Department of Environment, Science and Innovation

Belmah Conservation Park

Resource Information

2024

Queensland Government

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Front cover photo: Belmah Conservation Park © Queensland Government, DESI 2020

Aboriginal and Torres Strait Islander people should be aware that this document may contain images or names of deceased persons in photographs and printed material that some people may find distressing.

Contents

1. Introduction

The Queensland Parks and Wildlife Service (QPWS) management planning process aligns with the Values-Based Management Framework (VBMF), an adaptive management cycle that incorporates planning, prioritising, doing, monitoring, evaluating and reporting into all areas of our business (Figure 1). Management plans and statements set the strategic management direction, guiding the next tier of planning and the development of thematic strategies, which in turn inform and prioritise our on-ground operations.

Resource information is a compendium of park information and a supporting document for management plans and management statements. It contains background information about a park's purpose, values, resources, and legal and administrative framework.

Information about the VBMF is available on the Department of Environment, Science and Innovation (DESI) website at https://www.desi.qld.gov.au/

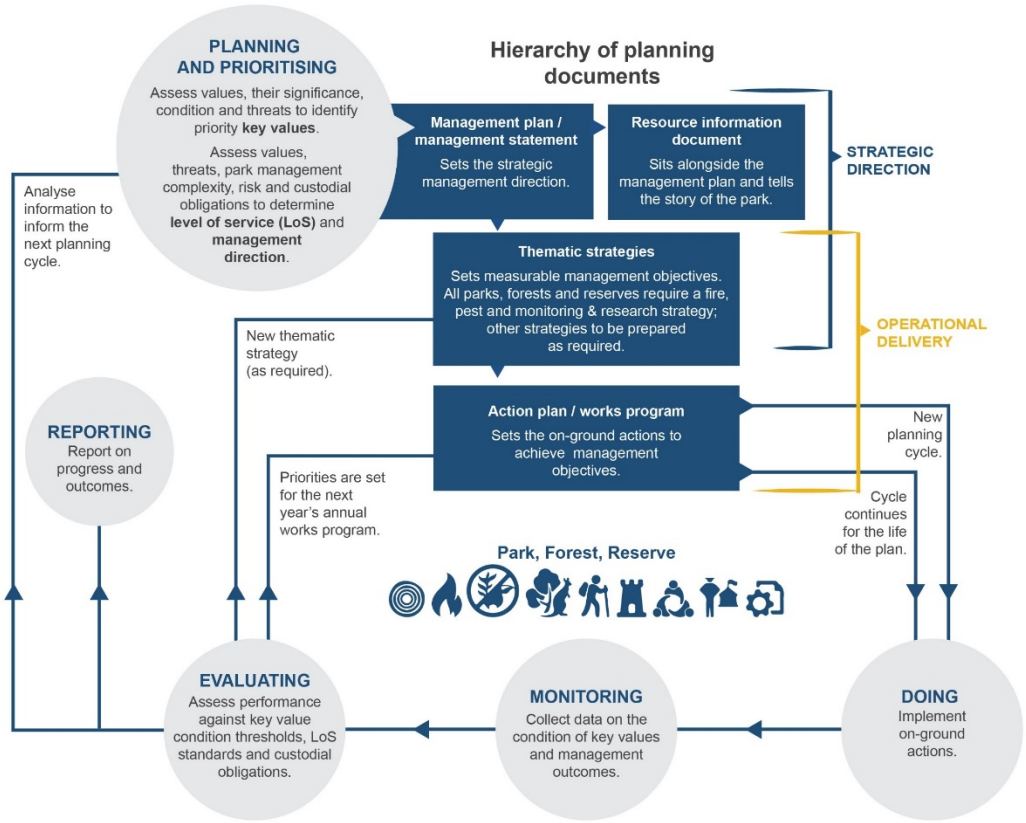


Figure 1. Phases of the VBMF cycle for planning and the hierarchy of planning documents

2. Belmah Conservation Park

Belmah Conservation Park is within the Brigalow Belt North bioregion and the Isaac–Comet Downs subregion. The Brigalow Belt North is a very high conservation priority due to increasing fragmentation of the landscape, the low level of reservation, and the number of endangered and vulnerable ecosystems that were once widespread.

Belmah was purchased in 2011, with the assistance of the National Reserve System component of the Australian Government's *Caring for our Country* initiative, and dedicated as Belmah Resources Reserve in 2015. The reserve was re-dedicated as Belmah Conservation Park in 2020.

A large tract of remnant vegetation is conserved on Belmah Conservation Park, consisting primarily of endangered regional ecosystems in a predominantly cleared landscape. Belmah Conservation Park protects nine regional ecosystems in total. Regional ecosystems 11.3.1, 11.3.21, 11.4.8 and 11.4.9 are listed as 'endangered' and cover 48.6% of the reserve, covering nearly half of Belmah. A further four regional ecosystems (11.3.2, 11.3.25, 11.3.3 and 11.3.6), representing 11% of the park, are listed as 'of concern' and one, 11.5.3, is listed as 'not of concern' at present Less than 1% of their pre-clearing extent is protected elsewhere (REDD, 2018).

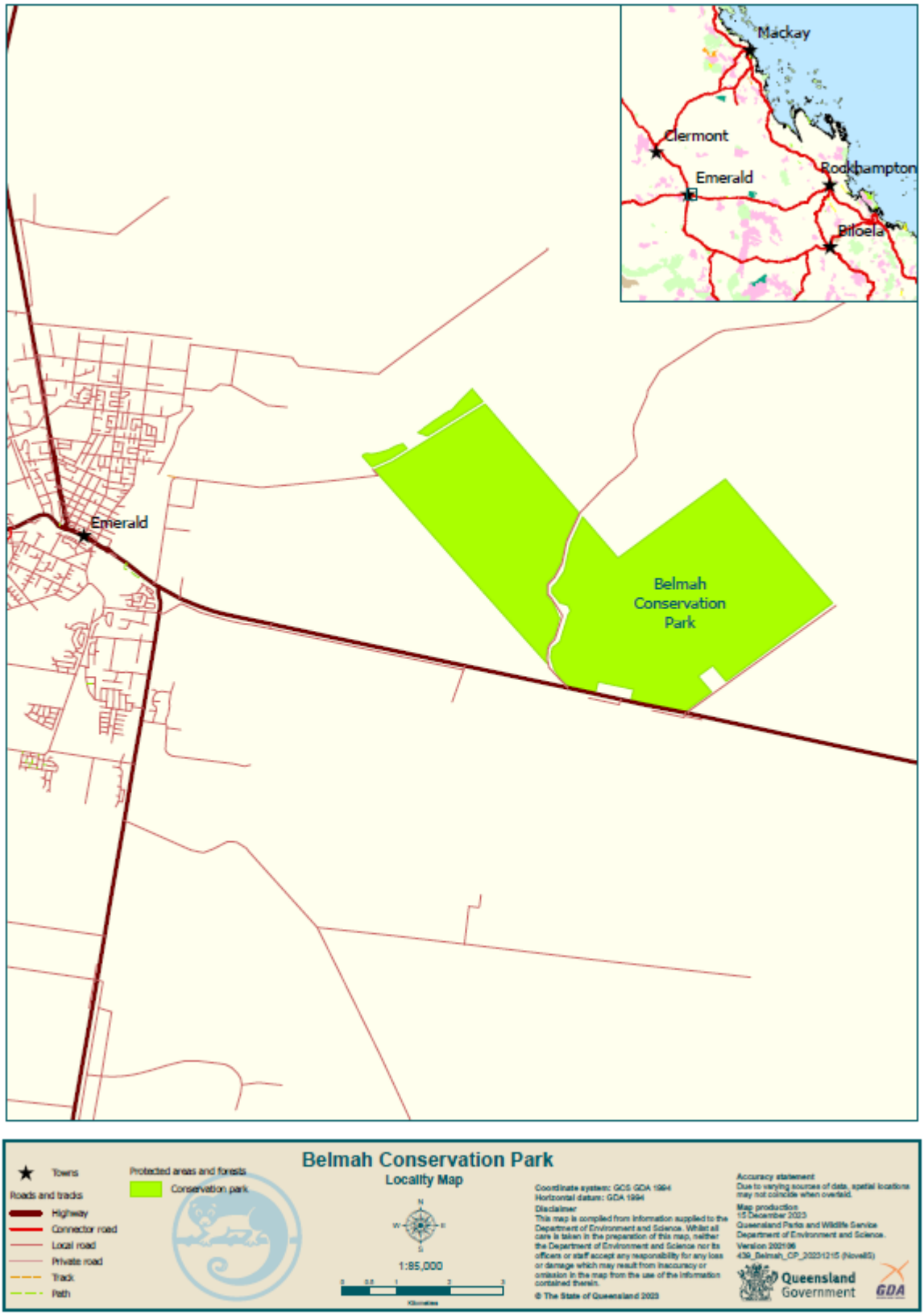
Bioregion	Brigalow Belt North		
Area	2046.007ha		
Local government area	Central Highlands Regional Council	**State electorate**	Gregory
Management obligations	Convention on the Conservation of Migratory Species of Wild Animals (CMS) Japan–Australia Migratory Bird Agreement (JAMBA) China–Australia Migratory Bird Agreement (CAMBA) Republic of Korea–Australia Migratory Bird Agreement (ROKAMBA)		

Belmah Conservation Park is located 6 kilometres east of Emerald in the state electorate of Gregory and the local government area of Central Highlands Regional Council (**Map 1)**. Belmah is considered a small reserve of 2,046 hectares, but it contains excellent examples of brigalow, Queensland blue-grass and woodland communities that have low protected area representation.

The Nogoa River, part of the Fitzroy Basin, adjoins the property to the north-west, and approximately 5% of Belmah was inundated in the 2012 floods. Belmah contains two tributaries of the Nogoa River catchment, with the perennial Winton Creek running through the eastern part of the property and an unnamed ephemeral tributary running through the western section. The north-western parts of Belmah form part of a riparian bioregional corridor of state and regional significance.

Opportunities exist for visitation and education due to the close proximity to the Central Highlands regional centre of Emerald. This will allow visitors to explore a large remnant of brigalow, which was once widespread in this region, emphasising the importance of conservation in the largely cleared landscape. Belmah can be accessed by conventional vehicle directly from the Capricorn Highway and is dissected in the west by Foleys Road, which is also sealed.

Belmah Conservation Park lies within the lands of the Western Kangalou People. Although no comprehensive survey has been carried out, there are likely to be artefacts, for example, shell middens, as Belmah is associated with a major river and is in an undisturbed state.



Map 1. Belmah Conservation Park location map

2.1 Western Kangoulu People

Belmah Conservation Park lies within the lands of the Western Kangoulu People. The Western Kangoulu People's traditional Country is the area surrounding Emerald and is covered by the registered Native Title Claim QC2013/002. Western Kangoulu People are represented by the Lumburra Bimbi Pty Ltd cultural heritage body (lumburrabimbi.com.au, accessed 25 February 2019).

The Western Kangoulu People's Country is rich in history and natural resources, contains both tangible and intangible values, and is of great cultural significance to the Western Kangoulu People. The Western Kangoulu People are committed to making a positive reconnection with their Country (lumburrabimbi.com.au). QPWS is committed to meaningful engagement to ensure the protection of cultural sites, and to assist the Western Kangoulu People fulfil their aspiration to connect with Country.

2.2 Ecosystems and biodiversity

The conservation of Belmah Conservation Park was the last opportunity to protect alluvial brigalow ecosystems in this highly cleared and fragmented subregion. Belmah Conservation Park contains some significant and highly threatened ecosystems that are very poorly represented in protected areas.

Most of Belmah Conservation Park is mapped as having state biodiversity significance and rates very highly on bioregional and subregional ecosystem value, context and connection, tract size, wildlife refugia and ecosystem diversity.

2.2.1 Brigalow communities

Nearly 60% of Belmah is brigalow *Acacia harpophylla* (dominant and co-dominant), a threatened ecological community listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (EPBC Act). Belmah contains three 'endangered' brigalow *Acacia harpophylla* dominant and co-dominant woodlands on alluvial and Cainozoic clay plains (11.3.1 – *A. harpophylla* and/or *Casuarina cristata* open forest on alluvial plains, 11.4.8 – *Eucalyptus cambageana* woodlands to open forest with *A. harpophylla* or *A. argyrodendron* on Cainozoic clay plains, 11.4.9 – *A. harpophylla* shrubby open forest to woodland with *Terminalia oblongata* on Cainozoic clay plains). These communities have been extensively cleared for cropping and pasture. Less than 21% (1999) of pre-clearing extent remains and the protected area extent is low. These communities have high biodiversity values and provide habitat for a number of threatened species, including painted honeyeater *Grantiella picta* (vulnerable, *Nature Conservation Act 1992* (NCA) and EPBC Act) and the shrub *Solanum elachophyllum* (endangered, EPBC Act).

2.2.2 Natural tussock grassland

Belmah contains a small area (22.2 hectares) of *Dichanthium sericeum* and/or *Astrabla* spp. grassland on alluvial plains (11.3.21). This community has been extensively cultivated for cropping and pasture and the remnant area can be over-estimated due to mapping scale errors. These grasslands provide habitat for a number of rare and threatened flora species, including *Thesium australe*, *Picris evae*, *Rhaponticum australe*, *Dichanthium queenslandica*, *Bothriochloa biloba* and *Digitaria porrecta*, and fauna species including grassland earless dragon *Tympanocryptis* sp.

2.2.3 Eucalypt woodland

Belmah contains four 'of concern' woodland communities (11.3.2 – *Eucalyptus populnea* woodlands on alluvial plains, 11.3.3 – *E. coolabah* woodlands on alluvial plains, 11.3.6 – *E. melanophloia* woodlands on alluvial plains and 11.5.3 – *E. populnea* and/or *E. melanophloia* and/or *Corymbia clarksoniana* on Cainozoic sand plains/remanent surfaces). These communities have been extensively cleared and modified by grazing and impacted by invasive weeds and grasses. These woodland communities have

high biodiversity values, especially when vegetation composition, structure and fauna habitat, including large mature trees and ground logs, are retained.

2.2.4 Riparian

Belmah's north-western boundary is adjacent to the Nogoa River, part of the Fitzroy Basin, enhancing the ecological integrity of the property and giving it some importance in catchment protection. The riparian area contains extensive fringing ecosystems and alluvial country (RE 11.3.25). Two tributaries of the Nogoa River catchment run through the estate, with the perennial Winton Creek running through the eastern part of the property and an unnamed ephemeral tributary running through the western section. In flood times, there are large areas of inundation, creating significant ephemeral wetlands. The riparian corridor forms part of a riparian bioregional corridor of state and regional significance.

2.3 Species

No detailed flora and fauna surveys have been completed for Belmah Conservation Park. Currently, only one animal and 36 plants have been recorded on Belmah (DESI 2020). However, numerous species have been recorded off the reserve within a 5 kilometre radius; many of which are likely to occur on Belmah (DESI 2020).

2.3.1 Native animals

The ornamental snake *Denisonia maculata*, listed as 'vulnerable' under the NCA and the EPBC Act, has been recorded on a neighbouring property and is likely to occur on Belmah. The southern snapping turtle *Elseya albagula* is listed as 'endangered' under the NCA and 'critically endangered' under the EPBC Act. It has been recorded on the Nogoa River near Emerald, and may occur in the reach of the river adjacent to the park.

2.3.2 Native plants

Solanum elachophyllum is listed as 'endangered' under the NCA and has been recorded on Belmah Conservation Park. Invasive weeds, especially introduced pasture grasses, have been identified as a threatening process for *S. elachopyllum* and as a threat to the brigalow community (DESI 2020).

2.4 Geophysical features

2.4.1 Geology

Belmah is located in Province 11, Issac–Comet Downs. Dominated by Tertiary and other Cainozoic deposits, the region is represented by undulating plateaus and plains with the lower area dominated by fine-textured alluvium soils. These diverse soil types support a variety of vegetative communities, including eucalypt woodland, brigalow and open grasslands (Sattler & Williams 1999).

2.5 Recreational opportunities

There are currently no camping or day use facilities in Belmah Conservation Park.

2.6 Partnerships

QPWS engages with park neighbours and the local government with respect to management of Belmah Conservation Park.

2.7 Fire

Fire management is core business for QPWS to protect life and property, mitigate wildfires and maintain natural diversity in accordance with the NCA and the *Fire and Emergency Services Act 1990* for the control and prevention of fires.

QPWS has entered into a formal arrangement with the neighbour of Belmah Conservation Park to undertake controlled conservation grazing of buffel grass *Cenchrus ciliaris* infestation to protect the fire-sensitive acacia communities on Belmah Conservation Park.

2.8 Pests

Pest management is core business for QPWS to mitigate the threats to biodiversity in accordance with the NCA. QPWS has a responsibility under the *Biosecurity Act 2014* (Qld) to take all reasonable and practical steps to minimise the risks associated with plant and animal pests on lands under our control.

2.8.1 Pest plants

Buffel grass *Cenchrus ciliaris* is an environmental weed species of management concern in Belmah Conservation Park. It can dominate the ground layer, displacing native grasses and other plants, and its rapid regrowth and high biomass may alter the intensity, frequency and extent of fires, changing vegetation structure and composition.

QPWS has entered into a formal arrangement with the neighbour of Belmah Conservation Park to undertake controlled conservation grazing of buffel grass *Cenchrus ciliaris* infestation to protect the fire-sensitive acacia communities on Belmah Conservation Park.

2.8.2 Pest animals

Feral cats and feral pigs, wild dogs and cane toads have been present on Belmah Conservation Park.

Appendices

Appendix 1. Legal, policy and management commitments

Gazettal details

Belmah Conservation Park was purchased in 2011 to conserve a number of threatened ecosystems of the Brigalow Belt North bioregion. The property was initially dedicated as a Resources Reserve in 2015 and has subsequently be re-dedicated as Conservation Park in 2020.

Applicable Acts and statutory powers

- *Nature Conservation Act 1992* (Qld)
- *Native Title Act 1993* (Cwth)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cwth)
- *Biosecurity Act 2014* (Qld)
- *Aboriginal Cultural Heritage Act 2003* (Qld)
- *Queensland Heritage Act 1992* (Qld)

Appendix 2. Regional ecosystems of significance

Regional ecosystem	Description	Biodiversity status
11.3.1	*Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains	Endangered
11.4.9	*Acacia harpophylla* shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Endangered
11.3.21	*Dichanthium sericeum* and/or *Astrebla* spp. grassland on alluvial plains. Cracking clay soils	Endangered
11.3.25	*Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines	Of concern
11.3.6	*Eucalyptus melanophloia* woodland on alluvial plains	Of concern
11.3.2	*Eucalyptus populnea* woodland on alluvial plains	Of concern
11.3.3	*Eucalyptus coolabah* woodland on alluvial plains	Of concern

Appendix 3. Species of conservation significance

Scientific name	Common name	NC Act status	EPBC Act status	Back on track
Plants				
Solanum elachophyllum	-	Endangered	-	-
Animals				
-	-	-	-	-

Appendix 4. Pests

Scientific name	Common name	*Biosecurity Act 2014* status	Historical notes
Plants			
Cenchrus ciliaris	Buffel grass	No listing	Widespread and well established, impacts: • Out-competes native species. • Reduces the natural values of the park. • Increases fire frequency and intensity.
Panicum maximum	Green panic		Widespread and well established, impacts: • Out-competes native species. • Reduces the natural values of the park. • Increases fire frequency and intensity.
Ricinus communis	Castor-oil plant		Distribution areas include the riparian zone of the Nogoa River, impacts: • Out-competes native species. • Reduces the natural values of the park.
Parkinsonia aculeata	Parkinsonia		Distribution areas include the riparian corridor of the Nogoa River and eucalypt woodlands, impacts: • Out-competes native species. • Reduces the natural values of the park.
Cryptostegia grandiflora	Rubber vine		Distribution areas include the riparian zone of the Nogoa River, impacts: • Out-competes native species. • Reduces the natural values of the park.
Hymenachne amplexicaulis	Hymenachne		Disturbed areas, including artificial waters (dams), creeks and riparian areas, impacts: • Out-competes native species. • Reduces the natural values of the park.
Parthenium hysterophorus	Parthenium		Widespread and well established, impacts: • Out-competes native species. • Reduces the natural values of the park.
Opuntia spp.	Prickly pear		Widespread and well established, impacts: • Out-competes native species. • Reduces the natural values of the park.
Animals			
Sus scrofa	Feral pig		Park-wide, impacts: • Reduces the natural values of the park. • Predation of terrestrial flora and fauna. • Potential vector for diseases.
Felis catus	Feral cat		Park-wide, especially the area adjacent to refuse dump, impacts: • Reduces the natural values of the park. • Predation of terrestrial flora and fauna. • Potential vector for diseases.
Canis familiaris	Wild dogs		Park-wide but at very low levels, impacts: • Potential threat to neighbouring livestock.
Boss spp.	Cattle		Potential management tool to control high biomass grasses.
Rhinella marina	Cane toad		Park-wide, impacts: • Causes significant impact on aquatic and terrestrial biodiversity.

Bibliography

McCosker, JC, Fensham, RJ & Cox MJ (1997). *Brigalow Reserve Proposals in the Central Highlands Internal Report*, Queensland.

Department of the Environment, Water, Heritage and the Arts (DEWHA) (2009). Project No N363 acquisition of a property known as Belmah and establishment of a protected area.

Queensland Herbarium (2018). Regional Ecosystem Description Database (REDD) version 10.1, (March 2018) Department of Environment and Science, Brisbane.

Department of Natural Resources and Mines (2017). Local area mining permit report 6DSN80887, MyMinesOnline, accessed 9 March 2018.

Department of Environment and Science (2020), Wildnet, Species List for Belmah Resources Reserve, accessed 30 June 2020.

Australian Association of Bush Regenerators Management Guides, WeedGuides, Buffel grass, accessed 30 June 2020.

Lumburra Bimbi, accessed 25 February 2019 at lumburrabimbi.com au

Sattler P.S. and Williams R.D. (eds) (1999), The Conservation Status of Queensland Bioregional

Ecosystems. Environmental Protection Agency, Brisbane