma pubescens and other species is formed in places. The ground layer is variable in cover and composition, but composed mainly of grasses. Occurs on the lower slopes of scarp retreats, associated with dissected tablelands. Associated soils are generally moderately deep, acidic, sandy, yellow earths and sandy-surfaced texture contrast soils formed from medium to coarse-grained sediments. (BVG1M: 12a)	7.08
11.10.8	OC	Semi-evergreen vine thicket and microphyll rainforest. Occurs on medium to coarse-grained sediments that may be subject to local enrichment from adjacent rocks such as basalt as well as seepage. (BVG1M: 7a)	5.31
11.10.9	NCP	*Callitris glaucophylla* woodland to open forest often associated with *Eucalyptus melanophloia* in the tree canopy and a sparse ground layer. Various other tree species may be present including *Corymbia clarksoniana*, *Eucalyptus populnea*, *C. tessellaris*, *E. chloroclada* and *Angophora leiocarpa* which may form a mono-specific open woodland in places. Low trees such as *Allocasuarina luehmannii*, *Alphitonia excelsa*, *Lysicarpus angustifolius*, *Geijera parviflora* and *Acacia* spp. Sometimes conspicuous in mid low tree to tall shrub layer. The ground layer	11.81

RE	Biodiversity status	Description	Area
		is often sparse and dominated by grasses such as *Aristida echinata*, *A. jerichoensis*, *A. caput-medusae*, *Bothriochloa decipiens*, *Eriachne mucronata*, *Enneapogon* spp. And sometimes *Triodia mitchellii*. Occurs on deep uniform sandy and deep texture contrast soils on course grained sediments. (BVG1M: 20a)	
Non-rem			72.51

NCP = no concern at present, OC = Of concern

3.1.5 Essential Habitat

There is no essential habitat mapped within the Project area.

3.1.6 Threatened Ecological Communities

There are five Threatened Ecological Communities (TEC) predicted to occur within the Project area:

- Brigalow (*Acacia harpophylla* dominant and codominant)
- Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions
- Poplar Box Grassy Woodland on Alluvial Plains
- Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions
- Weeping Myall Woodlands

3.2 Field Results

Field results are based on surveys carried out 27 August – 1 September 2020 by Donovan Sharp and Heath Agnew.

3.2.1 Field Mapped Regional Ecosystems

The remnant regional ecosystems within the Project area are dominated by Poplar box *Eucalyptus populnea* dominated woodlands with a subcanopy characterised by the presence of white cypress *Callitris glaucophylla* (RE 11.10.11). In minor areas where White cypress dominates the woodlands these areas have been mapped as RE 11.10.9. One patch of Brigalow *Acacia harpophylla* dominated open forest occurs within the Project area. This minor occurrence is less than 0.5 ha but is intimately connected to a larger patch of RE 11.9.5 outside of the Project area and has therefore been mapped at the Project scale.

Table 3.3: Field Mapped Regional Ecosystems within the Project Area

RE	Biodiversity status	Description	Area
11.9.5	E	Open forest dominated by *Acacia harpophylla* and/or *Casuarina cristata* (10-20m) or *Acacia harpophylla* with a semi-evergreen vine thicket understorey. Open forest dominated by *C. cristata* is more common in southern parts of the bioregion. A prominent low tree or tall shrub layer dominated by species such as *Geijera parviflora* and *Eremophila mitchellii*, and often with semi-evergreen vine thicket species is often present. The latter include *Flindersia dissosperma*, *Brachychiton rupestris*, *Excoecaria dallachyana*, *Macropteranthes leichhardtii* and *Acalypha eremorum* in eastern areas, and species such as *Carissa ovata*, *Owenia acidula*, *Croton insularis*, *Denhamia oleaster* and *Notelaea microcarpa* in south-western areas. *Melaleuca bracteata* may be present along watercourses. Occurs on fine-grained sediments. The topography includes gently undulating plains, valley floors and undulating footslopes and rarely on low hills. The soils are generally deep texture-contrast and cracking clays. The cracking clays are usually black or grey to brown or reddish-brown in colour, often self-mulching and sometimes with gilgai microrelief in flatter areas. Some texture contrast soils are shallow to only moderately deep. (BVG1M: 25a)	2.15
11.9.10	E	Eucalyptus populnea predominates forming a distinct but discontinuous canopy (15-18 m tall). Acacia harpophylla and sometimes Casuarina cristata usually forms a lower tree layer (8-14 m tall) which occasionally becomes the dominant layer. An open to moderately dense layer of tall shrubs is usually present and dominated by Eremophila mitchellii and Geijera parviflora with Acacia excelsa, Atalaya hemiglauca, Psydrax oleifolia, Alectryon oleifolius frequent. Scattered low shrubs such as Carissa ovata and Eremophila deserti are frequently present. The ground cover is usually sparse, and dominated by the grasses Aristida ramosa, Enteropogon acicularis, Bothriochloa decipiens and Paspalidium spp. Occurs on Cainozoic to Proterozoic consolidated, fine-grained sediments. Occurs on lower parts of undulating plains often with deep texture-contrast soils. Occurs	2.95

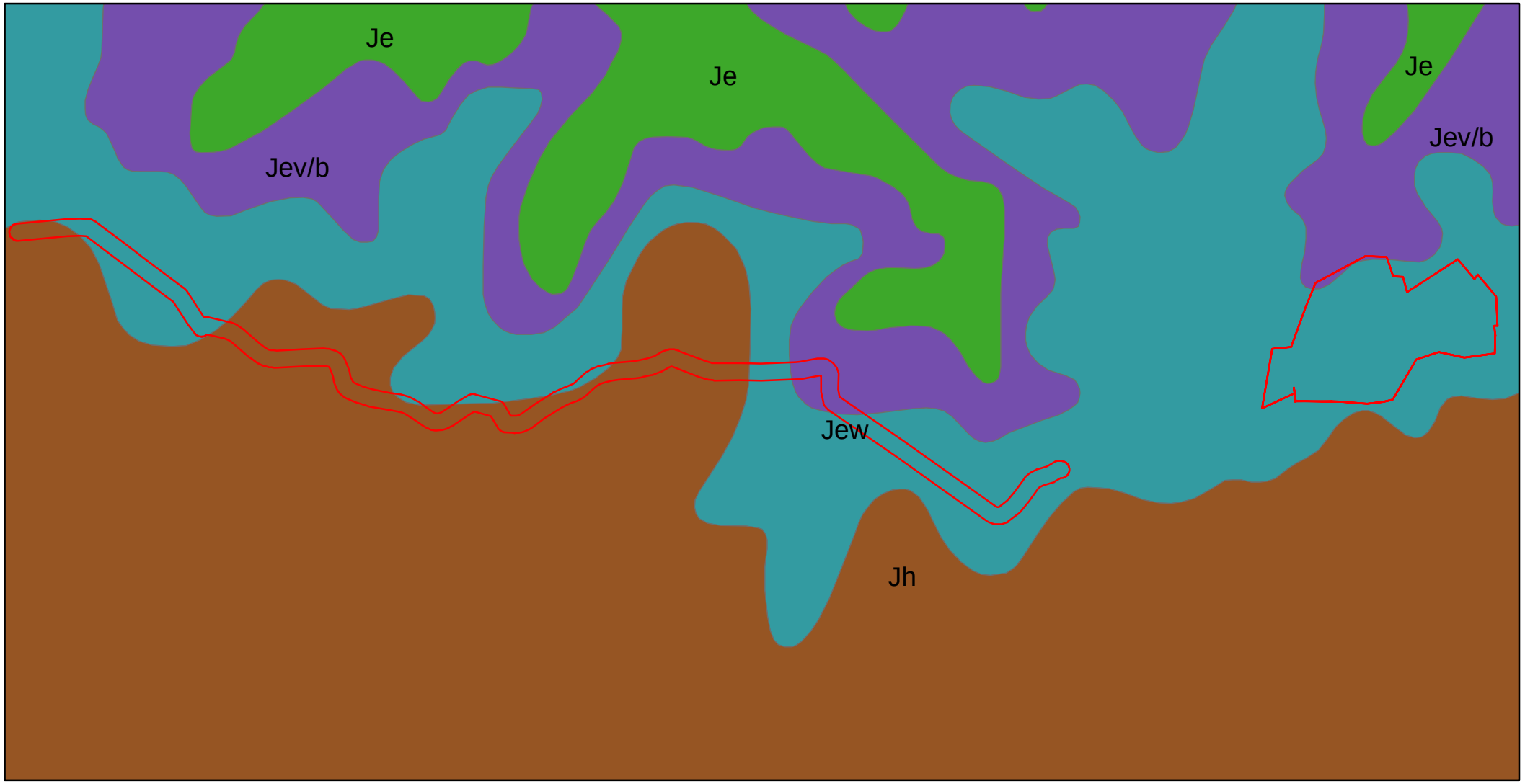
RE	Biodiversity status	Description	Area
		on sodic and saline soils which may act as a discharge area if adjacent to alluvium.	
11.10.9	NCP	*Callitris glaucophylla* woodland to open forest often associated with *Eucalyptus melanophloia* in the tree canopy and a sparse ground layer. Various other tree species may be present including *Corymbia clarksoniana*, *Eucalyptus populnea*, *C. tessellaris*, *E. chloroclada* and *Angophora leiocarpa* which may form a mono-specific open woodland in places. Low trees such as *Allocasuarina luehmannii*, *Alphitonia excelsa*, *Lysicarpus angustifolius*, *Geijera parviflora* and *Acacia* spp. Sometimes conspicuous in mid low tree to tall shrub layer. The ground layer is often sparse and dominated by grasses such as *Aristida echinata*, *A. jerichoensis*, *A. caput-medusae*, *Bothriochloa decipiens*, *Eriachne mucronata*, *Enneapogon* spp. And sometimes *Triodia mitchellii*. Occurs on deep uniform sandy and deep texture contrast soils on course grained sediments. (BVG1M: 20a)	1.83
11.10.11	NCP	*Eucalyptus populnea* predominates forming a discontinuous canopy (13-18 m high). *E. melanophloia* is often present in the canopy, and occasionally *E. chloroclada* trees occur. *Eucalyptus moluccana* or *E. microcarpa* may dominate localised areas. *Callitris glaucophylla* forms a lower tree layer (10-13 m tall) of varying density. Allocasuarina luehmannii is prominent in this layer in places. A tall shrub layer is developed in some stands. Dense patches of low shrubs occur in some stands. The ground cover is usually sparse and dominated by the perennial grasses, *Bothriochloa decipiens* and *Aristida* spp. Occurs on undulating to rolling hills. The soils are predominantly deep texture contrast soils with sandy surface horizons (up to 70 cms deep), over strongly alkaline to acidic, yellow clayey subsoils. (BVG1M: 17a)	16.90
Non-rem			124.76

3.2.2 Threatened Species

No threatened flora or fauna species listed under the Nature Conservation Act (1992) or the Environment Protection and Biodiversity Conservation Act (1999) were found within the Project area. It is unlikely that any threatened flora species occur within the Project area whilst habitat for the Squatter Pigeon - southern subspecies, Short-beaked echidna and Golden-tailed gecko was found to be present.

3.2.3 Threatened Ecological Communities

The TEC, Brigalow (*Acacia harpophylla* dominant and codominant) as defined by the presence of RE 11.9.5 was mapped within the Project area (**Figure 3.3**). The first area on the alignment has an area of this patch is less than the 0.5ha threshold for mapping TECs, however it is part of a large area of RE 11.9.5 that extends outside of the Project area and has therefore been included as the TEC. The second area occurs within the pivot irrigation area. No other TECs occur within or adjacent to the Project area.



LEGEND

- Project area
- Boxvale Sandstone Member
- Evergreen Formation
- Hutton Sandstone
- Westgrove Ironstone Member

FIGURE 3.1: State Detailed Surface Geological Mapping

Springwater Irrigation Area and Water Pipeline Ecological Assessment

Created AD 15/09/2020
Job No. 0223

terrestria ECOLOGICAL MANAGEMENT

LEGEND

- Project area
- 11.10.7/11.10.1/11.10.8
- 11.10.7a
- 11.10.8/11.10.7a/11.10.9
- 11.10.9
- 11.9.7a/11.9.5a
- non-rem

FIGURE 3.2: State Regional Ecosystem Mapping

Springwater Irrigation Area and Water Pipeline Ecological Assessment

Created AD 15/09/2020
Job No. 0223

terrestria ECOLOGICAL MANAGEMENT

0 0.15 0.3 0.6 0.9 1.2 Kilometers

N

LEGEND

- 11.10.11
- 11.10.9
- 11.9.10
- 11.9.5
- non-rem
- Threatened Ecological Community

FIGURE 3.3: Field Validated Regional Ecosystem Mapping

Springwater Irrigation Area and Water Pipeline Ecological Assessment

Created AD 15/09/2020
Job No. 0223

terrestria ECOLOGICAL MANAGEMENT

3.3 Discussion

The survey area has been heavily grazed by cattle and historically cleared. Most of the timbered areas were covered by remnant woodland regional ecosystems with a No concern at present Biodiversity Status. There is one small patch of endangered RE 11.9.5 which also qualifies as a Threatened Ecological Community within the pipeline alignment and one small patch within the irrigation area. The endangered (biodiversity status) RE 11.9.10 occurs in the westernmost end of the pipeline alignment The changes in mapped regional ecosystem areas between the State 1:100,000 mapping and the field 1:10,000 mapping are given in **Table 4.1**, below.

No threatened flora species were found and habitat for threatened flora species was found to be very poor. The likelihood of any threatened flora species remaining undetected within the Project area is very low.

The whole Project area provides habitat for Squatter Pigeon - southern subspecies (*Geophaps scripta scripta*) whilst the timbered areas provide foraging habitat for the South-eastern Long-eared Bat (*Nyctophilus corbeni*), Red goshawk Erythrotriorchis radiatus, Short-beaked echidna *Tachyglossus aculeatus, a*nd general habitat for Collared Delma *Delma torquata*, Dunmall's Snake *Furina dunmalli,* Golden-tailed gecko *Strophurus taenicauda* and Yakka Skink *Egernia rugosa*.

Table 4.1: Change in Mapped Area of Regional Ecosystems within the Project Area

RE	Biodiversity status	State Mapped Area (ha)	Project Mapped Area (ha)
11.10.1	NCP	5.31	
11.10.7	NCP	7.08	
11.10.8	OC	5.31	
11.10.9	NCP	11.81	1.83
11.10.11	NCP		16.90
11.9.5	E		2.15
11.9.10	E		2.95
Non-rem		72.51	124.76

3.4 References

Significant Impact Guidelines, (2013). *Matters of National Environmental Significance; Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999*. Australian Department of Environment.

Appendix A

WildNet Database Search Results

Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Status: All
Records: All
Date: All
Latitude: -25.764
Longitude: 149.012
Distance: 20
Email: adaniel@terrestria.com.au
Date submitted: Tuesday 15 Sep 2020 10:09:15
Date extracted: Tuesday 15 Sep 2020 10:10:05

The number of records retrieved = 625

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			1
animals	amphibians	Hylidae	*Litoria peronii*	emerald spotted treefrog		C		3/3
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		4/4
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		18/7
animals	amphibians	Hylidae	*Cyclorana verrucosa*	rough collared frog		C		1/1
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		8/6
animals	amphibians	Hylidae	*Cyclorana alboguttata*	greenstripe frog		C		2/2
animals	amphibians	Hylidae	*Cyclorana novaehollandiae*	eastern snapping frog		C		3/2
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		6/6
animals	amphibians	Hylidae	*Cyclorana brevipes*	superb collared frog		C		1/1
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		37/31
animals	amphibians	Limnodynastidae	*Limnodynastes terraereginae*	scarlet sided pobblebonk		C		5/2
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		10/7
animals	amphibians	Limnodynastidae	*Limnodynastes fletcheri*	barking frog		C		6/6
animals	amphibians	Limnodynastidae	*Limnodynastes salmini*	salmon striped frog		C		1
animals	amphibians	Myobatrachidae	*Uperoleia rugosa*	chubby gungan		C		5
animals	amphibians	Myobatrachidae	*Crinia parinsignifera*	beeping froglet		C		1
animals	amphibians	Myobatrachidae	*Uperoleia laevigata*	eastern gungan		C		4/4
animals	amphibians	Myobatrachidae	*Pseudophryne major*	great brown broodfrog		C		10/9
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		3/2
animals	birds	Acanthizidae	*Sericornis frontalis*	white-browed scrubwren		C		2
animals	birds	Acanthizidae	*Pyrrholaemus sagittatus*	speckled warbler		C		2
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		5/2
animals	birds	Acanthizidae	*Gerygone olivacea*	white-throated gerygone		C		1
animals	birds	Acanthizidae	*Acanthiza pusilla*	brown thornbill		C		1
animals	birds	Acanthizidae	*Gerygone fusca*	western gerygone		C		1
animals	birds	Acanthizidae	*Acanthiza nana*	yellow thornbill		C		1
animals	birds	Acanthizidae	*Acanthiza apicalis*	inland thornbill		C		3/3
animals	birds	Accipitridae	*Accipiter cirrocephalus*	collared sparrowhawk		C		1
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		4
animals	birds	Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar		C		3
animals	birds	Anatidae	*Anas gracilis*	grey teal		C		1
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		1
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		3
animals	birds	Apodidae	*Hirundapus caudacutus*	white-throated needletail		V	V	1
animals	birds	Ardeidae	*Ardea intermedia*	intermediate egret		C		1
animals	birds	Ardeidae	*Ardea alba modesta*	eastern great egret		C		2
animals	birds	Ardeidae	*Ardea pacifica*	white-necked heron		C		2
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		3
animals	birds	Artamidae	*Artamus cinereus*	black-faced woodswallow		C		1
animals	birds	Artamidae	*Gymnorhina tibicen*	Australian magpie		C		5
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		8
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		6
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		3
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		3
animals	birds	Cacatuidae	*Eolophus roseicapilla*	galah		C		3

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Cacatuidae	*Nymphicus hollandicus*	cockatiel		C		2
animals	birds	Cacatuidae	*Calyptorhynchus funereus*	yellow-tailed black-cockatoo		C		1
animals	birds	Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo (eastern)		V		1
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		5
animals	birds	Campephagidae	*Coracina tenuirostris*	cicadabird		C		2
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		1
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		1
animals	birds	Campephagidae	*Lalage tricolor*	white-winged triller		C		1
animals	birds	Casuariidae	*Dromaius novaehollandiae*	emu		C		3
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		2
animals	birds	Climacteridae	*Cormobates leucophaea*	white-throated treecreeper		C		2
animals	birds	Climacteridae	*Cormobates leucophaea metastasis*	white-throated treecreeper (southern)		C		2
animals	birds	Columbidae	*Geophaps scripta scripta*	squatter pigeon (southern subspecies)		V	V	2
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		3
animals	birds	Columbidae	*Geopelia striata*	peaceful dove		C		4/2
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		4
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		1
animals	birds	Columbidae	*Leucosarcia melanoleuca*	wonga pigeon		C		1
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		1
animals	birds	Corcoracidae	*Struthidea cinerea*	apostlebird		C		6
animals	birds	Corcoracidae	*Corcorax melanorhamphos*	white-winged chough		C		1
animals	birds	Corvidae	*Corvus coronoides*	Australian raven		C		6
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		4
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		2
animals	birds	Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo		C		2/1
animals	birds	Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo		C		1
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		1
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		4
animals	birds	Estrildidae	*Stagonopleura guttata*	diamond firetail		C		1/1
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		1
animals	birds	Falconidae	*Falco berigora*	brown falcon		C		1
animals	birds	Gruidae	*Antigone rubicunda*	brolga		C		1
animals	birds	Halcyonidae	*Dacelo leachii*	blue-winged kookaburra		C		1
animals	birds	Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra		C		5
animals	birds	Halcyonidae	*Todiramphus sanctus*	sacred kingfisher		C		1
animals	birds	Halcyonidae	*Todiramphus pyrrhopygius*	red-backed kingfisher		C		1
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		1
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		1
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		1
animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		1
animals	birds	Meliphagidae	*Nesoptilotis leucotis*	white-eared honeyeater		C		6/2
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		2/1
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		1
animals	birds	Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater		C		2
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		1
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		1
animals	birds	Meliphagidae	*Melithreptus gularis*	black-chinned honeyeater		C		1
animals	birds	Meliphagidae	*Melithreptus lunatus*	white-naped honeyeater		C		2
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		3
animals	birds	Meliphagidae	*Ptilotula penicillata*	white-plumed honeyeater		C		1
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		7
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		1
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		1
animals	birds	Meliphagidae	*Acanthagenys rufogularis*	spiny-cheeked honeyeater		C		1
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		1
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		1
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		4
animals	birds	Nectariniidae	*Dicaeum hirundinaceum*	mistletoebird		C		3
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		1/1
animals	birds	Otididae	*Ardeotis australis*	Australian bustard		C		1
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		4/1
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		4/1
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		1
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		8/2
animals	birds	Pardalotidae	*Pardalotus punctatus*	spotted pardalote		C		3/2
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		3/1
animals	birds	Petroicidae	*Petroica goodenovii*	red-capped robin		C		1/1
animals	birds	Petroicidae	*Petroica rosea*	rose robin		C		1
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		4/3
animals	birds	Phasianidae	*Coturnix ypsilophora*	brown quail		C		1
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		1
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		5
animals	birds	Psittacidae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet		C		4
animals	birds	Psittacidae	*Platycercus adscitus*	pale-headed rosella		C		6
animals	birds	Psittacidae	*Alisterus scapularis*	Australian king-parrot		C		2
animals	birds	Psittacidae	*Parvipsitta pusilla*	little lorikeet		C		1
animals	birds	Psittacidae	*Psephotus haematonotus*	red-rumped parrot		C		1
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		1
animals	birds	Rallidae	*Porphyrio melanotus*	purple swamphen		C		1
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		2
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		4
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		2
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		1
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		3
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		1
animals	birds	Timaliidae	*Zosterops lateralis*	silvereye		C		3/1
animals	birds	Tytonidae	*Tyto longimembris*	eastern grass owl		C		1
animals	birds	Tytonidae	*Tyto delicatula*	eastern barn owl		C		1
animals	insects	Aeshnidae	*Anax papuensis*	Australian Emperor				3
animals	insects	Corduliidae	*Hemicordulia australiae*	Australian emerald				1
animals	insects	Libellulidae	*Diplacodes bipunctata*	wandering percher				1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	insects	Libellulidae	*Pantala flavescens*	wandering glider				2
animals	insects	Libellulidae	*Diplacodes haematodes*	scarlet percher				3
animals	insects	Libellulidae	*Orthetrum caledonicum*	blue skimmer				3
animals	insects	Nymphalidae	*Junonia orithya albicincta*	blue argus				2
animals	insects	Nymphalidae	*Hypolimnas bolina nerina*	varied eggfly				1
animals	insects	Nymphalidae	*Tirumala hamata hamata*	blue tiger				1
animals	insects	Nymphalidae	*Danaus petilia*	lesser wanderer				1
animals	insects	Nymphalidae	*Junonia villida villida*	meadow argus				1
animals	insects	Pieridae	*Belenois java teutonia*	caper white				1
animals	mammals	Canidae	*Canis familiaris (dingo)*	dingo				2
animals	mammals	Dasyuridae	*Sminthopsis macroura*	stripe-faced dunnart		C		1/1
animals	mammals	Dasyuridae	*Sminthopsis murina*	common dunnart		C		1
animals	mammals	Dasyuridae	*Planigale maculata*	common planigale		C		4/2
animals	mammals	Emballonuridae	*Saccolaimus flaviventris*	yellow-bellied sheathtail bat		C		4/1
animals	mammals	Equidae	*Equus caballus*	horse	Y			1
animals	mammals	Macropodidae	*Notamacropus dorsalis*	black-striped wallaby		C		1
animals	mammals	Macropodidae	*Notamacropus rufogriseus*	red-necked wallaby		C		4
animals	mammals	Macropodidae	*Osphranter robustus*	common wallaroo		C		4
animals	mammals	Macropodidae	*Macropus giganteus*	eastern grey kangaroo		C		3
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		3
animals	mammals	Miniopteridae	*Miniopterus schreibersii oceanensis*	eastern bent-wing bat		C		2/1
animals	mammals	Molossidae	*Mormopterus lumsdenae*	northern free-tailed bat		C		7
animals	mammals	Molossidae	*Tadarida australis*	white-striped freetail bat		C		3/1
animals	mammals	Molossidae	*Mormopterus sp.*			C		4
animals	mammals	Muridae	*Pseudomys delicatulus*	delicate mouse		C		5/5
animals	mammals	Muridae	*Pseudomys sp.*			C		2
animals	mammals	Muridae	*Mus musculus*	house mouse	Y			9/8
animals	mammals	Petauridae	*Petaurus norfolcensis*	squirrel glider		C		1
animals	mammals	Petauridae	*Petaurus breviceps sensu lato*	sugar glider		C		2
animals	mammals	Potoroidae	*Aepyprymnus rufescens*	rufous bettong		C		3
animals	mammals	Suidae	*Sus scrofa*	pig	Y			1
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		SL		1
animals	mammals	Vespertilionidae	*Nyctophilus geoffroyi*	lesser long-eared bat		C		4/2
animals	mammals	Vespertilionidae	*Chalinolobus gouldii*	Gould's wattled bat		C		10/4
animals	mammals	Vespertilionidae	*Chalinolobus picatus*	little pied bat		C		2
animals	mammals	Vespertilionidae	*Scotorepens sanborni*	northern broad-nosed bat		C		3
animals	mammals	Vespertilionidae	*Nyctophilus gouldi*	Gould's long-eared bat		C		5
animals	mammals	Vespertilionidae	*Scotorepens sp.*			C		18
animals	mammals	Vespertilionidae	*Scotorepens greyii*	little broad-nosed bat		C		5/4
animals	ray-finned fishes	Clupeidae	*Nematalosa erebi*	bony bream				2
animals	ray-finned fishes	Eleotridae	*Hypseleotris galii*	firetail gudgeon				1
animals	ray-finned fishes	Melanotaeniidae	*Melanotaenia splendida splendida*	eastern rainbowfish				1
animals	ray-finned fishes	Terapontidae	*Leiopotherapon unicolor*	spangled perch				1
animals	reptiles	Agamidae	*Diporiphora phaeospinosa*	brigalow nobbi		C		1
animals	reptiles	Agamidae	*Diporiphora nobbi*	nobbi		C		1
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		6

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animals	reptiles	Boidae	*Antaresia maculosa*	spotted python		C		4
animals	reptiles	Boidae	*Morelia spilota*	carpet python		C		1
animals	reptiles	Boidae	*Aspidites ramsayi*	woma		NT		1
animals	reptiles	Chelidae	*Chelodina expansa*	broad-shelled river turtle		C		4
animals	reptiles	Chelidae	*Wollumbinia latisternum*	saw-shelled turtle		C		1
animals	reptiles	Chelidae	*Emydura macquarii krefftii*	Krefft's river turtle		C		12
animals	reptiles	Chelidae	*Elseya albagula*	southern snapping turtle		CR	CE	2
animals	reptiles	Chelidae	*Rheodytes leukops*	Fitzroy River turtle		V	V	1
animals	reptiles	Colubridae	*Dendrelaphis punctulatus*	green tree snake		C		1
animals	reptiles	Diplodactylidae	*Oedura tryoni*	southern spotted velvet gecko		C		2
animals	reptiles	Diplodactylidae	*Amalosia rhombifer*	zig-zag gecko		C		1
animals	reptiles	Diplodactylidae	*Oedura monilis sensu lato*	ocellated velvet gecko		C		1
animals	reptiles	Diplodactylidae	*Diplodactylus vittatus*	wood gecko		C		2/1
animals	reptiles	Diplodactylidae	*Strophurus taenicauda*	golden-tailed gecko		NT		7/1
animals	reptiles	Diplodactylidae	*Nebulifera robusta*	robust velvet gecko		C		1
animals	reptiles	Elapidae	*Brachyurophis australis*	coral snake		C		1
animals	reptiles	Elapidae	*Suta dwyeri*	Dwyer's snake		C		2
animals	reptiles	Elapidae	*Furina diadema*	red-naped snake		C		3/1
animals	reptiles	Elapidae	*Demansia torquata*	collared whipsnake		C		1
animals	reptiles	Elapidae	*Demansia psammophis*	yellow-faced whipsnake		C		3
animals	reptiles	Elapidae	*Vermicella annulata*	bandy-bandy		C		2/1
animals	reptiles	Elapidae	*Pseudonaja textilis*	eastern brown snake		C		11
animals	reptiles	Elapidae	*Hoplocephalus bitorquatus*	pale-headed snake		C		2/1
animals	reptiles	Gekkonidae	*Gehyra dubia*	dubious dtella		C		43/6
animals	reptiles	Gekkonidae	*Gehyra versicolor*			C		1
animals	reptiles	Gekkonidae	*Heteronotia binoei*	Bynoe's gecko		C		19/3
animals	reptiles	Pygopodidae	*Lialis burtonis*	Burton's legless lizard		C		1
animals	reptiles	Pygopodidae	*Pygopus schraderi*	eastern hooded scaly-foot		C		2
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		6
animals	reptiles	Scincidae	*Carlia pectoralis sensu lato*			C		1
animals	reptiles	Scincidae	*Cryptoblepharus australis*	inland snake-eyed skink		C		5
animals	reptiles	Scincidae	*Cryptoblepharus pannosus*	ragged snake-eyed skink		C		6
animals	reptiles	Scincidae	*Pygmaeascincus timlowi*	dwarf litter-skink		C		4
animals	reptiles	Scincidae	*Lampropholis guichenoti*	pale-flecked garden sunskink		C		1
animals	reptiles	Scincidae	*Lerista punctatovittata*	eastern robust slider		C		1/1
animals	reptiles	Scincidae	*Morethia taeniopleura*	fire-tailed skink		C		2
animals	reptiles	Scincidae	*Ctenotus taeniolatus*	copper-tailed skink		C		2
animals	reptiles	Scincidae	*Morethia boulengeri*	south-eastern morethia skink		C		7
animals	reptiles	Scincidae	*Carlia vivax*	tussock rainbow-skink		C		2
animals	reptiles	Scincidae	*Carlia rubigo*	orange-flanked rainbow skink		C		1
animals	reptiles	Scincidae	*Lerista timida*	timid slider		C		1
animals	reptiles	Scincidae	*Tiliqua rugosa*	shingle-back		C		1
animals	reptiles	Scincidae	*Concinnia tenuis*	bar-sided skink		C		4/1
animals	reptiles	Scincidae	*Lerista fragilis*	eastern mulch slider		C		9
animals	reptiles	Scincidae	*Carlia pectoralis*	open-litter rainbow skink		C		12
animals	reptiles	Scincidae	*Egernia striolata*	tree skink		C		3/2

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animals	reptiles	Scincidae	*Concinnia sokosoma*	stout bar-sided skink		C		1
animals	reptiles	Scincidae	*Ctenotus spaldingi*	straight-browed ctenotus		C		5/1
animals	reptiles	Scincidae	*Lygisaurus foliorum*	tree-base litter-skink		C		6
animals	reptiles	Typhlopidae	*Anilios sp.*			C		1
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		1
animals	reptiles	Varanidae	*Varanus gouldii*	sand monitor		C		3
animals	reptiles	Varanidae	*Varanus tristis*	black-tailed monitor		C		6
animals	uncertain	Indeterminate	*Indeterminate*	Unknown or Code Pending				11/2
fungi	Agaricomycetes	Agaricaceae	*Cyathus stercoreus*			C		1
plants	land plants	Adoxaceae	*Sambucus gaudichaudiana*	white elder		C		1/1
plants	land plants	Amaranthaceae	*Achyranthes aspera*			C		1/1
plants	land plants	Amaranthaceae	*Alternanthera denticulata var. denticulata*			C		1/1
plants	land plants	Amaranthaceae	*Deeringia amaranthoides*	redberry		C		3/3
plants	land plants	Amaranthaceae	*Ptilotus decipiens*			C		2/2
plants	land plants	Amaranthaceae	*Amaranthus viridis*	green amaranth	Y			1/1
plants	land plants	Amaryllidaceae	*Proiphys cunninghamii*	Moreton Bay lily		C		1/1
plants	land plants	Annonaceae	*Melodorum leichhardtii*			C		2/2
plants	land plants	Apiaceae	*Centella asiatica*			C		1
plants	land plants	Apiaceae	*Cyclospermum leptophyllum*		Y			1/1
plants	land plants	Apocynaceae	*Hoya australis subsp. australis*			C		1/1
plants	land plants	Apocynaceae	*Marsdenia*					1/1
plants	land plants	Apocynaceae	*Marsdenia microlepis*			C		1
plants	land plants	Apocynaceae	*Secamone elliptica*			C		1/1
plants	land plants	Apocynaceae	*Parsonsia lanceolata*	northern silkpod		C		1/1
plants	land plants	Apocynaceae	*Marsdenia pleiadenia*			C		1/1
plants	land plants	Apocynaceae	*Parsonsia rotata*	veinless silkpod		C		3/3
plants	land plants	Araliaceae	*Polyscias elegans*	celery wood		C		2/2
plants	land plants	Araliaceae	*Hydrocotyle acutiloba*			C		1/1
plants	land plants	Araliaceae	*Hydrocotyle laxiflora*	stinking pennywort		C		2/1
plants	land plants	Aspleniaceae	*Asplenium subglandulosum subsp. subglandulosum*			C		1/1
plants	land plants	Asteraceae	*Peripleura hispidula var. setosa*			C		1/1
plants	land plants	Asteraceae	*Brachyscome whitei subsp. whitei*			C		1/1
plants	land plants	Asteraceae	*Apowollastonia spilanthoides*			C		1/1
plants	land plants	Asteraceae	*Symphyotrichum subulatum*		Y			3/1
plants	land plants	Asteraceae	*Parthenium hysterophorus*	parthenium weed	Y			1/1
plants	land plants	Asteraceae	*Acanthospermum hispidum*	star burr	Y			1/1
plants	land plants	Asteraceae	*Senecio bathurstianus*			C		1/1
plants	land plants	Asteraceae	*Cyanthillium cinereum*			C		1/1
plants	land plants	Asteraceae	*Coronidium glutinosum*			C		1/1
plants	land plants	Asteraceae	*Olearia microphylla*			C		2/2
plants	land plants	Asteraceae	*Leiocarpa websteri*			C		2/2
plants	land plants	Asteraceae	*Calotis lappulacea*	yellow burr daisy		C		1/1
plants	land plants	Asteraceae	*Xanthium spinosum*	Bathurst burr	Y			1/1
plants	land plants	Asteraceae	*Camptacra barbata*			C		1
plants	land plants	Asteraceae	*Olearia canescens subsp. canescens*			C		1/1
plants	land plants	Asteraceae	*Calotis dentex*	white burr daisy		C		1/1

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plants	land plants	Asteraceae	*Calotis cuneata*			C		2/2
plants	land plants	Asteraceae	*Centipeda minima*			C		3
plants	land plants	Asteraceae	*Pluchea xanthina*			C		1/1
plants	land plants	Asteraceae	*Zinnia peruviana*	wild zinnia	Y			1/1
plants	land plants	Aytoniaceae	*Reboulia hemisphaerica*			C		1/1
plants	land plants	Aytoniaceae	*Asterella drummondii*			C		1/1
plants	land plants	Blechnaceae	*Doodia*					1
plants	land plants	Blechnaceae	*Doodia caudata*			C		1/1
plants	land plants	Brassicaceae	*Rorippa eustylis*			C		1/1
plants	land plants	Brassicaceae	*Lepidium didymum*		Y			1/1
plants	land plants	Brassicaceae	*Lepidium africanum*	common peppercress	Y			1/1
plants	land plants	Bryaceae	*Rosulabryum*					1/1
plants	land plants	Byblidaceae	*Byblis liniflora*			C		1/1
plants	land plants	Byttneriaceae	*Seringia corollata*			C		1/1
plants	land plants	Byttneriaceae	*Waltheria indica*			C		1/1
plants	land plants	Byttneriaceae	*Seringia collina*			C		1/1
plants	land plants	Cactaceae	*Opuntia tomentosa*	velvety tree pear	Y			1
plants	land plants	Cactaceae	*Opuntia aurantiaca*	tiger pear	Y			1
plants	land plants	Caesalpiniaceae	*Chamaecrista biddulphiana*			C		1/1
plants	land plants	Caesalpiniaceae	*Chamaecrista rotundifolia var. rotundifolia*		Y			2/2
plants	land plants	Caesalpiniaceae	*Chamaecrista nomame*			C		1/1
plants	land plants	Campanulaceae	*Wahlenbergia islensis*			C		5/5
plants	land plants	Campanulaceae	*Wahlenbergia celata*			C		1/1
plants	land plants	Campanulaceae	*Wahlenbergia queenslandica*			C		1/1
plants	land plants	Campanulaceae	*Wahlenbergia tumidifructa*			C		1/1
plants	land plants	Campanulaceae	*Lobelia trigonocaulis*	forest lobelia		C		1/1
plants	land plants	Campanulaceae	*Wahlenbergia gracilis*	sprawling bluebell		C		1/1
plants	land plants	Capparaceae	*Capparis loranthifolia var. bancroftii*			C		1/1
plants	land plants	Casuarinaceae	*Allocasuarina inophloia*			C		3/3
plants	land plants	Casuarinaceae	*Casuarina cunninghamiana subsp. cunninghamiana*			C		1/1
plants	land plants	Centrolepidaceae	*Centrolepis exserta*			C		1/1
plants	land plants	Chenopodiaceae	*Einadia trigonos*			C		2/2
plants	land plants	Chenopodiaceae	*Dysphania ambrosioides*		Y			1/1
plants	land plants	Chenopodiaceae	*Maireana enchylaenoides*			C		3/3
plants	land plants	Chenopodiaceae	*Dysphania glomulifera*			C		1/1
plants	land plants	Clusiaceae	*Hypericum gramineum*			C		3/2
plants	land plants	Convolvulaceae	*Ipomoea plebeia*	bellvine		C		1/1
plants	land plants	Convolvulaceae	*Evolvulus alsinoides var. decumbens*			C		1/1
plants	land plants	Convolvulaceae	*Jacquemontia paniculata var. tomentosa*			C		1/1
plants	land plants	Cucurbitaceae	*Citrullus amarus*		Y			1/1
plants	land plants	Cucurbitaceae	*Diplocyclos palmatus subsp. palmatus*			C		1/1
plants	land plants	Cucurbitaceae	*Sicyos australis*	star cucumber		C		1/1
plants	land plants	Cupressaceae	*Callitris endlicheri*	black cypress pine		C		1/1
plants	land plants	Cyperaceae	*Fuirena incrassata*			C		1/1
plants	land plants	Cyperaceae	*Scleria sphacelata*			C		1/1
plants	land plants	Cyperaceae	*Cyperus brevifolius*	Mullumbimby couch	Y			1

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plants	land plants	Cyperaceae	*Cyperus leptocarpus*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis nutans*			C		1
plants	land plants	Cyperaceae	*Cyperus polystachyos*			C		5
plants	land plants	Cyperaceae	*Cyperus sphaeroideus*			C		2/1
plants	land plants	Cyperaceae	*Schoenus yarrabensis*			C		2/1
plants	land plants	Cyperaceae	*Scleria mackaviensis*			C		1/1
plants	land plants	Cyperaceae	*Abildgaardia vaginata*			C		1/1
plants	land plants	Cyperaceae	*Lepidosperma laterale*			C		2/2
plants	land plants	Cyperaceae	*Cyperus sanguinolentus*			C		2/1
plants	land plants	Cyperaceae	*Fimbristylis dichotoma*	common fringe-rush		C		6/3
plants	land plants	Cyperaceae	*Eleocharis atricha*	tuber spikerush		C		2/1
plants	land plants	Cyperaceae	*Cyperus nervulosus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus leiocaulon*			C		2/2
plants	land plants	Cyperaceae	*Fimbristylis nuda*			C		2/2
plants	land plants	Cyperaceae	*Cyperus exaltatus*	tall flatsedge		C		1
plants	land plants	Cyperaceae	*Cyperus difformis*	rice sedge		C		7
plants	land plants	Cyperaceae	*Caustis pentandra*	thick twistrush		C		2/2
plants	land plants	Cyperaceae	*Eleocharis plana*	ribbed spikerush		C		2/1
plants	land plants	Cyperaceae	*Cyperus flavidus*			C		4/1
plants	land plants	Cyperaceae	*Caustis flexuosa*			C		1/1
plants	land plants	Cyperaceae	*Cyperus lucidus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus haspan*			C		1
plants	land plants	Cyperaceae	*Gahnia aspera*			C		1/1
plants	land plants	Cyperaceae	*Caustis sp. (Robinson Gorge P.I.Forster+ PIF11256)*			C		2/2
plants	land plants	Cyperaceae	*Cyperus polystachyos var. polystachyos*			C		1/1
plants	land plants	Cyperaceae	*Cyperus nutans var. eleusinoides*	flatsedge		C		1/1
plants	land plants	Cyperaceae	*Schoenoplectus tabernaemontani*			C		6/1
plants	land plants	Cyperaceae	*Cyperus haspan subsp. haspan*			C		1/1
plants	land plants	Cyperaceae	*Schoenus apogon var. apogon*			C		1/1
plants	land plants	Cyperaceae	*Schoenoplectiella mucronata*			C		7/1
plants	land plants	Cyperaceae	*Eleocharis cylindrostachys*			C		3/2
plants	land plants	Cyperaceae	*Fimbristylis aestivalis*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis bisumbellata*			C		1/1
plants	land plants	Dicranaceae	*Sclerodontium clavinerve*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia acicularis*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia oligodonta*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia cistoidea*			C		3/3
plants	land plants	Droseraceae	*Drosera burmanni*			C		2/1
plants	land plants	Droseraceae	*Drosera finlaysoniana*			C		1/1
plants	land plants	Ebenaceae	*Diospyros humilis*	small-leaved ebony		C		2/2
plants	land plants	Entodontaceae	*Entodon mackaviensis*			C		2/2
plants	land plants	Ericaceae	*Acrotriche aggregata*	red cluster heath		C		2/2
plants	land plants	Ericaceae	*Lissanthe strigosa subsp. subulata*			C		1/1
plants	land plants	Ericaceae	*Lissanthe pluriloculata*			C		2/2
plants	land plants	Ericaceae	*Monotoca scoparia*	prickly broom heath		C		1/1
plants	land plants	Ericaceae	*Melichrus sp. (Isla Gorge P.Sharpe+ 601)*			C		4/4

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plants	land plants	Ericaceae	*Agiortia pleiosperma*			C		1/1
plants	land plants	Ericaceae	*Melichrus urceolatus*	honey gorse		C		1/1
plants	land plants	Ericaceae	*Leucopogon grandiflorus*			C		5/5
plants	land plants	Eriocaulaceae	*Eriocaulon athertonense*			C		2/1
plants	land plants	Eriocaulaceae	*Eriocaulon scariosum*			C		3/3
plants	land plants	Erythroxylaceae	*Erythroxylum sp. (Splityard Creek L.Pedley 5360)*			C		3/3
plants	land plants	Euphorbiaceae	*Bertya opponens*			C	V	2/2
plants	land plants	Euphorbiaceae	*Bertya oleifolia*			C		5/5
plants	land plants	Euphorbiaceae	*Croton insularis*	Queensland cascarilla		C		3/3
plants	land plants	Euphorbiaceae	*Acalypha eremorum*	soft acalypha		C		3/3
plants	land plants	Euphorbiaceae	*Bertya lapicola subsp. brevifolia*			C		2/2
plants	land plants	Fabaceae	*Hovea lorata*			C		3/3
plants	land plants	Fabaceae	*Pultenaea millarii var. angustifolia*			C		2/2
plants	land plants	Fabaceae	*Hovea longipes*	brush hovea		C		1/1
plants	land plants	Fabaceae	*Lotus cruentus*	red-flowered lotus		C		1/1
plants	land plants	Fabaceae	*Desmodium gunnii*			C		1/1
plants	land plants	Fabaceae	*Glycine tabacina*	glycine pea		C		1/1
plants	land plants	Fabaceae	*Hovea planifolia*			C		2/2
plants	land plants	Fabaceae	*Mirbelia pungens*			C		1/1
plants	land plants	Fabaceae	*Tephrosia rufula*			C		1/1
plants	land plants	Fabaceae	*Crotalaria juncea*	sunhemp	Y			1/1
plants	land plants	Fabaceae	*Mirbelia aotoides*			C		1/1
plants	land plants	Fabaceae	*Swainsona affinis*			C		2/2
plants	land plants	Fabaceae	*Indigofera hirsuta*	hairy indigo		C		1/1
plants	land plants	Fabaceae	*Stylosanthes scabra*		Y			1/1
plants	land plants	Fabaceae	*Swainsona phacoides*	dwarf swainsona		C		1/1
plants	land plants	Fabaceae	*Indigofera brevidens*			C		2/2
plants	land plants	Fabaceae	*Indigofera pratensis*			C		2/2
plants	land plants	Fabaceae	*Chorizema parviflorum*	eastern flame pea		C		1/1
plants	land plants	Fabaceae	*Hardenbergia perbrevidens*			C		2/2
plants	land plants	Fabaceae	*Rhynchosia minima var. australis*			C		1/1
plants	land plants	Funariaceae	*Goniomitrium acuminatum*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia delicata*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia*					2/2
plants	land plants	Goodeniaceae	*Velleia paradoxa*	spur velleia		C		1/1
plants	land plants	Goodeniaceae	*Goodenia bellidifolia subsp. argentea*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia disperma*			C		1/1
plants	land plants	Goodeniaceae	*Scaevola parvibarbata*			C		1/1
plants	land plants	Grimmiaceae	*Grimmia laevigata*			C		2/2
plants	land plants	Haloragaceae	*Gonocarpus urceolatus*			C		10/10
plants	land plants	Haloragaceae	*Myriophyllum gracile var. lineare*			C		2/1
plants	land plants	Haloragaceae	*Haloragis heterophylla*	rough raspweed		C		2/1
plants	land plants	Juncaceae	*Juncus bufonius*	toad rush	Y			2/1
plants	land plants	Juncaceae	*Juncus prismatocarpus*	branching rush		C		3/2
plants	land plants	Juncaceae	*Juncus continuus*			C		3/2
plants	land plants	Juncaceae	*Juncus usitatus*			C		2/1

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plants	land plants	Lamiaceae	*Mentha grandiflora*			C		1/1
plants	land plants	Lamiaceae	*Mentha satureioides*	native pennyroyal		C		1/1
plants	land plants	Lamiaceae	*Prostanthera lithospermoides*			C		4/4
plants	land plants	Lamiaceae	*Prostanthera sp. (Baking Board V.Hando 135)*			C		1/1
plants	land plants	Lamiaceae	*Prostanthera cryptandroides subsp. euphrasioides*			C		3/3
plants	land plants	Laxmanniaceae	*Lomandra ramosissima*			C		2/2
plants	land plants	Laxmanniaceae	*Lomandra longifolia*			C		1/1
plants	land plants	Laxmanniaceae	*Lomandra glauca*	pale matrush		C		2/2
plants	land plants	Lentibulariaceae	*Utricularia gibba*	floating bladderwort		C		1
plants	land plants	Lentibulariaceae	*Utricularia dichotoma*	fairy aprons		C		3/2
plants	land plants	Leskeaceae	*Pseudoleskeopsis imbricata*			C		1/1
plants	land plants	Leucobryaceae	*Campylopus introflexus*			C		1/1
plants	land plants	Loganiaceae	*Logania albiflora*			C		1/1
plants	land plants	Loranthaceae	*Amyema quandang var. bancroftii*	broad-leaved grey mistletoe		C		1/1
plants	land plants	Lythraceae	*Rotala tripartita*			C		1/1
plants	land plants	Macarthuriaceae	*Macarthuria neocambrica*			C		2/2
plants	land plants	Malvaceae	*Sida spinosa*	spiny sida	Y			1/1
plants	land plants	Malvaceae	*Pavonia hastata*	pink pavonia	Y			1/1
plants	land plants	Malvaceae	*Gossypium sturtianum*			C		2/2
plants	land plants	Menispermaceae	*Tinospora smilacina*	snakevine		C		2/2
plants	land plants	Meteoriaceae	*Papillaria flexicaulis*			C		1/1
plants	land plants	Mimosaceae	*Acacia decora*	pretty wattle		C		1/1
plants	land plants	Mimosaceae	*Acacia leiocalyx subsp. leiocalyx*			C		1/1
plants	land plants	Mimosaceae	*Acacia buxifolia subsp. pubiflora*			C		1/1
plants	land plants	Mimosaceae	*Acacia blakei subsp. blakei*			C		11/5
plants	land plants	Mimosaceae	*Acacia podalyriifolia*	Queensland silver wattle		C		2/2
plants	land plants	Mimosaceae	*Acacia parvifoliolata*			C		3/3
plants	land plants	Mimosaceae	*Acacia longispicata*			C		2/2
plants	land plants	Mimosaceae	*Acacia glaucocarpa*	hickory wattle		C		1/1
plants	land plants	Mimosaceae	*Acacia neriifolia*	pechey wattle		C		1/1
plants	land plants	Mimosaceae	*Acacia macradenia*	zig-zag wattle		C		2/2
plants	land plants	Mimosaceae	*Acacia juncifolia*			C		2/2
plants	land plants	Mimosaceae	*Acacia ixiophylla*			C		1/1
plants	land plants	Mimosaceae	*Acacia amblygona*	fan-leaf wattle		C		1/1
plants	land plants	Mimosaceae	*Acacia caroleae*			C		3/3
plants	land plants	Mimosaceae	*Acacia calantha*			NT		7/7
plants	land plants	Mimosaceae	*Acacia lineata*	streaked wattle		C		1/1
plants	land plants	Mimosaceae	*Acacia jucunda*			C		2/2
plants	land plants	Mimosaceae	*Acacia implexa*	lightwood		C		1/1
plants	land plants	Mimosaceae	*Acacia gnidium*			C		1/1
plants	land plants	Mimosaceae	*Acacia spania*			NT		2/2
plants	land plants	Mimosaceae	*Acacia islana*			V		2/2
plants	land plants	Molluginaceae	*Glinus oppositifolius*			C		1/1
plants	land plants	Moraceae	*Trophis scandens subsp. scandens*			C		1/1
plants	land plants	Moraceae	*Ficus coronata*	creek sandpaper fig		C		1
plants	land plants	Myrtaceae	*Eucalyptus melanophloia subsp. melanophloia*			C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Myrtaceae	*Eucalyptus fibrosa subsp. nubilis*			C		2/2
plants	land plants	Myrtaceae	*Melaleuca diosmatifolia*	mauve honey myrtle		C		1/1
plants	land plants	Myrtaceae	*Leptospermum lamellatum*			C		1/1
plants	land plants	Myrtaceae	*Backhousia angustifolia*	narrow-leaved backhousia		C		1/1
plants	land plants	Myrtaceae	*Lophostemon suaveolens*	swamp box		C		2/2
plants	land plants	Myrtaceae	*Eucalyptus viridis*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus tholiformis*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus suffulgens*			C		1/1
plants	land plants	Myrtaceae	*Sannantha brachypoda*			V		11/10
plants	land plants	Myrtaceae	*Micromyrtus sessilis*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca thymifolia*	thyme honeymyrtle		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus mediocris*			C		2/2
plants	land plants	Myrtaceae	*Corymbia tessellaris*	Moreton Bay ash		C		1/1
plants	land plants	Myrtaceae	*Corymbia hendersonii*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca bracteata*			C		1/1
plants	land plants	Myrtaceae	*Eucalyptus rhombica*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca uncinata*			C		3/3
plants	land plants	Myrtaceae	*Melaleuca quercina*			C		3/3
plants	land plants	Myrtaceae	*Eucalyptus major*	mountain grey gum		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus bakeri*	Baker's mallee		C		1/1
plants	land plants	Myrtaceae	*Melaleuca irbyana*			E		22/17
plants	land plants	Myrtaceae	*Leptospermum sericatum*			C		2/2
plants	land plants	Notothyladaceae	*Phaeoceros carolinianus*			C		1/1
plants	land plants	Nyctaginaceae	*Boerhavia dominii*			C		1/1
plants	land plants	Oleaceae	*Jasminum dianthifolium*			C		1/1
plants	land plants	Oleaceae	*Notelaea microcarpa*			C		1/1
plants	land plants	Oleaceae	*Jasminum simplicifolium subsp. australiense*			C		1/1
plants	land plants	Onagraceae	*Ludwigia octovalvis*	willow primrose		C		6/2
plants	land plants	Onagraceae	*Ludwigia peploides subsp. montevidensis*			C		7
plants	land plants	Ophioglossaceae	*Ophioglossum polyphyllum*			C		1/1
plants	land plants	Orchidaceae	*Sarcochilus ceciliae*	fairy bells		C		1/1
plants	land plants	Orchidaceae	*Caladenia fuscata*			C		1/1
plants	land plants	Orchidaceae	*Cymbidium canaliculatum*			C		1/1
plants	land plants	Papaveraceae	*Papaver aculeatum*	bristle poppy	Y			1/1
plants	land plants	Passifloraceae	*Passiflora aurantia var. aurantia*			C		3/3
plants	land plants	Pentapetaceae	*Melhania oblongifolia*			C		3/3
plants	land plants	Philydraceae	*Philydrum lanuginosum*	frogsmouth		C		2/1
plants	land plants	Phyllanthaceae	*Phyllanthus involutus*			C		1/1
plants	land plants	Phyllanthaceae	*Bridelia leichhardtii*			C		4/4
plants	land plants	Phyllanthaceae	*Synostemon spinosus*			C		1/1
plants	land plants	Phyllanthaceae	*Synostemon albiflorus*			C		1/1
plants	land plants	Phyllanthaceae	*Phyllanthus carpentariae*			C		1/1
plants	land plants	Phyllanthaceae	*Synostemon ramosissimus*			C		3/3
plants	land plants	Phyllanthaceae	*Phyllanthus microcladus*			C		3/3
plants	land plants	Picrodendraceae	*Petalostigma pubescens*	quinine tree		C		1/1
plants	land plants	Plantaginaceae	*Gratiola pedunculata*			C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Plantaginaceae	*Bacopa monnieri*			C		4/2
plants	land plants	Plumbaginaceae	*Plumbago zeylanica*	native plumbago		C		1/1
plants	land plants	Poaceae	*Eragrostis parviflora*	weeping lovegrass		C		2/2
plants	land plants	Poaceae	*Eremochloa bimaculata*	poverty grass		C		1/1
plants	land plants	Poaceae	*Setaria australiensis*	scrub pigeon grass		C		3/2
plants	land plants	Poaceae	*Sporobolus natalensis*		Y			1/1
plants	land plants	Poaceae	*Arundinella nepalensis*	reedgrass		C		1
plants	land plants	Poaceae	*Echinochloa crus-galli*	barnyard grass	Y			3/1
plants	land plants	Poaceae	*Enneapogon lindleyanus*			C		1/1
plants	land plants	Poaceae	*Enneapogon robustissimus*			C		2/2
plants	land plants	Poaceae	*Lachnagrostis filiformis*			C		2
plants	land plants	Poaceae	*Eriochloa pseudoacrotricha*			C		1/1
plants	land plants	Poaceae	*Aristida calycina var. calycina*			C		1/1
plants	land plants	Poaceae	*Austrostipa rudis subsp. nervosa*			C		1/1
plants	land plants	Poaceae	*Dinebra decipiens var. decipiens*			C		1/1
plants	land plants	Poaceae	*Aristida holathera var. holathera*			C		1/1
plants	land plants	Poaceae	*Bothriochloa bladhii subsp. glabra*		Y			2/2
plants	land plants	Poaceae	*Urochloa panicoides var. pubescens*		Y			1/1
plants	land plants	Poaceae	*Poa labillardierei var. labillardierei*	tussock grass		C		2/2
plants	land plants	Poaceae	*Aristida jerichoensis var. subspinulifera*			C		1/1
plants	land plants	Poaceae	*Eulalia aurea*	silky browntop		C		2/2
plants	land plants	Poaceae	*Aristida acuta*			C		2/2
plants	land plants	Poaceae	*Eriachne obtusa*			C		1/1
plants	land plants	Poaceae	*Isachne globosa*	swamp millet		C		5/1
plants	land plants	Poaceae	*Aristida lignosa*			C		1/1
plants	land plants	Poaceae	*Cynodon dactylon*		Y			2
plants	land plants	Poaceae	*Leersia hexandra*	swamp rice grass		C		4/2
plants	land plants	Poaceae	*Triraphis mollis*	purple plumegrass		C		1/1
plants	land plants	Poaceae	*Enneapogon virens*			C		1/1
plants	land plants	Poaceae	*Paspalum urvillei*	vasey grass	Y			1
plants	land plants	Poaceae	*Sporobolus creber*			C		1/1
plants	land plants	Poaceae	*Aristida lazaridis*			C		1/1
plants	land plants	Poaceae	*Aristida personata*			C		1/1
plants	land plants	Poaceae	*Echinochloa colona*	awnless barnyard grass	Y			2
plants	land plants	Poaceae	*Eragrostis curvula*		Y			1
plants	land plants	Poaceae	*Eragrostis sororia*			C		2/2
plants	land plants	Poaceae	*Oplismenus aemulus*	creeping shade grass		C		1/1
plants	land plants	Poaceae	*Paspalum dilatatum*	paspalum	Y			3
plants	land plants	Poaceae	*Paspalum distichum*	water couch	Y			4/1
plants	land plants	Poaceae	*Sacciolepis indica*	Indian cupscale grass		C		3/2
plants	land plants	Poaceae	*Triodia mitchellii*	buck spinifex		C		1/1
plants	land plants	Poaceae	*Eragrostis cumingii*			C		1/1
plants	land plants	Poaceae	*Eragrostis elongata*			C		1/1
plants	land plants	Poaceae	*Paspalidium distans*	shotgrass		C		1/1
plants	land plants	Poaceae	*Digitaria longiflora*			C		1/1
plants	land plants	Poaceae	*Dimorphochloa rigida*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Poaceae	*Eragrostis bahiensis*		Y			1/1
plants	land plants	Poaceae	*Phragmites australis*	common reed		C		2
plants	land plants	Poaceae	*Cenchrus purpurascens*			C		1/1
plants	land plants	Polygalaceae	*Polygala triflora*			C		2/2
plants	land plants	Polygonaceae	*Persicaria hydropiper*	water pepper		C		7/3
plants	land plants	Polygonaceae	*Rumex dumosus*	wiry dock		C		1/1
plants	land plants	Polygonaceae	*Persicaria prostrata*	creeping knotweed		C		1/1
plants	land plants	Portulacaceae	*Calandrinia balonensis*	broad-leaved parakeelya		C		1/1
plants	land plants	Proteaceae	*Grevillea longistyla*			C		1/1
plants	land plants	Proteaceae	*Grevillea striata*	beefwood		C		1/1
plants	land plants	Proteaceae	*Hakea purpurea*			C		1/1
plants	land plants	Proteaceae	*Grevillea cyranostigma*			C		1/1
plants	land plants	Proteaceae	*Grevillea floribunda subsp. floribunda*			C		1/1
plants	land plants	Proteaceae	*Conospermum sphacelatum*			C		1/1
plants	land plants	Pteridaceae	*Adiantum hispidulum var. hispidulum*			C		1/1
plants	land plants	Pteridaceae	*Cheilanthes sieberi subsp. sieberi*			C		2/2
plants	land plants	Pteridaceae	*Paraceterach muelleri*			C		1/1
plants	land plants	Pteridaceae	*Pellaea falcata*			C		6/6
plants	land plants	Pteridaceae	*Pteris vittata*	Chinese bracken		C		3/1
plants	land plants	Pteridaceae	*Pteris tremula*			C		1/1
plants	land plants	Pteridaceae	*Adiantum atroviride*			C		1
plants	land plants	Ptychomitriaceae	*Ptychomitrium australe*			C		2/2
plants	land plants	Putranjivaceae	*Drypetes deplanchei*	grey boxwood		C		2/2
plants	land plants	Rhamnaceae	*Pomaderris queenslandica*			C		1/1
plants	land plants	Rhamnaceae	*Cryptandra longistaminea*			C		3/3
plants	land plants	Ricciaceae	*Ricciocarpos natans*			C		1/1
plants	land plants	Ricciaceae	*Riccia*					1/1
plants	land plants	Rosaceae	*Rubus parvifolius*	pink-flowered native raspberry		C		1/1
plants	land plants	Rubiaceae	*Psydrax odorata subsp. australiana*			C		4/4
plants	land plants	Rubiaceae	*Spermacoce multicaulis*			C		1/1
plants	land plants	Rubiaceae	*Opercularia diphylla*			C		1/1
plants	land plants	Rubiaceae	*Psydrax oleifolia*			C		1/1
plants	land plants	Rubiaceae	*Galium leptogonium*			C		1/1
plants	land plants	Rutaceae	*Zieria aspalathoides subsp. aspalathoides*			C		1/1
plants	land plants	Rutaceae	*Crowea exalata subsp. magnifolia*			C		1/1
plants	land plants	Rutaceae	*Phebalium nottii*	pink phebalium		C		1/1
plants	land plants	Rutaceae	*Flindersia collina*	broad-leaved leopard tree		C		2/2
plants	land plants	Rutaceae	*Geijera parviflora*	wilga		C		1/1
plants	land plants	Rutaceae	*Flindersia australis*	crow's ash		C		2/2
plants	land plants	Rutaceae	*Acronychia pauciflora*	soft acronychia		C		2/2
plants	land plants	Rutaceae	*Philotheca difformis subsp. difformis*			C		1/1
plants	land plants	Santalaceae	*Exocarpos latifolius*			C		1/1
plants	land plants	Santalaceae	*Santalum lanceolatum*			C		1/1
plants	land plants	Sapindaceae	*Alectryon pubescens*			C		3/3
plants	land plants	Sapindaceae	*Cupaniopsis anacardioides*	tuckeroo		C		1/1
plants	land plants	Sapindaceae	*Dodonaea vestita*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Sapindaceae	*Dodonaea biloba*			C		1
plants	land plants	Sapindaceae	*Atalaya salicifolia*			C		1/1
plants	land plants	Sapindaceae	*Dodonaea triangularis*			C		1/1
plants	land plants	Sapindaceae	*Alectryon connatus*	grey birds-eye		C		3/3
plants	land plants	Sapotaceae	*Planchonella cotinifolia var. pubescens*			C		1/1
plants	land plants	Solanaceae	*Solanum mitchellianum*			C		2/2
plants	land plants	Solanaceae	*Solanum aviculare*	kangaroo apple		C		1/1
plants	land plants	Solanaceae	*Physalis ixocarpa*	annual ground cherry	Y			1/1
plants	land plants	Solanaceae	*Solanum dumicola*			C		2/2
plants	land plants	Sparrmanniaceae	*Corchorus trilocularis*			C		1/1
plants	land plants	Sterculiaceae	*Brachychiton bidwillii*	little kurrajong		C		1/1
plants	land plants	Stylidiaceae	*Stylidium debile*	frail trigger plant		C		1/1
plants	land plants	Stylidiaceae	*Stylidium eriorhizum*			C		1/1
plants	land plants	Stylidiaceae	*Stylidium eglandulosum*			C		1/1
plants	land plants	Stylidiaceae	*Stylidium laricifolium*	tree trigger plant		C		1/1
plants	land plants	Thelypteridaceae	*Christella arida*			C		1/1
plants	land plants	Thelypteridaceae	*Christella dentata*	creek fern		C		2/1
plants	land plants	Thelypteridaceae	*Ampelopteris prolifera*			C		1/1
plants	land plants	Thymelaeaceae	*Pimelea leptostachya*			C		3/3
plants	land plants	Typhaceae	*Typha orientalis*	broad-leaved cumbungi		C		1
plants	land plants	Violaceae	*Viola betonicifolia*			C		1
plants	land plants	Viscaceae	*Viscum whitei subsp. whitei*			C		1/1
plants	land plants	Viscaceae	*Korthalsella rubra subsp. geijericola*			C		1/1
plants	land plants	Vitaceae	*Cissus oblonga*			C		2/2
plants	land plants	Vitaceae	*Clematicissus opaca*			C		2/2
plants	land plants	Xyridaceae	*Xyris complanata*	yellow-eye		C		2/2
plants	land plants	Zygophyllaceae	*Zygophyllum apiculatum*	gall weed		C		1/1

CODES

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

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

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

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

Appendix B

Protected Matters Database Search Results

Australian Government
Department of the Environment and Energy

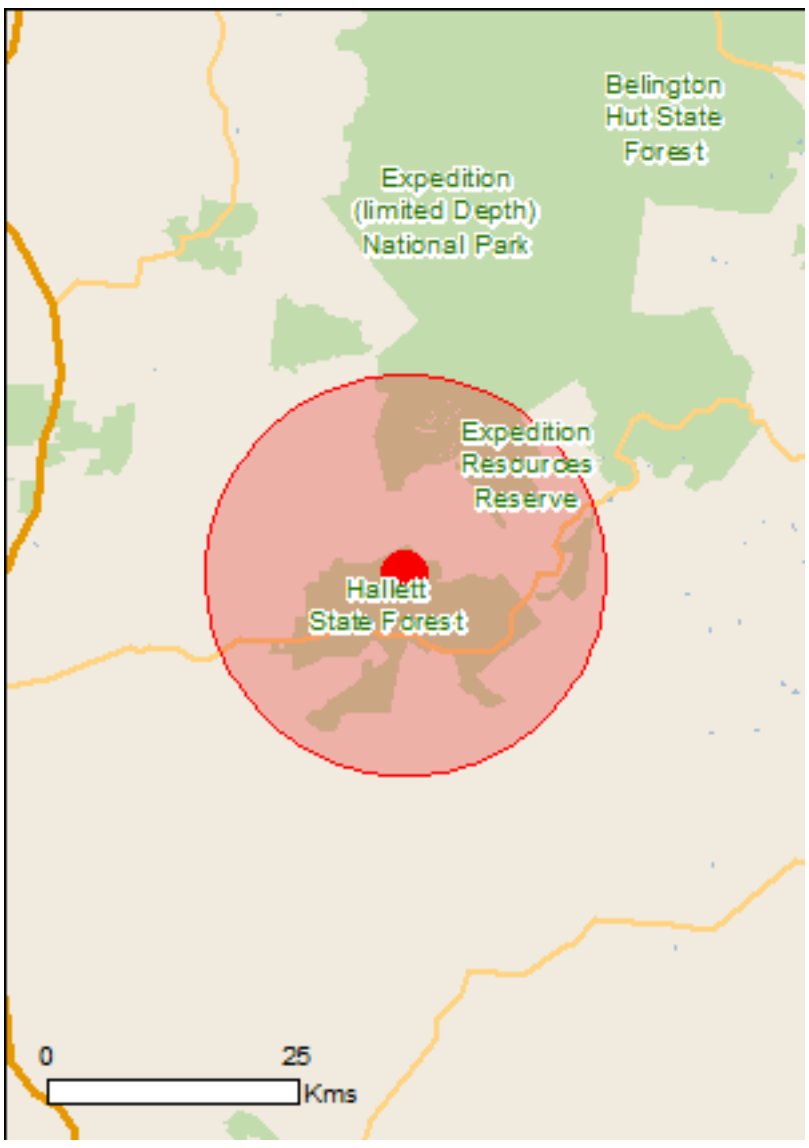
EPBC Act Protected Matters Report

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: 15/09/20 10:11:00



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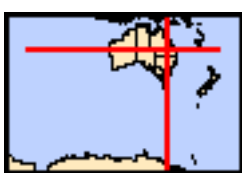

Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	24
Listed Migratory Species:	11

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	3
Regional Forest Agreements:	None
Invasive Species:	17
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

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

Name	Status	Type of Presence
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
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community likely to occur within area
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions	Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	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 likely to occur within area
Mammals		

Name	Status	Type of Presence
[Chalinolobus dwyeri](#)		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
[Dasyurus hallucatus](#)		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
[Nyctophilus corbeni](#)		
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
[Petauroides volans](#)		
Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
[Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)](#)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat may occur within area
Plants		
[Arthraxon hispidus](#)		
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area
[Bertya opponens](#)		
[13792]	Vulnerable	Species or species habitat known to occur within area
[Cadellia pentastylis](#)		
Ooline [9828]	Vulnerable	Species or species habitat likely to occur within area
[Eucalyptus beaniana](#)		
Bean's Ironbark [56320]	Vulnerable	Species or species habitat may occur within area
[Tylophora linearis](#)		
[55231]	Endangered	Species or species habitat may occur within area
[Xerothamnella herbacea](#)		
[4146]	Endangered	Species or species habitat likely to occur within area
Reptiles		
[Delma torquata](#)		
Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
[Egernia rugosa](#)		
Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
[Elseya albagula](#)		
Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	Species or species habitat likely to occur within area
[Furina dunmalli](#)		
Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
[Rheodytes leukops](#)		
Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat likely 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		

Name	Threatened	Type of Presence
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		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		
Actitis hypoleucos		
Common Sandpiper [59309]		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 likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		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 may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to 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 likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Expedition	QLD
Expedition (Limited Depth)	QLD
Lonesome Holding	QLD

Invasive Species	[Resource Information]

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

Name	Status	Type of Presence
Birds		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur

Name	Status	Type of Presence
		within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known 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
Feral deer Feral deer species in Australia [85733]		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		
Acacia nilotica subsp. indica Prickly Acacia [6196]		Species or species habitat may occur within area
Opuntia spp. Prickly Pears [82753]		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
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-25.764 149.012

Acknowledgements

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

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

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

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

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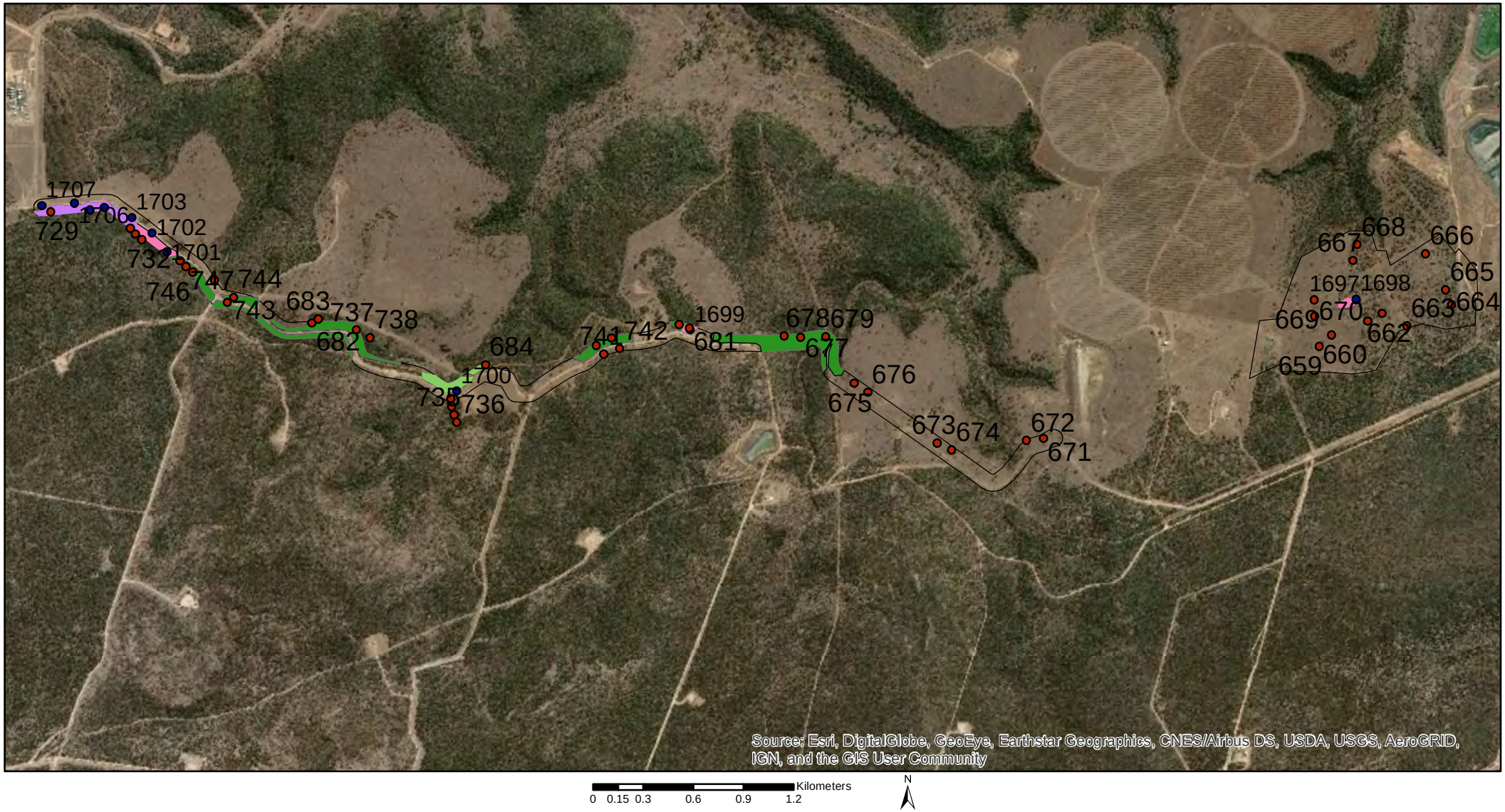
Appendix C

Field Survey Site locations



LEGEND

- Survey sites
- Survey sites 161020

- 11.10.11
- 11.10.9
- 11.9.10
- 11.9.5
- non-rem

APPENDIX FIGURE C: Field Survey Site Locations

Springwater Irrigation Area and Water Pipeline Ecological Assessment

Created AD 15/09/2020
Job No. 0223

terrestria ECOLOGICAL MANAGEMENT

Appendix D

Field Survey Site Data


2020/07/22 22:23


2020/07/22 22:23


2020/07/22 22:44


2020/07/22 22:44


2020/07/22 22:54


2020/07/22 22:55

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 1 **Recorder:** DS HA **Day/Date:** 24/4/20

Regional ecosystem:

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	5	5 - 6	V
T2		-	
T3		-	
S1	1.5	1 - 2	V
S2		-	
G	1	1 - 1	D

Structural formation: (including height) Low open Woodland 5m

Ecologically dominant layer: T1

Notes: Brown Sandy clay

D 862
S 863
S 864
W 865
G 466

Plant species

Record relative (numerical) dominance for each stratum;

d – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
T1	C	Bursaria
	C	Cas Cristata
S1		Acacia
		Eremophila
G	D	Buffel

Notes

Disturbance: offset area Not Remnant

Weeds: 100% buffel ground layer

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transcript - crown cover measured *(transect intercept method)*

GPS coordinates:	Datum: GDA 94	Transect length: 100	
Start point	Zone 55	E 0706578	N 7149223	659
End point	Zone 55	E 0706653	N 7149290	660

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
No -	m	
intersect	m	
with	m	
- veg	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	0 m
Intercept of EDL 50 -100m:	0 m
Measured crown cover % of EDL 0 -100m:	0 %
Structural formation	

Conclusions/notes: regrowth
Beech thin along time but little recruitment or canopy development
Dominated by buttel

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 2 Recorder: DS HA Day/Date: 28/8/20

Regional ecosystem: Regrowth 11.9.5a?

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	6	5-8	5
T1		-	
T2		-	
T3		-	
S1	2	2-3	5
S2		-	
G	0.7	0.5 1	D

Structural formation: (including height)

Low woodland 6m

Ecologically dominant layer: T1

Notes: Pale sandy clay

Advanced regrowth

Very open

Brigalow

Plant species

Record relative (numerical) dominance for each stratum;

d – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
	c	Poplar
S1	c	A. decora
		wilga
		Alectryon diversifolius
		Eremophila
G		Buffel

Notes

Disturbance: Cleared

Weeds: Ground disturbed by buffel

Landzone: 7

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 55 E 0730656 N 7149372 661

End point Zone 55 E 0730695 N 7149419 662

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
5 - 8	3 m	T1 6
38 - 43.5	5.5 m	T1 5
69 - 71	2 m	T1 4
41 - 46	5 m	T1 5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

N 867
S 868
E 869
W 870
G 871

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 3 Recorder: PT HA Day/Date: 29/8/20

Purpose

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 | 0707104 | 7149346 D 863

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	10	8 - 10	S
T2		-	
T3		-	
S1	3	3 - 5	S
S2		-	
G	0-4	0.3-0.6	D

Structural formation: (including height) Low woodland 10m

Ecologically dominant layer: T1

N 872
S 873
G 874

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant, *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	c	Poplar
	c	Brigalow
S1		wilga
		Emu bush
		Acacia sp
G	D	Buffel
	c	Heteropogon contortus
		Eragrostis diandra?

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale sandy clay

Field observation and notes: Negligible watercourse

Landzone: 9

RE code changes

Existing RE code:

Proposed RE code:

END

	
North	South
	
Ground	

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – Reference site/transect form

Location

Site No. 4 Recorder: DS NA Day/Date: 29/8/20

Regional ecosystem: not named offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured
Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	4	3 - 5	M
T2		-	
T3		-	
S1	1	0.5 - 1.5	V
S2		-	
G	0.6	0.6 - 0.8	M

N 875
S 876
E 878
W 879
G 680

Structural formation: (including height)
open. scrub 4m

Ecologically dominant layer: T1

Notes:

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; ***c*** – codominant; **s** - subdominant, ***a*** – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
S1		Carissa ovata
		Eucalyptus sp
		Alectryon diversifolius
G	D	Buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Brown silty clay

Field observation and notes: a lot of the T1 is browned off- and potentially dead from drought >80% **Landzone:** 7

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – **Reference site/transect Form** (continued)

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA 94 Transect length: 100

Start point Zone 55 E 0704370 N 7149471 664

End point Zone 55 E 0707334 N 7149562 665

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
10.5 - 20	9.5 m	T1 4
26.5 - 34	0.5 m	S1 0.2
50 - 51	1 m	T1 3
53 - 55	2 m	T1 4
60 - 67	3 m	T1 5
69 - 7	2 m	T1 5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 5 Recorder: DS AA Day/Date: 28/8/20

Regional ecosystem: Regrowth offset

Locality: (inc. distance/direction to nearest town) fir view

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	5	4 - 6	S
T2		-	
T3		-	
S1	1	0.5 - 2	S
S2		-	
G	0.8	0.8 - 1	D

N 884
S 885
E 886
W 887
G 888

Structural formation: (including height) Low Woodland 5m

Ecologically dominant layer: T1

Notes: Brown silty clay

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
S1		Atalaya
		Apetophyllum - leaf loss 4
		Carissa ovata
		Alstonia constricta
G	D	Buffel

Notes

Disturbance: Op. tom present currently grazed

Weeds: Dominated by buffel

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 55 E 0707213 N 7149778 666

End point Zone 55 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
24 - 26	2 m	T1 4
59 - 61	2 m	S1 2
78 - 80	2 m	S1 2
97 - 100	3 m	T1 5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 6 Recorder: JS HH Day/Date: 28/4/20

Purpose: watercourse – offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: D

Vegetation structure

Median height of the EDL is to be measured

NW 889
SN 890
E 891

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	6	5-7	√
T2		-	
T3		-	
S1	1.5	1-2	S
S2		-	
G	1	0.8-1.2	D

Structural formation: (including height) Low open-woodland 6m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
S1		Citrus
		A. decora
S1	D	Buffel

Geology, landform, soils

Geology map/scale/year: Brigalow regrowth

Geology code and rock types:

Land system:

Landform:

Soils: Pale sandy clay

Field observation and notes: Grazing

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

	
North	South
	
Ground	

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – Reference site/transect form

Location

Site No. 7 Recorder: DS HA Day/Date: 28/8/20

Regional ecosystem: Regrowth offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured
Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	10	10 - 12	V
T1	3	2 - 5	S/M
T2		-	
T3		-	
S1	1	0.5 - 1	V
S2		-	
G	0.8	0.7 - 1	D

Structural formation: (including height) Tall shrubland 3m

Ecologically dominant layer: T1

Notes: Grazed

N 892
S 893
E 894
W 895
G 896

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – codominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
E	c	Cas Cristata
		Brigalow
T1	D	Brigalow
		Eremophila deserti/MIT
S1		Citrus
		Apophyllum
		Brigalow
G	D	Buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform: Reddish brown silty clay

Soils: OP tom Prosent

Field observation and notes:

Landzone:

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – Reference site/transect Form (continued)

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum: GDA 94	Transect length: 100
Start point	Zone 55	E 0706779	N 7149736 667
End point	Zone 55	E 0706804	N 7149831 668

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
4 - 6	2 m	T, 3
25 - 27	2 m	T, 4
28 - 29	1 m	T, 3.5
31 - 33	2 m	T, 4
36.5 - 39	2.5 m	T, 3
61 - 63.5	2.5 m	T, 3
78 - 80.5	2.5 m	T, 5
85 - 86	1 m	[redacted], 2
92 - 99	7 m	[redacted]
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – Reference site/transect form

Location

Site No. 8 Recorder: DS NA Day/Date: 28/8/20

Regional ecosystem: Regrowth offset

Locality: (inc. distance/direction to nearest town) Forrest

Vegetation structure

Median height of the EDL is to be measured
Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	10	9-11	V
T1		-	
T2		-	
T3		-	
S1	1	1.5-1.5	V
S2		-	
G	1	0.4-1.2	D

Structural formation: (including height) Low open woodland 10m

Ecologically dominant layer: T1

Notes: Buffel 100% ground layer

N 899
S 900
E 901
W 902
G 903

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – codominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Bursaria
	A	Cas Cristata
S1		Citrus glauca
		Capparis Lucida
G	D	Buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform: Brown clay rocky patches present

Soils:

Field observation and notes: Op. low present
Grazed
Dominated by buffel

Landzone: 9

SHEET G – Reference site/transect Form (continued)

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA 94 **Transect length:** 100

Start point	Zone 55	E 0706549	N 7149501 669
End point	Zone 55	E 0706651	N 7149402 670

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
62 - 72	10 m	T, 10
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – Reference site/transect form

Location

Site No. 9 **Recorder:** DS HA **Day/Date:** 28/8/20

Regional ecosystem: Non-Rem

Locality: (inc. distance/direction to nearest town) Fair view

Vegetation structure

Median height of the EDL is to be measured
Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	8	8 - 10	✓
T2		-	
T3		-	
S1		-	
S2		-	
G	0.5	0.3 - 1	D

Structural formation: (including height) Low open woodland 8m

Ecologically dominant layer: G

Notes: No canopy
Dominated by buffel 80% cover

N 901
S 905
E 906
W 907
G 908

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – codominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Bloodwood
	A	Poplar
G	D	Buffel

Geology, landform, soils

Geology map/scale/year: Non Canopy

Geology code and rock types:

Land system:

Landform:

Soils: Brown Clay

Field observation and notes:

Landzone: 9

Request for Assessment of Regional Ecosystem Map - DRAFT

SHEET G – Reference site/transect Form (continued)

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA 94 Transect length: 100

Start point Zone 5 E 0704926 N 7149671 671

End point Zone 5 E 0704826 N 7149660 672

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 10 Recorder: DS HA Day/Date: 28/4/20

Regional ecosystem: [illegible] & [illegible] Pipeline corridor

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E			
T1	5	4 - 7	V
T2		-	
T3		-	
S1	25	2 - 3	V
S2		-	
G	06	0.4 - 1	D

Structural formation: (including height) Low open-woodland 5m

Ecologically dominant layer: T1

Notes:

N 909
S 910
E 911
W 912
G 913

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – codominant; *a* – associated; *s* — suppressed.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
		Poplars
		Kurrajong
		Eremophila mit/des
S1		Wilga
		Citrus
G	D	Buffel

Notes

Disturbance:

Weeds:

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 5 E 0 7 0 6 2 9 1 N 7 1 4 8 6 4 5 673

End point Zone 5 E 0 7 0 4 3 7 9 N 7 1 4 8 6 0 3 674

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
7.5 - 8.5	1 m	T1
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 12 Recorder: DS NA Day/Date: 28/8/20

Regional ecosystem: Pipeline Corridor NR

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	~~5~~	4-6	V
T1	~~5~~	~~4-6~~	~~V~~
T2		-	
T3		-	
S1	1	1-2	V
S2		-	
G	0.8	0.5-0.8	D

Structural formation: (including height) Low open Woodland 5m

Ecologically dominant layer: T1

Notes: Reddish brown silty clay

Buffel ~7% cover

N 916
S 915
E 916
W 917
G 918

Plant species

Record relative (numerical) dominance for each stratum; ***d*** – dominant; ***c*** – codominant; ***a*** – associated; ***s*** – suppressed.

Str.	Rel. dom.	Scientific Name
T1	~~D~~ C	Bogadon
	C	Poplar
S1		Grass
G	D	Buffel

Notes

Disturbance:

Weeds:

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 5 E 0 4 0 3 7 9 3 N 7 1 4 9 0 0 2 675

End point Zone 5 E 0 4 0 3 8 7 6 N 7 1 4 9 9 4 8 576

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Canopy too dense / No understorey

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 13 Recorder: DS MA Day/Date: 28/8/20

Regional ecosystem: Mapped as NR

Locality: (inc. distance/direction to nearest town) Fair View

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	13	12 - 16	S
T2		-	
T3		-	
S1	6	5 - 8	M
S2	1	1 - 1.5	V
G	1	0.6 - 1.2	M

Structural formation: (including height) Woodland 10m

Ecologically dominant layer: T1

Notes: Reddish silty clay

Mapped as NR

13 11.10.9 ?

N 919
S 920
E 921
W 922
G 923

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
T1	C	Poplar
	C	Melaleuca
	A	Callitris glaucophylla
S1	D	Callitris glaucophylla
		Wilga
		Eremophila dos/mit
S2		Geijera
		Acacia decora
		Carissa
G	D	Buffel
		Enteropogon acicularis
		Aristida calycina
		Themeda
		Cymbopogon quad

Notes

Disturbance: Grazed

Ground Dominated by buffel 60%

Weeds:

Landzone: 10

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA 94 Transect length: 100

Start point	Zone 55	E 0703[illegible]5	N 7149278 677
End point	Zone 5	E 0703716	N 7149285 678

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
0 - 5.5	5.5 m	T1 10
9 - 16	7 m	S1 6
19 - 21	4 m	S1 5
21.5 - 27.5	6 m	T1 14
26.5 - 34.5	8 m	S1 8
29 - 38	9 m	T1 15
29 - 30	1 m	S2 2
45.5 - 53	7.5 m	T1 14
47 - 48	1 m	S2 2
53 - 55	2 m	S1 5
59.5 - 63.5	4 m	S1 4
65 - 69	4 m	S1 4
69 - 70.5	1.5 m	S2 1.5
74.5 - 77	2.5 m	S1 5
80.5 - 83.5	3 m	S1 6
83 - 86.5	3.5 m	T1 16
86 - 88	2 m	S1 8
71 - 100	9 m	S1 5
96.5 - 100	3.5 m	T1 14
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 14 Recorder: DS HA Day/Date: 28/8/20

Purpose

Locality: (inc. distance/direction to nearest town)

GPS: 55 | 7 0 3 6 2 5 | 7 1 4 9 2 8 1 D 679

N 931
S 932
E 933
W 934
G 935

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	18	16-20	S/M
T2	10	8-12	M
T3		-	
S1	4	2-6	S
S2	1	1-1.5	✓
G		0.5-1	

Structural formation: (including height) Open forest/woodland 18m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Callitris glaucophylla
	A	Corymbia citriodora
	A	C. melanophloia
		A. leiocarpa
T2	D	Callitris glaucophylla
S1		wilga
		Petalostigma pubescens
S2		Carissa ovata
G		Buffel

Echinopogon
Aristida calycina
Eragrostis sororia
Heteropogon contortus
Themeda

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system: Watercourse running through it

Landform:

Soils: Pale sandy clay - rocky

Field observation and notes:

Landzone: 10

RE code changes

Existing RE code:

Proposed RE code: 11.10.9

END

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 15 Recorder: DS HA Day/Date: 28/8/20

Purpose

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 | 6702446 | 7149355 | D680

Vegetation structure

Median height of the EDL is to be measured

N 940
S 941
E 942
W 943
C 944

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	12	11 - 14	S
T1		-	
T2	6	5 - 8	M
T3		-	
S1	2	1.5 - 3	S/M
S2	1	0.5 - 1	M
G	0.5	0 - 1.5	S

Structural formation: (including height) Low Woodland 12m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, ***a*** – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Melaleuca
	S	Poplar
T2	D	Callitris glaucophylla
S1		Hovea ?
		Wilga
		Pittosporum spinescens
		Psydrax
S2	D	Carissa ovata

G D Megathyrsus

Geology, landform, soils

Geology map/scale/year: op. fam Present Buffel

Geology code and rock types:

Land system:

Landform:

Soils: Pale sandy clay

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code: 11.10.9

END

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 16 Recorder: DS HA Day/Date: 28/8/20

Purpose

Locality: (inc. distance/direction to nearest town) Fairview

GPS: S 55 0702509 7149332 D 681

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	7	6-8	D
T2		-	
T3		-	
S1	2	2-2.5	V
S2		-	
G	0.5	0.3-0.6	M

Structural formation: (including height) Low closed forest 7m

Ecologically dominant layer: T1

N 950
S 951
E 952
W 953
G 955

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; **c** – co-dominant; **s** - subdominant, ***a*** – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
S1		Wilga
G		Paspalidium
		buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale brown clay – very rocky

Field observation and notes:

Landzone: 10

RE code changes

Existing RE code:

Proposed RE code: 11 9.5a

END < 0.5ha not mappable

	
North	South
	
East	West
	
Ground	

Biocondition Datasheet

Site ID	17	Date	28/8/20
Observers	DS HA		
Site Information:			
100x50m Area:			
Location (GPS reference)		Bioregion	BBS
Datum	GDA 94		
Zone	55J		

	Easting	Northing	
Plot origin	0700548	7149 363	682
Plot centre	0700586	7149 386	683
Plot Bearing			

Plot Alignment Description

Locality: Fairview

Regional Ecosystem and Tree height

Habitat Description: Callitris woodland with poplar / Pale sandy ~~silt~~ clay

Regional Ecosystem		Median Tree canopy Height (m)	16	
Emergent height (m)		Subcanopy ht (m)	8	

Site Photos	Plot centre	North	956	South	957
Photo Numbers		East	958	West	959
	Plot Origin			other	960

N 956
S 957
E 958
W 959
G 960

Disturbance				
Type	mean fire scar height	severity	last event	obs type
Wildfire				
Prescribed burn				
Logging				
Treatment				
Grazing				
Non-native plant cover	Buffel	~50%		
Erosion				
Regeneration	100%			
Storm				
Other (specify)				

100 x 50m Area: Tree SPP. Richness

Tree Species		Tree Spp. Count
	Callitris glaucophylla	
	Eucalyptus Populnea	
	~~Acacia~~	

50 x 20m Area: Coarse woody Debris

Specimen length (mm)

site total m	per ha (m)
37	

50 x 10m Area — **Native Plant Species Richness** — Total

Shrub sp.	Carissa / Mulga / Eremophila des/mit	Cp. tom / Psydrax / Ovenia	Acacia excelsa / Acacia cretata / Alphitonia / Cas. cristata
Grass sp.	Anastrechne / Aristida capit.-meds. / Buffel / Ophiuros	~~Paspalum~~ / barbed wire / Themeda / Sporobolus creber	
Forbs/other sp.	Cheilanthes seiberi / 5		

Grevillea striata
~~Hakea~~ Lorea
Kurrajong

Lots of stags

Biocondition datasheet (cont.)

10 x 10m Plots: Ground Cover

Ground cover type	1	2	3	4	5	Mean
Native perennial (preferred and intermediate) grass	10	30	30	20	20	
Native non-preferred grass						
Native forbs and other species						
Native shrubs (< 1m height)			45		60	
Non-native grass						
Non-native forbs and shrubs				15		
litter	15	70	25	50	20	
rock						
bare ground	75			15		
Cryptograms						
Total	100	100	100	100	100	100

100 x 50m Area: Large Trees Plot size 100x 50 | 100x 20 | 100 x 10

Species	Euc (E) Non-Euc (N)	Diam (cm)	DBH

Eucalypts	Avg DBH threshold		RE		Euc Benchm	Euc Benchmark
	No. Trees	0	No. Trees > = Benchmark/ha			
Non-Eucalypts	Avg DBH threshold		RE		Euc Benchm	Euc Benchmark
	No. Trees	0	No. Trees > = Benchmark/ha			

No Benchmark

100m Transect: Tree and Shrub Canopy Cover Canopy (C), Subcanopy (SC), Emergent (E), Shrub (S)

Distance (m)		Type	Distance (m)		Type	Distance (m)		Type
Poplar	2-3	S1	1					
Casuarina	7-9	S2	2					
wilga	12.5-14.5	S1	2					
Eucalyptus	17.5-18.5	S1	3					
wilga	19-23.5	S1	4.5					
Callitris	22-23	T1	1					
wilga	24.5-30	S1	5.5					
wilga	35.5-52.5	S1	17					
Casuarina	34-45.5	S2	11.5					
Poplar	38-48	T1	10			canopy total		
Callitris	49-54	S1	5			subcanopy total		
Callitris	60-65	T1	5			emergent total		
Casuarina	67-93	~~S1~~ S2	26			shrub total		
psydrax	75-78	S1	3					
wilga	95-100	S1	5					

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 18 Recorder: DS AA Day/Date: 28/8/20

Purpose

Locality: (inc. distance/direction to nearest town)

GPS: 55J 0701587 7149612 D684

N 961
S 962
E 963
W 964
G 965

Vegetation structure
Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	16	16-20	S/M
T1	4	3-6	/S
T2		-	
T3		-	
S1		-	
S2	1	1-1.5	V
G	0.6	0.3-1	M

Structural formation: (including height) Tall shrubland 4m

Ecologically dominant layer: T1

Plant species
Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Melaleuca
	A	Callitris glaucophylla
	A	Poplar
S1	D	Callitris glaucophylla
	A	Ac. decora Psydrax
		Grevillea striata
		Eremophila des/mit
G		Buffel
		Aristida racemosa
		Lomandra
		Alternanthera pungens – native spiny thing
		Chloris truncata
		Enneapogon nutans
		Cymbopogon quadrivalvis

Senna artemisioides
Grevia

S2

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Brown loam – rocks present

Field observation and notes:

Landzone: 9/10

RE code changes

Existing RE code:

Proposed RE code: 11.10.9

END

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 20 Recorder: DS HA Day/Date: 29/8/20

Regional ecosystem: Regrowth NR offset.

Locality: (inc. distance/direction to nearest town) fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

N=966
S=967
E=968
W=969
G=970

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	6	5 - 8	S/M
T1		-	
T2		-	
T3		-	
S1	2	1.5 - 3	S
S2		-	
G	0.6	0.4 - 0.8	D

Structural formation: (including height) Low openforest/woodland 6m

Ecologically dominant layer: T1

Notes: open but advanced regrowth

monoculture melanophloia

Soil Reddish clay

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

P - Present minor

Str.	Rel. dom.	Scientific Name
T1	D	E melanophloia
	P	Poplar
	P	Brigalow
S1	D	Ac. excelsa
		Petalostigma longifolia
G	D	Buffel,
		ophiuros
		Eragrostis brownii/collina
		Themeda
		Glandulicarpa aristigera
		Hetropogon Contortus
		Aristida Calisera

Notes

Disturbance:

Weeds: Buffel 60% cover

Landzone: 9

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA94 **Transect length:** 100

Start point Zone 5 E 0 6 9 4 2 1 7 N 7 1 5 4 8 0 1 685

End point Zone 5 E 0 6 9 4 2 4 6 N 7 1 5 4 6 9 0 686

All heights in the "Str./height" column are to be measured 694148 7154735

Interval (metres)	Intercept	Str./height
34 - 35	1 m	T1 4
45 - 45.5	0.5 m	S1 1
55.5 - 56	0.5 m	S1 1.5
67 - 74	7 m	T1 4.5
85.5 - 86	0.5 m	S1 1
92 - 92.5	0.5 m	S1 0.5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 21 Recorder: DS HA Day/Date: 29/9/20

Regional ecosystem: NR offset regrowth

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	5	5-6	V
T1	2	1-4	D
T2		-	
T3	~~1.5~~	~~1-2~~	~~M~~
S1	~~0.5~~	~~0.5-1~~	~~M~~
S2	0.5	0.5-1	V
G	1.5	1-1.5	M

N 971
S 972
E 973
W 974
G 975

Structural formation: (including height) Tall open shrubland 2m

Ecologically dominant layer:

Notes: Brown loam clay
Surface rocks
on top of rise

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
E	D	Poplar
T1	D	Brigalow
		Wilga
		Eremophila deas/mit.
		Citrus
~~T1~~	~~D~~	~~Brigalow~~
S2		Grevia
		Senna artemisioides
G	D	Buffel
		Eragrostis collina
		Chloris gayana
		Sida hackethorni

Notes

Disturbance: Gp. tram. track
Buffel 50%

Weeds:

Landzone: 1 0

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA 94 Transect length: 100

Start point Zone 55 E 0694452 N 7154779 687

End point Zone 5 E 0694364 N 7154738 688

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
5 - 6	1 m	T1 1.5
6.5 - 7	0.5 m	T1 0.7
10 - 11	1 m	T1 1
22 - 25	3 m	E 3
24 - 35	11 m	T1 2
37 - 41.5	4.5 m	T1 2
55.5 - 57	1.5 m	T1 1.5
60 - 65	5 m	T1 2
68 - 69	1 m	T1 2.5
76 - 77.5	1.5 m	T1 2.5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 22 Recorder: DS HA Day/Date: 29/8/20

Purpose

Locality: (inc. distance/direction to nearest town)

GPS: 55 J 694602 7154633 D 689

N 976
S 977
E 978
W 979
G 980

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1		-	
T2		-	
T3		-	
S1	1	1 - 1.5	S
S2		-	
G	0.7	0.6 - 1	D

Structural formation: (including height) Low shrubland 1m

Ecologically dominant layer: S1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
S1	D	Brigalow
	P	Eremophila des/mit
G	D	Buffel
		Eragrostis collina

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale brown clay

Field observation and notes: Low regrowth brigalow

Landzone: 9

RE code changes

Existing RE code:

Proposed RE code:

END

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 23 Recorder: DK HA Day/Date: 29/9/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

N 981
S 982
E 983
W 984
G 985

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1		-	
T2		-	
T3		-	
S1		-	
S2		-	
G	0.9	0.6-1	D

Structural formation: (including height) Grassland Non remnant

Ecologically dominant layer: Ground

Notes: No cover

Brigalow to 4m in area

Poplar to 10m in area (small patch)

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
G	D	Buffel
	?	Eragrostis collina

Notes

Disturbance:

Weeds: Buffel 90% cover
Xanthium Pungens common in adjacent watercourse ~60% cover

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point	Zone 55	E 0694796	N 7154372	690
End point	Zone 55	E 0694894	N 7154389	691

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
50 - 51	1 m	Single individual
-	m	Bry. sp.
-	m	1.5m
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 24 Recorder: DS HA Day/Date: 29/4/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

N 996
S 954
E 948
W 989
G 990

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	10	8 - 10	V/S
T1	4	3 - 5	M
T2		-	
T3		-	
S1	2	1 - 25	S
S2		-	
G	0.8	0.5 - 1	D

Structural formation: (including height)

Open - Scrub 4m

Ecologically dominant layer:

Notes:

Pale clay

lots of drought related dieback in Brigalow ecosyst

Plant species

Record relative (numerical) dominance for each stratum; ***d*** – dominant; ***c*** – codominant; ***a*** – associated; ***s*** – suppressed.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
E	C	Poplar
	C	Brigalow
S1		wilga
		Brigalow
		Eremophila desiderata
G	D	Buffel
		Paspalidium distans?
		Dysphania carinata

Notes

Disturbance:

Weeds: Buffel dominates ground ~80% cover

Bare ground 20%

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

***Transect - crown cover measured** (transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 5 E 0 6 9 4 5 8 3 N 7 1 5 4 2 6 5 692

End point Zone 5 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
31.5 - 35	3.5 m	S1 2
38 - 52	14 m	T1 4
64 - 70	6 m	T1 4
77 - 81	4 m	T1 3.5
96.5 - 100	3.5 m	T1 5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 25 Recorder: DS HA Day/Date: 29/8/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	8	8-10	√
T1	6	4-6	√
T2	2	1.5-3	M
T3		-	
S1		-	
S2		-	
G	0.6	0.8-1	D

N 991
S 992
E 993
W 994
G 995

Structural formation: (including height) Low open woodland 6m

Ecologically dominant layer: T1

Notes:

Pale clay
Some rocks
Patchy low
bright green regrowth

Plant species

Record relative (numerical) dominance for each stratum; ***d*** – dominant; ***c*** – codominant; ***a*** – associated; ***s*** – suppressed.

Str.	Rel. dom.	Scientific Name
E	D	Poplar
T1	D	Poplar
		Brigalow
T2	D	Brigalow
		wilga
		Eremophila deserti
G	D	Buffel

Notes

Disturbance:

Weeds: Ground layer 80% buffel
15% bare ground

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 55 E 0694355 N 7154427 697

End point Zone 55 E 0694289 N 7154503 694

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
42 - 48	6 m	T1 6
53 - 54	1 m	T2 1.5
57 - 60	3 m	T2 2
62 - 63	1 m	T2 1.5
73 - 75	2 m	T2 1.5
92 - 98.5	6.5 m	T2 2
90 - 91	1 m	T2 1.5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 26 Recorder: DS AA Day/Date: 29/8/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Bear View

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	10	8 - 11	S
T1	4	1.5 - 6	M
T2		-	
T3		-	
S1		-	
S2		-	
G	0.5	0.3 - 1.2	D

N 996
S 977
E 958
W 999
C 1000

Structural formation: (including height) 11.10.9 ? open forb uw

Ecologically dominant layer:

Notes: Brown clay

Some surface rock

Plant species

Record relative (numerical) dominance for each stratum; ***d*** – dominant; ***c*** – codominant; ***a*** – associated; ***s*** – suppressed.

Str.	Rel. dom.	Scientific Name
E	C	Melaleuca
		Poplar
		Callitris glaucophylla
T1		Ac decora
		brigalow
		Eremophila des/mit
		Geijera stricta
		Casuarina
		Ac excelsa
G		Cymbopogon refractus
		Heteropogon contortus
		Buffel
		Aristida jerichoensis ?

Notes

Disturbance:

Weeds: buffel minor component of ground layer ~ 20%

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA 94 Transect length: 100

Start point Zone 55 E 0694001 N 7154408 695

End point Zone 55 E 0694026 N 7154467 696

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
13 - 19.5	6.5 m	E 8
19.5 - 21.5	2 m	T1 3.5
24 - 25	1 m	T1 E3
33 - 34.5	1.5 m	T1 2
36 - 38	2 m	T1 1.5
38 - 40	2 m	T1 4
60 - 61	1 m	T1 3
64 - 65	1 m	T1 4
76 - 77.5	1.5 m	T1 3
92 - 94	2 m	T1 3
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 21 Recorder: DS NA Day/Date: 29/8/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	10	8 - 12	M
T2		-	
T3		-	
S1		-	
S2		-	
G	06	05-08	D

Structural formation: (including height)

Low open forest 10m

Ecologically dominant layer: T1

Notes: Pale silty clay

T1 with lots of disturbed - recovering

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
T1	D	Melaleuca bowi
G	D	Buffel
		Heteropogon contortus
		Eragrostis cilianensis
		Cleistochloa subjuga
		Dichanthium sericeum
		Xanthium
		Sorghum sp.

Notes

Disturbance:

Weeds: Buffel 40%

Bare ground 20%

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: Datum: GDA94 Transect length: 100

Start point Zone 55 E 0 6 9 3 5 9 5 N 7 1 5 4 5 6 1 697

End point Zone 55 E 0 6 9 3 6 9 1 N 7 1 5 4 5 9 3 698

All heights in the "Str./height" column are to be measured

N 1001
S 1002
E 1003
W 1004
G 1006

Interval (metres)	Intercept	Str./height
0 - 3.5	3.5 m	T1 12
26.5 - 30	3.5 m	T1 9
65 - 67	2 m	T1 6
74 - 75	1 m	T1 10
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 28 Recorder: DJ TH Day/Date: 29/6/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	12	10 - 12	V
T1	7	6 - 8	S
T2		-	
T3		-	
S1	2	1 - 3	S
S2		-	
G	0.5	0.4 - 1	M

W 1007
S 1008
E 1009
W 1010
G 1011

Structural formation: (including height)

Low woodland 7m

Ecologically dominant layer: T1

Notes: Pale silty clay
Rocky Patch
50m Transect

Plant species

Record relative (numerical) dominance for each stratum;

d – dominant; *c* – codominant; *a* – associated; *s* – suppressed.

Str.	Rel. dom.	Scientific Name
E	D	Poplar
T1	D	callitris glaucophylla
S1		A. decora
		Poplar seedlings
		Wilga
		Callitris seedlings
G		Eragrostis cilliata
		Chrysocephalum
		Buffel

Notes

Disturbance:

Weeds: Buffel 70%
Bare ground 20

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

50m

GPS coordinates: **Datum:** GDA94 **Transect length:**

Start point	Zone 55	E 0697559	N 7154763	699
End point	Zone 55	E 0697510	N 7154762	700

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
0 - 5	5 m	E 12
38.5 - 51	12.5 m	T1 8
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Vegetation Structure Site Inspection Sheet - Proforma

Location

Site No. 29 Recorder: DS NA Day/Date: 29/8/20

Regional ecosystem: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

Vegetation structure

Median height of the EDL is to be measured

Cover density is to be estimated

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	8	8 - 10	S
T2		-	
T3		-	
S1	2	1 - 3	V
S2		-	
G	0.5	0.3 - 1	M

N 1017
S 1014
E 1019
W 1020
G 1021

Structural formation: (including height)

Low woodland 8m

Ecologically dominant layer: T1

Notes:

Pale reddish clay

Plant species

Record relative (numerical) dominance for each stratum; ***d*** – dominant; ***c*** – codominant; ***a*** – associated; ***s*** – suppressed.

Str.	Rel. dom.	Scientific Name
T1	D	Melaleuca
	P	Poplar
		Callitris glaucophylla
S1		Ac decora
		Euc seedlg
		Dodonaea viscosa
		Alectryon diversifolius
G		Themeda
		Cymbopogon bombicinus
		Eragrostis elliana
		Aristida calycina

Notes

Disturbance:

Weeds:

Landzone:

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** GDA 94 **Transect length:** 100

Start point Zone 55 E 0697347 N 7154544 701

End point Zone 55 E 0697355 N 7154184 702

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
6 - 7	1 m	S1 2
5 - 11	6 m	T1 10
17 - 25	7.5 m	T1 8
50 - 58	8 m	T1 10
55 - 56	1 m	S1 3
89 - 94	5 m	T1 10
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 30 Recorder: DS WA Day/Date: 29/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693708 7154639 D 703

0693629 7154340 704

Vegetation structure

Median height of the EDL is to be measured

N 1022
S 1023
E 1024
W 1025
G 1026

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	10	6 - 12	V/S
T2		-	
T3	4	1 - 5	V
S1		-	
S2		-	
G	0.4	0.1 - 0.4	M

Structural formation: (including height) Low Woodland / low open Woodland 10m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Poplar
	a	Melaleuca
S1		A decora
		Callitris glaucophylla
		Poplar seedlings
		Grevillea striata
G		Themeda
		Aristida calycina

Corymbia tessellaris present

Heteropogon
Glandulosa
Eragrostis collina
chrysopogon fallax
Xanthium pungens
Eulalia aurea
chrysopogon refractus

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale clay

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

Site 30

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 5	E 0	N
End point	Zone 5	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
20 - 22	2 m	T1 8
47 - 50.5	3.5 m	T1 10
59 - 62	3 m	S1 5
94 - 100	6 m	T1 12
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 32 Recorder: TS HA Day/Date: 29/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693488 7154213 D 705

069 3419 7154 143 706

Vegetation structure

Median height of the EDL is to be measured

N 1027
S 1028
E 1029
W 1030
G 1031

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	12	10 - 14	✓
T1	8	6 - 9	✓
T2		-	
T3		-	
S1	2	1.5 - 3	S/M
S2		-	
G	0.5	0.3 - 0.7	D

Structural formation: (including height) Low open Woodland 4m

Ecologically dominant layer:

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

G - Poplar, Melaleuca

Str.	Rel. dom.	Scientific Name
T1		Melaleuca
		Poplar
		Grevillea striata
		Eremophila des/mit
S1		Eremophila des/mit
		wilga
		Ac. decora
G		Eragrostis cilianensis
		Cymbopogon (refracted)
		Aristida calycina
		Buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale sandy clay

Field observation and notes: Buffel 60% cover

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

Site 32

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 5	E 0	N
End point	Zone 5	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
6 - 7	1 m	S1 3
18 - 19	1 m	S1 2
38 - 40	2 m	S1 4
72 - 80	8 m	E 14
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 33 Recorder: DS NA Day/Date: 29/8/20

Purpose: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693279 7154255 D 707

345 0693331 7154340 708

Vegetation structure

Median height of the EDL is to be measured

N 1032
S 1033
E 1034
W 1035
G 1036

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	12	10-13	V
T1	7	6-9	V
T2		-	
T3		-	
S1	4	3-4	S
S2	1	0.5-1	S
G	06	0.5-08	D

Structural formation: (including height) Low open Woodland 7m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
E		Poplar
T1		Poplar
S1		A. decora
		poplar seedling
S2	D	wilga
G		Buffel

Eragrostis cilliana
Chloris gayana
Dichanthium sericeum
Heteropogon contortus
Panicum effusum

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils:

Field observation and notes: Buffel 30%

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

Site 33

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 5 E 0 N

End point Zone 5 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
7 - 8	1 m	5 1 3
25 - 28	3 m	5 1 8
30 - 31	1 m	5 1 2.5
48 - 51.5	3.5 m	5 1 4
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 40 Recorder: JK HA Day/Date: 30/3/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693663 7153700 D 709

0693663 7153700 410

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	9	7 - 12	S/m Patchy
T2		-	
T3		-	
S1	2	2 - 4	S
S2	1	0.5 - 1	S
G	0.5	0.2 - 1	D

Structural formation: (including height) low Woodland / tall open forest 9m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – co-dominant; s - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
	p	Poplar
S1		Eremophila des/mit, callitris
		Wilga Myoporum
		Acacia ventilago
S2		Carissa ovata
G		Buffel
		Echinopogon

1071 P
1072 S
1073 E
1074 W
1075 G

Geology, landform, soils

Geology map/scale/year: Buffel 50% bare ground 40%

Geology code and rock types:

Land system:

Landform:

Soils: Red clay very rocky

Field observation and notes: Ground heavily disturbed old mining works?

Landzone: 10

RE code changes

Existing RE code:

Proposed RE code: 11.9.5a?

END

op. from paper

Site 40

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 5 E 0 N

End point Zone 5 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
2 - 8	6 m	T1 9
6 - 7	1 m	S1 2
8.5 - 10	1.5 m	S1 3
11 - 17	6 m	S1 3
25.5 - 27.5	2 m	S1 3.5
32 - 33	1 m	T1 8
35.5 - 37	1.5 m	S1 3
38 - 39	1 m	S1 6
40 - 41.5	1.5 m	S1 5
50 - 62	12 m	T1 10
51 - 52	1 m	S2 0.5
53.5 - 54	0.5 m	S2 0.5
64 - 70.5	6.5 m	T1 8
65 - 67	2 m	S1 4
70 - 74.5	4.5 m	S2 1
76 - 78	2 m	S2 1.5
82 - 84	2 m	S1 6
80 - 82	2 m	T1 10
87 - 88	1 m	S1 5
93 - 94	1 m	S2 1.5

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 41 Recorder: DS HA Day/Date: 30/9/20

Purpose

Locality: (inc. distance/direction to nearest town)

GPS: 55 6697775 7153546 D 711

693706 7153617 712

N 1076
S 1077
E 1078
W 1079
G 1080

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	8	6-10	V
T2		-	
T3		-	
S1	3	2-5	S (Patchy)
S2	1	1-1.5	V
G	0.6	0.5-0.8	D

Structural formation: (including height) Low Open Woodland 8m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
		Grevillea striata
S1		Eremophila des/mit
		citrus
		Brigalow seedy
S2	D	Carissa ovata
		Alectryon
G	D	Buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types: Buffel 90% Bare ground 10%

Land system:

Landform:

Soils: Brown clay very rocky

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END OP. tow Present

Site 41

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 55	E 0	N
End point	Zone 55	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
27 - 41	14 m	t, 11
48 - 50	2 m	S1 3
74 - 77.5	3.5 m	S1 3
81 - 83	2 m	S2 1.5
84 - 86	2 m	S1 3
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 42 Recorder: DS HA Day/Date: 30/4/20

Purpose: NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693619 7153510 D 713

0693621 7153608 714

Vegetation structure

Median height of the EDL is to be measured

W 1085
S 1086
E 1087
W 1088
G 1089

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
T1	10	6 - 12	V (Patchy)
T1		-	
T2		-	
T3		-	
S1	4	2 - 5	S
S2	1	0.5 - 1.5	V
G	0.5	0.2 - 0.6	D

Structural formation: (including height) Low open woodland 10m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Melaleuca
		Tecticornia present on lower slopes
S1	D	Ac decora Hovea?
		Psydrax Santalum
		Eremophila des/mit.
		Brigalow
S2		Senna artemisioides
		Carissa ovata Grewia
		mulga

G Dichanthium sericeum
Enneapogon nutans
Heteropogon contortus
~~[illegible]~~ Sporobolus caroli
Aristida calycina
Buffel Themeda

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Light brown clay very rocky

Field observation and notes:

Landzone: 10

RE code changes

Existing RE code:

Proposed RE code:

END

Op-tom present
Buffel dominates in the open areas
with 50% cover overall

Site 42

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 5	E 0	N
End point	Zone 5	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
15 - 16	1 m	52 0.5
9.5 - 10	0.5 m	51 3
12 - 13	1 m	51 3
16 - 19	3 m	51 3.5
23 - 25	2 m	51 3
66.5 - 67.5	1 m	52 0.75
67 - 67.5	0.5 m	51 3
70 - 91	21 m	T1 12
74 - 75.5	1.5 m	52 1
76 - 78.5	2.5 m	51 5
80 - 88	8 m	51 4
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 43 Recorder: DS NA Day/Date: 30/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693592 7153647 D 715

0693628 7153737 716

N 1094
S 1092
E 1093
W 1090
G 1095

Vegetation structure
Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	10	9-11	V
T1	/	-	
T2		-	
T3		-	
S1		1.5-3	V
S2		-	
G	0.5	0.5-0.8	D

Structural formation: (including height) Low open Woodland 10m

Ecologically dominant layer: T1

Plant species
Record relative (numerical) dominance for each stratum;
d – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Melaleuca
		Fluviatilis/Leucadendra (assoc. with rocky river)
		Poplar
S1		Ac decora
		Ac excelsa
G		Buffel
		Dichanthium sericeum
		Heteropogon contortus
		Ophiuros
		Gladiolus
		Maireana microphylla
		Lomandra sterile
		Daisy (thistle - dead)

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Dark red clay Lots of rocks

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

of form present
+ of structure

Site 43

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 55	E 0	N
End point	Zone 55	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
5 - 9	4 m	S1 3
25.5 - 26	0.5 m	S1 1.5
37 - 37.5	0.5 m	S1 4
58 - 63	5 m	T1 8
63.5 - 64.5	1 m	S1 2
68 - 71	3 m	S1 4.5
71 - 74	3 m	T1 10
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 414 Recorder: DS HA Day/Date: 30/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0694566 7153018 D 717

0696647 7152979 718

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	10	8 -12	M
T2		-	
T3		-	
S1	3	2 - 5	S
S2		-	
G	0.6	0 - 1	

Structural formation: (including height) Low open forest 10m

Ecologically dominant layer: T1

N 1096
S 1097
E 1098
W 1099
G 1100

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Cas cristata
		Poplar
		Brigalow
S1		Geraphila ? dus/mit
		Wilga
		Dodonaea viscosa
		Alectryon
G		Buffel

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Light brown clay

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

T1 Dense in patches

Bare under casuarinas

site 44

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 55 E 0 N

End point Zone 55 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
3 - 7.5	4.5 m	T1 9
9.5 - 28	18.5 m	T1 12
33 - 35	2 m	S1 3
43 - 51	8 m	T1 9
53 - 63	10 m	T1 11
55 - 57.5	2.5 m	S1 3.5
67 - 69	2 m	S1 1
71 - 76	5 m	S1 2.5
73 - 77	4 m	T1 7
78.5 - 81	2.5 m	S1 1.5
91 - 95	4 m	T1 10
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Function

Location

Site No. 45 Recorder: DS HA Day/Date: 30/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) four view

GPS: 55J 0693748 4152746 D 719

0693691 7152769 720

Vegetation structure

Median height of the EDL is to be measured

N 1101
S 1102
E 1103
W 1104
G 1105

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	9	8 - 11	S
T2		-	
T3		-	
S1	3	1.5 - 5	S
S2		-	
G	0.6	0.6-0.8	D

Structural formation: (including height) low Woodland 9m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1		Poplar
		Callitris glaucophylla
S1		wilga
		Eremophila des/mit
		Bitgelow
		Dodonaea viscosa
		Ac. decora
G	D	Buffel Panicum effusum
		Enteropogon acicularis
		Dichanthium sericeum

Geology, landform, soils

Geology map/scale/year: Buffel 70% Bare ground 10

Geology code and rock types:

Land system:

Landform:

Soils: Light brown clay minor surface rock

Field observation and notes:

Landzone: 9

RE code changes

Existing RE code:

Proposed RE code:

END

op tom present

Site 45

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 55	E 0	N
End point	Zone 55	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
23 - 23.5	0.5 m	51 1
27 - 28	1 m	51 3.5
30.5 - 41	10.5 m	51 5
30 - 37.5	7.5 m	T, 9
47 - 50	3 m	T, 8
49 - 50	1 m	51 7
58 - 59	1 m	51 3.5
63 - 63.5	0.5 m	51 2
65 - 69.5	4.5 m	51 5
71.5 - 72.5	1 m	51 1.5
84.5 - 100	15.5 m	51 5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 46 Recorder: DS HA Day/Date: 30/8/20

Purpose ~~of~~ NR offset

Locality: (inc. distance/direction to nearest town) fairview

GPS: 55 0693491 7152957 D 721

0693402 7153006 722

Vegetation structure

Median height of the EDL is to be measured

	Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
	E		-	
N 1106	T1	6	6 - 7	V
S 1107	T2		-	
E 1109	T3		-	
W 1109	S1	2	1.5 - 3	M
G 1110	S2	1	0.5 - 1	S
	G	0.2	0 - 0.6	M

Structural formation: (including height) low open Woodland 6m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Poplar
		Callitris glaucophylla
S1		Ac deccora
		Eremophila dos/mit
		Grevillea striata
		Dodonaea viscosa
S2		Dodonaea viscosa
		Carissa ovata
G		Buffel
		Aristida calycina

Vallechia fornesiana

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale clay Lots of surface Rock

Field observation and notes:

Landzone: 10

RE code changes

Existing RE code:

Proposed RE code:

END

Of few present

Valechia formesiana Present

Site 4/6

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 55	E 0	N
End point	Zone 55	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
1 - 1.5	0.5 m	S2 1
6 - 7	1 m	S2 0.5
10.5 - 11	0.5 m	S2 0.5
12.5 - 13	0.5 m	S1 2
16.5 - 18	1.5 m	S1 1.5
20 - 24	4 m	S1 3
27.5 - 28	0.5 m	S1 2
29 - 40	11 m	S1 2.5
36 - 39	3 m	T1 6
45 - 45.5	0.5 m	S1 3
47.5 - 49	1.5 m	S1 3.5
71 - 72	1 m	S2 1
73.5 - 74	0.5 m	S2 1.5
77 - 77.5	0.5 m	S2 2
93.5 - 94	0.5 m	S2 1
95 - 96	1 m	S1 2.5
98 - 98.5	0.5 m	S2 1
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 47 Recorder: DS HA Day/Date: 30/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 J 0693248 7153081 D 723

0693167 7153139 724

N 1111
E 1112
S 1113
W 1114
G 1115

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
1	13	12 - 16	V
T1		-	
T2		-	
T3		-	
S1	3	1.5 - 6	S/M
S2	0.5	0.4 - 1	V
G	0.5	0.4 - 0.6	D

Structural formation: (including height) Open Woodland 13m

Ecologically dominant layer: 1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
E	D	Melaleuca
S1		Ac. ?
		Melaleuca
S2		Ac excelsa
G		Buffel sclerolaena birchii
		ophiuros
		Heteropogon
		Glandulifera

Geology, landform, soils

Geology map/scale/year: Buffel 60% Bare ground 30%

Geology code and rock types:

Land system:

Landform:

Soils: Pale brown clay some rock on surface

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

site 41

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 55 E 0 N

End point Zone 55 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
9.5 - 25	15.5 m	51 35
32 - 32.5	0.5 m	51 2
36 - 38.5	2.5 m	51 3
43.5 - 51	7.5 m	51 3
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 48 Recorder: DS NA Day/Date: 30/8/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) fairview

GPS: 55J 0692991 7153145 D 725

0693060 7153223 726

N 1116
S 1117
E 1118
W 1119
G 1120

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	12	10 -14	V
T2	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
T3		-	
S1	4	3 - 6	S
S2		-	
G	0.4	0.1 - 0.6	M

Structural formation: (including height) 12m ~~[illegible]~~ woodland

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1		Poplar
S1		Eremophila des/mit
		Callitris glaucophylla
		mulga
		Grevillea striata
		Ac decora
G		Aristida calycina
		Chrysopogon fallax

Buffel
Dichanthium sericeum
Eragrostis brownii

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale brown clay

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

site 48

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 55 E 0 N

End point Zone 55 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
27 - 28	1 m	S1 2
26 - 35.5	9.5 m	T1 10
41 - 42	1 m	S1 3
49 - 51	3 m	S1 2.5
53.5 - 56	2.5 m	S1 3
59 - 60	1 m	S1 4
61 - 63	2 m	S1 4
61 - 64	3 m	T1 7
72 - 73	1 m	S1 4.5
73 - 74	1 m	T1 19
82.5 - 83.5	1 m	S1 2.5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 49 Recorder: DS HA Day/Date: 30/4/20

Purpose NR offset

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0693293 7153213 D 727

728

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	12	10 - 15	S
T2		-	
T3		-	
S1	6	3 - 7	S
S2		-	
G	0.6	0.5 - 1	D

Structural formation: (including height) ~~12m~~ Woodland

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Poplar
S1		eremophila desmit
		A. decora
G		Aristida caput-medusae
		ophiuros

Buffel

1121 1122 1123 1124 1125

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale silty clay

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

Site 49

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 5 E 0 N

End point Zone 5 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
0 - 2.5	2.5 m	S1 3
17 - 19	2 m	S1 5
22 - 24.5	2.5 m	S1 5
28 - 34	6 m	S1 6
38 - 38.5	0.5 m	S1 5
42 - 55	13 m	T1 11
45 - 48	3 m	S1 5
55 - 60	5 m	S1 4.5
62.5 - 69	6.5 m	S1 3
76.5 - 77	0.5 m	S1 5
79.5 - 86	6.5 m	S1 4
89 - 90.5	1.5 m	S1 3
92 - 98	6 m	S1 4.5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 50 **Recorder:** DS HA **Day/Date:** 31/8/20

Purpose unmapped strip

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 | 0 6 9 5 9 8 7 | 7 1 5 0 2 7 D 729

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	8	8 - 9	M
T2		-	
T3		-	
S1	2	1.5 - 3	S
S2	0.5	0.5 - 1	V
G	0.5	0.3 - 0.6	D

Structural formation: (including height) low open forest 8m

Ecologically dominant layer: T1

N 1126
S 1127
E
W 1129
G 1129

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; **c** – co-dominant; **s** - subdominant, ***a*** – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Brigalow
S1		Wilga
S2		Cassia
G	D	Buffel

Geology, landform, soils

Geology map/scale/year: Cloncurry 80% buffel

Geology code and rock types: 15% bare ground

Land system:

Landform:

Soils: Dark sandy clay

Field observation and notes: 11.9.5a brigalow but only 25m wide + < 0.5 ha - unmapped

Landzone: 9

RE code changes

Existing RE code:

Proposed RE code:

END

	
North	South
	
East	West
	
Ground	

Biocondition Datasheet

Site ID	51		Date	31/8/20
Observers	DS HA			
Site Information: 100x50m Area:	Fairview			
Location (GPS reference)			Bioregion	BBS
Datum	GDA 94			
Zone	55J	Easting 0699462	Northing 7149931	730
Plot origin		0699493	7149894	731
Plot centre		0699530	7149863	732
Plot Bearing		Plot Alignment Description		
Locality	mapped as 11.10.1/11.10.7/11.10x but is poplar box callitris			

Regional Ecosystem and Tree height	20		Low the layer
Habitat Description	open woodland of poplar to 18m with an under storey of callitris glaucophylla to 14m the understorey consists of mulga with a shrub layer of Carissa		
Regional Ecosystem	11.10.7 ?	Median Tree canopy Height (m)	18
Emergent height (m)		Subcanopy ht (m)	14

Site Photos					
Photo Numbers	Plot centre	North	1131	South	1132
		East	1133	West	1134
	Plot Origin			other	1135 - Ground

Disturbance				
Type	mean fire scar height	severity	last event	obs type
Wildfire				
Prescribed burn				
Logging				
Treatment	heavily disturbed historically			
Grazing	Ongoing			
Non-native plant cover	<10%			
Erosion				
Regeneration	80%			
Storm				
Other (specify)				

100 x 50m Area: Tree SPP. Richness

Tree Species	Tree Spp. Count
Poplar mulga callitris glauc ~~Eucalyptus~~ Geijera Owenia Tree heath	

50 x 20m Area: Coarse woody Debris

Specimen length (mm)	site total m	per ha (m)
	26	

50 x 10m Area — Native Plant Species Richness Total

Shrub sp.	Eremophila, mulga, Carissa, Alphitonia, Atalaya, Senna artemisioides, Pittosporum spinescens, Casuarina cristata, Alectryon, Psydrax
Grass sp.	Buffel, Aristida, Cenchrus, Aristida caput-medusae, ~~mulga~~ Dichanthium sericeum, Aristida calycina, Eragrostis? collina, Chloris truncata
Forbs/other sp.	Cheilanthes seiberi, ~~Chloris truncata~~, Jasminum

op form present

Biocondition datasheet (cont.)

10 x 10m Plots: Ground Cover

Ground cover type	1	2	3	4	5	Mean
Native perennial (preferred and intermediate) grass	40	15		10	5	
Native non-preferred grass						
Native forbs and other species						
Native shrubs (< 1m height)			5			
Non-native grass						
Non-native forbs and shrubs						
litter	40	70	55	25	95	
rock						
bare ground	20	15	50	65		
Cryptograms						
Total	100	100	100	100	100	

100 x 50m Area: Large Trees	Plot size	100x 50		100x 20		100 x 10	

Species	Euc (E) Non-Euc (N)	Diam (cm)	DBH
E. Populnea	E		75"
E Populnea	E		59"
Callitris	N		25.5"
Callitris	N		23"
Callitris	N		26"

No benchmark for 11.10.7

Eucalypts	Avg DBH threshold		RE		Euc Benchm	Euc Benchmark
	No. Trees		No. Trees > = Benchmark/ha			
Non-Eucalypts	Avg DBH threshold		RE		Euc Benchm	Euc Benchmark
	No. Trees		No. Trees > = Benchmark/ha			

100m Transect: Tree and Shrub Canopy Cover Canopy (C), Subcanopy (SC), Emergent (E), Shrub (S)

Distance (m)		Type	Distance (m)	Type	Distance (m)		Type
0 - 7 - 13	Poplar	T1 20m	6				
19 - 23	wilga	S1 6m	4				
30.5 - 32	~~Pitt~~	S1 2	2.5				
35.5 - 39.5	Eucs cri	T2 8	4.5				
44 - 47.5	Poplar	T2 10	3.5				
50 - 52	wilga	S1 3	2				
56 - 57.5	dwarf wa	S1 4.5	1.5				
57.5 - 58	Eremoph	S2 1.5	0.5				
63 - 72	Callissia	S2 0.5	9				
64 - 66.5	Tree heath	S1 5	2.5		canopy total		
65 - 68	wilga	T2 12	3		subcanopy total		
72 - 76	wilga	T2 7	4		emergent total		
72 - 72.5	wilga	S2 1.5	0.5		shrub total		
75.5 - 93	Eucs cri	S1 9	17.5				
77.5 - 80.5	Eremo	~~S2~~ S1 9	3				
81.5 - 84.5	wilga	S1 7	3				
~~95~~ - 95 - 100	wilga	S1 7	5				

	
North	South
	
East	West
	
Ground	

N = 1141
S = 1142
E = 1143
W = 1144
G = 1145

Biocondition Datasheet

Site ID: 52 — Date: 31/8/20

Observers: DS NA

Site Information:

100x50m Area:

Location (GPS reference) — Bioregion:

Datum:

Zone:

	Easting	Northing	
Plot origin	0701 307	7149862	734
Plot centre	0701 419	7149813	735
Plot Bearing	0701 417	7149770	736

Plot Alignment Description:

Locality: Fairview — Line drawn round veg

Regional Ecosystem and Tree height

Habitat Description: Brigalow

Regional Ecosystem: 11.9.5a

Median Tree canopy Height (m): 10

Emergent height (m): 13

Subcanopy ht (m):

Site Photos

Photo Numbers

Plot centre	North	South	
	East	West	
Plot Origin		other	

Disturbance	mean fire scar height	severity	last event	obs type
Wildfire				
Prescribed burn				
Logging				
Treatment				
Grazing	yes			
Non-native plant cover	50%	30% bare ground		
Erosion				
Regeneration	160			
Storm				
Other (specify)				

100 x 50m Area: Tree SPP. Richness

Tree Species	Tree Spp. Count
Brigalow	
Poplar	

50 x 20m Area: Coarse woody Debris

Specimen length (mm)

site total m: 20

per ha (m):

50 x 10m Area — **Native Plant Species Richness** — Total

Shrub sp.	Wilga Atalaya Enneapogon dus/mt
Grass sp.	Buffel Aristida ps Paspalidium dubia
Forbs/other sp.	Dysphania carinata Sigesbeckia sp. tan

narrow strip ~~of~~ Abutting alignment but contiguous with Larger area to South

Biocondition datasheet (cont.)

10 x 10m Plots: Ground Cover

Ground cover type	1	2	3	4	5	Mean
Native perennial (preferred and intermediate) grass	5				40	
Native non-preferred grass						
Native forbs and other species	15					
Native shrubs (< 1m height)						
Non-native grass		35	10	30	10	
Non-native forbs and shrubs						
litter	80	55	20	50	45	
rock						
bare ground		10	70	20	5	
Cryptograms						
Total	100	100	100	100	100	
100 x 50m Area: Large Trees Plot size	100x50		100x20		100 x 10	

Species	Euc (E) Non-Euc (N)	Diam (cm)	DBH

Eucalypts	Avg DBH threshold		RE		Euc Benchm	Euc Benchmark
	No. Trees		No. Trees >= Benchmark/ha			
Non-Eucalypts	Avg DBH threshold		RE		Euc Benchm	Euc Benchmark
	No. Trees		No. Trees >= Benchmark/ha			

100m Transect: Tree and Shrub Canopy Cover Canopy (C), Subcanopy (SC), Emergent (E), Shrub (S)

Distance (m)		Type	Distance (m)		Type	Distance (m)		Type
0 – 3	Bmg	T1 10m	3					
11 – 37	Bmg	T1 12	26					
44 – 51	Pop	T1 10	7					
60 – 66	Pop	~~T1~~ E 15	6					
62 – 65	Bmg	T1 10	3					
68.5 – 100	Bmg	T1 12	31.5					
						canopy total		
						subcanopy total		
						emergent total		
						shrub total		

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 53 Recorder: DS HA Day/Date:

Purpose NR

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0 00816 7149721 D 777

07 00899 E 7149274 Ang Leiocarpa - Single E Callitris glaucophylla

Vegetation structure

Median height of the EDL is to be measured

N 1146
S 1147
W 1148
E 1149
G 1150

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	20	20 - 22	✓
T1	7	6 -	D
T2		-	
T3		-	
S1	0.7	0.5 - 1	✓
S2		-	
G	0.4	0.2 - 1	D

Structural formation: (including height) Tall open woodland 20m

Ecologically dominant layer: T1

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; *s* - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Callitris glaucophylla
		Corymbia intermedia
		Ac crebata
S1		Carissa ovata
		Alphitonia
		Croton insularis
T1		Petalostigma
G		Echinopogon ?
		Panicum effusum
		Buffel
		Aristida ?
T1		Grevillea striata

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale silty clay

Field observation and notes: Thick regrowth Callitris

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END Buffel 40% cover

Site 53

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** ..... **Transect length:** .....

Start point Zone 5 E 0 N

End point Zone 5 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
0 - 5.5	5.5 m	T, 7
7.5 - 10.5	3 m	T, 7
13 - 77	54 m	T, 8
87 - 100	13 m	T, 8
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

Function

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. S4 Recorder: DS NA Day/Date: 31/8/20

Purpose Irrigation corridor

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0702342 7149272 D 739

740

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	10	5 -12	S
T2		-	
T3		-	
S1	4	3 -5	S
S2	1	1 -1.5	V
G	0.3	0.2 -0.5	M

Structural formation: (including height)
open woodland to 10m

Ecologically dominant layer: T1

N 1151
S 1152
W 1153
E 1154
G 1155

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Poplar
S1	D	wilga Owenia
		Poplar seedlings Atalaya
		Bremontia dissimilis
G2	D	Carissa ovata Grewia
		Senna artemisioides
G	D	Buffel
		Dichanthium sericeum

Chloris truncata

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Pale silty soil

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

Buffel ~40%
Bare ground 50%
OC str present

Site 54

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates:		Datum:	Transect length:
Start point	Zone 55	E 0	N
End point	Zone 55	E 0	N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
21 - 26	5 m	S1 3
28 - 29	2 m	S2 0.5
36.5 - 43	6.5 m	S1 8
37 - 47	10 m	S1 3
50 - 51	1 m	S1 2.5
51 - 58	7 m	T1 10
55 - 60	5 m	S1 3
64 - 69	5 m	T1 12
705 - 745	4 m	T1 10
81.5 - 86	4.5 m	S1 4
83 - 97	14 m	T1 13
92 - 94	2 m	S1 2.5
99 - 100	1 m	S2 0.5
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:	
Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 55 Recorder: DS HA Day/Date: 31/8/20

Purpose Irrigation corridor

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0702795 7149178 D 741

55 0702 796 7149210 742

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E	12	10 - 14	S
T1		-	
T2		-	
T3		-	
S1	4	2 - 6	M
S2	1	1 - 1.5	M
G	0.4	0.2 - 0.5	M

Structural formation: (including height)
12m tall woodland

Ecologically dominant layer: T1

N 1156
S 1157
E 1158
W 1159
G 1160

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	D	Poplar
		Melaleuca leuc 30m
S1		Eremophila dis/mit
		over Atriplex
S2		Carissa ovata
G		Bothriochloa
		Chloris truncata
		Abutilon oxycarpum
		Paspalidium distans

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils: Brown clay Surface rock

Field observation and notes:

Landzone:

RE code changes

Existing RE code:

Proposed RE code: 11.10.7 ?

END

In mapped remnant but poor

Site 55

Vegetation Structure Site Inspection Sheet - Proforma

Transect - crown cover measured *(transect intercept method)*

GPS coordinates: **Datum:** **Transect length:**

Start point Zone 5 E 0 N

End point Zone 5 E 0 N

All heights in the "Str./height" column are to be measured

Interval (metres)	Intercept	Str./height
10 - 21	11 m	S1 4
11 - 17	6 m	T1 10
25 - 30	5 m	S1 4
55 - 60	9 m	S2 1
695 - 745	5 m	S2 1
86 - 100	14 m	S2 1
90 - 94	4 m	T1 17
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	
-	m	

Summary:

Minimum height of plants included in the transect table:	m
Intercept of EDL 0 - 50m:	m
Intercept of EDL 50 -100m:	m
Measured crown cover % of EDL 0 -100m:	%
Structural formation	

Conclusions/notes:

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

N 1164
S 1165
E 1166
W 1167
G 1166

Location

Site No. 8 **Recorder:** DS AA	**Day/Date:** 31/8/20
Purpose irrigation corridor	
Locality: (inc. distance/direction to nearest town) Fairview	
GPS: 55 6700042 7149485	D743

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1		No -	
T2		Layer -	
T3		-	
S1		-	
S2		-	
G	0.5	0.3 - 0.6	D

Structural formation: (including height) Grassland not remnant

Ecologically dominant layer: G

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
		Buffel ~80%
		Bare ground 15%
		Sclerolaena birchii

Geology, landform, soils

Geology map/scale/year:

Geology code and rock types:

Land system:

Landform:

Soils:

Field observation and notes:

Landzone:

RE code changes

Existing RE code: At Existing pipeline

Proposed RE code: No cover

END

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 54 Recorder: DS HA Day/Date: 31/8/20

Purpose Irrigation Collider

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55J 0700089 7149516 D744

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1	16	14 -18	S
T2	10	8 - 12	S
T3		-	
S1	4	2 -5	S
S2	1	1 -1.5	V
G	0.6	0.5 - 0.8	M

Structural formation: (including height) Woodland 16m

Ecologically dominant layer: T1

N 1169
S 1170
E 1171
W 1172
G 1173

Plant species

Record relative (numerical) dominance for each stratum;
d – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
T1	d	Poplar
		Melaleuca bi
T2		Callitris glaucophylla
S1		mixed Ac decora
		Callitris
		Eremophila des/mit
S2		Carissa ovata
G		Buffel

Panicum effusum
Cymbopogon refractus

Geology, landform, soils

Geology map/scale/year: Buffel 40%

Geology code and rock types: Bare ground 40%

Land system:

Landform:

Soils:

Field observation and notes: Small triangl d remnant

Landzone:

RE code changes

Existing RE code:

Proposed RE code: 11.10.7

END

	
North	South
	
East	West
	
Ground	

A 3.3 Sheet D – Regional Ecosystem type assessment site

Location

Site No. 58 Recorder: DS HA Day/Date: 31/8/20

Purpose Irrigation corridor

Locality: (inc. distance/direction to nearest town) Fairview

GPS: 55 0169966 7149619 D 745

N 1174
S 1175
E 1176
W 1177
G 1178

Vegetation structure

Median height of the EDL is to be measured

Stratum	Median height	Height interval	Est. cover density (D,M,S,V)
E		-	
T1		Cover	
T2		-	
T3	No	-	
S1		-	
S2		-	
G	0.4	0.2-0.6	D

Structural formation: (including height) Grassland Not Remnant

Ecologically dominant layer: G

Plant species

Record relative (numerical) dominance for each stratum; *d* – dominant; *c* – co-dominant; **s** - subdominant, *a* – associated.

Str.	Rel. dom.	Scientific Name
		Buffel
		Heteropogon Contortus
		Dichanthium Sericeum

Geology, landform, soils

Geology map/scale/year: Buffel 90% cover

Geology code and rock types: Bare ground 10%

Land system:

Landform:

Soils:

Field observation and notes: Pipeline corridor No cover

Landzone:

RE code changes

Existing RE code:

Proposed RE code:

END

	
North	South
	
East	West
	
Ground	

Biocondition Datasheet

Site ID	59				Date	31/8/20	
Observers	R DS HA						
Site Information: 100x50m Area:	fairview irrigation corridor						
Location (GPS reference)					Bioregion	BBS	
Datum	GDA94						
Zone	55	Easting	0699 835	Northing	7149668	746	
Plot origin			0699 795		714 9401	447	
Plot centre			0699 760		714 9434	748	
Plot Bearing		Plot Alignment Description					
Locality							

N= 1179
S= 1180
*W= 1181
E= 1182
G= 1183

Regional Ecosystem and Tree height					
Habitat Description	open woodland of poplar box to 21m				
Regional Ecosystem		Median Tree canopy Height (m)	21		
	Emergent height (m)		Subcanopy ht (m)	6	
Site Photos / Photo Numbers	Plot centre	North		South	
		East		West	
	Plot Origin			other	

Disturbance					100 x 50m Area: Tree SPP. Richness	
Type	mean fire scar height	severity	last event	obs type	Tree Species	Tree Spp. Count
Wildfire					Poplar box	
Prescribed burn					Eremophila	
Logging					mulga	
Treatment					Grevillea striata	
					Casuarina cristata	
					Psydrax	
Grazing					50 x 20m Area: Coarse woody Debris	
Non-native plant cover	Buffel 55%				Specimen length (mm)	
Erosion						site total m
Regeneration	60%					42.5
Storm						per ha (m)
Other (specify)						

50 x 10m Area	Native Plant Species Richness	Total
Shrub sp.	Eremophila des/mit Dodonaea viscosa Carissa ovata	
Grass sp.	Aristida calycina Buffel Dichanthium sericeum	
Forbs/other sp.	Op torn Glandulicera (?) … Abutilon oxycarpum	

Biocondition datasheet (cont.)

10 x 10m Plots: Ground Cover

Ground cover type	1	2	3	4	5	Mean
Native perennial (preferred and intermediate) grass	25		25	25	40	
Native non-preferred grass						
Native forbs and other species	5	10		5	10	
Native shrubs (< 1m height)						
Non-native grass						
Non-native forbs and shrubs						
litter	55	65	5	40	40	
rock						
bare ground	15	15	70	30	10	
Cryptograms						
Total	100	100	100	100	100	

100 x 50m Area: Large Trees Plot size 100x 50 | 100x 20 | 100 x 10

Species	Euc (E) Non-Euc (N)	Diam (cm)	DBH
Populnea	E		90"
Populnea	E		53"
Populnea	E		48"
Populnea	E		42"
Populnea	E		41.5"

Eucalypts	Avg DBH threshold		RE		Euc Benchm Euc Benchmark
	No. Trees		No. Trees > = Benchmark/ha		
Non-Eucalypts	Avg DBH threshold		RE		Euc Benchm Euc Benchmark
	No. Trees		No. Trees > = Benchmark/ha		

100m Transect: Tree and Shrub Canopy Cover Canopy (C), Subcanopy (SC), Emergent (E), Shrub (S)

Distance (m)		Type	Distance (m)		Type	Distance (m)		Type
5.5 - 14	8.5	T1 20.m	Poplar					
16 - 18.5	0.5	S1 2	Dodonaea					
23 - 29	6	T1 22	Poplar					
29 - 29.5	0.5	T2 3	callitris					
34.5 - 40	5.5	T2 7	vulgar					
44 - 48	4	T2 3	vulgar					
50 - 53	3	T1 10	Poplar					
62 - 62.5	0.5	S1 3	Dodonaea					
65.5 - 66.5	1	S1 1	Dodonaea					
66 - 74	6	T1 14	Poplar			canopy total		
69 - 71.5	2.5	T2 4	Eucalyptus			subcanopy total		
73 - 74	1	S1 1.5	Eucalyptus			emergent total		
77 - 79	2	T1 8	Poplar			shrub total		
91 - 92.5	1.5	S1 2	Eucalyptus					
94.5 - 95	0.5	T2 4.5	Eucalyptus					

	
North	South
	
East	West
	
Ground	