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# Targeted Rare Flora Assessment

Lot 27 Shallows Loop, Yallingup

17 September 2019

Prepared for:  
Lachlan Guthrie



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# Document Control

Lachlan Guthrie

Lot 27 Shallows Loop, Yallingup

Version	Revision	Purpose	Author	Reviewer	Submitted	
					Form	Date
Report	Rev A	Initial Report	LD	KP/GM	Electronic (email)	17/09/2019

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# Contents

<b>Document Control</b>	<b>2</b>
<b>Contents</b>	<b>3</b>
<b>1 Introduction</b>	<b>5</b>
<b>2 Site Details</b>	<b>6</b>
<b>3 <i>Caladenia excelsa</i> Targeted Survey</b>	<b>10</b>
3.1 Landscape, Soils and Vegetation	10
3.2 Conservation Significant Flora	12
3.3 <i>Caladenia excelsa</i> Description	14
3.4 <i>Caladenia excelsa</i> Critical Habitat	14
3.5 Methods	15
3.6 Results and Discussion	16
3.6.1 Flora Results	16
3.6.2 Survey Results	16
<b>4 Summary and Recommendations</b>	<b>17</b>
<b>5 References</b>	<b>18</b>

## List of Figures

Figure 1	Proposed development for Lot 27 Shallows Loop, Yallingup	7
Figure 2	Corymbia calophylla, Agonis flexuosus woodland within the development envelope	8
Figure 3	Corymbia calophylla, Eucalyptus marginata woodland within development envelope	8
Figure 4	Agonis flexuosa woodland within development envelope	9
Figure 5	Soil Landscape and vegetation complex Lot 27 Shallows Loop, Yallingup	11
Figure 6	Known population of <i>Caladenia excelsa</i> , visited prior to the targeted survey at Lot 27 Shallows Loop, Yallingup	14

# List of Tables

Table 1      Western Australian Flora Conservation Codes (DPAW 2017)

12

## Appendices

Appendix A

NatureMap Extract

Appendix B

EPBC Act Protected Matters Report

# 1 Introduction

Ecosystem Solutions were contracted by the owner of Lot 27 Shallows Loop, Yallingup (hereafter called the “Site”) within the City of Busselton, to undertake a Rare Flora assessment for *Caladenia excelsa* (Giant Spider Orchid) on the Site.

It is proposed to modify vegetation within the Site in a low fuel state to allow the construction of a Class 1a dwelling within a BAL-29 area.

The City of Busselton requested survey for the Declared Rare Flora *Caladenia excelsa* as an Environmentally Sensitive Area (ESA) exists on the Site due to a previously recorded population of the species on the Site.

The purpose of this report is to determine the absence or presence of *Caladenia excelsa* within the Site following on-ground survey. This will guide approval of the proposed dwelling location and associated Asset Protection Zone, which will require modification to the standard in the Guidelines for Planning in Bushfire Prone Areas (WAPC, V1.3 Dec 2017), as detailed in the Bushfire Management Plan for the Site, also prepared by Ecosystem Solutions (Jan 2019).

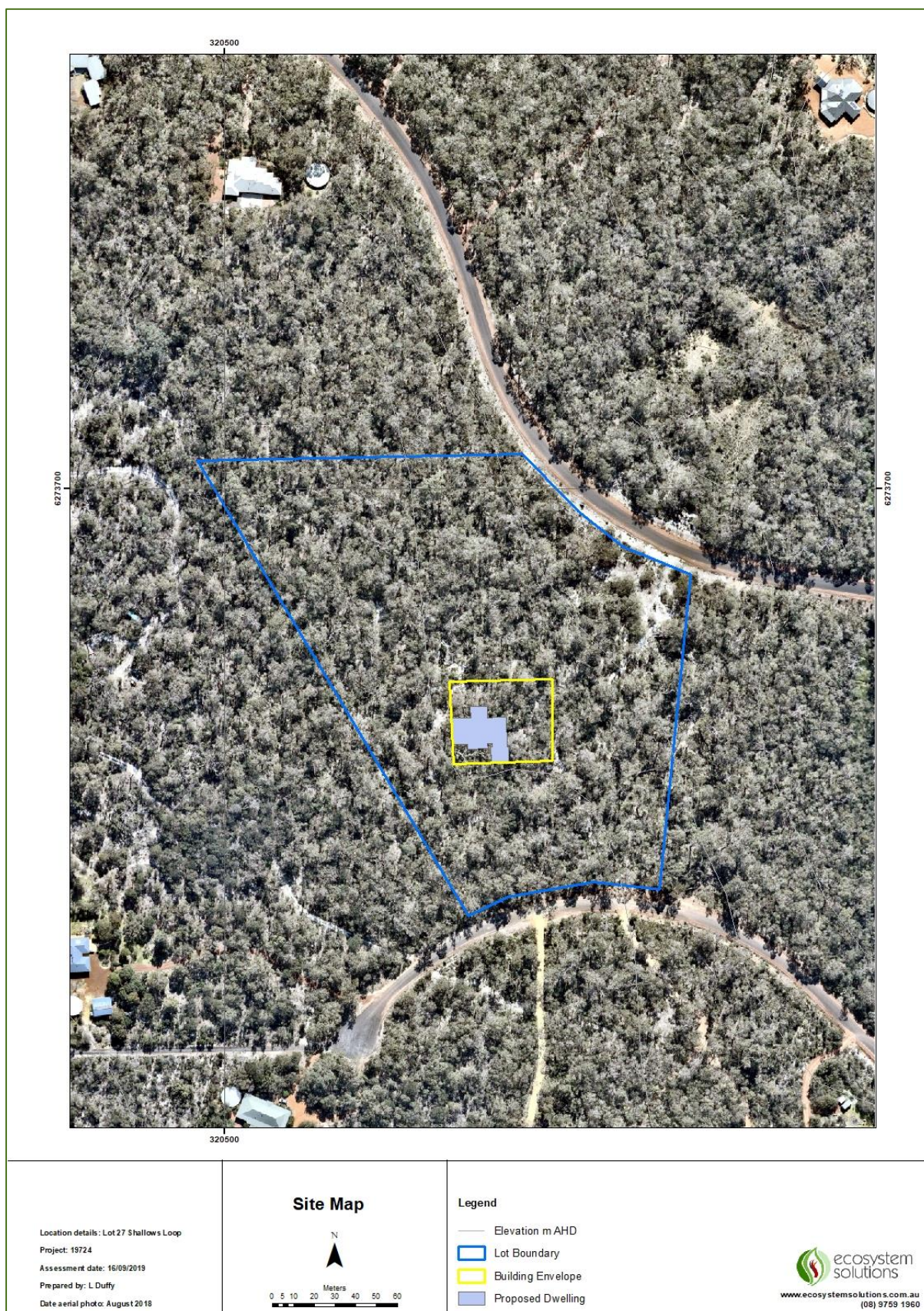
## 2 Site Details

The Site is 3.3054 ha in area and is currently vacant, with a designated building envelope of 2,000m<sup>2</sup> (Figure 1). Shallows Loop abuts the northern boundary and Porter Court abuts the south (Figure 1).

The Site is mostly vegetated with species including *Agonis flexuosa*, *Corymbia calophylla* and *Eucalyptus marginata* subsp. *marginata* (Figures 2-4). The Site sits approximately 120 m (AHD) and slopes down to the east.

The surrounding area consists of rural residential lots with areas of remnant vegetation and cleared areas to facilitate the construction of dwellings. An ephemeral stream runs to the east of the Site on adjacent lots.





*Figure 1 Proposed development for Lot 27 Shallows Loop, Yallingup*





Figure 2 *Corymbia calophylla*, *Agonis flexuosa* woodland within the development envelope



Figure 3 *Corymbia calophylla*, *Eucalyptus marginata* woodland within development envelope





*Figure 4* *Agonis flexuosa* woodland within development envelope

## 3 *Caladenia excelsa* Targeted Survey

### 3.1 Landscape, Soils and Vegetation

Soil-Landscape systems are areas with recurring patterns of landforms, soils and vegetation and are used by the Department of Agriculture to maintain a consistent approach to land resource surveys (Map 2).

The Site is within the Leeuwin Soil-Landscape Zone which is underlain by the Leeuwin Complex of granites and gneiss. Over this has formed the lateritic plateau of the Cowaramup Uplands system which has been dissected by several relatively shallow, undulating valleys collectively known as the Wilyabrup Valleys (Tille and Lantzke, 1990):

- The soil landscape system is Cowaramup Uplands (216Co). This is lateritic plateau in the Leeuwin Zone with sandy gravel, loamy gravel and grey sandy duplex soils. The principle vegetation is Jarrah-Marri forest.

The soil landscape is further split into two sub-systems, of differing soil types;

- 216CoCOd2: Comprised of flats and gently sloping rises (gradients 0-5%), with deep bleached sands. Some areas of low and moderate slopes (gradients 5-15%).  
216CoCOv: Comprised of small, narrow V-shaped drainage depression with gravelly duplex (Forest Grove) soils. (Department of Primary Industries and Regional Development, 2019)

The vegetation mapping of Havel and Matiske (2000) reflects the soil landscape boundary and is divided into two vegetation classes:

#### Cowaramup (Cd)

- Woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia ilicifolia* on sandy rises and low woodland of *Melaleuca preissiana* on lower slopes in the hyperhumid to humid zones.

#### Cowaramup (Cw2)

- Woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on slopes and low woodland of *Melaleuca preissiana*-24 *Banksia littoralis* on depressions in perhumid and humid zones.



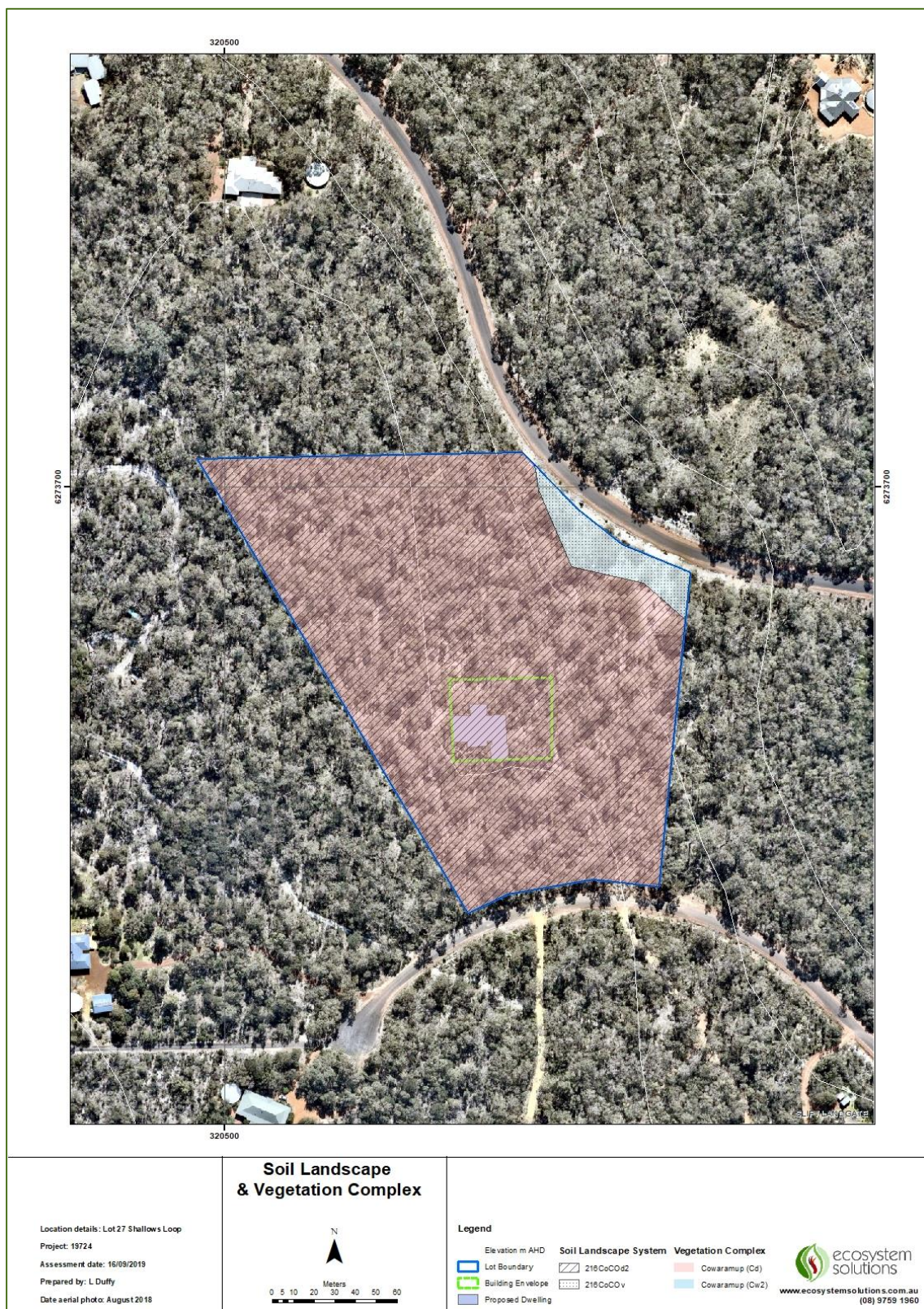


Figure 5 Soil Landscape and vegetation complex Lot 27 Shallows Loop, Yallingup



## 3.2 Conservation Significant Flora

Species of flora are protected as defined in Table 1, these have been determined as their populations are restricted geographically or threatened by local processes. DPAW recognizes these threats of extinction and consequently applies regulations towards population and species protection. Protected species are gazetted under the *Biodiversity Conservation Act (2016)* and therefore it is an offence to “take” or damage rare flora without Ministerial approval. The act defines “to take” as “... to gather, pick, cut, pull up, destroy, dig up, remove or injure the flora or to cause or permit the same to be done by any means” (Government of Western Australia, 2010).

Table 1 presents the definitions for conservation codes under the *Biodiversity Conservation Act (2016)* which supersedes the previous *Wildlife Conservation Act 1950*.

*Table 1 Western Australian Flora Conservation Codes (DPAW 2017)*

CONSERVATION CODE	CATEGORY
<b>Threatened species (T) or Declared Rare Flora (DRF)</b>	Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , and listed under Schedules 1 to 4, Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora)  Threatened flora is flora that has been declared to be ‘likely to become extinct or is rare, or otherwise in need of special protection’, pursuant to section 23F(2) of the Wildlife Conservation Act.
<b>Critically endangered species (CR)</b>	Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 1 of the Wildlife Conservation (Rare Flora) Notice.
<b>Endangered species (EN)</b>	Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 2 of the Wildlife Conservation (Rare Flora) Notice.
<b>Vulnerable species (VU)</b>	Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the Wildlife Conservation Act 1950, in Schedule 3 of the Wildlife Conservation (Rare Flora) Notice.

CONSERVATION CODE	CATEGORY
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<b>Priority species (P)</b>	Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened flora. Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.
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### 3.3 *Caladenia excelsa* Description

The Giant Spider-orchid is a tuberous, perennial herb that is one of the tallest spider orchids in Western Australia with stems 45-90 cm tall, usually with 1-2 flowers. The flowers are 15-30 cm long by 7-15 cm wide, cream coloured and marked with maroon stripes. The leaves are 20-35 cm long and 6-12 mm wide. The dorsal sepal (top petal) is erect initially, but then arches backward and becomes pendulous. Petals (9.5-15 cm long by 3-5 mm wide) and lateral sepals (13-20 cm long by 12-17 mm wide) narrow at 2-2.5 cm to slender elongate pendulous filaments. The labellum (lowest large petal, which is 25-35 mm long by 12-17 mm wide) has cream-coloured lamina (flat blades) at the base becoming maroon toward the apex and a marginal fringe 5-10 mm long (Williams et al. 2001).

### 3.4 *Caladenia excelsa* Critical Habitat

The Giant Spider-orchid grows on hilltops, slopes, swales in deep white, grey or brown sands or sandy loam of the Leeuwin-Naturaliste Ridge. Associated vegetation includes dense low shrubs in Banksia (*Banksia* spp.), Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) woodlands (Hopper & Brown 2001b; Williams et al, 2001).



*Figure 6 Known population of Caladenia excelsa, visited prior to the targeted survey at Lot 27 Shallows Loop, Yallingup*



## 3.5 Methods

Extracts from the Department of Parks and Wildlife (DPaW) Nature Base Database (Appendix A) and the Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Protected Matters Search Tool (Appendix B) were obtained to determine if records of any rare or threatened flora are known within the boundary or vicinity of the Site.

A total of four Declared Rare Flora were identified as occurring within a 5km radius of the Site (Appendix A), including the Declared Rare Flora, *Caladenia excelsa*.

A targeted rare flora survey for *Caladenia excelsa* was undertaken in accordance with EPA Technical Guidance, “Flora and Vegetation Surveys for Environmental Impact Assessment” (EPA, 2016).

Targeted survey is used to gather comprehensive information on significant flora and/or vegetation. It aims to determine the size and extent of all significant flora populations or vegetation in the survey area and to place any impacts into context (EPA, 2016).

The Site was surveyed on Tuesday September 10<sup>th</sup>, 2019 by Gary Mc Mahon (B.Sc. M. Env Mgmt, PG Dip Bushfire Protection), Kelly Paterson (B.Sc Hons. Nat Rs Mgmt., SL012472) and Dani Cuthbert (Dip Bus & Dip TM). Survey was undertaken during the known flowering period for *Caladenia excelsa* and a known population of flowering *Caladenia excelsa* was visited prior to Site survey (Figure 6). Conducting this survey when a nearby known population is in flower, increases our likelihood of determining the likelihood of the species presence.

The Asset Protection Zone (APZ) was traversed at 5m intervals and the remainder of the Site was traversed in a systematic manner to identify the presence or absence of *Caladenia excelsa*.

## 3.6 Results and Discussion

### 3.6.1 Flora Results

The Protected Matters Search Tool (Appendix B) and NatureMap (Appendix A) identified four Declared Rare Flora (DRF) species and ten Priority species which are likely to occur within the area or the species habitat is likely to occur within the area. *Caladenia excelsa* was targeted due to there being a known record on the Site (City of Busselton, Personal communication 2019).

### 3.6.2 Survey Results

There were no *Caladenia excelsa* plants observed in the proposed building envelope or across the Site during the field survey conducted September 10<sup>th</sup>, 2019. No other species of significance were identified during these surveys.

## 4 Summary and Recommendations

Based on the results of field survey, the following conclusions and recommendations are made.

- There were no *Caladenia excelsa* plants observed in the proposed building envelope nor any area of the Site.
- Given there were no signs of *Caladenia excelsa* or any other flora of significance, a referral under the EPBC Act is not considered as required as any proposed actions are unlikely to significantly impact on the species or the local populations.



## 5 References

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- Environmental Protection Authority (2016). Technical Guidance: Flora and Vegetation Surveys for *Environmental Impact Assessment in Western Australia*. EPA December 2016.
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- Western Australian Planning Commission (2017) Guidelines for Planning in Bushfire Prone Areas, Version 1.3).
- Williams, K., A. Horan, S. Wood & A. Webb (2001). *Declared Rare and Poorly Known Flora in the Central Forest Region. Part 2*. Western Australian Wildlife Management Program No. 33. Department of Conservation and Land Management.

## Appendix A NatureMap Extract

# NatureMap Species Report

Created By Guest user on 15/07/2019

<b>Kingdom</b>	Plantae
<b>Conservation Status</b>	Conservation Taxon (T, X, IA, S, P1-P5)
<b>Current Names Only</b>	Yes
<b>Core Datasets Only</b>	Yes
<b>Method</b>	'By Circle'
<b>Centre</b>	115° 03' 54" E, 33° 39' 44" S
<b>Buffer</b>	5km

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
1.	3386 <i>Acacia inops</i>		P3	
2.	14930 <i>Acacia latericola</i> var. <i>Glabrous variant</i> (B.R.Maslin 6765)		P3	
3.	3537 <i>Acacia semitrullata</i>		P4	
4.	32078 <i>Banksia sessilis</i> var. <i>cordata</i>		P4	
5.	13619 <i>Caladenia excelsa</i>		T	
6.	1596 <i>Caladenia huegelii</i> (Grand Spider Orchid)		T	
7.	15373 <i>Caladenia nivalis</i>		P2	
8.	16245 <i>Cyathochaeta teretifolia</i>		P3	
9.	13635 <i>Drakaea micrantha</i>		T	
10.	44440 <i>Gastrolobium argyrotichum</i>		T	Y
11.	1296 <i>Johnsonia inconspicua</i>		P3	
12.	4179 <i>Pultenaea pinifolia</i>		P3	
13.	12590 <i>Stylidium lowrieianum</i> (Lowrie's Triggerplant)		P3	
14.	1336 <i>Thysanotus isantherus</i>		P4	

**Conservation Codes**  
T - Rare or likely to become extinct  
X - Presumed extinct  
IA - Protected under international agreement  
S - Other specially protected fauna  
1 - Priority 1  
2 - Priority 2  
3 - Priority 3  
4 - Priority 4  
5 - Priority 5

<sup>1</sup> For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

## Appendix B    EPBC Act Protected Matters Report





## 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: 13/08/19 17:13:03

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

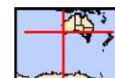
[Acknowledgements](#)



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

[Coordinates](#)

Buffer: 5.0Km



## 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](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance:</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	2
<a href="#">Listed Threatened Species:</a>	58
<a href="#">Listed Migratory Species:</a>	42

### 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.

<a href="#">Commonwealth Land:</a>	1
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	63
<a href="#">Whales and Other Cetaceans:</a>	13
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

### Extra Information

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

<a href="#">State and Territory Reserves:</a>	5
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Invasive Species:</a>	25
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">Key Ecological Features (Marine)</a>	None

## Details

### Matters of National Environmental Significance

#### Listed Threatened Ecological Communities [\[ Resource Information \]](#)

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

Name	Status	Type of Presence
	Endangered	Community likely to occur within area
<a href="#">Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and Forests of the Swan Coastal Plain ecological community</a>	Critically Endangered	Community may occur within area

#### Listed Threatened Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>Birds</b>		
<a href="#">Anous tenuirostris melanops</a> Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calyptorhynchus banksii naso</a> Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Calyptorhynchus baudinii</a> Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Endangered	Breeding known to occur within area
<a href="#">Calyptorhynchus latirostris</a> Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
<a href="#">Diomedea amsterdamensis</a> Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea dabbenena</a> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area



Name	Status	Type of Presence
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Limosa lapponica baueri</a> Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area
<a href="#">Limosa lapponica menzbieri</a> Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pachyptila turtur subantarctica</a> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Phoebastria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
<a href="#">Sternula nereis nereis</a> Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Thalassarche cauta cauta</a> Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche cauta steadi</a> White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<b>Crustaceans</b>		
<a href="#">Engaewa reducta</a> Dunsborough Burrowing Crayfish [82675]	Critically Endangered	Species or species habitat known to occur within area
<b>Fish</b>		
<a href="#">Nannatherina balstoni</a> Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat may occur within area
<b>Mammals</b>		
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<a href="#">Dasyurus geoffroii</a> Chuditch, Western Quoll [330]	Vulnerable	Species or species

Name	Status	Type of Presence
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Endangered	habitat likely to occur within area  Breeding known to occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Congregation or aggregation known to occur within area
<a href="#">Neophoca cinerea</a> Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
<a href="#">Pseudocheirus occidentalis</a> Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat known to occur within area
Other		
<a href="#">Westrallunio carteri</a> Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat known to occur within area
Plants		
<a href="#">Banksia nivea subsp. uliginosa</a> Swamp Honeypot [82766]	Endangered	Species or species habitat likely to occur within area
<a href="#">Banksia squarrosa subsp. argillacea</a> Whicher Range Dryandra [82769]	Vulnerable	Species or species habitat may occur within area
<a href="#">Brachyscias verecundus</a> Ironstone Brachyscias [81321]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Caladenia busselliana</a> Bussell's Spider-orchid [24369]	Endangered	Species or species habitat likely to occur within area
<a href="#">Caladenia caesarea subsp. maritima</a> Cape Spider-orchid [64856]	Endangered	Species or species habitat may occur within area
<a href="#">Caladenia excelsa</a> Giant Spider-orchid [56717]	Endangered	Species or species habitat likely to occur within area
<a href="#">Caladenia huegelii</a> King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
<a href="#">Caladenia viridescens</a> Dunsborough Spider-orchid [56776]	Endangered	Species or species habitat likely to occur within area
<a href="#">Chamelaucium sp. S coastal plain (R.D.Royce 4872)</a> Royce's Waxflower [87814]	Vulnerable	Species or species habitat may occur within area
<a href="#">Drakaea elastica</a> Glossy-leaved Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat may occur within area
<a href="#">Drakaea micrantha</a> Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Eucalyptus x phylacis</a> Meelup Mallee [87817]	Endangered	Species or species habitat likely to occur within area
<a href="#">Gastrolobium argyrotichum</a> Metricup Pea [89145]	Critically Endangered	Species or species

Name	Status	Type of Presence
<a href="#">Gastrolobium papilio</a> Butterfly-leaved Gastrolobium [78415]	Endangered	habitat known to occur within area  Species or species habitat may occur within area
<a href="#">Lambertia echinata subsp. occidentalis</a> Western Prickly Honeysuckle [64528]	Endangered	Species or species habitat may occur within area
<a href="#">Petrophile latericola</a> Laterite Petrophile [64532]	Endangered	Species or species habitat may occur within area
<a href="#">Sphenotoma drummondii</a> Mountain Paper-heath [21160]	Endangered	Species or species habitat may occur within area
<a href="#">Wurmbea calcicola</a> Naturaliste Nancy [64691]	Endangered	Species or species habitat likely to occur within area
Reptiles		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Sharks		
<a href="#">Carcharias taurus (west coast population)</a> Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[ Resource Information ]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardenna carneipes</a> Flesh-footed Shearwater, Fleishy-footed Shearwater [82404]		Species or species habitat likely to occur within area
<a href="#">Diomedea amsterdamensis</a> Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea dabbenena</a> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely



Name	Threatened	Type of Presence to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Hydroprogne caspia</a> Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Onychoprion anaethetus</a> Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
<a href="#">Phoebastria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche cauta</a> Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<b>Migratory Marine Species</b>		
<a href="#">Balaena glacialis australis</a> Southern Right Whale [75529]	Endangered*	Breeding known to occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<a href="#">Caperea marginata</a> Pygmy Right Whale [39]		Species or species habitat may occur within area
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur

Name	Threatened	Type of Presence
<a href="#">Lagenorhynchus obscurus</a> Dusky Dolphin [43]		within area  Species or species habitat may occur within area
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
<a href="#">Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
<a href="#">Manta birostris</a> Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Congregation or aggregation known to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat likely to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Land [ Resource Information ]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

#### Name

Commonwealth Land -

### 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
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a>		
Common Sandpiper [59309]		Species or species habitat likely to occur within area
<a href="#">Anous tenuirostris melanops</a>		
Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
<a href="#">Apus pacificus</a>		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea alba</a>		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
<a href="#">Ardea ibis</a>		
Cattle Egret [59542]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a>		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<a href="#">Calidris canutus</a>		
Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a>		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a>		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Diomedea amsterdamensis</a>		
Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea dabbenena</a>		
Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea epomophora</a>		
Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a>		
Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a>		
Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pachyptila turtur</a> Fairy Prion [1066]		Species or species habitat likely to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Phoebastria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
<a href="#">Puffinus assimilis</a> Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
<a href="#">Puffinus carneipes</a> Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
<a href="#">Sterna anaethetus</a> Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area
<a href="#">Sterna caspia</a> Caspian Tern [59467]		Foraging, feeding or related behaviour known to occur within area
<a href="#">Thalassarche cauta</a> Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophrys</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thinornis rubricollis</a> Hooded Plover [59510]		Species or species



Name	Threatened	Type of Presence
<a href="#">Tringa nebularia</a>		habitat known to occur within area
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
<b>Fish</b>		
<a href="#">Acentronura australe</a>		
Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
<a href="#">Campichthys galei</a>		
Gale's Pipefish [66191]		Species or species habitat may occur within area
<a href="#">Heraldia nocturna</a>		
Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
<a href="#">Hippocampus angustus</a>		
Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
<a href="#">Hippocampus breviceps</a>		
Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
<a href="#">Hippocampus subelongatus</a>		
West Australian Seahorse [66722]		Species or species habitat may occur within area
<a href="#">Histiogamphelus cristatus</a>		
Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
<a href="#">Lissocampus caudalis</a>		
Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
<a href="#">Lissocampus fatiloquus</a>		
Prophet's Pipefish [66250]		Species or species habitat may occur within area
<a href="#">Lissocampus runa</a>		
Javelin Pipefish [66251]		Species or species habitat may occur within area
<a href="#">Maroubra perserrata</a>		
Sawtooth Pipefish [66252]		Species or species habitat may occur within area
<a href="#">Mitotichthys meraculus</a>		
Western Crested Pipefish [66259]		Species or species habitat may occur within area
<a href="#">Nannocampus subosseus</a>		
Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
<a href="#">Phycodurus eques</a>		
Leafy Seadragon [66267]		Species or species habitat may occur within area
<a href="#">Phyllopteryx taeniolatus</a>		
Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
<a href="#">Pugnaso curtirostris</a>		
Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
<a href="#">Solegnathus lettiensis</a>		
Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species

Name	Threatened	Type of Presence
<a href="#">Stigmatopora argus</a> Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		habitat may occur within area  Species or species habitat may occur within area
<a href="#">Stigmatopora nigra</a> Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
<a href="#">Urocampus carinirostris</a> Hairy Pipefish [66282]		Species or species habitat may occur within area
<a href="#">Vanacampus margaritifer</a> Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
<a href="#">Vanacampus phillipi</a> Port Phillip Pipefish [66284]		Species or species habitat may occur within area
<a href="#">Vanacampus poecilolaemus</a> Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
<b>Mammals</b>		
<a href="#">Arctocephalus forsteri</a> Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
<a href="#">Neophoca cinerea</a> Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
<b>Reptiles</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
<b>Whales and other Cetaceans</b>		<b>[ Resource Information ]</b>
Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#">Balaenoptera acutorostrata</a> Minke Whale [33]		Species or species habitat may occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<a href="#">Caperea marginata</a> Pygmy Right Whale [39]		Species or species habitat may occur within area
<a href="#">Delphinus delphis</a> Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area

Name	Status	Type of Presence
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Endangered	Breeding known to occur within area
<a href="#">Grampus griseus</a> Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
<a href="#">Lagenorhynchus obscurus</a> Dusky Dolphin [43]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]		Congregation or aggregation known to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Stenella attenuata</a> Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
<a href="#">Tursiops aduncus</a> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Tursiops truncatus s. str.</a> Bottlenose Dolphin [68417]		Species or species habitat may occur within area

#### Extra Information

State and Territory Reserves	[ Resource Information ]
Name	State
Leeuwin-Naturaliste	WA
NTWA Bushland covenant (0085A)	WA
NTWA Bushland covenant (0085B)	WA
NTWA Bushland covenant (0102)	WA
Unnamed WA26065	WA

Regional Forest Agreements	[ Resource Information ]
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Note that all areas with completed RFAs have been included.

Name	State
<a href="#">South West WA RFA</a>	Western Australia

Invasive Species	[ Resource Information ]
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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
<b>Birds</b>		
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
<b>Mammals</b>		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
<b>Plants</b>		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species



Name	Status	Type of Presence
Pinus radiata		habitat may occur within area
Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Tamarix aphylla		
Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		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

-33.6625 115.06611

## 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](#)

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