Title Gundabooka National Park and State Conservation Area Vegetation 2021 VIS ID 5108

Alternative title(s)

GundabookaVeg2021 VIS5108

Abstract

Eco Logical Australia was commissioned by the NSW Parks and Wildlife Service and the NSW Department of Planning, Industry and Environment to undertake vegetation survey, analysis and mapping of Gundabooka National Park and State Conservation Area. Gundabooka National Park and State Conservation Area is of special significance to the Aboriginal people of western NSW and is the traditional lands of the Ngemba and Paakandji people who have strong cultural links to the area. The Gundabooka Range was a vital resource for Aboriginal people during dry periods, with creeks in the range being one of the few locations on the Cobar Peneplain that provide water during times of drought. Gundabooka National Park and State Conservation Area are located in north western New South Wales 50 km south west of Bourke and just south of the Darling River, covering an area of 90,473 hectares within the Cobar Peneplain and Darling Riverine Plains bioregions. Prior to gazettal in 1996, Gundabooka National Park consisted of three pastoral stations: Belah, Ben Lomond and Mulgowan Stations. In 2006 the nearby Yanda Station was gazetted and became the Gundabooka State Conservation Area. This project reviews and expands upon existing data and mapping and aligns vegetation communities with the current state-wide Plant Community Type classification through the collection of strategic data on floristic and structural diversity. Existing vegetation surveys and mapping were reviewed and supplemented with over 240 rapid data points. Vegetation community mapping was undertaken at a scale of between 1:5,000 and 1:25,000 using a range of datasets. Development of vegetation community linework and attribution of Plant Community Types was undertaken in three dimensions using high resolution stereo ADS40 imagery. The final mapped product is considered accurate at a 1:25,000 scale. A total of 410 species from 76 plant families were recorded, of which 8% were exotic (one being a priority weed). Four threatened plant species are now known to occur, with new localities identified for Pterostylis cobarensis and Lepidium monoplocoides. A total of 35 unique vegetation communities (totalling 89,210 hectares) were mapped and described. These 35 vegetation communities are equivalent to 25 Plant Community Types. The vast majority of vegetation falls within the Semi-Arid Woodlands and Arid Shrublands Vegetation Formations. One Threatened Ecological Community, namely Coolibah-Black Box Woodland was mapped across three Plant Community Types on the floodplains of the Darling River. A range of management considerations are discussed including: grazing pressure from feral animals; erosion and loss of topsoil; inappropriate fire regimes; priority and environmental weeds; historical clearing and land degradation; and extensive Eucalypt dieback.

VIS_ID 5108

Resource locator

Data Quality Statement: Gundabooka **National Park** and State Conservation

Protocol: WWW:DOWNLOAD-1.0-http--download

Name: Data Quality Statement: Gundabooka National Park and State Conservation

Area Vegetation 2021 VIS ID 5108

Description:

Area **Vegetation** 2021 VIS_ID

Data Quality Statement

Function: download

Report

5108

Name: Report

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Gundabooka Veg Report 2021

Function: download

Download Package

Name: Download Package

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

	Data (Shapefile)	
	Function: download	
Unique resource identifier		
Code	007b5124-17d8-4b73-bc47-7892abc77832	
Presentation form	Map digital	
Edition	1	
Dataset language	English	
Metadata stan	dard	
Name	ISO 19115	
Edition	2016	
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/007b5124-17d8-4b73-bc47-7892abc77832	
Purpose	Park and fire management	
Status	Completed	
Spatial representation		
Туре	vector	
Geometric Object Type	surface	
Geometric Object Count	1918	
Spatial referen	ice system	
Code identifying the spatial reference system	4283	
Spatial resolution	10 m	
Additional information source	The following recommendations have been developed: • Conduct detailed research into the fire ecology of each PCT including recent and likely historic fire regimes as well as sensitive species to better inform fire management requirements. • Review and update relevant fire management plans taking into consideration the minimum fire intervals, mosaic cultural burning practises, the adequacy of existing trail networks, management of fire in long unburnt shrublands and woodlands and consideration of impacts to conservation significant species. • Control priority and environmental weeds. • Control feral animals including goats, rabbits and pigs. • Undertake erosion control works in identified areas to mitigate against continual erosion and landscape degradation. • Undertake an investigation into Eucalypt dieback to ascertain root causes and potential controls which could be implemented to ensure positive ecosystem recovery. • Undertake restoration works in areas disturbed as a result of historical agricultural practices (e.g. holding yards) • Establish a biodiversity monitoring program to measure change as a result of positive environmental actions being undertaken in the reserve (e.g. weed and feral control, erosion control works, cultural burning) as well as any adverse effects of climate change (increase fire risk less	

burning) as well as any adverse effects of climate change (increase fire risk, less

frequent rainfall, increased storms, less frequent flooding in riparian zones etc.) •
Undertake spring surveys for rare and threatened species including orchids in areas of

suitable habitat.		
Topic category		
Keyword set		
keyword value	FLORA-Native	
	VEGETATION-Floristic	
Originating controlled vocabulary		
Title	ANZLIC Search Words	
Reference date	2008-05-16	
Geographic location		
West bounding longitude	145.472717	
East bounding longitude	145.950623	
North bounding latitude	-30.727671	
South bounding latitude	-30.232968	
NSW Place Name	Near Bourke, NSW	
Vertical extent information		
Minimum value	-100	
Maximum value	2228	
Coordinate reference system		
Authority code	urn:ogc:def:cs:EPSG::	
Code identifying the coordinate reference system	5711	
Temporal extent		
Begin position	2021-03-08	
End position	N/A	
Dataset reference date		
Resource maintenance		
Maintenance and update frequency	Unknown	
Contact info		
Contact position	Data Broker	
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water	
Telephone number	131555	
Email address	data.broker@environment.nsw.gov.au	
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew	
Responsible party role	pointOfContact	

Lineage

The reserve includes Gundabooka National Park and Gundabooka State Conservation Area. Prior to gazettal in 1996 Gundabooka National Park consisted of three pastoral stations: Belah, Ben Lomond and Mulgowan Stations (Westbrook, et al., 2005). In 2006 the nearby Yanda Station was gazetted and became the Gundabooka State Conservation Area (NPWS, 2005). The reserve sits within the Western Local Land Service (LLS) area, which conforms to the Bourke Shire Council Local Government Area (LGA). The reserve is of special significance to the Aboriginal people of western NSW and is the traditional lands of the Ngemba and Paakandji people who have strong cultural links to the area (NPWS, 2005). The Gundabooka Range was a vital resource for Aboriginal people during dry periods, with creeks in the range being one of the few locations on the Cobar Peneplain that provide water during times of drought (NPWS, 2005). The Gundabooka Range and adjoining Yanda Creek were used as part of an extensive travel network linking the mountain with creeks, waterholes and the Darling River (NPWS, 2005). Important physical archaeological evidence in the form of art sites, stone quarries, open camp sites and scarred trees survives in the reserve, with important rock art sites listed on the Register of the National Estate (NPWS, 2005). Aboriginal people were displaced by European settlers who grazed the reserve as part of four separate pastoral leases 'Ben Lomond', 'Belah', 'Mulgowan' and 'Yanda'. These leases were subdivisions of larger leases which date from the early 1900s, with grazing of sheep and cattle being the main land use since the mid-19th century (NPWS, 2005). Since the gazettal of Gundabooka National Park (comprising the former pastoral leases 'Ben Lomond' and 'Belah') in 1996, the reserve was expanded to include the former pastoral lease 'Mulgowan' in 2002. More recently Gundabooka State Conservation Area (comprising the former pastoral lease 'Yanda') was gazetted in 2005. A major feature of the reserve is the Gunderbooka Range (500 m) that dramatically rises from the southern end of the reserve and is strikingly contrasted against the flat riverine plains found in the rest of the reserve (120-140 m). Within the reserve are four ephemeral creeks (Yanda, Gundabooka, Mulareenya and Ben Lomond Gorge) that flow following major rainfall events (Westbrook, et al., 2005). Vegetation surveys and mapping have previously been undertaken across the reserve on behalf of the NSW NPWS in 2005 (Westbrook, et al., 2005). Prior to these surveys little botanical data for the reserve existed. Twenty-one vegetation communities were identified and mapped, the most widespread being Eucalyptus populnea/Acacia aneura/Acacia excelsa open woodland and Acacia aneura tall shrubland (Westbrook, et al., 2005). A full list of the vegetation communities described by Westbrook et al. (2005) is located in Appendix A. A State Vegetation Type Map for the Western Region in NSW was produced by DPIE in 2019 at a scale of 1:25,000 using the best available imagery, site survey records and environmental information (DPIE, 2019). Thirty eight PCTs were identified in the reserve, the most widespread being 'Poplar Box - Mulga - Ironwood woodland on red loam soils on plains in the Cobar Peneplain Bioregion and north-eastern Mulga Lands Bioregion' (PCT 109: 55,149 ha) and 'Mulga - Ironwood shrubland on loams and clays mainly of the Cobar Peneplain Bioregion' (PCT 125: 15,951 ha). A full list of the PCTs mapped within the reserve is located in Appendix B. Westbrook, et al. (2005) reported that there has been a loss of perennial tussock grasses in the reserve due to its pastoral history and increased grazing by introduced and native herbivores. The reserve is isolated from other protected areas and is largely surrounded by pastoral lands. Three species of conservation significance have been recorded in the reserve prior to this survey, including Acacia curranii, Pterostylis cobarensis and Oldenlandia galioides.

Limitations on public access

Responsible party

Contact position Data Broker

Organisation name NSW Department of Climate Change, Energy, the Environment and Water

Telephone number 131555

Email address <u>data.broker@environment.nsw.gov.au</u>

Web address https://www.nsw.gov.au/departments-and-agencies/dcceew

Responsible party role pointOfContact

Metadata point of contact

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