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1st May 2020

TARGETED THREATENED FLORA SURVEY AT DALGARANGA- APRIL 2020

Dear Belinda,

GNT Resources Pty Ltd (GNT) are proposing to expand the existing Gilbeys West and Gilbeys East Waste Rock Landforms (WRL), as well as expanding the existing pipeline network within Miscellaneous License L59/168. Part of expanding the WRL's also involves installing a rainwater diversion drain. These are the main areas which form the Targeted Threatened Flora survey area, totalling approximately 131.28 hectares.

In 2016, NVS conducted a Level 1 Flora and Vegetation Survey (NVS, 2016) of the Dalgaranga Project area totalling 2,051 hectares. This previous survey area encompasses the current 2020 targeted search areas including both WRL expansion areas and the diversion drain. However, the 2020 pipeline corridor was not included in the 2016 survey area.

The database search results, referenced within the 2016 Level 1 flora survey report, were utilised for this targeted threatened Flora search (DPAW, 2016 and 2014) and NVS can confirm that no known Threatened Flora, Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) revealed in the database search results occur within the survey area. The threatened flora database revealed no threatened and 28 Priority Flora to occur within a 40km radius of the survey area. Appendix 2 displays these threatened flora and the potential of each species to occur within the survey area.

The *Environment Protection and Biodiversity Conservation Act 1999* Protected Matters Search Tool was also utilised to conduct a search within a 4km radius of the following coordinates;

- Latitude -27.84607143°, Longitude 117.243385°.

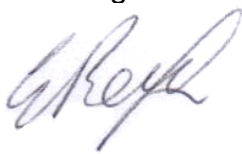
The results of the Protected Matters search Tool (Appendix 3) revealed that no Environmentally Sensitive Areas (ESAs) or Conservation Reserves occur within the survey area. The Protected Matters Search Tool did however highlight that a State and Territory Reserve “Dalgara and Noongal Pastoral Leases” are nearby and intersect with the pipeline corridor.

NVS conducted field assessments on the 15th April and 16th April 2020. Eight hours in total were spent covering the entire survey area on foot and via 4-wheeldrive vehicle. During field work NVS confirmed that the vegetation present within the survey area is representative of the vegetation groups described in NVS (2016). No Threatened Flora or Priority Flora were recorded in the survey area during the field assessment. The vegetation present in the survey area has the potential to provide suitable habitat for *Jacksonia lanicarpa* (P1), however the survey area was searched extensively and this species was not recorded during the field work.

An IBSA Data Package has been provided as a separate attachment including the survey area and a GPS Tracklog of the field survey.

If you have any queries regarding this work completed, please do not hesitate to contact me on the above-mentioned contact details.

Kind Regards



Eren Reid
Director/Botanist

References

DAWE, (2020), *EPBC Act 1999 Protected Matters Search Tool*, Department of Agriculture, Water and the Environment

<http://www.environment.gov.au/epbc/protected-matters-search-tool>

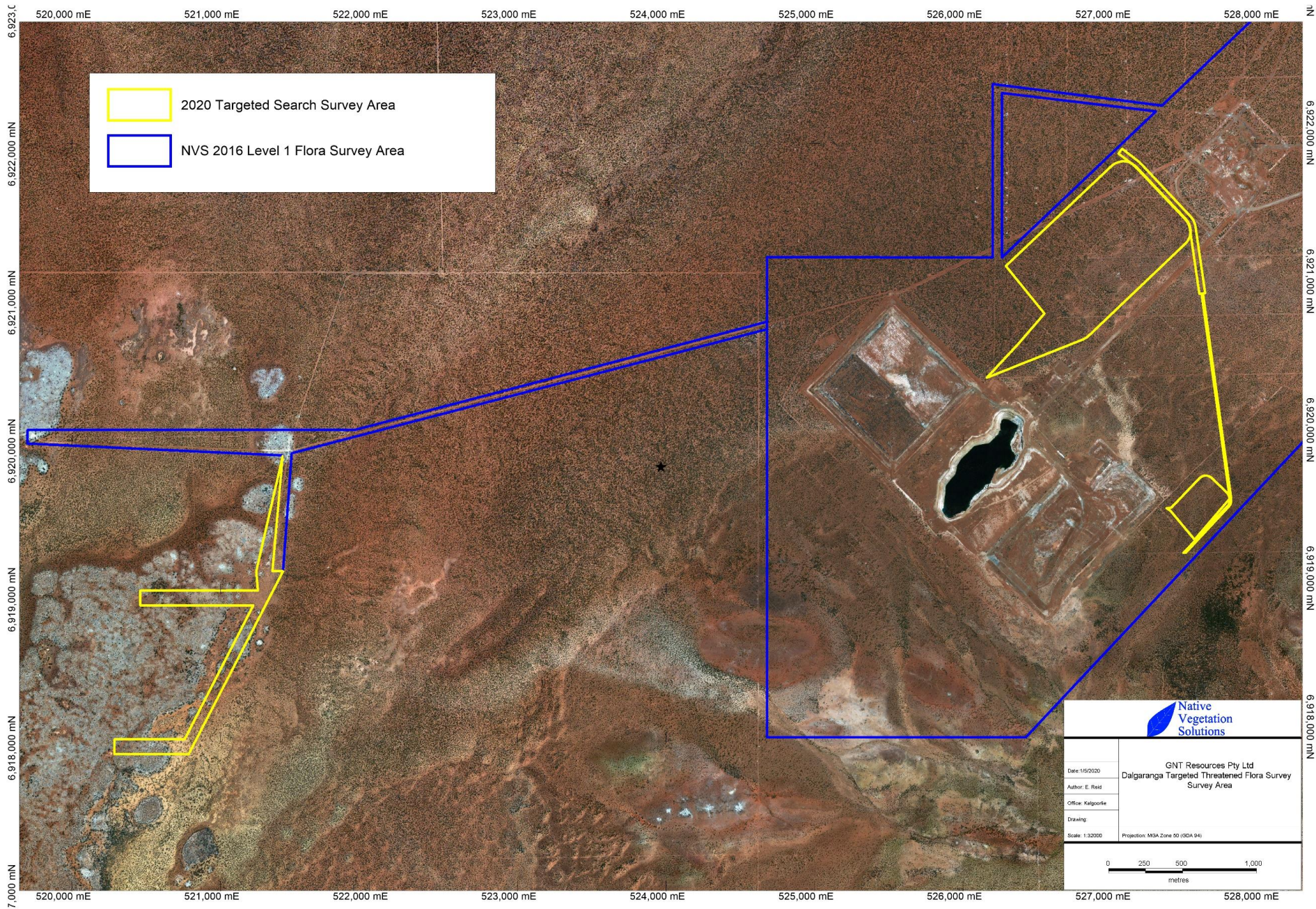
Accessed: 01/05/2020

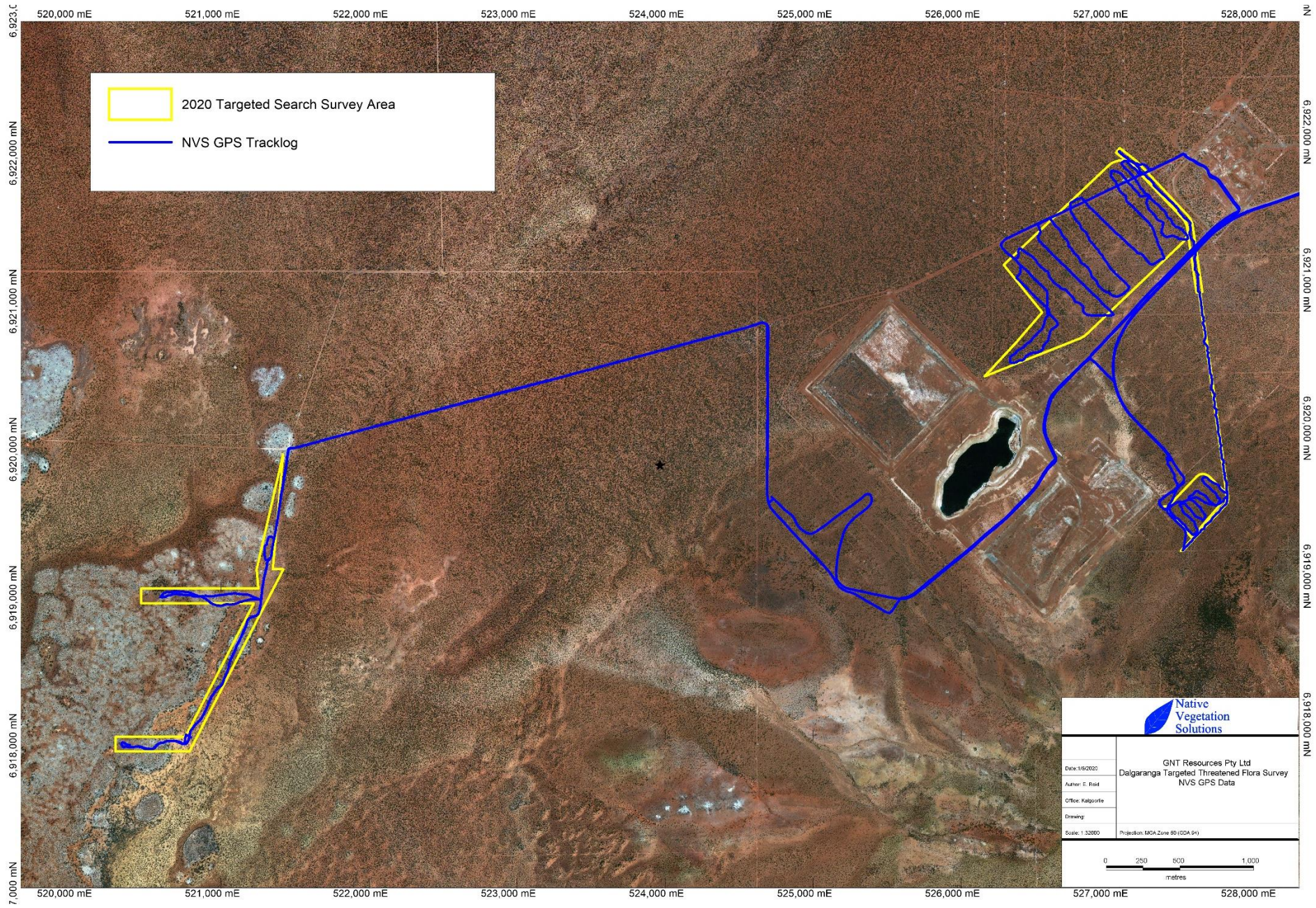
DPAW, (2014), *TEC/PEC Database Results Ref: 11-0213EC*, Department of Parks and Wildlife

DPAW, (2016), *Threatened Flora Database Results Ref: 19-0516FL*, Department of Parks and Wildlife

NVS, (2016), *Level 1 Flora and Vegetation Survey Gascoyne Resources Dalgara Tenements- June 2016*, Unpublished Report Prepared for Clark Lindbeck & Associates Pty Ltd

Appendix 1: Maps





Appendix 2: Threatened Flora Database Search Results

Taxon	Status	Likelihood of occurring in the Survey Area
<i>Acacia speckii</i>	P4	Unlikely- Lack of suitable habitat
<i>Acacia subsessilis</i>	P3	Unlikely- Lack of suitable habitat
<i>Alyxia tetanifolia</i>	P3	Unlikely- Lack of suitable habitat
<i>Amanita lesueurii</i>	P2	Unlikely- Lack of suitable habitat
<i>Angianthus uniflorus</i>	P1	Unlikely- suitable habitat, no record (<40km)
<i>Cyanicula fragrans</i>	P3	Unlikely- Lack of suitable habitat
<i>Dicrastylis linearifolia</i>	P3	Unlikely- suitable habitat, no record (<40km)
<i>Dicrastylis</i> sp. Cue (A.A. Mitchell 764)	P1	Unlikely- Lack of suitable habitat
<i>Eremophila simulans</i> subsp. <i>megacalyx</i>	P3	Unlikely- Lack of suitable habitat
<i>Euryomyrtus recurva</i>	P3	Unlikely- Lack of suitable habitat
<i>Goodenia berringbinensis</i>	P4	Unlikely- Lack of suitable habitat
<i>Goodenia neogoodenia</i>	P4	Unlikely- Lack of suitable habitat
<i>Hibiscus krichauffianus</i>	P3	Unlikely- suitable habitat, no record (<40km)
<i>Jacksonia lanicarpa</i>	P1	Possible- suitable habitat, record (<20km)
<i>Labichea obrullata</i>	P1	Unlikely- Lack of suitable habitat
<i>Micromyrtus trudgenii</i>	P3	Unlikely- Lack of suitable habitat
<i>Millotia depauperata</i>	P1	Unlikely- Lack of suitable habitat
<i>Petrophile pauciflora</i>	P3	Unlikely- Lack of suitable habitat
<i>Petrophile vana</i>	P1	Unlikely- Lack of suitable habitat
<i>Polianthion collinum</i>	P3	Unlikely- Lack of suitable habitat
<i>Psammomoya grandiflora</i>	P2	Unlikely- Lack of suitable habitat
<i>Psammomoya implexa</i>	P3	Unlikely- Lack of suitable habitat
<i>Ptilotus beardii</i>	P3	Unlikely- Lack of suitable habitat
<i>Ptilotus luteolus</i>	P3	Unlikely- suitable habitat, no record (<40km)
<i>Rhodanthe collina</i>	P3	Unlikely- Lack of suitable habitat
<i>Triglochin protuberans</i>	P3	Unlikely- Lack of suitable habitat
<i>Verticordia jamiesonii</i>	P3	Unlikely- Lack of suitable habitat
<i>Wurmbea murchisoniana</i>	P4	Unlikely- Lack of suitable habitat

Likely – suitable habitat, close (<10km) records and/or field survey completed in sub-optimal season, suggest species is likely to occur

Possible- suitable habitat, record(<50km) and/or field survey completed in sub-optimal season, suggests species possibly occurs

Unlikely- Lack of suitable habitat, no records(<50km) and /or field survey completed in optimal season, suggests species is unlikely to occur

Appendix 3: Protected Matters Search Tool Results



Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 01/05/20 12:41:38

[Summary](#)

[Details](#)

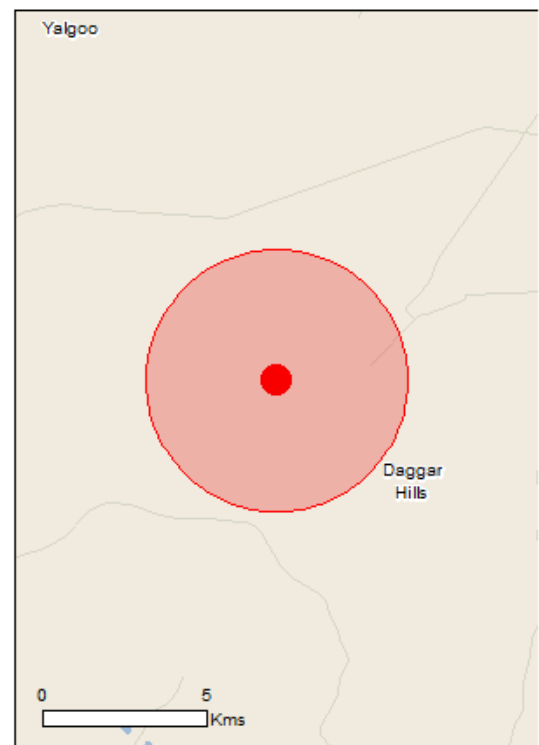
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

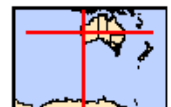
[Acknowledgements](#)



This map may contain data which are
©Commonwealth of Australia
(Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 4.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	6
Listed Migratory Species:	5

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	9
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	7
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Other		
Idiosoma nigrum Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Egernia stokesii badia Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Dalgaranga and Noongal Pastoral Leases	WA

Invasive Species [[Resource Information](#)]

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

Name	Status	Type of Presence
Birds		
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-27.846071 117.243385

Acknowledgements

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

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

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

Please feel free to provide feedback via the [Contact Us](#) page.