



MANAGING FOR RESILIENCE

Desert Channels Queensland's

Biodiversity Plan

**Part 2 – Management and values of the
Desert Channels Region**



2012–2017

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For further information contact:

Desert Channels Queensland

07 4658 0600

admin@dcq.org.au

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Introduction

Part 2 of the biodiversity plan provides background information on the assessment of biodiversity values within the region, management options and a comprehensive list of the values that make up the region. This includes a list of the:

- Native plants and animals of the region
- Introduced species of the region (weeds and feral animals)
- Regional ecosystems
- Wetlands
- Special landscape areas (wildlife refugia)

This part is used to inform Part 1 of the Desert Channels Queensland's Biodiversity Plan, which informs the goals, initiatives and actions that are needed within the region to protect biodiversity.

Assessing biodiversity value

In the absence of comprehensive species distribution data, expert opinion about the biodiversity significance of landscapes, flora and fauna in our region is very valuable, and aligns with our main objective of managing for good landscape-scale outcomes.

The Queensland Government has developed a biodiversity assessment and mapping methodology (BAMM) to provide a consistent approach for assessing biodiversity values at a landscape scale across the state. Five of the six bioregions in the Desert Channels region have been assessed using the BAMM, with only the Northwest Highlands still to be assessed for our region. The product is a series of recommendations and mapping about areas of highest biodiversity value within each bioregion.



Using the BAMB, regional ecosystems have been evaluated by bioregion for their rarity, diversity, fragmentation, habitat condition, resilience and ecosystem processes. Expert panels have then considered connectivity, threatening processes, significance at a state, regional and local level, and special biodiversity values.

From these assessments, common themes emerge across the region highlighting the importance to biodiversity of:

- riparian corridors and their buffer zones
- river confluences
- permanent and ephemeral wetlands and their buffer zones
- permanent and semi-permanent waterholes
- floodplain linkages
- springs
- dune systems, desert, stony plains
- natural terrestrial vegetation corridors
- ridges, ranges, escarpments, tablelands, jump-ups
- centres of endemism
- areas of high flora and fauna diversity
- areas with disjunct populations, taxa at the limits of their ranges, ecosystems with distinct variation
- relictual populations
- wildlife refugia
- protected areas – national parks, resources reserves, nature refuges
- remote and low disturbance areas away from artificial waters and grazing pressure
- threatened ecosystems with 'endangered' or 'of concern' biodiversity status









Please see 'Special Biodiversity Values' for further details.

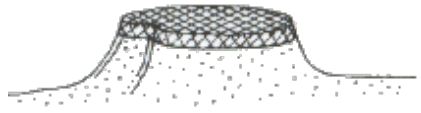



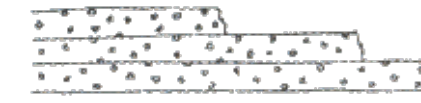





Managing the landscape for biodiversity

Common to all landscapes across Queensland, and a unifying theme across the bioregions, is the land zone classification. Land zones are simple groupings of similar geology and landforms at a whole of landscape scale. Twelve land zones are described for the State with nine of these represented in the Desert Channels region. Each land zone has a distinctive set of natural attributes, as shown on the following page. This provides a simple way to think about the best management options for long term resilience.



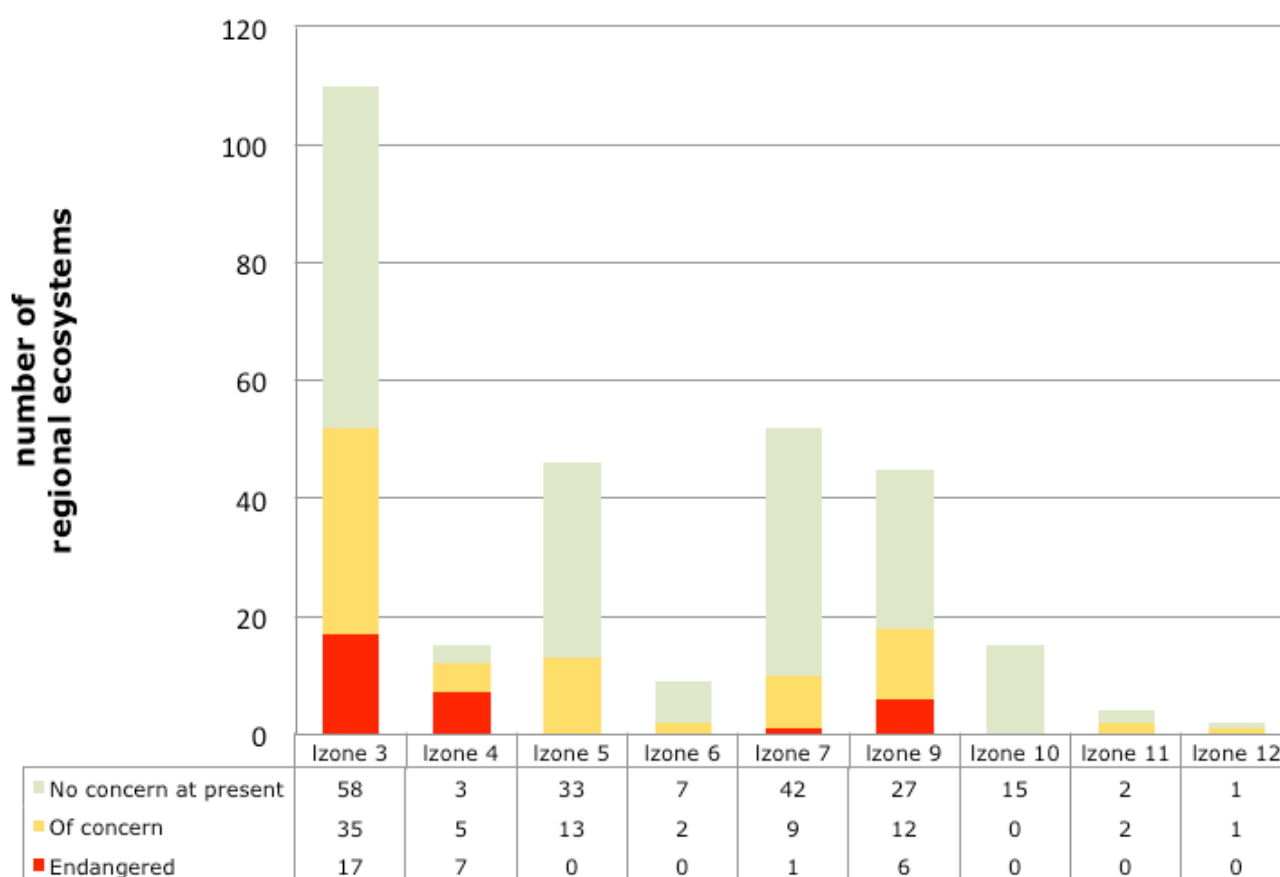
Land zones and their natural attributes in the Desert Channels region

Bioregion						Geology	Land Zone		Attributes	
C	D	M	M	B	N	Plains or dunes formed from unconsolidated water or wind borne deposits	3		Drainage lines with riparian habitats, waterholes, alluvial plains, floodplain habitats, artesian mound spring complexes	
H	E	G	L	B			4		Clay plains not associated with current alluvium, with grasslands, and acacia/eucalypt woodlands	
C	U	D		S			5		Old loamy and sandy plains with diverse eucalypt and acacia woodlands	
							6		Inland dune fields with hummock grasslands, open forblands and shrublands	

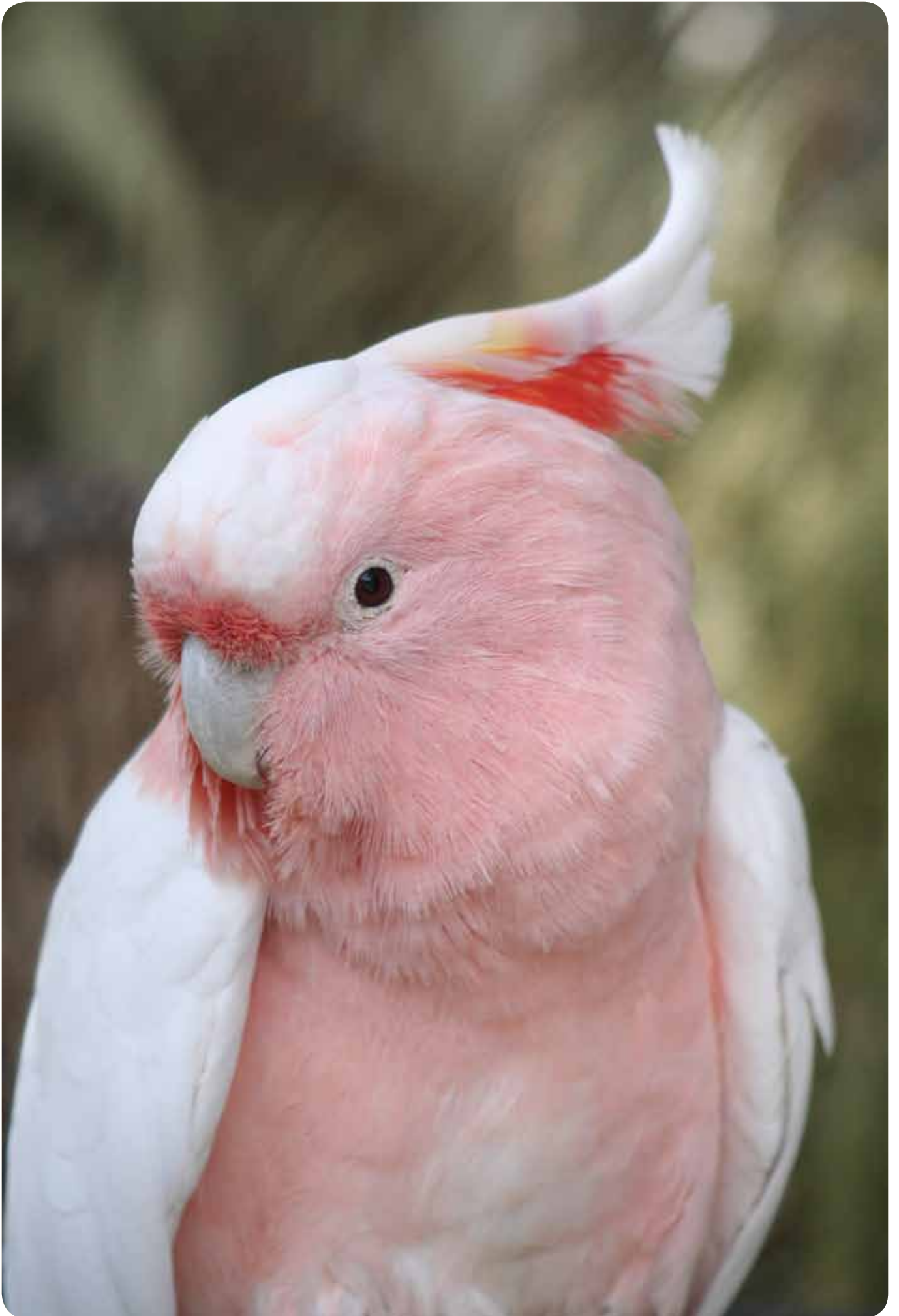
Bioregion						Geology	Land Zone		Description	
C	D	M	M	B	N	Sedimentary bedrock, usually undulation to hilly	7		Ironstone jump-ups and footslopes - isolated remnant plateaus and scarps with diverse open shrub and woodlands, caves and hollows	
H	E	G	L	B	N		9		Undulating country with grasslands on deep cracking clay soils, and acacia woodlands	
C							10		Sandstone ranges forming plateaus, scarps and hills, with shrublands and acacia/eucalypt woodlands	
H							11		Hills and lowlands on metamorphic rocks with eucalypt woodlands	
C	D	M	M	B	N	Igneous bedrock, usually undulating to hilly	12		Hills and lowlands on granitic rock, with caves and crevices	

Natural vegetation condition is widely acknowledged as a very good surrogate for biodiversity condition. In the absence of detailed data about biodiversity condition for all plants and animals in the region, an analysis of regional ecosystem variety and condition can be undertaken. Some land zones are widely represented in the region, and have high numbers of regional ecosystems (for example land zone 3 with its extensive wetland systems), whilst others are represented in only a few small areas, with far fewer regional ecosystems (such as land zone 12 with its igneous hills). From this analysis it is clear that certain land zones are under more pressure than others, as illustrated below.

Biodiversity status of regional ecosystems by land zone in the Desert Channels region



Land Zone	Description
3	Drainage lines with riparian habitats, waterholes, alluvial plains, floodplain habitats, artesian mound spring complexes
4	Clay plains not associated with current alluvium, with grasslands, and acacia/eucalypt woodlands
5	Old loamy and sandy plains with diverse eucalypt and acacia woodlands
6	Inland dune fields with hummock grasslands, open forblands and shrublands
7	Ironstone jump-ups and footslopes - isolated remnant plateaus and scarps with diverse open shrub and woodlands, caves and hollows
9	Undulating country with grasslands on deep cracking clay soils, and acacia woodlands
10	Sandstone ranges forming plateaus, scarps and hills, with shrublands and acacia/eucalypt woodlands
11	Hills and lowlands on metamorphic rocks with eucalypt woodlands
12	Hills and lowlands on granitic rock, with caves and crevices



For each of the nine land zones in the region, a suite of issues and best practice management approaches can be described, as shown below

Land Zone	Attributes	Threatening process	Biodiversity outcome	Prevention/recovery action
3	Drainage lines with riparian habitats, waterholes, alluvial plains, floodplain habitats, artesian mound spring complexes			
3	Riparian habitats	INTRODUCED PLANTS Invasion by exotic weed species	Change in vegetation structure	Manage exotic weed species
		INTRODUCED PLANTS Invasion by exotic pasture legume (leucaena)	Altered vegetation structure, loss of habitat quality	Exclude exotic pasture legumes from riparian areas
		INTRODUCED PLANTS CAUSING ALTERED FIRE REGIME Hot fires due to high buffel grass fuel load destroy hollow bearing trees	Loss of essential habitat for hollow dependant species	Strategically graze buffel grass prior to fire season to reduce fuel load
		FERAL ANIMALS Pigs - destruction of ground layer habitat, predation of small reptiles, amphibians & insects	Loss of ground layer habitat and associated fauna	Strategic control of feral pigs
		FERAL ANIMALS Cats - predation on birds, small mammals, reptiles, amphibians; occupy tree hollows and bird nests	Localised loss of species, alienation of essential breeding habitat	Need R&D to develop effective broad scale control techniques
		FERAL ANIMALS Foxes - predation on birds, small mammals, reptiles, amphibians	Localised loss of species	Strategic control of foxes
		HUMAN IMPACT Campers - burning old trees and fallen woody material	Loss of ground layer plants and fallen woody material, destruction of hollow bearing trees	Education and signage
		HUMAN IMPACT Campers - disturbance of habitat	Loss of essential habitat for ground dwelling fauna, loss of organic material and protective cover for ground layer	Education and signage
		TOTAL GRAZING PRESSURE Stock camps	Trampling, destruction of ground layer plants and tree seedlings	Wet season spelling, riparian fencing

Land Zone	Attributes	Threatening process	Biodiversity outcome	Prevention/recovery action
3	Aquatic refugia – permanent and near permanent waterholes	ALTERED WATER REGIME Inappropriate water harvesting	Loss of key refugia sites Breakdown of benthic algae component of food chain	Appropriate planning and compliance measures
		ALTERED WATER REGIME Modification to stream flow	Loss of genetic diversity	Appropriate planning and compliance measures
		ALTERED WATER REGIME Sewage outflow	Poor water quality	Appropriate planning and compliance measures
		ALTERED WATER REGIME Groundwater release	Changed water quality, changed hydrology	Appropriate planning and compliance measures
		INTRODUCED PLANTS Salvinia, water lettuce, water hyacinth	Choked water ways, eutrication leading to loss of aquatic species	Manage exotic weed infestations
		FERAL ANIMALS Pigs, carp, cane toads - predation on shellfish, aquatic fauna and amphibians, juveniles and eggs	Localised loss of species	Strategic control of feral animals; R&D to develop and promote effective control techniques
		HUMAN IMPACT Fishing - netting, translocating non - endemics, using soap in yabby traps	Altered population structure, displacement of native populations by non - endemics, loss of water quality	Education and signage; compliance action on illegal netting
		TOTAL GRAZING PRESSURE Domestic and native animal use	Trampling destroys critical flora and benthic algae at water's edge, increases turbidity	Wet season spelling, riparian fencing
3	Floodplain habitat, seasonal corridors, swamps, billabongs, migratory bird habitat	ALTERED WATER REGIME Infrastructure interfering with shallow flooding events	Loss of floodplain habitat crucial to wetland fauna breeding cycles	Ensure infrastructure (roads, fire-breaks, pipelines etc.) do not impede shallow flooding events
		INTRODUCED PLANTS Invasion by exotic weeds	Changed vegetation structure creates habitat for feral species	Manage exotic weed species
		INTRODUCED PLANTS Invasion by exotic pasture legumes (leucaena)	Changed vegetation structure, loss of habitat quality	Exclude exotic pasture legumes from this land zone
		INTRODUCED ANIMALS Pigs, cats, cane toad predation	Localised loss of species and habitat quality	Strategic control where possible; R&D required for effective broad scale control techniques
		TOTAL GRAZING PRESSURE Domestic and native animal use	Grazing and trampling of wetland vegetation	Wet season spelling
		ALTERED FIRE REGIME Broad scale burning of lignum swamps	Fire destroys grey grass wren habitat	Lignum swamps should not be burned

Land zone	Attribute	Threatening process	Biodiversity outcome	Prevention/recovery action
3	Artesian spring complexes	FERAL ANIMALS gambusia and cane toad predation on aquatic fauna, juveniles and eggs	Population reduction and localised extinctions	Strategic control where possible; R&D required for effective broad scale control techniques
		FERAL ANIMALS Pigs - habitat destruction, predation on amphibians, spread of diseases	Loss of habitat quality, impact on native species	Exclusion fencing and strategic control measures
		TOTAL GRAZING PRESSURE Domestic and native animal use	Trampling and grazing of springs vegetation, poor water quality	Exclusion fencing of springs
4	Clay plains not associated with current alluvium, with grasslands and acacia/eucalypt woodlands			
4	Woodland habitats	Scalding, loss of A horizon soil and organic matter	Loss of ground layer diversity	Strategic grazing, fencing to land type
4		INTRODUCED PLANTS Buffel grass	Loss of plant diversity	Strategic grazing, fencing to land type
4		INTRODUCED PLANTS Invasion by exotic weeds	Change in vegetation structure; creation of habitat for feral species	Manage exotic weed species
5	Old loamy and sandy plains with diverse eucalypt and acacia woodlands			
5	Diverse habitat – eucalypt and acacia woodlands, high plant diversity, woodland bird habitat	INTRODUCED PLANTS Exotic pasture	Loss of native grasses and forbs essential for seed eating fauna	Avoid overgrazing and creation of opportunities for exotic pastures to dominate
			Changed fire regime causing loss of hollow bearing trees	Manage fuel load to minimise hot fires
		TOTAL GRAZING PRESSURE Domestic and native animal use	Loss of native grasses and forbs; structural change due to increasing native shrubs	Fencing to land type, strategic grazing management
		HUMAN IMPACT Fodder harvesting - mulga	Loss of hollow bearing trees, loss of connectivity	Education, planning structure of harvesting permits, ensure operators leave habitat trees
6	Inland dune fields with hummock grasslands, open forblands and shrublands			
6	Hummock grasslands - specialist fauna	FERAL ANIMALS Camels	Damage to trees, loss of shrubs, destruction of isolated wetlands (artesian springs)	Strategic management of feral animals
		FERAL ANIMALS foxes and cats - predation on small mammals, reptiles and birds	Population reduction and localised extinctions	Strategic management of feral animals where possible; R&D to develop broad scale strategic control methods.
6	Sand habitats – specialist fauna	More information needed	More information needed	

7	Ironstone jumpups and footslopes - isolated remnant plateaus and scarps with diverse open shrub and woodlands, caves and hollows			
7	Specialised flora, including rare plants	FERAL ANIMALS Goats	Destruction of specialised or rare plant species	Manage feral goat populations
7	Specialised fauna because of special habitats – caves, cracks, hollows	FERAL ANIMALS Goats	Displacing native fauna – bats, yellow foot and purple - shouldered rock wallabies & other marsupials.	Manage feral goat populations
9	Undulating country with grasslands on deep cracking clay soils, and acacia woodlands			
9	Grassland on cracking clay downs, grassland birds, specialist crack-dwelling fauna	INTRODUCED PLANTS Exotic weed species	Loss of soil cracking structure, loss off perennial tussock grasses, change from grassland to shrubland monoculture	Manage exotic weed infestation
		INTRODUCED PLANTS Exotic pastures	Loss of ground layer plant diversity	Avoid overgrazing and creation of opportunities for exotic pastures to dominate
		FERAL ANIMALS Fox, cat	Predation on specialist grassland fauna	Manage foxes, need R&D for cats
		TOTAL GRAZING PRESSURE Domestic and native animal use	Loss of perennial tussock grasses which are critical grassland habitat	Manage grazing pressure (Need R&D for marsupial management)
		VEGETATION CHANGE encroachment/shrub balance	Loss of ground layer and grassland habitat	Manage woody vegetation, introduce planned burning
9	Acacia woodlands	VEGETATION CHANGE thickening	Loss of ground layer grasses and forbs	Manage woody vegetation, introduce planned burning
		VEGETATION CHANGE shrub/grass balance	Loss of ground layer grasses and forbs	Strategic grazing, planned fire regime
10	Sandstone ranges forming plateaus, scarps and hills, with shrublands and acacia/eucalypt woodlands			
10	Eucalypt/acacia woodlands - habitat for vulnerable plant species	More information needed	More information needed	
10	Springs in sandstone ranges	TOTAL GRAZING PRESSURE Domestic and native animal use	Trampling and grazing of springs vegetation, poor water quality	Exclusion fencing
11	Hills and lowlands on metamorphic rocks with eucalypt woodlands			
11	Sparse eucalypt woodland habitat	INTRODUCED PLANTS CAUSING ALTERED FIRE REGIME Hot fires due to high buffel grass fuel load	Changed fire regime causing loss of hollow bearing trees	Manage fuel load to minimise hot fires
12	Hills and lowlands on granitic rock, with caves and crevices			
	Caves and crevices	More information needed	More information needed	

Values of the Desert Channels Region

Plants and animals

Species information has been evaluated and compiled from the following sources:

Queensland Government's WildNet database

www.ehp.qld.gov.au/wildlife/wildlife-online/

Species Profile and Threats database (SPRAT)

www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

The Australian Natural Heritage Assessment Tool (ANHAT)

www.environment.gov.au/heritage/anhath/summaries/qld/qld-desert-channels.html

The EPBC Act Protected Matters Search Tool

www.environment.gov.au/epbc/pmst/index.html

Chapman, AD, 2009, Numbers of Living Species in Australia and the World, 2nd edition, Australian Biodiversity Information Services, Toowoomba, Australia, A Report for the Australian Biological Resources Study

www.environment.gov.au/biodiversity/abrs/publications/other/species-numbers/2009/04-01-groups-chordates.html

Desert Channels vertebrates

Class	Native	% of Australian species in DCQ region	Rare or threatened species	% of DCQ species rare or threatened	Introduced species
mammals	97	25%	18	18.5%	14
birds	372	45%	17	4.6%	7
reptiles	220	24%	2	0.9%	0
amphibians	34	15%	1	2.9%	1
bony fish	25	unknown	4	unknown	2
TOTAL	748	31%	42	5.6%	24



Desert Channels native invertebrates

*Totals are species currently recorded in ANRAH database – there are additional undescribed species in the region

Class	*Number of species
ants and bees	69
beetles	72
bivalves	7
bugs	86
dragon and damsel flies	13
moths and butterflies	30
snails	87
spiders	29
stiletto flies	1
termites	20
wheel animals	10
TOTAL	424

Desert Channels rare and threatened vertebrates

NCA – Status under Queensland’s Nature Conservation Act 1992:
PE presumed extinct E endangered V vulnerable C common

EPBC – Status under the national Environmental Protection and Biodiversity Conservation Act 1999:
EX extinct CE critically endangered E endangered V vulnerable

Class	Common Name	Scientific Name	NCA	EPBC
mammals	ampurta	<i>Dasycercus hillieri</i>		E
mammals	bridled nailtail wallaby	<i>Onychogalea fraenata</i>	E	E
mammals	brush-tailed mulgara	<i>Dasycercus blythi</i>	V	
mammals	crest-tailed mulgara	<i>Dasycercus cristicauda</i>	V	V
mammals	desert rat-kangaroo	<i>Caloprymnus campestris</i>	PE	EX
mammals	dusky hopping-mouse	<i>Notomys fuscus</i>	E	V
mammals	ghost bat	<i>Macroderma gigas</i>	V	
mammals	greater bilby	<i>Macrotis lagotis</i>	E	V
mammals	Julia Creek dunnart	<i>Sminthopsis douglasi</i>	E	E
mammals	koala	<i>Phascolarctos cinereus</i>	C	V
mammals	kowari	<i>Dasyuroides byrnei</i>	V	V
mammals	northern quoll	<i>Dasyurus hallucatus</i>	C	E
mammals	orange leaf-nosed bat	<i>Rhinonictis aurantia</i>	V	
mammals	plains rat	<i>Pseudomys australis</i>	E	V
mammals	purple-necked rock-wallaby	<i>Petrogale purpureicollis</i>	V	
mammals	south-eastern long-eared bat	<i>Nyctophilus corbeni</i>		E
mammals	southern marsupial mole	<i>Notoryctes typhlops</i>		E
mammals	water mouse	<i>Xeromys myoides</i>	V	V
birds	Australian bittern	<i>Botaurus poiciloptilus</i>		E
birds	Australian painted snipe	<i>Rostratula australis</i>	V	V

Class	Common Name	Scientific Name	NCA	EPBC
birds	black-throated finch (white-rumped species)	<i>Poephila cincta cincta</i>	E	E
birds	Gouldian finch	<i>Erythrura gouldiae</i>	E	E
birds	Grey grasswren	<i>Amytornis barbatus barbatus</i>		V
birds	Herald petrel	<i>Pterodroma heraldica</i>	E	CE
birds	Major Mitchell's cockatoo	<i>Lophochroa leadbeateri</i>	V	
birds	night parrot	<i>Pezoporus occidentalis</i>	E	E
birds	painted honeyeater	<i>Grantiella picta</i>	V	
birds	plains-wanderer	<i>Pedionomus torquatus</i>	V	V
birds	powerful owl	<i>Ninox strenua</i>	V	
birds	princess parrot	<i>Polytelis alexandrae</i>	C	V
birds	red goshawk	<i>Erythrotriorchis radiatus</i>	E	V
birds	squatter pigeon (southern subspecies)	<i>Geophaps scripta scripta</i>	V	V
birds	star finch (eastern and southern)	<i>Neochmia ruficauda ruficauda</i>	E	
birds	yellow chat	<i>Epthianura crocea</i>	V	
birds	yellow chat (gulf)	<i>Epthianura crocea crocea</i>	V	
reptiles	plains death adder	<i>Acanthophis hawkei</i>	C	V
reptiles	yakka skink	<i>Egernia rugosa</i>	V	V
amphibians	wallum froglet	<i>Crinia tinnula</i>	V	
bony fish	Edgbaston goby	<i>Chlamydogobius squamigenus</i>	E	V
bony fish	Elizabeth Springs goby	<i>Chlamydogobius micropterus</i>	E	E
bony fish	Murray cod	<i>Maccullochella peelii</i>		V
bony fish	redfin blue eye	<i>Scaturiginichthys vermeilipinnis</i>	E	E

Desert Channels plants

Class	Number of Species	Rare of threatened species	% of DCQ species rare or threatened	Introduced species
conifers	1	-	-	-
ferns	32	-	-	-
higher dicots	1958	26	1.32%	178
liverworts	7	-	-	-
lower dicots	14	-	-	2
monocots	531	7	1.32%	63
mosses	9	-	-	-
quillworts	1	-	-	-
uncertain	1	-	-	-
TOTAL	2554	33	1.29%	243

Desert Channels rare and threatened plants

NCA – Status under Queensland’s Nature Conservation Act 1992:
PE presumed extinct E endangered V vulnerable C common

EPBC – Status under the national Environmental Protection and Biodiversity Conservation Act 1999:
EX extinct CE critically endangered E endangered V vulnerable

Class	Common Name	Scientific Name	NCA	EPBC
higher dicots	<i>Rhaphidospora bonneyana</i>		V	V
higher dicots	<i>Xerothamnella parvifolia</i>		V	V
higher dicots	<i>Ptilotus brachyanthus</i>		E	
higher dicots	<i>Eryngium fontanum</i>	blue devil	E	E
higher dicots	<i>Hydrocotyle dipleura</i>		V	
higher dicots	<i>Atriplex morrisii</i>		V	
higher dicots	<i>Maireana cheelii</i>		C	V
higher dicots	<i>Sclerolaena blakei</i>		V	V
higher dicots	<i>Sclerolaena walkeri</i>		V	V
higher dicots	<i>Austrobryonia argillicola</i>		E	E
higher dicots	<i>Euphorbia sarcostemmoides</i>	climbing caustic	V	
higher dicots	<i>Indigofera oxyrachis</i>		V	
higher dicots	<i>Myriophyllum artesium</i>		E	
higher dicots	<i>Nesaea robertsii</i>		E	
higher dicots	<i>Lawrencia buchananensis</i>		V	V
higher dicots	<i>Acacia ammophila</i>		V	V
higher dicots	<i>Acacia crombiei</i>	pink gidgee	V	V
higher dicots	<i>Acacia deuteroneura</i>		V	V
higher dicots	<i>Acacia peuce</i>	waddy	V	V
higher dicots	<i>Acacia ramiflora</i>		C	V
higher dicots	<i>Eremophila tetraptera</i>		V	V
higher dicots	<i>Kardomia squarrulosa</i>		V	
higher dicots	<i>Micromyrtus rotundifolia</i>		V	
higher dicots	<i>Hakea maconochieana</i>		V	V
higher dicots	<i>Cadellia pentastylis</i>	ooline	V	V
higher dicots	<i>Grevillea kennedyana</i>	flame spider-flower		V
monocots	<i>Eriocaulon aloefolium</i>	salt pipewort	E	
monocots	<i>Eriocaulon carsonii</i>		E	E
monocots	<i>Eriocaulon carsonii</i> subsp. <i>carsonii</i>		E	
monocots	<i>Eriocaulon giganticum</i>		E	
monocots	<i>Dichanthium setosum</i>		C	V
monocots	<i>Sporobolus pamelae</i>		E	

Introduced species

Desert Channels introduced animal species

Class	Common Name	Scientific Name
amphibians	cane toad	<i>Rhinella marina</i>
birds	common myna	<i>Sturnus tristis</i>
birds	common starling	<i>Sturnus vulgaris</i>
birds	house sparrow	<i>Passer domesticus</i>
birds	Indian peafowl	<i>Pavo cristatus</i>
birds	long-billed corella	<i>Cacatua tenuirostris</i>
birds	northern mallard	<i>Anas platyrhynchos</i>
birds	rock dove	<i>Columba livia</i>
bony fish	goldfish	<i>Carassius auratus</i>
bony fish	mosquito fish	<i>Gambusia holbrooki</i>
mammals	brown rat	<i>Rattus norvegicus</i>
mammals	cat	<i>Felis catus</i>
mammals	cattle	<i>Bos sp.</i>
mammals	dog	<i>Canis lupus familiaris</i>
mammals	donkey	<i>Equus asinus</i>
mammals	European brown hare	<i>Lepus europaeus</i>
mammals	goat	<i>Capra hircus</i>
mammals	horse	<i>Equus caballus</i>
mammals	house mouse	<i>Mus musculus</i>
mammals	one-humped camel	<i>Camelus dromedarius</i>
mammals	pig	<i>Sus scrofa</i>
mammals	rabbit	<i>Oryctolagus cuniculus</i>
mammals	red fox	<i>Vulpes vulpes</i>

SOURCE: Queensland Government's WildNet database

www.ehp.qld.gov.au/wildlife/wildlife-online/



Desert Channels weeds of national significance and emerging threat species

Class	Common Name	Scientific Name
WONS	bellyache bush	<i>Jatropha gossypifolia</i>
WONS	coral cactus	<i>Cylindropuntia fulgida</i>
WONS	devil's rope cactus	<i>Cylindropuntia imbricata</i>
WONS	jumping cholla	<i>Cylindropuntia prolifera</i>
WONS	mesquite	<i>Prosopis spp.</i>
WONS	parkinsonia	<i>Parkinsonia aculeata</i>
WONS	parthenium	<i>Parthenium hysterophorus</i>
WONS	prickly acacia	<i>Vachellia nilotica</i>
WONS	rubber vine	<i>Cryptostegia grandiflora</i>
WONS	snake cactus	<i>Cylindropuntia spinosior</i>
WONS	tiger pear	<i>Opuntia aurantiaca</i>
Qld Class 2	chinee apple	<i>Ziziphus mauritiana</i>
Qld Class 2	mother of millions	<i>Bryophyllum spp.</i>
Qld Class 1 and 2	harrisia cactus	<i>Harrisia spp.</i>
emerging threat	ruby dock	<i>Acetosa vesicaria</i>
emerging threat	bathurst burr	<i>Xanthium spinosum</i>
emerging threat	leucaena	<i>Leucaena leucocephala</i>
emerging threat	noogoora burr	<i>Xanthium pungens</i>
emerging threat	sticky florestina	<i>Florestina tripteris</i>

WONS Weed of national significance
 Qld Class 1 Potential to be a serious weed
 Qld Class 2 Established as a serious weed

SOURCES:

Central West Queensland Regional Pest Management Plan, Developed for the community of the region by Desert Channels Queensland, May 2011

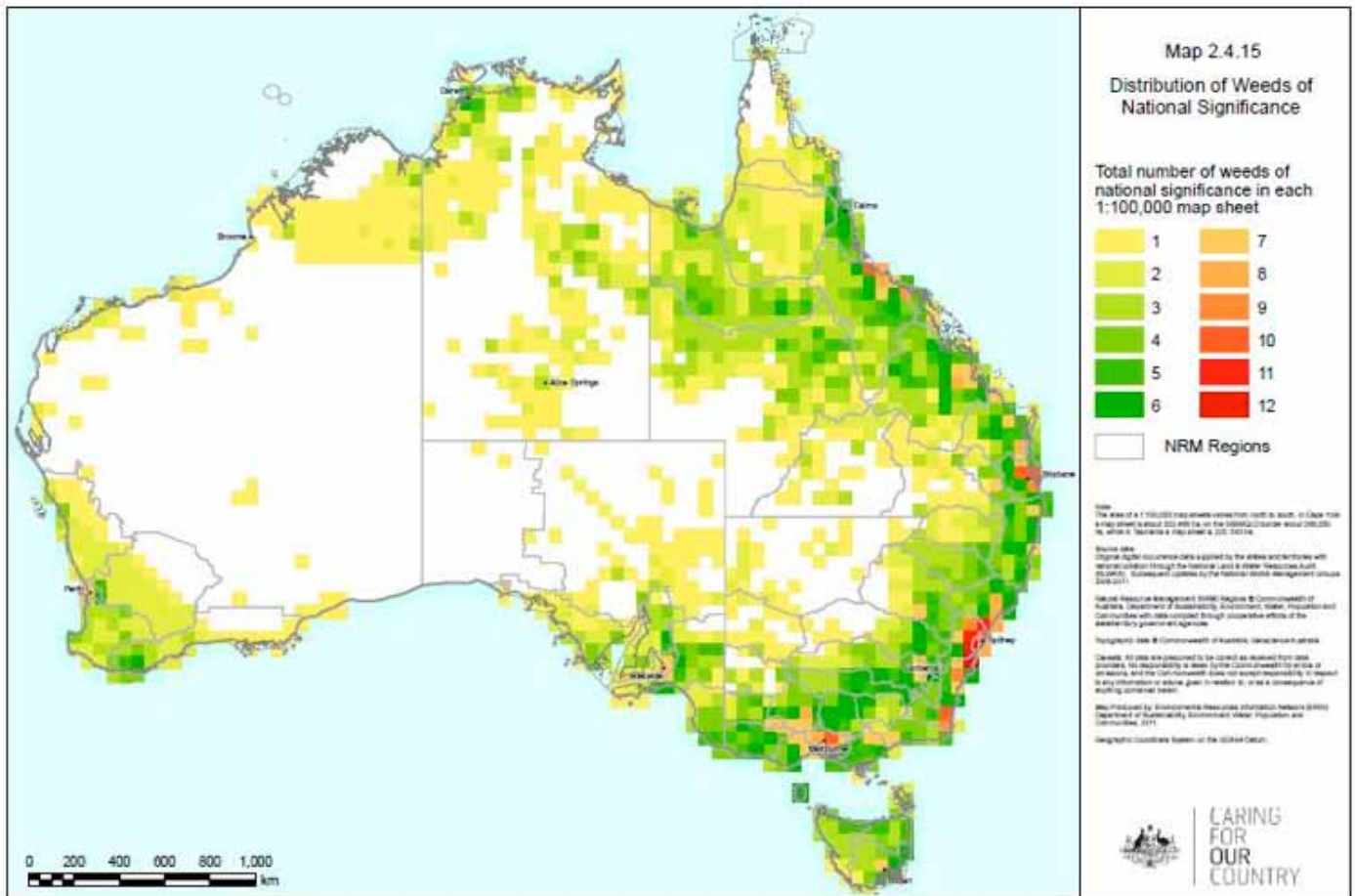
www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html

www.daff.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-Declared-Plants-Qld-PP1.pdf

Further information about DCQ's introduced plants can be found at

www.wetlandinfo.derm.qld.gov.au/wetlands/MappingFandD/WetlandMapsAndData/SummaryInfo/NRM-11.jsp





Distribution of weeds of national significance
Caring for our Country 2012-13 Business Plan

www.nrm.gov.au/resources/publications/bp-2012-13/pubs/2-4-15.pdf

Further mapping and management options is available for individual species at the following sites:

Bellyache bush

www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=&ibra=all&card=S15

Mesquite

www.nrm.gov.au/resources/publications/bp-2012-13/pubs/2-4-29.pdf

Mother of millions

www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=H14

Parkinsonia

www.nrm.gov.au/resources/publications/bp-2012-13/pubs/2-4-31.pdf

Parthenium

www.nrm.gov.au/resources/publications/bp-2012-13/pubs/2-4-32.pdf

Prickly acacia

www.nrm.gov.au/resources/publications/bp-2012-13/pubs/2-4-34.pdf

Rubber vine

www.nrm.gov.au/resources/publications/bp-2012-13/pubs/2-4-35.pdf

Regional ecosystems

SOURCE: Queensland Government's Regional Ecosystem database

www.ehp.qld.gov.au/ecosystems/biodiversity/re_introduction.html

clipped by Desert Channels regional NRM boundary

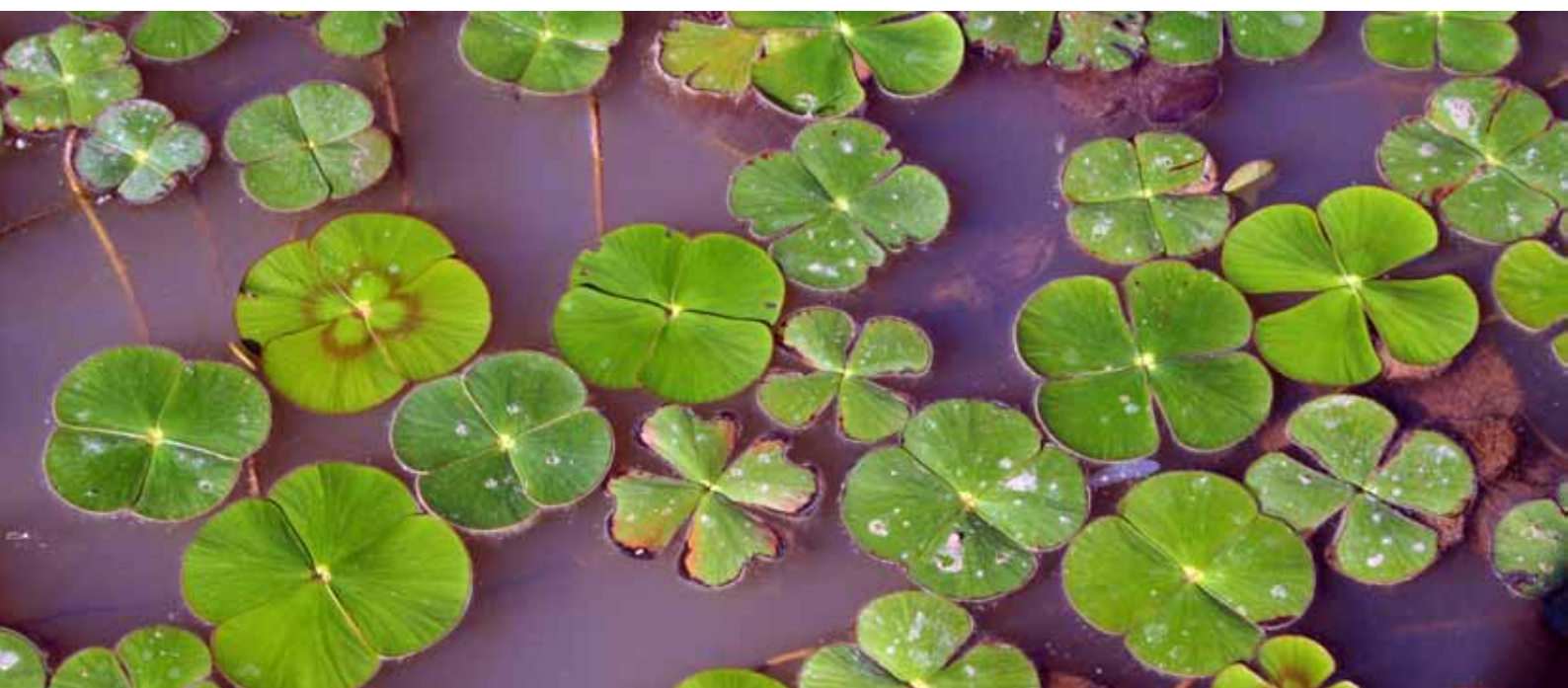
Regional ecosystems by land zone for Desert Channels area

Landzone	Endangered	Of concern	No concern at present	Total
3	17	35	58	110
4	7	5	3	15
5		13	33	46
6		2	7	9
7	1	9	42	52
9	6	12	27	45
10			15	15
11		2	2	4
12		1	1	2
Total	31	81	190	298
%	10%	27%	63%	100%

Desert Channels regional ecosystems with endangered biodiversity status

ID	Description
Landzone 3	
1.3.7	Red gum (<i>Eucalyptus camaldulensis</i>) woodland on channels and levees (south)
1.3.8	Red gum (<i>Eucalyptus camaldulensis</i>) woodland on channels and levees (north)
4.3.22	Springs on recent alluvia and fine-grained sedimentary rock
5.3.23	Springs on recent alluvia and fine-grained sedimentary rocks
10.3.5	<i>Eucalyptus cambageana</i> open-woodland on broad stream beds
10.3.16	<i>Triodia longiceps</i> hummock grassland, ephemeral open herblands, and <i>Melaleuca bracteata</i> low woodland on alluvial plains
10.3.17	<i>Acacia excelsa</i> and <i>Grevillea striata</i> low open-woodland on lake-fringing dunes
10.3.19	<i>Acacia cambagei</i> woodland on lakeside dunes
10.3.21	<i>Acacia salicina</i> and <i>Grevillea striata</i> low open-woodland on sandy alluvial plains
10.3.22	Clay pans, <i>Fimbristylis</i> sp. (Lake Buchanan) open sedgeland and spare-tussock grasslands on shallow alluvial plains (Lake Buchanan)
10.3.25	<i>Eremophila mitchellii</i> low open-woodland on alluvial plains
10.3.26	<i>Lysiphyllum carronii</i> low open-woodland on alluvial plains
10.3.29	<i>Acacia torulosa</i> shrubland or <i>Triodia longiceps</i> hummock grassland on weathered lake dunes
10.3.30	<i>Casuarina cristata</i> woodland on flood plains
11.3.1	<i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open-forest on alluvial plains
11.3.17	<i>Eucalyptus populnea</i> woodland with <i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> on alluvial plains
11.3.21	<i>Dichanthium sericeum</i> and/or <i>Astrebla</i> spp. grassland on alluvial plains. Cracking clay soils

ID	Description
Landzone 4	
10.4.3	Acacia harpophylla and/or Eucalyptus cambageana open-woodland on Cainozoic lake beds
11.4.3	Acacia harpophylla and/or Casuarina cristata shrubby open-forest on Cainozoic clay plains
11.4.5	Acacia argyrodendron woodland on Cainozoic clay plains
11.4.6	Acacia cambagei woodland on Cainozoic clay plains
11.4.7	Eucalyptus populnea with Acacia harpophylla and/or Casuarina cristata open-forest to woodland on Cainozoic clay plains
11.4.8	Eucalyptus cambageana woodland to open-forest with Acacia harpophylla or A. argyrodendron on Cainozoic clay plains
11.4.9	Acacia harpophylla shrubby open-forest to woodland with Terminalia oblongata on Cainozoic clay plains
Landzone 7	
5.7.8	Acacia peuce low open-woodland between dunes
Landzone 9	
10.9.3	Acacia harpophylla and/or Eucalyptus cambageana open-woodland to woodland on Mesozoic sediments
10.9.5	Eucalyptus melanophloia open-woodland or Lysiphyllum carronii low open-woodland on calcareous sandstones
11.9.1	Acacia harpophylla-Eucalyptus cambageana open-forest to woodland on fine-grained sedimentary rocks
11.9.5	Acacia harpophylla and/or Casuarina cristata open-forest on fine-grained sedimentary rocks
11.9.8	Macropteranthes leichhardtii thicket on fine-grained sedimentary rocks
11.9.10	Eucalyptus populnea, Acacia harpophylla open-forest on fine-grained sedimentary rocks



Wetlands

Desert Channels wetland area by system

System	Area	% wetlands area	% total area
Artificial and highly modified	83.31	0.4%	0.0%
Lacustrine	4,372.94	18.8%	0.9%
Palustrine	15,989.10	68.8%	3.1%
Riverine	2,779.98	12.0%	0.5%
Total	23,225.32	100.0%	4.6%

There are approximately 22,286 lacustrine/palustrine wetlands in the region. Lacustrine refer to lake wetlands. Palustrine refer to marshes, swamps and floodplain type wetlands.

SOURCE:

<http://wetlandinfo.derm.qld.gov.au/wetlands/>

Special biodiversity areas

This is a summary of the Queensland Government's biodiversity planning assessment reports on landscape, flora and fauna values for the key bioregions of the Desert Channels area. To this has been added nationally significant information from the EPBC protected matters report for the Desert Channels region (annotated in red). For further information refer to the sources below. All areas are mapped in the Desert Channels GIS.

SOURCES:

Queensland Government

Reports and data are available at <http://dds.information.qld.gov.au/dds/>

Department of Environment and Resource Management (Qld) 2012, Biodiversity Planning Assessment, Desert Uplands Bioregion: Flora, Fauna and Landscape Expert Panel Reports.

Department of Environment and Resource Management (Qld) 2009, Biodiversity Planning Assessment, Channel Country Bioregion: Flora, Fauna and Landscape Expert Panel Reports.

Department of Environment and Resource Management (Qld) 2009, Mitchell Grass Downs Bioregion: Landscape, Flora and Fauna Expert Panel Reports.

Department of Environment and Resource Management (Qld) 2008, Brigalow Belt South Bioregion: Landscape, Flora and Fauna Expert Panel Reports.

Environmental Protection Agency (Qld) 2003, Biodiversity Planning Assessment Mulga Lands Bioregion: Flora, Fauna and Landscape Expert Panel Reports, revised and updated June 2009.

Australian Government

Department of the Environment, Water, Heritage and the Arts 2011, EPBC protected matters report for DC region. www.environment.gov.au/epbc/pmst/index.html

Channel Country

Channel Country special landscape areas

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
chc_I_01	<p>Toko Range Geological extension of the central Australian ranges. Very old geology that contains well developed cave systems and supports species adapted to soils derived from limestone. The area contains species at eastern limit of their range: e.g. <i>Eucalyptus pachyphylla</i> and is home to a unique subspecies of Australian ringneck parrot as well as unique reptile species. Decision area includes Toko Gorge which has permanent or near permanent water (possibly spring-fed) in gorge. This renders it an important and very isolated refuge waterbody. Its inaccessible nature means that it is largely unsurveyed. The area is culturally very significant.</p> <p>Nationally important wetland</p>	<p>centre of endemism wildlife refugia geographic range limit REs distinct variation</p>	State
chc_I_02	<p>Mooraberrie dune system Historically significant records dating from early 1900s. Known location for desert fauna including: bilby, kowari, kultarr, desert rat-kangaroo, grey falcon, plains-wanderer, princess parrot, night parrot, scarlet-chested parrot and thorny devil. Historical reference to native cat presumably the western quoll as well as brushtail possums. Night parrots have been sighted. Very diverse with massive dune fields. Eastern most representation of dune system. Likely to be florally distinct due to proximity of dune systems to channels. Surface geology is quite young mostly Pleistocene. The area captures most representations of the differing landscapes within the CHC. 2 breeding records of the EPBC-Vulnerable Australian Painted Snipe Includes the Kingadurka and Milkra Waterholes and their associated swale wetlands. Kingadurka is the largest-known, mixed species colony of breeding waterbirds in the bioregion (estimated at around 45,000 pairs of egrets, spoonbills, ibises, night herons and cormorants) and supported this order of numbers post-flood in 2000 and 2009 with high numbers also in some intervening years. Milkra supports small/moderate-sized breeding colonies of Australian Pelican in an unusual habitat situation (on channel banks under trees).</p>	<p>wildlife refugia high species diversity REs distinct variation</p>	State

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
	EPBC listed species		
chc_I_03	Diamantina dune system Wildlife refugia supporting Simpson desert isolates from river systems. Suspected habitat for a diversity of fauna species. Florally rich. Captures a combination of land zones. Part of overall Diamantina area which is of state significance.	wildlife refugia geographic range limit high species diversity REs distinct variation	Regional
chc_I_04	Roseberth-Birdsville High richness for arid zone endemics, threatened taxa, reptiles & mammals. Stronghold for the kowari as the area supports a persistent population. Supports other EVR taxa including: kultarr, bilby, dusky hopping-mouse & grey falcon. Historical records for desert rat-kangaroo. High species richness. Significant population of the Vulnerable flora species <i>Acacia peuce</i> . Good example of ecosystems outside of rivers/channels. The area is culturally important. Landscape includes hills that are remnants of ancient geologies. EPBC listed species	centre of endemism disjunct populations geographic range limit high species diversity relictual populations	State
chc_I_05	Tickalara-Bulloo-Wonpah Stronghold for grey grasswren (Bulloo subspecies) and supports other EVR taxa including: <i>Cyclorana verrucosa</i> , freckled duck, grey falcon, Major Mitchell cockatoo & redthroat. Northern range limit for the bluewinged and elegant parrots. Bulloo Lakes support huge numbers of waterbirds (over 100,000) and small breeding colonies. High reptile richness. Moderate overall species richness, especially birds. Flora values include the presence of lignum swamps in the north. Geology: Grey range is an ancient system, recent alluvial systems, diversity of geologies and landscapes. EPBC listed species	centre of endemism wildlife refugia geographic range limit high species diversity REs distinct variation	State
chc_I_06	Southern Simpson Desert Habitat for EVR taxa including: woma and the dusky hopping-mouse. Supports high species richness, especially reptiles and birds with moderate richness of arid zone endemics and threatened taxa. Likely habitat for kowaris. Known periodic habitat for night parrots. There is a different mix of geologies and a different rainfall pattern negligible rainfall. The area is regarded as being more Strezleckie (IBRA) rather than Simpson. Unique river systems typified by a lack of connectivity. Likely to contain more values but as yet the area is poorly surveyed and hence remains largely unknown.	geographic range limit high species diversity REs distinct variation	Regional

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
	EPBC listed species		
chc_l_07	<p>Simpson Desert High richness of arid zone endemics and reptiles. Moderate overall species richness comprised mostly of mammals for example the marsupial mole. Unique river systems typified by a lack of connectivity. Simpson desert salt lake system. Unique within Queensland but extends into South Australia. Samphire (<i>Tecticornia indica</i>) is associated with salt lake systems. There is significant value in the scale and size of the decision area, and justifies the fact this is a different bioregion under IBRA.</p> <p>EPBC listed species</p>	<p>centre of endemism wildlife refugia geographic range limit high species diversity REs distinct variation</p>	State
chc_l_08	<p>Southern stony plains. One of the largest examples of stony plains in the CHC. It is a highly fragile landscape, very sensitive to erosion. Much anthropogenic activity due to mining interest such as the Jackson oilfields. Contains ephemeral wetlands. Contains highly productive pockets that support a diversity of flora species and provide wildlife refugia. The area is unsuitable habitat for pigs. Habitat for EVR taxa including: woma and dusky hopping-mouse. High fauna richness, especially reptiles and birds. Moderate richness of arid zone endemics and threatened taxa. Poorly surveyed and hence data deficient.</p> <p>EPBC listed species</p>	<p>centre of endemism wildlife refugia REs distinct variation</p>	Regional
chc_l_09	<p>Tully Range escarpment Lark Quarry to the top of the CHC bioregion is the edge of a tertiary surface that contains cliffs to 50m high housing small caves which are home to a diversity of bats. It is different to other cliff lines due to the sheer height of the cliffs. The areas inaccessibility has resulted in little disturbance by domestic stock, however it is under threat from opal mining. It includes intact mulga country and the interface between bioregions. The area is believed to support threatened plant species including <i>Ptilotus</i> spp. Probable fossil site.</p> <p>Register of the national estate</p>	<p>wildlife refugia high species diversity REs distinct variation</p>	Regional
chc_l_10	<p>Colston complex An internally draining system with numerous small lakes. There is a deep sand plan consisting primarily of wash on top of a tertiary surface. Habitat for the grasswren and rufous crowned emu wren. Supports a large intact <i>Triodia</i> population including both <i>T. basedowii</i> and <i>T. pungens</i> as well as numerous annual grasses. This system</p>	<p>wildlife refugia disjunct populations geographic range limit high species diversity REs show distinct</p>	Regional

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
	is subject to a too frequent fire regime. EPBC listed species	variation	
chc_l_11	Noonbah - Lochern NP High reptile richness and moderate richness of arid zone endemic species. Habitat for EVR taxa including the quoll and <i>Eremophila alatisepala</i> , <i>Euphorbia sarcostemmoides</i> and <i>Ptilotus pseudohelipteroides</i> . This decision area is affected by recent changes to the bioregional boundary and now falls into the Mitchell Grass Downs bioregion. EPBC listed species	wildlife refugia disjunct populations geographic range limit high species diversity REs distinct variation	Regional
chc_l_12	Windorah – Cooper Creek crossing High species richness, especially reptiles and moderate species richness for birds and mammals. Good example of a sand plain system. Nationally important wetland	wildlife refugia geographic range limit high species diversity REs distinct variation	Regional
chc_l_13	Goneaway Tablelands Hard country that supports a rich diversity of plant species but is very poorly surveyed as it is physically very difficult to access. Habitat for EVR taxa including <i>Eremophila alatisepala</i> and the priority taxa <i>Gossypium sturtianum</i> .	wildlife refugia geographic range limit high species diversity REs distinct variation	State
chc_l_14	Permanent waterholes Drought refugia for fauna species especially fish. Habitat for disjunct populations of turtles. Habitat for Cooper Creek catfish. Fringing Eucalypts provide breeding and roosting site for bird species. Permanent waterholes in the CHC BPA are those described by Silcock as having not gone dry as far as could be ascertained through oral and written record; typically knowledge dates back to white settlement around 1870-1880 for most permanent waterholes.	centre of endemism wildlife refugia disjunct populations geographic range limit high species diversity REs distinct variation hollow-bearing trees breeding/roost sites	State
chc_l_15	Semi permanent waterholes Drought refugia for fauna species especially fish. Habitat for disjunct populations of turtles. Habitat for Cooper Creek catfish. Fringing Eucalypts provide breeding and roosting site for bird species. Generally similar values as for permanent waterholes. Semi permanent waterholes in the CHC BPA are those that typically dry out between every 5-25 years.	centre of endemism wildlife refugia disjunct populations geographic range limit high species diversity REs distinct variation hollow-bearing trees breeding/roost sites	State
chc_l_16	Ephemeral wetlands	centre of endemism	State

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
	<p>Habitat for a wider range of invertebrates and algae than permanent and semi-permanent waterholes, including species such as fairy shrimp and shield shrimp which do not occur in more permanent waterholes where fish predation is higher. Support waterbird populations estimated systematically to be in the millions of individuals and breeding colonies or dispersed waterbird breeding numbering tens of thousands of pairs (for multiple species); among the most important recruitment areas for waterbirds in Australia; include the most important sites in Australia for a suite of waterbird species in terms of numbers (supporting >1% of total population size).</p> <p>Many of the wetlands, at several scales, can be demonstrated to meet criteria for international importance. Includes areas outside of floodplains that may fill from local runoff. Includes salt pan systems which have their own unique suit of species. These wetlands go dry every year or nearly every year. They will go dry by end of the year in average seasons but last during good seasons or after very large floods and when clusters of good flood seasons occur.</p> <p>Internationally significant wetlands for migratory bird species</p>	<p>wildlife refugia disjunct populations geographic range limit high species diversity relictual populations REs distinct variation breeding/roost sites</p>	
chc_l_17	<p>Floodplain linkages Links wetland type ecosystems. Provides all ecosystem services associated with flood events. These biodiversity values are defined using the greatest flood event. Good Flood (above Major). All channels, gutters and floodways are activated, with overland flows across the tops of channels banks and levees; sand dunes become isolated islands; 80 – 100% of the floodplain inundated Handy Flood (Major). Braid gutters activated as sheets of water spread out from the main channels, most downstream water flow is via the floodways formed by braid gutters; 50 – 60% of the floodplain inundated Gutter Flood (Moderate). Water escaping from primary and secondary channels into channel and braid gutters but generally contained within gutter channels; 5 – 15% of the floodplain inundated Channel Flood (Minor). Water just escaping from primary channels and into channel gutters; <5% of the floodplain inundated River flow (below Minor). Water contained within river banks; no floodplain inundation.</p>	<p>wildlife refugia geographic range limit high species diversity REs distinct variation breeding/roost sites</p>	State
chc_l_18	<p>Terrestrial Corridors This terrestrial corridors decision identifies major themes of habitat connectivity across the bioregion. They identify north/south and east/west links that cover areas</p>	breeding/roost sites	State/ Regional

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
	<p>characterised by a relative continuity of similar or related habitats:</p> <p>5001 Omicron to Marama. Major north-south corridor linking Mulga Lands bioregion to Channel Country bioregion and through into North-western New South Wales. Captures some of the interface between the Noccundra Slopes subregion and floodplains of Cooper Creek. State (20km)</p> <p>5002 Birdsville to Glenormiston. Major north-south corridor linking Mitchell Grass Downs bioregion and the Northern Territory to the Channel Country bioregion and through to South Australia. Captures much of the interface between Simpson-Strezlecki Dunefields and Diamantina Plains subregions as well as linking to the Toko Range. Also captures salt lakes such as Lake Torquinie and Mumbleberry Lake. State (20km)</p> <p>5003 Mount Leonard - Goneaway Tableland – Kynuna Plateau. Major north-south corridor linking Mitchell Grass Downs bioregion from the Kynuna Plateau to the Channel Country bioregion and through to South Australia. Also links into Channel Country corridors 5004 and 5006. Connects much of the Goneaway Tablelands including Goneaway National Park through to the Cooper Plains subregion. This corridor will also link into the PAFF - Bilby Track. State (20km)</p> <p>5004 Adria Downs to Tonkoro. Major east-west corridor linking bioregional corridors 5002 and 5003. In connecting the Diamantina Plains subregion to Goneaway Tablelands it also captures the interface environs of a number of special features including Lake Machattie and Bilpa Morea Claypan. State (20km)</p> <p>5005 Naryilco to Tobermory. Linkage between Mulga Lands bioregion and Channel Country bioregional corridor 5001. Primarily follows the Grey Range which forms the watershed between the Wilson and Bulloo Rivers. This corridor is largely analogous to the Channel Country to Carnarvon State-Wide Conservation Corridor. State (20km)</p> <p>5006 Marama to Connemara. North-south linkage of Mulga Lands corridor 6007 and Channel Country corridor 5001 through to Channel Country corridor 5003. Connects Channel Country subregions; Goneaway Tableland, Cooper Plains and Noccundra Slopes and links to the adjacent Mulga Lands bioregion. Regional (40km)</p>		

Map code	Channel Country special landscape areas Description of significance value	Criteria used	Scale of significance
chc_l_19	Riparian Corridors Riparian corridors in the Channel Country are significant for biodiversity both as a climatic refuge and as a major element of habitat continuity including connecting permanent waterholes. Includes major channels (250k geodata hierarchy 1) plus minor channels (250k geodata hierarchy 2 & 3) necessary to capture permanent waterholes, buffered by 1km either side and clipped to land zone 3.	breeding/roost sites	State
chc_l_20	Ground Cover Disturbance Index (GCDI) Implement to regional ecosystems listed on REDD as under threat from grazing; (5.3.1, 5.3.2, 5.3.5, 5.3.6, 5.3.17, 5.3.18, 5.3.20, 5.3.21, 5.3.22, 5.5.6, 5.6.3, 5.7.8). Floodplains are considered too ephemeral for the GCDI to be reliable and are excluded along naturally bare areas. >20% Very low disturbance, upgrade final biodiversity significance >50% High/very high disturbance, downgrade biodiversity significance	threatening process	State, Regional or Local

Channel Country special flora areas

Map code	Channel Country special flora areas Description of significance value	Criteria used	Scale of significance
chc_fl_01	Goneaway Tablelands Very hard country that supports a rich diversity of plant species. It is very difficult to access and is therefore poorly surveyed This decision became chc_l_13	centre of endemism wildlife refugia high species diversity REs distinct variation	State
chc_fl_02	Grey Range Very hard country that supports a rich diversity of plant species. It is very difficult to access and is therefore poorly surveyed. Habitat for EVR taxa including <i>Rhodanthe rufescens</i> , <i>Grevillea kennedyana</i> and <i>Euphorbia sarcostemmoides</i> . Known habitat for priority species including <i>Acacia papyrocarpa</i> . EPBC listed species	centre of endemism wildlife refugia high species diversity REs distinct variation	State
chc_fl_03	Toko Range Habitat for species at their eastern range limit, for example <i>Eucalyptus pachyphylla</i> . There are cave systems present. Decision area includes Toko Gorge which has permanent or near-permanent water (possibly spring-fed) in gorge. This renders it	wildlife refugia high species diversity REs distinct variation	State

Map code	Channel Country special flora areas Description of significance value	Criteria used	Scale of significance
	an important and very isolated refuge waterbody. Its inaccessible nature means that it is largely unsurveyed This decision became chc_l_1		
chc_fl_04	Monkira dune systems Wildlife refugia that support Simpson Desert isolates from surrounding river systems. Species rich including; <i>Crotalaria cunninghamii</i> ; <i>Ptilotus latifolius</i> ; <i>Crotalaria eremaea</i> and <i>Zygochloa paradoxa</i> . Contains numerous small waterholes.	wildlife refugia high species diversity REs distinct variation	Regional
chc_fl_05	Diamantina dune system Wildlife refugia that support Simpson Desert isolates from surrounding river systems. Species rich including; <i>Crotalaria cunninghamii</i> , <i>Ptilotus latifolius</i> , <i>Crotalaria eremaea</i> , <i>Zygochloa paradoxa</i> , <i>Grevillea stenobotrya</i> , <i>Acacia bivenosa</i> , <i>A. ligulata</i> , <i>Dodonaea viscosa subsp. spatulata</i> and <i>Triodia</i> spp. The only location where <i>Triodia</i> spp. occurs on Diamantina NP as it's uncommon for <i>Triodia</i> spp. to occur on dunes in the east of the bioregion. This decision became chc_l_3	wildlife refugia high species diversity REs distinct variation	Regional
chc_fl_06	Mooraberrie dune system Massive dune system which is likely to be florally distinct due to proximity of dune system to channels. Historically known as good habitat for desert fauna including; bilby, kowari, kultarr, desert rat-kangaroo, grey falcon, plains-wanderer, Princess parrot, night parrot, scarlet-chested parrot & thorny devil. Past reference to native cat (Western quoll?) and brushtail possum. This decision became chc_l_2 EPBC listed species	wildlife refugia high species diversity REs distinct variation	Regional
chc_fl_07	Grove Mulga Large, disjunct stands of mulga (RE 5.5.1) restricted in the CHC bioregion to Goneaway Tableland that provides wildlife refugia and supports high species richness.	wildlife refugia high species diversity	Regional

Channel Country special fauna areas

Map code	Channel Country special fauna areas Description of significance value	Criteria used	Scale of significance
chc_fa_01	Roseberth-Birdsville Stronghold for kowari – persistent population. Other significant EVR taxa – kultarr, bilby, dusky hopping-mouse & grey falcon. Historical records for desert rat-kangaroo. High species richness. High richness for arid zone endemics, threatened	centre of endemism disjunct populations geographic range limit high species diversity	State

Map code	Channel Country special fauna areas Description of significance value	Criteria used	Scale of significance
	taxa, reptiles & mammals. Other values: Also <i>Acacia peuce</i> in area. Good examples of areas outside of rivers/channels. Culturally important. This becomes chc_l_4 EPBC listed species	relictual populations	
chc_fa_02	Adria Downs - The decision was made to concentrate on the area immediately surrounding the lake systems and the area to the north-east. Incorporates - Muncoonie Lakes complex – waterbirds. Significant EVR taxa: Freckled Duck, Australian Painted Snipe & Yellow Chat. At times (e.g. autumn 2009) includes breeding by substantial numbers of Blue-billed Duck which otherwise is mainly a southern Australian species. Includes several waterbird breeding colonies. High species richness, especially reptiles & birds. Other values: annual grasses in lake beds. Lignum on surrounds. Also <i>Acacia georgiana</i> . The wetlands on the broad floodplains display complex mosaics of perennial and seasonal vegetation and can support high numbers of breeding waterbirds, and high numbers overall (> 200,000 waterbirds in March 2001: Costelloe et al. 2004). Condition: Under threat from rabbit grazing. Long-term rabbit monitoring site by DERM. EPBC listed species Nationally important wetland	high species diversity	Regional
chc_fa_03	Sandringham Dune Systems Zone of sympatry for Crest-tailed and Brush-tailed Mulgara. Other significant EVR taxa: Bilby, Kowari, Kultarr, Dusky Hopping-mouse, Plains-wanderer, Painted Honeyeater & Woma. High species richness, especially threatened taxa, reptiles and mammals. High richness arid zone endemics. Moderate bird species richness. EPBC listed species	centre of endemism high species diversity	Regional
chc_fa_04	Ethabuka Zone of sympatry for Crest-tailed and Brush-tailed Mulgara. Also Woma & Inland Taipan. High species richness, especially reptiles and mammals. High richness arid zone endemics. Moderate bird species richness. Supports a suite of sand dunes species not found anywhere else. EPBC listed species	centre of endemism species range limit high species diversity	State
chc_fa_05	Durrie Significant EVR taxa: Bilby, Kultarr, Dusky Hopping-mouse, Freckled Duck, Grey Grasswren (<i>Diamantina</i>), Woma & Inland Taipan. High species richness. High richness arid zone endemics, threatened taxa, reptiles, birds & mammals. EPBC listed species	centre of endemism high species diversity	State

Map code	Channel Country special fauna areas Description of significance value	Criteria used	Scale of significance
	Nationally important wetland		
chc_fa_06	Mt Leonard - including the main land zones which cover the dunes and waterhole and the land zone that follows the watercourse in from the south. Specific localities (A) – Pelican & Pierikoola Waterholes & surrounds. Persistent colony Dusky Hopping-mouse; also Grey Grasswren (Diamantina), Kowari, Woma and Inland Taipan. High species richness. High richness arid zone endemics, threatened taxa, reptiles & mammals. Moderate bird species richness. EPBC listed species	centre of endemism high species diversity	State
chc_fa_08	Diamantina Lakes Significant EVR taxa: Ctenotus septenarius, C. serotinus, C. schevilli, Inland Taipan, Grey Falcon, Night Parrot, Kultarr, Kowari, Bilby, Dusky Hopping-mouse and possible Plains Rat. High species richness. High richness for threatened taxa, reptiles, birds & mammals. Moderate richness arid zone endemics. EPBC listed species, nationally important wetland	centre of endemism high species diversity	State
chc_fa_09	Tanbar Specific localities (A): Lake Yamma Yamma. Moderate richness arid zone endemics, reptiles & birds. Scenically beautiful country that needs more survey work.	centre of endemism high species diversity	Regional
chc_fa_10	Tickalara – Bulloo – Wonpah Lake Bulloo-Grey Range. Stronghold for Grey Grasswren (Bulloo). Other EVR taxa: Freckled Duck, Grey Falcon, Major Mitchell Cockatoo & Red throat. Also records for Blue-winged and Elegant Parrots (northern edge of range). High richness for threatened taxa & reptiles. Moderate species richness, especially birds. Flora values: Eastern extent of Eragrostis australasicus. Lignum swamps in the north. This is now chc_I_5 EPBC listed species	centre of endemism wildlife refugia geographic range limit high species diversity REs distinct variation	State
chc_fa_11	Omicron – Naryilco EVR taxa - Woma & Dusky Hopping-mouse. High species richness, especially reptiles & birds. Moderate richness arid zone endemics & threatened taxa. Need panel to provide more values and further justify decision. This is now chc_I_6 EPBC listed species	geographic range limit high species diversity REs distinct variation	Regional
chc_fa_13	Simpson Desert High richness arid zone endemics & reptiles. Moderate species richness, mostly	centre of endemism wildlife refugia	Regional

Map code	Channel Country special fauna areas Description of significance value	Criteria used	Scale of significance
	mammals. <i>Samphire</i> spp. assoc with salt lakes systems. Simpson desert salt lake system. Unique to QLD but extends to SA This is now chc_l_7	geographic range limit high species diversity REs distinct variation	
chc_fa_14	Cravens Peak Specific localities (A): Toomba Range area. High mammal richness. Other panel Values: Large number of caves in rock outcrops thus bats, Reptile diversity, Culturally significant.	wildlife refugia	State
chc_fa_16	Noonbah - Lochern NP High reptile richness. Moderate richness arid zone endemics. Refer to landscape panel. Values extend to the entire Vergemont area. This is now chc_l_11 EPBC listed species	wildlife refugia disjunct populations geographic range limit high species diversity REs distinct variation	Regional
chc_fa_18	Windorah – Coopers Creek crossing High species richness, especially reptiles. Moderate species richness for birds & mammals. Refer to landscape – pick up as part of wetlands decision. This is now chc_l_12 Nationally important wetland	wildlife refugia geographic range limit high species diversity REs distinct variation	Regional
chc_fa_19	Bilpa Morea Claypan Specific localities (A): Bilpa Morea Claypan and associated – extensive dune fields to NE. Significant EVR taxa: Bilby, Kowari and other spp. EPBC listed species	disjunct populations high species diversity REs distinct variation	State
chc_fa_20	South of Diamantina NP Similar to Astrebla Downs National Park Significant EVR taxa: Bilby, Kowari, Inland Taipan. Contains gas pipeline and large compressor station EPBC listed species	wildlife refugia species range limit high species diversity	State
chc_fa_21	Lake Yamma Yamma - Waterbird sites arid flow Significant Waterbird habitat, including breeding Nationally important wetland	wildlife refugia high species diversity roost /breeding sites	Regional
chc_fa_22	Lake Machattie, Lake Mipia, Koolivoo Specific localities (A): Lake Machattie, Lake Mipia, Koolivoo Extensive lignum swamps. Pelican breeding sites. Significant numbers of species breed at different times. High diversity of chenopod communities, extensive areas of grass-sedge swamp (channel millet, Cyperus spp, other) in the bed of Lake Machattie are unusual in lakes in the LEB. Physically maintains its wet species even though not	wildlife refugia high species diversity roost/breeding sites	State

Map code	Channel Country special fauna areas Description of significance value	Criteria used	Scale of significance
	wet all the time. Most of the wetlands are temporary but Lake Mipia can hold out because it is in-channel. Contains significant flora values. Nationally important wetland		
chc_fa_23	Cawallrie Waterhole Confluence of Eyre Creek and Mulligan River. Values: Important Waterbird habitat. Other Values: Contains significant bluebush and lignum communities.	high species diversity roost/breeding sites	Regional
chc_fa_24	Morney plains (Mitchell grass plains) High reptile diversity – Inland Taipans Separates populations from Cooper and Diamantina Eastern extent of Inland Taipans	disjunct populations species range limit high species diversity	Regional
chc_fa_25	Cardinals Cap Series of residual ridges. Drains to the east.	species range limit high species diversity REs distinct variation	Regional
chc_fa_26	Stony Jump up areas Edge of tertiary surface. Including Lark Quarry to top of bioregion. Cliffs to 50m. Small caves - High bat diversity. Under threat by opal mining. Different to other areas due to height. Little domestic stock influence due to terrain. This is now chc_I_9 Register of the national estate	wildlife refugia high species diversity REs distinct variation	Regional
chc_fa_27	Mt Windsor Brighton Downs Jumpup – Including spinifex and samphire habitats. Potential habitat for Night Parrot. Spinifex communities in the north of area. Spinifex associated with gravel plains. Also contains significant Samphire, Maireana spp. and Senna glutenosa	wildlife refugia	Regional
chc_fa_28	Eastern Diamantina Lakes Diverse suite of western woodland birds. Supports numerous priority plant species on edge of geographic range.	species range limit high species diversity	Regional

Mitchell Grass Downs

Mitchell Grass Downs special landscape areas

Map code	Mitchell Grass Downs special landscape areas Description of significance value	Criteria used	Scale of significance
mgd_I_01	Springvale Supergroup (active) Disjunct mound spring systems of Great Artesian Basin (GAB). Panel identified that mound springs that are still flowing have flora and fauna values. Nationally listed threatened community (EPBC) Register of the national estate (Elizabeth Springs) Nationally important wetland (Elizabeth Springs)	centre of endemism wildlife refugia disjunct populations taxa at range limit high sp. richness relictual popns REs distinct variation	State
mgd_I_02	Springvale Supergroup (inactive) Distinct variant of an RE. Provide microhabitat, different soil types. Geomorphological significant values. *needs a review of inactive springs – have they become active recently? Nationally listed threatened community (EPBC)	REs distinct variation	Regional
mgd_I_03	Extreme Northeast – Upper Flinders River Change from shale system to unconsolidated deposits. Younger than Cainozoic. Woodland with a grassy understorey with bloodwoods, ironbarks. These sediments aren't expressed anywhere else in QLD. <i>Syzygium</i> spp. and other species from Northern Australia. Unusual Regional Ecosystems – residual effects of sandy soils in higher ridge areas.	disjunct populations taxa at range limit high sp. richness REs distinct variation	State
mgd_I_04	Kynuna Plateau subregion – Swords Range Landzone 7, floodplain, ashy Mitchell grass country – unique mix. Jump up country, unusual for MGD, biggest tract of this type in the MGD. Topographic diversity, real mix of vegetation. Fauna species at limit of geographic range	centre of endemism wildlife refugia disjunct populations taxa at range limit REs distinct variation	State
mgd_I_05	Mokana Tertiary plateau (DEU) / shale (MGD) interface. Gidgee communities on pediments – largest example left in the MGD. Boree thickening (lack of fire?).	wildlife refugia taxa at range limit REs distinct variation	Regional

Map code	Mitchell Grass Downs special landscape areas Description of significance value	Criteria used	Scale of significance
mgd_l_06	Red gum tributaries Large red gums in association with sand sheets. Deep soils, large well developed system. Unique system in the MGD. Sandy watercourses – far south east, Barcoo and Alice Rivers. Bloodwoods with more poplar box and <i>Eucalyptus tessellaris</i> . Mixed species woodland on sand plains, grassier understorey.	wildlife refugia disjunct populations high sp. richness REs distinct variation hollow bearing trees breeding/roost sites	State
mgd_l_07	Black Gin Creek, Thomson River confluence First flood-out in the system. Unique braided channels, associated lagoons - provides bird habitat. Flowering lignum and bluebush. Coolabah lined channels. Outlier of Channel Country. There has been removal of hollow trees for aviary Nests.	wildlife refugia disjunct populations REs distinct variation wetlands breeding/roost sites	Regional
mgd_l_08	Enniskillen Range, eucalypt acacia downs Representative of this community within the limits of its range. Contains silver leaved iron back and <i>Acacia pendula</i> with some brigalow. Large good condition remnants, watershed between Barcoo and Warrego Rivers.	taxa at range limit high sp. richness	State
mgd_l_09	Barkly Tableland Intact tertiary swamp deposits. wetter and higher than the rest of the bioregion, long term history not much grazing pressure as compared to across the border into NT. High floristic biodiversity.	wildlife refugia taxa at range limit high sp. richness REs distinct variation	State
mgd_l_10	Barkly Downs Wetlands Wetland complex, internal drainage basin. Complex of wetland surfaces. Bluebush and other flora species. Important for wetland bird nesting.	wildlife refugia REs distinct variation breeding/roost sites	State
mgd_l_11	Barkly Tableland Wetlands Closed depressions on Barkly Tableland with bluebush	wildlife refugia REs distinct variation breeding/roost sites	Regional
mgd_l_12	Wetlands Closed depressions with bluebush and nardoo outside Barkly subregion	wildlife refugia REs distinct variation breeding/roost sites	Regional
mgd_l_13	Georgina Waterholes (permanent) Permanent waterbodies. e.g. basin waterhole, Midgingar waterhole on Glenormiston, fed by spring – desert hardyhead refuge	wildlife refugia high sp. richness breeding/roost sites	State

Map code	Mitchell Grass Downs special landscape areas Description of significance value	Criteria used	Scale of significance
mgd_l_14	Georgina Waterholes (semi-permanent) Semi-permanent waterbodies	wildlife refugia high species richness breeding/roost sites	Regional
mgd_l_15	Melaleuca viminalis east of Boulia On a salt area <i>Triodia</i> sp., <i>Myoporum accuminatum</i> . From flora panel decision mgd_fl_02.	wildlife refugia disjunct populations taxa range limit high species richness	State
Mgd_I_16	Tertiary springs Permanent water in relatively dry range system, especially important for kangaroos and birds. Bexley, Springvale, Highlands, Newhaven. There are others that we may not be able to locate spatially. Decision was not implemented as no springs were identified.	wildlife refugia disjunct populations	Regional
mgd_l_17	Thomson, Barcoo waterholes Permanent to semi-permanent	centre of endemism wildlife refugia high species richness hollow bearing trees breeding/roost sites	State
mgd_l_18	Mt Mundi Tabletop Complex Tongue of Mitchell Grass into North West Highlands, highest rainfall area in the subregion - 4.9.13, new RE 4.4.1x4. Unusual combination of REs at the extreme of the range. Identified based on Marxan analysis within vicinity of Night Parrot records EPBC listed species	taxa range limit REs distinct variation	State
mgd_l_19	Urandangi confluence Particularly diverse area. Outwash fan, grasslands, drainage lines. Identified based on Marxan analysis	high species richness REs distinct variation	State
mgd_l_20	Parkdale Jump-up Caves among the jump-ups with bats. Spinifex and bloodwoods on top. High diversity of jump-up and plateau ecosystems.	wildlife refugia REs distinct variation breeding/roost sites	Regional
mgd_l_21	Sand ridge system Longreach to Muttaborra Deeper sands and bigger trees. Higher overstorey, bloodwoods and ghost gums hollows. Well developed lower tree storey. Good habitat for parrot, koalas, brush-tail possums. Some spinifex around Muttaborra.	wildlife refugia disjunct populations high species richness REs distinct variation	State

Map code	Mitchell Grass Downs special landscape areas Description of significance value	Criteria used	Scale of significance
		hollow bearing trees breeding/ roost sites	
mgd_l_22	Sand ridge system Stonehenge to Longreach Shallower sands, more mulga associations than mgd_l_21. Well developed lower tree storey. Good habitat for frogs and brushtail possums.	wildlife refugia disjunct populations high species richness REs distinct variation hollow bearing trees breeding/ roost sites	State
mgd_l_23	Sand ridge system Isisford to Blackall Bloodwoods with more poplar box and <i>Corymbia tessellaris</i> . Mixed species woodland on sand plains. Grassier understorey.	wildlife refugia disjunct populations high species richness hollow bearing trees	Regional
mgd_l_24	Riparian Corridors State (2.5km), Regional (2.5km) or Local (200m) In more intact landscapes, such as that in the Mitchell Grass Downs bioregion, riparian areas provide for a disproportionately high number of species relative to the area they occupy. The notion that native riparian vegetation should be considered as the ecological arteries for wildlife is particularly relevant to drier areas of Queensland such as the MGD.	Corridors	State, Regional or Local
mgd_l_25	Terrestrial corridors Recognised that in bioregions which have largely intact remnant vegetation cover some further criteria are needed to select the most ecologically effective corridor alignments. Current selections made to identify broad patterns of migration (between external bioregions) and broad areas of good condition grasslands. Corridors are indicative only and may in fact be much wider depending on species and seasons. Corridor number, significance and width 1 PAFF - Bilby Track - State (10km) 2 PAFF- Dig Tree to DEU - State (10km) 3 PAFF - Gulf to Grasslands - State (10km) 4 PAFF - Channel Country to Carnarvon State - (10km) 5 Eastern Branch Gulf to Grasslands - Core of the Mitchell grass following areas with low disturbance. Higher rainfall area - State - (10km) 6 Kynuna Plateau - Band of rugged country linking CHC to NWH, land zone 7 within mgd_l_4 - link to land zone 7. State significant, crosses through 3		State or Regional

Map code	Mitchell Grass Downs special landscape areas Description of significance value	Criteria used	Scale of significance
	<p>bioregions – State - (10km)</p> <p>7 Great Wall - Start with mgd_l_5, follow DEU boundary between existing corridors. Continuity of gidgee ecosystems and scarps and associated caves – Regional (10km)</p> <p>8 Mulga BPA v1.4 - Corridor 6007 - Northern Mulga Lands component of major EW corridor, linking Brigalow Belt, through Mitchell Grass Downs and Mulga Lands to Channel Country; connects remnant vegetation on ridge lines. State (10km)</p> <p>9 Mulga BPA v1.4 - Corridor 6008 - North-south corridor, linking Channel Country, Mitchell Grass Downs and Mulga Lands; connects remnant vegetation on ridge lines through Welford NP; links to east-west corridor 6007. State (10km)</p> <p>10 Mulga BPA v1.4 - Corridor 6009 - Follows a ridge to connect three terrestrial corridors. It incorporates several areas which are among the largest representatives of regional ecosystems in the subregion. This corridor also intersects three riparian corridors. State (10km)</p>		

Mitchell Grass Downs special flora areas

Map code	Mitchell Grass Downs special flora areas Description of significance value	Criteria used	Scale of significance
mgd_fl_01	<p><i>Acacia peuce</i> south of Boulia</p> <p>Relictual surface, biogeographical isolate with a high probability of other biogeographically significant species being present. May have been some clearing by Council for road widening.</p> <p>EPBC listed species</p>	<p>wildlife refugia</p> <p>disjunct populations</p> <p>taxa ranges limits</p> <p>relictual populations</p> <p>REs distinct variation</p>	State
mgd_fl_02	<p><i>Melaleuca viminalis</i> east of Boulia</p> <p>On a salt area <i>Triodia</i> sp., <i>Spinifex</i>, <i>Myoporum accuminatum</i>. This decision became mgd_l_15</p>	<p>wildlife refugia</p> <p>disjunct populations</p> <p>high species richness</p>	State
mgd_fl_03	<p><i>Eucalyptus socialis</i> subsp. <i>eucentrica</i> south of 'Old Cork'</p> <p>Associated with gypsum soils. Gypsum mining at the bottom of the escarpment at the moment.</p>	<p>disjunct populations</p> <p>REs distinct variation</p>	State
mgd_fl_04	<p>Ayrshire Hills</p> <p>Biogeographic isolate in the middle of open downs, presence of EVR species and fig</p>	<p>wildlife refugia</p> <p>disjunct populations</p>	Regional

Map code	Mitchell Grass Downs special flora areas Description of significance value	Criteria used	Scale of significance
	trees		
mgd_fl_05	Sand ridge system Longreach to Muttaburra Deeper sands and bigger trees. Higher overstorey, bloodwoods and ghost gums (hollows). Well developed lower tree storey. Good habitat for parrot, koalas, brush-tail possums. Some spinifex around Muttaburra. This decision became mgd_l_21	wildlife refugia disjunct populations high species richness REs distinct variation hollow bearing trees breeding/roost sites	State
mgd_fl_06	Sand ridge system Stonehenge to Longreach Shallower sands, more mulga associations than mgd_fl_5 which is dominated by Eucalypt/Corymbia associations. Well developed lower tree storey. Good habitat for frogs and brush-tail possums. This decision became mgd_l_22	wildlife refugia disjunct populations high species richness REs distinct variation hollow bearing trees breeding/roost sites	State
mgd_fl_07	Sand ridge system Isisford to Blackall Bloodwoods with more poplar box and Corymbia. tessellaris. Mixed species woodland on sand plains. Grassier understorey. This decision became mgd_l_23	wildlife refugia disjunct populations high species richness hollow bearing trees breeding/roost sites	Regional
mgd_fl_08	Barkly Tablelands Intact tertiary swamp deposits. Wetter and higher than the rest of the bioregion. Long term history not much grazing pressure as compared to across the border into NT. High floristic biodiversity. This decision became mgd_l_9	wildlife refugia taxa range limit high species richness REs distinct variation	State
mgd_fl_09	Springvale Supergroup Disjunct mound spring systems of GAB. Ones that are still flowing have flora values This decision became mgd_l_1	centre of endemism wildlife refugia disjunct populations taxa range limit high species richness relictual populations REs distinct variation	State
mgd_fl_10	Mesic gidgee on shallower soils Most extensive remaining example mantled pediment gidgee in the northeast of the bioregion. Refuges from clearing. Tertiary capping on top of shales and saline discharge.	wildlife refugia REs distinct variation	Regional

Map code	Mitchell Grass Downs special flora areas Description of significance value	Criteria used	Scale of significance
mgd_fl_11	Soft gidgee on deeper soils Taller, better developed gidgee on deeper soils. Largest examples left of this ecosystem – refuge from clearing. more likely to be cleared than mgd_fl_10. Areas on Westbourne and Highfields are particularly good examples	wildlife refugia REs distinct variation	State
mgd_fl_12	Brigalow low woodland Largest remaining patch of Brigalow – refuge from clearing.	wildlife refugia REs distinct variation	State
mgd_fl_13	Astrebla Downs country – Southwestern Downs Subregion Mitchell grass within stony plains. Productive area in relatively unproductive landscape – relative high species diversity. Microtopography – focus for grazing pressure. Need to manage landscape as a whole – don't manage individual patches.	wildlife refugia high species richness REs distinct variation	Regional

Mitchell Grass Downs special fauna areas

Map code	Mitchell Grass Downs special fauna areas Description of significance value	Criteria used	Scale of significance
mgd_fa_01	Barkly Tableland caves Limestone caves in the Camooweal district. Roosting and maternity sites for bat species, including Orange Horseshoe bat (<i>Rhinonictoris aurantia</i>) and Ghost bat (<i>Macroderma gigas</i>), both being NCA Vulnerable. Major extent of caves in arid Queensland. Poorly known biologically Register of the national estate	wildlife refugia taxa range limit breeding/roost sites	State
mgd_fa_02	Bore drain on Crossmoor Station Edgbaston goby habitat EPBC listed species	wetlands	Regional
mgd_fa_03	Southern half of Southwestern Downs subregion. High species diversity, large protected tracts of RE 4.9.4, high number of EVR, core population of bilby. EPBC listed species	wildlife refugia disjunct populations high species richness breeding/roost sites	State
mgd_fa_04	Winton town common and Rangelands Julia Creek dunnart, suspected bilby habitat, reintroduction of bilby possible. EPBC listed species	wildlife refugia disjunct populations	Regional

Desert Uplands

Desert Uplands special landscape areas

Map code	Desert Uplands special landscape areas Description of significance value	Criteria used	Scale of significance
deu_l_01	<p>Class 1 springs</p> <p>The biodiversity value of springs as refuges varies widely depending on their condition and reliability of discharge. Class 1 springs are rated as very high as wildlife refugia and these springs and a 500 metre buffer have a state significance rating. Springs are very susceptible to climate change. It is also unknown what effects bore capping and mining are going to have on springs.</p> <p>Nationally listed threatened community (EPBC)</p>	wildlife refugia	State
deu_l_02	<p>Threatened regional ecosystems</p> <p>A number of threatened regional ecosystems have their status because of their naturally restricted distribution but others largely due to widespread degradation resulting from a history of high grazing pressure. Others are endemic with restricted extents. 28 threatened regional ecosystems include:</p> <p>10.3.5, 10.3.8, 10.3.17, 10.3.19, 10.3.20, 10.3.21, 10.3.25, 10.3.26, 10.3.27, 10.3.29, 10.3.30, 10.3.31, 10.4.2, 10.4.4, 10.4.6, 10.4.7, 10.4.9, 10.5.9, 10.7.4, 10.7.6, 10.7.9, 10.7.13, 10.9.5, 10.9.7, 10.9.8, 10.10.3, 10.10.6, 10.10.7</p>	wildlife refugia REs distinct variation	State
deu_l_03	<p>Lake Galilee/north-east Lake Galilee wetland complex</p> <p>Nationally important wetland, register of the national estate</p>	<p>centre of endemism</p> <p>wildlife refugia</p> <p>geographic range limit</p> <p>high species diversity</p> <p>REs distinct variation</p> <p>habitat trees – hollows</p> <p>breeding/roosting sites</p>	State
deu_l_04	<p>Cauckingburra Swamp</p> <p>Nationally important wetland</p>	<p>wildlife refugia</p> <p>high species diversity</p> <p>habitat trees – hollows</p> <p>breeding/roosting sites</p>	State
deu_l_05	<p>Lake Buchanan</p> <p>nationally important wetland, register of the national estate</p>	<p>centre of endemism</p> <p>wildlife refugia</p> <p>disjunct populations</p> <p>high species diversity</p> <p>relictual populations</p>	State

Map code	Desert Uplands special landscape areas Description of significance value	Criteria used	Scale of significance
		REs distinct variation breeding/roosting sites	
deu_l_06	Thirlestone Lake	wildlife refugia habitat trees - hollows	State
deu_l_08	Lake Huffer	wildlife refugia high species diversity REs distinct variation	State
deu_l_09	Lake Barcoorah	wildlife refugia habitat trees – hollows breeding/roosting sites	State
deu_l_10	Lake Moocha	wildlife refugia habitat trees – hollows breeding/roosting sites	State
deu_l_12	Lake Mueller	wildlife refugia geographic range limit	State
deu_l_13	Lake Dunn	wildlife refugia habitat trees – hollows breeding/roosting sites	State
deu_l_14	RE 10.5.8a High diversity of flowering shrubs with high flora and fauna species richness. <i>Acacia ramiflora</i> – EPBC listed species	high species diversity	State
deu_l_15	saline discharge areas RE 10.3.16a and areas of 10.3.29 associated with 10.3.16 occurring in low lying areas of the bioregion. Doongmabulla EPBC listed species Lake Huffer EPBC listed species Edgbaston EPBC listed species and national heritage place	centre of endemism wildlife refugia	Regional
deu_l_16	Riparian regional ecosystems RE 10.3.12, 10.3.13 and 10.3.14 and a 200 metre buffer around them – riparian REs associated with the larger river systems function as important refuges for many species of flora and fauna because of their relatively high nutrient levels, better moisture balance and well developed vegetation. Black-throated finch, Gouldian finch, Australian painted snipe, painted honeyeater - EPBC listed bird species	wildlife refugia	State

Map code	Desert Uplands special landscape areas Description of significance value	Criteria used	Scale of significance
deu_l_17	National parks and resource reserves Refugia for species sensitive to stock grazing Register of the national estate	wildlife refugia	State
deu_l_18	Remote areas The Desert Uplands retains a number of areas where because of their remoteness, size and condition the biodiversity values within them have the greatest chance of being maintained in the long term. These areas are centred largely on the rugged sandstone ranges and extensive red soil plateaus mainly in the central and northern parts of the Alice Tableland subregion. The major threatening process to these areas is the intensification of grazing through development of infrastructure such as watering points and fencing. The current condition of the ground layer and soil is considered very high compared to similar regional ecosystems in other locations. These areas are rated as State significant, including some small disturbed areas within them where there is localised degradation associated with watering points.	Threatening processes	State
deu_l_19	Areas with unique geomorphology These are areas having a significant variation in landform and soils from the mapped RE, that could also have significant differences in species composition.	REs distinct variation	State
deu_l_20	Class 2 and 3 springs These springs and a 200 metre buffer have a regional significance rating. Springs are very susceptible to climate change. Also unknown what effects bore capping and mining are going to have on spring. Nationally listed threatened community(EPBC)	wildlife refugia disjunct populations	Regional
deu_l_21	The areas surrounding the wetland complexes described in decisions deu_l_3 to deu_l_13 are identified as having special biodiversity value for the long-term functioning of the wetland and are rated very high as wildlife refugia.	wildlife refugia	State
deu_l_22	Low disturbance areas REs with a ground cover disturbance index of high or very high over 25 percent or more of the mapped area are significant as they are assumed to have very low disturbance to the ground layer.	threatening processes/condition	Regional
deu_l_23	Ulcanbah A classic DEU property with lots of REs, reptiles, landscape linkages. Highest diversity of REs and plants in bioregion. Interesting geomorphology. Sympathetic management practices for biodiversity values.	wildlife refugia high species diversity REs distinct variation habitat trees - hollows	State
deu_l_24	Moonoomoo	wildlife refugia	State

Map code	Desert Uplands special landscape areas Description of significance value	Criteria used	Scale of significance
	A classic DEU property with lots of REs, reptiles, landscape linkages. Highest diversity of REs and plants in bioregion. Interesting geomorphology. Sympathetic management practices for biodiversity values.	high species diversity REs distinct variation habitat trees - hollows	

Desert Uplands special flora areas

Map code	Desert Uplands special flora areas Description of significance value	Criteria used	Scale of significance
deu_fl_1	White Mountains area Area of concentration of flora with biogeographic interest. Includes concentrations of EVRs and/or priority species and disjunct and narrow endemic species. Register of the national estate EPBC listed species	centre of endemism wildlife refugia disjunct populations taxa at range limit high sp. richness REs distinct variation	State
deu_fl_2	Lake Buchanan area Area of concentration of flora with biogeographic interest. Includes concentrations of EVRs and/or priority species and narrow endemic taxa. Register of the national estate EPBC listed species	centre of endemism wildlife refugia high sp. richness REs distinct variation	State
deu_fl_3	Doongmabulla springs Area of concentration of flora with biogeographic interest. Includes concentrations of EVRs and/or priority species including narrow endemic taxa. Nationally listed threatened community (EPBC)	centre of endemism wildlife refugia high species diversity REs distinct variation	State
deu_fl_4	Edgbaston/Myross springs complex Area of concentration of flora with biogeographic interest. Includes concentrations of EVRs and/or priority species including narrow endemic taxa. Nationally listed threatened community (EPBC) Register of the national estate EPBC listed species	centre of endemism wildlife refugia high species diversity REs distinct variation	State
deu_fl_6	Lake Huffer springs Area of concentration of flora with biogeographic interest. Includes concentrations of EVRs and/or priority species. EPBC listed species	wildlife refugia high species diversity	Regional

Map code	Desert Uplands special flora areas Description of significance value	Criteria used	Scale of significance
deu_fl_7	RE 10.3.11 Area of concentration of EVR flora and flora with biogeographic interest and other priority species EPBC listed species	wildlife refugia disjunct populations taxa at range limit	Regional
deu_fl_8	RE 10.3.14 RE subtypes with EVNT/priority taxa Very high overall species diversity of DEU species. Area of concentration of EVNT flora.	wildlife refugia high sp. richness	Regional
deu_fl_9	RE 10.5.1 RE subtypes with EVNT/priority taxa Very high overall species diversity of DEU species. Area of concentration of EVNT flora and flora with biogeographic interest and other priority species. EPBC listed species	wildlife refugia disjunct populations taxa at range limit high sp. richness	Regional
deu_fl_10	Western escarpment of DEU bioregion Strip of disjunct area in west of bioregion approx 100km long.	disjunct populations high species diversity REs distinct variation	State
deu_fl_11	Landzone 9 west of Towerhill Creek Cover of tertiary surfaces so thin that the shale underneath dominates the effect of the vegetation. Rare RE – lush tussock grass 10.9.2a.	centre of endemism REs distinct variation	State

Desert Uplands special fauna areas

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
deu_fa_1	The special biodiversity value of occurrences of 10.3.1 between Aberfoyle and Forest Den, in the Prairie-Torrens Creek subregion is very high. High species richness (birds and frogs) High species richness for priority species Refugial habitat for woodland species in areas where clearing is extensive. Also provides concentrations of larger hollow-bearing trees in mosaics of grassland and very open savanna woodlands Biogeographically significant habitat on the edge of the MGD/arid inland with many disjunct spp, and others on the edge of their geographic range	wildlife refugia disjunct populations taxa at range limit high sp. richness breeding/roost sites	Regional

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
	EPBC listed species		
deu_fa_2	<p>The special biodiversity value of occurrences of 10.3.2 between the Cape and Campaspe Rivers, in the Cape-Campaspe subregion is very high.</p> <p>High species richness of birds, mammals and frogs</p> <p>Very high species richness for priority species</p> <p>Refugial habitat for woodland species in areas where clearing is extensive. Also provides concentrations of larger hollow-bearing trees and dense closed vegetation favoured by many woodland bird and mammal species</p> <p>EPBC listed species</p>	wildlife refugia high sp. richness breeding/roost sites	Regional
deu_fa_3	<p>The special biodiversity value of occurrences of 10.3.3 between the Cape and Campaspe Rivers, in the Cape-Campaspe subregion is very high.</p> <p>High species richness of birds and frogs</p> <p>High species richness for priority and EVNT species.</p> <p>Refugial habitat for woodland species in areas where clearing is extensive. Also provides concentrations of larger hollow-bearing trees and dense closed vegetation favoured by many woodland bird and mammal species</p> <p>EPBC listed species</p>	wildlife refugia high sp. richness breeding/roost sites	Regional
deu_fa_4	<p>The special biodiversity value of occurrences of 10.3.4 between Prairie and Bullock Creek, in the Prairie-Torrens Creek subregion is very high.</p> <p>High species richness of birds</p> <p>High species richness for priority species</p> <p>Refugial habitat for woodland species in areas where clearing is extensive. Also provides concentrations of larger hollow-bearing trees in mosaics of grassland and very open savanna woodlands</p> <p>Biogeographically significant habitat on the edge of the MGD/arid inland with many disjunct spp, and others on the edge of their geographic range</p>	wildlife refugia taxa at range limit high sp. richness breeding/roost sites	Regional
deu_fa_5	<p>The special biodiversity value of occurrences of 10.3.6 is very high in areas with very high condition rating, within or directly adjacent to significant wetlands, or with a D2 rating of very high (largest examples of this RE in the subregion.</p> <p>Very high species richness for all taxa</p> <p>Very high species richness for priority and EVR species</p>	wildlife refugia disjunct populations taxa at range limit high sp. richness breeding/roost sites	State

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
	<p>Complex, well-formed woodlands with many hollow-bearing trees of high fertility is one of the most significant habitats for fauna in the DEU</p> <p>Refugial habitat for woodland species in areas where clearing is extensive, and important habitat for bird species, many of which have declined further south</p> <p>Biogeographically significant habitat as it allows inland incursions of many east coast and south-east species into the semi-arid zone which are on edge of their geographic range. The fauna includes species from a variety of neighbouring bioregions to the north (Einasleigh Uplands), east (Brigalow Belt) and west (Mitchell Grass Downs).</p> <p>Occurrences of this RE in the Alice Tableland form part of a biogeographically significant landscape, which represents a substantial area of species turnover, refuge and disjunction. Being associated with the Great Dividing Range, this area forms continuous north-south woodland corridor.</p> <p>EPBC listed species</p>		
deu_fa_6	<p>The special biodiversity value of occurrences of 10.3.7 between Towerhill and Bullock Creek, north of Uanda, in the Prairie-Torrens Creek subregion is very high. High species richness for priority and EVNT species</p> <p>This community is an outlier of the more extensive Mitchell Grass communities to the west. Though they support a fauna assemblage of low species richness, it is very specialised and almost entirely restricted to this habitat and the associated microhabitat features (e.g. deep cracking soils, tussock bases).</p> <p>Biogeographically significant habitat on the edge of the MGD/arid inland with many disjunct spp, and others on the edge of their geographic range</p> <p>EPBC listed species</p>	wildlife refugia disjunct populations taxa at range limit high sp. richness	Regional
deu_fa_7	<p>The special biodiversity value of occurrences of 10.3.9 in the Torrens Creek fan, in the Prairie-Torrens Creek subregion is very high.</p> <p>High species richness for birds and mammals</p> <p>Very high species richness for priority species</p> <p>Presence of one species endemic to the DEU</p> <p>Refugial habitat for woodland species in areas where clearing is extensive. Also provides concentrations of larger hollow-bearing trees and dense closed vegetation favoured by many woodland bird and mammal species.</p> <p>EPBC listed species</p>	centre of endemism taxa at range limit high sp. richness breeding/roost sites	State

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
deu_fa_8	<p>The special biodiversity value of occurrences of 10.4.8 within the Natal Downs and Victoria Downs critical areas as per DEU NRS report is very high.</p> <p>High species richness of birds</p> <p>High species richness for priority and EVR species</p> <p>EPBC listed species</p>	<p>wildlife refugia</p> <p>disjunct populations</p> <p>taxa at range limit</p> <p>high sp. richness</p>	Regional
deu_fa_9	<p>The special biodiversity value of occurrences of 10.5.1 is very high in areas with very high condition rating.</p> <p>High species richness for all taxa</p> <p>Very high species richness for priority and EVR species</p> <p>This RE represents some of the best remaining intact sub-tropical woodlands in central and south-east Queensland. Extremely high habitat condition in most of this region due to lack of disturbance, low levels of grazing (including areas where it is entirely absent due to poison bush), low levels of infrastructure, watering points and weeds.</p> <p>The presence of at least two endemic species.</p> <p>The presence of a number of sibling or related species, indicated this region has biogeographic significance as a zone of species turnover between the wetter coastal regions and the arid interior of Australia;</p> <p>The presence of a number of disjunct species, and in the case of Pseudomys desertor, extremely high abundances, further evidence of this regions value as good quality habitat and as an area of significant habitat refuge; and</p> <p>This RE forms the core of the Alice Tableland a biogeographically significant landscape, which represents a substantial area of species turnover, refuge and disjunction. Being situated on the Great Dividing Range, this area forms continuous north-south woodland corridor, linking the woodlands and forests of the Einasleigh Uplands and Cape York Peninsula with the woodlands of the Carnarvon ranges, and ultimately with the woodlands and forests of the Great Dividing Range in New South Wales and Victoria.</p> <p>EPBC listed species</p>	<p>centre of endemism</p> <p>wildlife refugia</p> <p>disjunct populations</p> <p>taxa at range limit</p> <p>high sp. richness</p> <p>breeding/roost sites</p>	State
deu_fa_10	<p>The special biodiversity value of occurrences of 10.5.5 is very high in areas with very high condition rating, within or directly adjacent to significant wetlands, or with a D2 rating of very high (largest examples of this RE in the subregion)</p> <p>Very high species richness for all taxa</p> <p>Very high species richness for priority and EVR species</p>	<p>wildlife refugia</p> <p>disjunct populations</p> <p>taxa at range limit</p> <p>high sp. richness</p> <p>breeding/roost sites</p>	State

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
	<p>Complex, well-formed woodlands with many hollow-bearing trees of high fertility is one of the most significant habitats for fauna in the DEU</p> <p>Refugial habitat for woodland species in areas where clearing is extensive, and important habitat for bird species, many of which have declined further south</p> <p>Biogeographically significant habitat as it allows inland incursions of many east coast species into the semi-arid zone which are on edge of their geographic range</p> <p>EPBC listed species</p>		
deu_fa_11	<p>The special biodiversity value of all occurrences of 10.7.1a and b, and 10.7.10 and 10.7.11 is high.</p> <p>High species richness for reptiles</p> <p>Very high species richness for priority species</p> <p>Habitat of low fertility and lesser grazing pressure that is refugial for woodland species in areas that are surrounded by mosaics of grasslands and clearing.</p> <p>Dense, extensive spinifex groundcover a significant feature that provides important habitat for a range of priority terrestrial species.</p> <p>Biogeographically significant habitat on the edge of the MGD/arid inland with many disjunct spp, and others on the edge of their geographic range</p> <p>EPBC listed species</p>	<p>taxa at range limit</p> <p>high sp. richness</p>	Regional
deu_fa_12	<p>The special biodiversity value of all occurrences of 10.7.1a and b, and 10.7.10 and 10.7.11 is high in areas with high to very high condition rating.</p> <p>High species richness for reptiles</p> <p>Very high species richness for priority species</p> <p>Habitat of low fertility and lesser grazing pressure that is refugial for woodland species in areas that are surrounded by mosaics of grasslands and clearing.</p> <p>Dense, extensive spinifex groundcover a significant feature that provides important habitat for a range of priority terrestrial species.</p> <p>Biogeographically significant habitat on the edge of the MGD/arid inland with many disjunct spp, and others on the edge of their geographic range</p> <p>EPBC listed species</p>	<p>taxa at range limit</p> <p>high sp. richness</p>	State
deu_fa_13	<p>The special biodiversity value of occurrences of 10.7.3 mapped in the sandstone ranges, gorges, caves and escarpments is very high.</p> <p>High species richness for mammals</p> <p>High species richness for priority species</p> <p>The sandstone ranges, escarpments and cave habitats are of limited areal extent</p>	<p>wildlife refugia</p> <p>disjunct populations</p> <p>taxa at range limit</p> <p>high sp. richness</p> <p>breeding/roosting sites</p>	State

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
	<p>in the Desert Uplands, but many species are specialised to these environments, being associated with bare stony ground, the mesic gorges or the caves and crevices in the sandstone rock. These habitat are refugial and support disjunct species. The caves and escarpment provide significant roosting habitat for many bats species including significant species as well as roosts for owls in environments that may not otherwise have tall hollow-bearing trees</p>		
deu_fa_14	<p>The special biodiversity value of occurrences of 10.7.7 mapped in the sandstone ranges, gorges, caves and escarpments is very high. High species richness for frogs High species richness for priority species The sandstone ranges, escarpments and cave habitats are of limited areal extent in the Desert Uplands, but many species are specialised to these environments, being associated with bare stony ground, the mesic gorges or the caves and crevices in the sandstone rock. These habitat are refugial and support disjunct species. The caves and escarpment provide significant roosting habitat for many bats species including significant species as well as roosts for owls in environments that may not otherwise have tall hollow-bearing trees EPBC listed species</p>	<p>wildlife refugia disjunct populations taxa at range limit high sp. richness</p>	State
deu_fa_15	<p>The special biodiversity value of all occurrences of 10.9.2 is very high. High species richness for EVR species Well-developed woodlands with many hollow-bearing trees of high fertility is significant and restricted habitat for fauna in the eastern DEU Refugial habitat for woodland species in areas where clearing is extensive, and important habitat for bird species, many of which have declined further south Biogeographically significant habitat as it allows incursions of south-eastern species into the semi-arid zone which are on edge of their geographic range (Brigalow Belt) EPBC listed species</p>	<p>wildlife refugia taxa at range limit high sp. richness breeding/roost sites</p>	State
deu_fa_16	<p>The special biodiversity value of all occurrences of 10.3.11 is very high. High species richness for mammals High species richness for priority species Refugial habitat for woodland species in gorges and minor drainage lines associated with sandstone ranges and in areas where clearing is extensive. Well-</p>	<p>wildlife refugia disjunct populations taxa at range limit high sp. richness breeding/roost sites</p>	State

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
	developed woodland provides concentrations of larger hollow-bearing trees and dense closed vegetation favoured by many woodland bird and mammal species.		
deu_fa_17	<p>The special biodiversity value of all occurrences of 10.3.13 and 10.3.14 4iver red gum is very high.</p> <p>Very high species richness for birds, high for frogs and mammals</p> <p>Very high species richness for EVR species, and high for priority species</p> <p>Significant refugial and corridor habitat specifically in subregion 3 where the clearing is moderately extensive. These mesic ribbons of habitat provide an important seasonal refuge and resources for a variety of species, in particular arboreal mammals, woodland birds, hollow-roosting species and amphibians. Many raptor species preferentially nest in tall riparian trees.</p> <p>EPBC listed species</p>	wildlife refugia high sp. richness breeding/roost sites	State
deu_fa_18	<p>The special biodiversity value of all occurrences of 10.3.23 shrublands around Lake Galilee is very high.</p> <p>High species richness for birds</p> <p>Very high species richness for EVR species</p> <p>High terrestrial fauna values to be found in the samphire, saltbush, herbfield and dune woodlands associated with the margins of the lakes, not-the-least being their significance as nesting sites for the waterbirds that feed on the lakes and other nomadic species (potentially Yellow Chat, Orange Chat, and Painted Snipe).</p> <p>This RE also contains disjunct and very poorly known significant species on the edge of their geographic range that utilise the samphire habitats</p>	centre of endemism wildlife refugia disjunct populations taxa at range limit high sp. richness breeding/roost sites habitat trees - hollows	State
deu_fa_19	<p>The special biodiversity value of occurrences of 10.3.27 poplar box is very high in areas with very high condition rating, within or directly adjacent to significant wetlands, or with a D2 rating of very high (largest examples of this RE in the subregion)</p> <p>High species richness for birds, frogs and reptiles</p> <p>Very high species richness for priority species</p> <p>Complex, well-formed woodlands with many hollow-bearing trees of high fertility is one of the most significant habitats for fauna in the DEU</p> <p>Refugial habitat for woodland species in areas where clearing is extensive, and important habitat for bird species, many of which have declined further south</p>	wildlife refugia taxa at range limit high sp. richness habitat trees - hollows	State

Map code	Desert Uplands special fauna areas Description of significance value	Criteria used	Scale of significance
	Biogeographically significant habitat as it allows inland incursions of many east coast species into the semi-arid zone which are on edge of their geographic range		
deu_fa_20	<p>The special biodiversity value of occurrences of 10.3.28 narrow leaf ironbark and silver leaf ironbark is very high in areas with very high condition rating, within or directly adjacent to significant wetlands, or with a D2 rating of very high (largest examples of this RE in the subregion)</p> <p>High species richness for reptiles, frogs and mammals, very high for birds</p> <p>Very high species richness for priority and EVR species</p> <p>Complex, well-formed woodlands with many hollow-bearing trees of high fertility is one of the most significant habitats for fauna in the DEU</p> <p>Refugial habitat for woodland species in areas where clearing is extensive, and important habitat for bird species, many of which have declined further south</p> <p>Biogeographically significant habitat as it allows inland incursions of many east coast species into the semi-arid zone which are on edge of their geographic range</p> <p>EPBC listed species</p>	wildlife refugia disjunct populations taxa at range limit high sp. richness breeding/roost sites	State
deu_fa_21	<p>The special biodiversity value of all occurrences of 10.3.29 is very high.</p> <p>High species richness for priority species</p> <p>The hummock grasslands and related low shrubby habitats occurring in the saline discharge zones, most commonly on the western margin of the Alice Tableland, are particularly significant for specialised fauna</p> <p>The presence of a number of disjunct species more typical of arid central Australia</p> <p>The presence in the associated artesian springs of fish species of conservation significance. These springs are also important seasonal refuge and resources for terrestrial fauna.</p>	wildlife refugia disjunct populations taxa at range limit high sp. richness	State
deu_fa_22	<p>Special biodiversity values of all land zone 10</p> <p>The sandstone ranges, escarpments and cave habitats support many species specialised to bare stony ground, mesic gorges or the cave habitats and crevices in the sandstone rock. The special biodiversity value of these areas is very high for the conservation of the faunal diversity of the bioregion.</p> <p>EPBC listed species</p>	wildlife refugia high species diversity	Regional

Mulga Lands

Mulga Lands special landscape areas

Map code	Mulga Lands special landscape areas Description of significance value	Criteria used	Scale of significance
mul_l_23	<p>Artesian Springs 6.3.23 Artesian springs can provide habitat for endemic plants and other organisms (i.e. fish or invertebrates) known only from those springs, provide habitat for threatened species (listed under the Nature Conservation Act 1992) or habitat for isolated populations of numerous plant species. Some species that occur in artesian mound springs and the mound spring community itself are also listed under the Commonwealth legislation Environmental Protection and Biodiversity Conservation Act (EPBC).</p> <p>Nationally listed threatened community (EPBC)</p>	<p>centres of endemism wildlife refugia disjunct populations high species diversity relictual populations REs distinct variation</p>	State
mul_l_30	<p>Riparian Bioregional Corridors within Land Zone 3 centred on watercourses and major tributaries. The riparian bioregional corridors, particularly river red gum <i>Eucalyptus camaldulensis</i> communities, provide migration routes and habitat for numerous species. Surrounding vegetation communities grade from mesic in the eastern parts of the MUL to semi-arid in the west, with a corresponding increase in the importance of riparian habitats.</p>	corridors	State
mul_l_31	Terrestrial Bioregional Corridors within fragmented Subregions (<30% remnant)	corridors	State
mul_l_54	<p>Floodplains Floodplain communities of the Mulga Lands are highly diverse ecosystems, and have adapted to surviving prolonged drought, and floods of varying duration and intensity.</p>	wildlife refugia	Regional

Mulga Lands special flora areas

Map code	Mulga Lands special flora areas Description of significance value	Criteria used	Scale of significance
mul_fl_03	<p>Mariala, Ambathala range The Ambathala Range has a high diversity of rare plant species The panel considered that all small, isolated ranges near Ambathala Range were also significant.</p>	<p>centre of endemism wildlife refugia disjunct populations high species diversity</p>	State

Map code	Mulga Lands special flora areas Description of significance value	Criteria used	Scale of significance
	EPBC listed species		
mul_fl_08	Grey Range The Grey Range and its spurs are habitat for rare and threatened plant species EPBC listed species	centre of endemism wildlife refugia disjunct populations high species diversity	State

Mulga Lands special fauna areas

Map code	Mulga Lands special fauna areas Description of significance value	Criteria used	Scale of significance
mul_fa_01	Mulga Land Ranges – Yellow Footed Rock-Wallaby Steep rocky residuals in the range country near Welford, Mariala and Idalia National Parks provide critical habitat for Yellow-footed Rock-wallabies (<i>Petrogale xanthopus</i>) (Gordon et al 1993). This landscape is also important habitat for reptiles Redthroats <i>Pyrrholaemus brunneus</i> (vulnerable) is known to breed in low open shrublands on crests of Tertiary residuals (RE 6.7.14) at Mariala National Park. The Spinifex pigeon <i>Geophaps plumifera</i> are at or near the southern limit of their distribution in this country, and are found in low shrublands on residual crests and foot slopes.	wildlife refugia taxa at limit of range	State

Brigalow Belt South

Brigalow Belt South special landscape areas

Map code	Brigalow Belt South special landscape areas Description of significance value	Criteria used	Scale of significance
brbs_l_16	Core areas: tracts of continuous remnant vegetation. The size of any tract is a major indicator of ecological significance, and is also strongly correlated with the long-term viability of biodiversity values.	refuge from clearing	State
brbs_l_17	Terrestrial bioregional corridors along the Great Dividing Range	terrestrial corridor	State or Regional
brbs_l_18	Riparian bioregional corridors	riparian corridor	State or Regional
brbs_l_20	Artesian springs with medium to very high conservation priorities	wildlife refugia disjunct populations taxa at limit of range high species diversity	State

Brigalow Belt South special fauna areas

Map code	Brigalow Belt South special fauna areas Description of significance value	Criteria used	Scale of significance
brbs_fa_6	Brown tree creeper <i>C. picumnus</i> habitat	habitat for priority taxa	Regional
brbs_fa_26	Koala <i>Phascolarctos cinereus</i> habitat	habitat for priority taxa	State
brbs_fa_48	Carnarvon National Park (small portion only in DCQ region). Sandstone gorge landscape supporting extensive remnant vegetation including large numbers of endangered and of concern REs. Numerous fauna species (mammal, bird, reptile, amphibian, insects)	wildlife refugia disjunct populations taxa at limit of range high species richness relictual populations	State

Bibliography

Online databases

Atlas of Living Australia

<http://www.ala.org.au/>

Australian Natural Resource Atlas (ANRA)

<http://www.anra.gov.au/topics/publications/index.html>

Back on Track, Actions for Biodiversity http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/back_on_track_species_prioritisation_framework/recovery-action-database.html

Directory of Important Wetlands in Australia

<http://www.environment.gov.au/water/topics/wetlands/database/diwa.html>

Regional ecosystem database

http://www.derm.qld.gov.au/wildlife-ecosystems/biodiversity/regional_ecosystems/introduction.html

Species Profile and Threats database (SPRAT)

<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

The Australian Natural Heritage Assessment Tool (ANHAT)

<http://www.environment.gov.au/heritage/anhathat/summaries/qld/qld-desert-channels.html>

The EPBC Act Protected Matters Search Tool

<http://www.environment.gov.au/epbc/pmst/index.html>

The Long Paddock

<http://www.longpaddock.qld.gov.au/>

Waterwise Information System for the Environment http://www.wise.unsw.edu.au/wise_v5.html

Weeds Australia National Portal

<http://www.weeds.org.au/>

Wetlandinfo

<http://wetlandinfo.derm.qld.gov.au/wetlands/>

WildNet

<http://www.ehp.qld.gov.au/wildlife/wildlife-online/>

Key spatial datasets

Biodiversity planning assessment data for the Channel Country, Mitchell Grass Downs, Desert Uplands, Mulga and Brigalow bioregions

<http://dds.information.qld.gov.au/dds/>

Digital cadastral database

<http://www.derm.qld.gov.au/property/mapping/dcdata/index.html>

Directory of Important Wetlands

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