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Document Control

RPS West

Portion of Greenpatch, Dalyellup

Version	Revision	Purpose	Author	Reviewer	Submitted	Form	Date
Report	Rev A	Initial Report	[REDACTED]		Electronic	(email)	2/03/2021

Filename: z:\projects\211060 greenpatch, dalyellup flora\reports\greenpatch, dalyellup vegetation assessment.docx

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Introduction

Ecosystem Solutions were contracted by the developers of part of Lot 9105, Dalyellup, commonly called Greenpatch, within the Shire of Capel to carry out a Vegetation and Fauna Assessment to support the clearing of vegetation of a small portion of the lot (Figure 1, hereafter called the “Site”), for the purpose of fine residue and soil excavation. Existing roads and tracks will be utilized to access the Site.

This survey focused on the proposed area of clearing. The flora and fauna assessment was limited to observing species present during the time of the survey.

Site Details

The Site is just under 5,000 m² in area. The site is a currently vacant, revegetation area, that has previously been mined (Figure 1). The area surrounding the site is currently vegetated. The area to the north west of the Site has been cleared of all vegetation.

The Site is undulating, sitting between 30 and 35 m Australian Height Datum (AHD), sloping down to the north east.



Figure 1 Proposed vegetation clearance area at Greenpatch, Dalyellup

Flora and Vegetation

3.1 Methods

Extracts from the Department of Biodiversity, Conservation and Attractions (DBCA) NatureMap 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 reconnaissance survey across the site was conducted, with targeted survey within the proposed areas of impact (in line with EPA, 2016).

The Site was surveyed in February 2021. The area proposed for the clearing of vegetation was targeted as the area of disturbance. The Site was inspected for flora species of significance and Threatened Ecological Communities, based on the DBCA records.

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. DBCA 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, 2020).

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 (DBCA, 2019)

CONSERVATION CODE	CATEGORY
Threatened species (T) or Declared Rare Flora (DRF)	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.
Critically endangered species (CR)	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.
Endangered species (EN)	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.
Vulnerable species (VU)	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.
Priority species (P)	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.

3.3 Threatened and Priority Ecological Communities

An ecological community is a naturally occurring biological assemblage that occurs in a particular type of habitat. A Threatened Ecological Community (TEC) is one which is found to fit into one of the following categories: Presumed Totally Destroyed; Critically Endangered; Endangers, or vulnerable. Possible TECs that do not meet survey criteria are added to the Department of Parks and Wildlife’s Priority Ecological

Community Lists, under Priority 1, 2 and 3. These are ranked in order of priority for survey and/or the definition of the community and evaluation of its conservation status.

3.4 Results and Discussion

3.4.1 Desktop Flora Results

The NatureMap Database (Appendix A) identified five Threatened flora species that are rare or likely to become extinct and 24 priority flora species within a 10 km radius of the Site.

The Protected Matters Search Tool identified four Critically Endangered species, 11 Endangered species and six Vulnerable species, within a 10 km radius of the Site (Appendix B). The results from these background searches are summarised in Table 2.

Table 2 Conservation significant flora species recorded within 10km of the Site

Species	DBCA Conservation Code	EPBC Act Status
<i>Acacia flagelliformis</i>	P4	
<i>Acacia semitrullata</i>	P4	
<i>Adelphacme minima</i>	P3	
<i>Andersonia gracilis</i>	T	Endangered
<i>Angianthus drummondii</i>	P3	
<i>Aponogeton hexatepalus</i>	P4	
<i>Austrostipa bronwenae</i>	T	Endangered
<i>Austrostipa jacobiana</i>	T	Critically Endangered
<i>Banksia nivea</i> subsp. <i>uliginosa</i>	T	Endangered
<i>Banksia squarrosa</i> subsp. <i>argillacea</i>	T	Vulnerable
<i>Boronia tetragona</i>	P3	
<i>Brachyscias verecundus</i>	T	Critically Endangered
<i>Caladenia huegelii</i>	T	Endangered
<i>Caladenia speciosa</i>	P4	
<i>Carex tereticaulis</i>	P3	

Species	DBCA Conservation Code	EPBC Act Status
<i>Chamaescilla gibsonii</i>	P3	
<i>Chamelaucium</i> sp. S coastal plain (R.D. Royce 4872)	T	Vulnerable
<i>Diuris drummondii</i>	T	Vulnerable
<i>Diuris micrantha</i>	T	Vulnerable
<i>Diuris purdiei</i>	T	Endangered
<i>Drakaea elastica</i>	T	Endangered
<i>Drakaea micrantha</i>	T	Vulnerable
<i>Eleocharis keigheryi</i>	T	Vulnerable
<i>Eucalyptus rudis</i> subsp. <i>cratyantha</i>	P4	
<i>Franklandia triaristata</i>	P4	
<i>Gastrolobium papilio</i>	T	Endangered
<i>Lambertia echinata</i> subsp. <i>occidentalis</i>	T	Endangered
<i>Lasiopetalum membranaceum</i>	P3	
<i>Leptomeria furtiva</i>	P2	
<i>Leucopogon</i> sp. Busselton	P2	
<i>Ornduffia submersa</i>	P4	
<i>Petrophile latericola</i>	T	Endangered
<i>Platysace ramosissima</i>	P3	
<i>Puccinellia vassica</i>	P1	
<i>Pultenaea skinneri</i>	P4	
<i>Schoenus benthamii</i>	P3	
<i>Schoenus loliaceus</i>	P2	
<i>Stylidium longitubum</i>	P4	
<i>Synaphea hians</i>	P3	
<i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)	T	Critically Endangered
<i>Synaphea</i> sp. Serpentine (G.R. Brand 103)	T	Critically Endangered

Species	DBCA Conservation Code	EPBC Act Status
<i>Synaphea stenoloba</i>	T	Endangered
<i>Thelymitra variegata</i>	P2	
<i>Verticordia attenuata</i>	P2	
<i>Verticordia densiflora</i> var. <i>pedunculata</i>	T	Endangered

There were no Declared Rare Flora species observed on Site.

The Protected Matters Search Tool identified three Threatened Ecological Communities. Banksia Woodlands of the Swan Coastal Plain ecological community, Clay Pans of the Swan Coastal Plain ecological community and Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community are likely to occur within the area. The Site does not have the characteristics of any listed TEC.

3.4.2 Survey Results

The entire Site was traversed, with survey effort shown in Figure 2 below. All flora species observed were recorded, with the results shown in Table 3 below. No flora species of conservation significance were observed. Sixteen naturally occurring flora species were observed, along with six introduced species.



Figure 2 Survey effort at the Site, Greenpatch, Dalyellup

Table 3 Flora species surveyed within the proposed area of clearing.

Family	Genus	Species
APOCYNACEAE	<i>Alyxia</i>	<i>buxifolia</i>
ASPARAGACEAE	<i>Acanthocarpus</i>	<i>preissii</i>
ASPHODELACEAE	* <i>Trachyandra</i>	<i>divaricata</i>
ASTERACEAE	<i>Olearia</i>	<i>axillaris</i>
CHENOPODIACEAE	<i>Rhagodia</i>	<i>baccata</i>
CYPERACEAE	<i>Ficinia</i>	<i>nodosa</i>
CYPERACEAE	<i>Lepidosperma</i>	<i>sp.</i>
CYPERACEAE	<i>Lepidosperma</i>	<i>sp. wide</i>
DILLENIACEAE	<i>Hibbertia</i>	<i>cuneiformis</i>
FABACEAE	<i>Acacia</i>	<i>cochlearis</i>
FABACEAE	<i>Acacia</i>	<i>cyclops</i>
FABACEAE	<i>Acacia</i>	<i>rostellifera</i>
FABACEAE	<i>Acacia</i>	<i>saligna</i>
IRIDACEAE	* <i>Romulea</i>	<i>rosea</i>
MYRTACEAE	<i>Agonis</i>	<i>flexuosa</i>
MYRTACEAE	<i>Eucalyptus</i>	<i>gomphocephala</i>
PHYLLANTHACEAE	<i>Phyllanthus</i>	<i>calycinus</i>
POACEAE	* <i>Avena</i>	<i>sp.</i>
POACEAE	* <i>Briza</i>	<i>maxima</i>
POACEAE	* <i>Cynodon</i>	<i>dactylon</i>
POACEAE	* <i>Lagurus</i>	<i>ovatus</i>
RUTACEAE	<i>Diplolaena</i>	<i>dampieri</i>

Fauna

4.1 Methods

A desktop study and analysis of the records of NatureMap and the Protected Matters Search Tool (Appendix A & B) were made to determine the presence or likely presence of fauna or fauna assemblages within the Site. The analysis primarily targeted terrestrial threatened vertebrate species listed under the *Biodiversity Conservation Act 2016* (WA) and *Environmental Protection Biodiversity Conservation Act 1999* (Commonwealth).

With these species in mind, a field study of the site was conducted. The approach adopted for this survey was:

- A Satellite Image of the Site was acquired.
- A day time visual inspection of the property and adjoining vegetation for any signs of fauna (e.g. scats, diggings, dreys, nests, burrows, feeding signs) was conducted.
- Hollow bearing trees or trees suitable for Black Cockatoos were recorded.
- Direct observations of fauna and signs of fauna were recorded using a Trimble Global Positioning System (GPS) and ArcPad© (Version 8- ESRI).
- Field observations were analysed and mapped with ArcGis (ArcMap V10.3©).

The Site was inspected via a walked transect and the trees were inspected via a physical inspection for hollows or signs of fauna usage.

All trees with large hollows were inspected for any signs of use by cockatoos. These include wear around the hollow, chewing, scarring and scratch marks on the trunks or branches. Old or recent evidence of cockatoo's feeding or roosting sites (feathers, droppings etc.) were also searched for.

This type of survey has minimal impact on the fauna within the property and provides sufficient data on the presence and relative abundance and distribution of taxa. During the field survey, the habitat at the site was assessed to determine its potential suitability to host any of the anticipated threatened or rare species. This approach is consistent with a Level 1 survey under the EPA's Technical Guide: Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (2020) which specifies a minimum requirement of a background research or desktop study to gather information on the subject site and a reconnaissance survey to verify the accuracy of the background study and delineate fauna and faunal assemblages.

Guidelines for the three Black Cockatoo species (Department of Sustainability, Environment, Water, Populations and Communities, 2012) outline requirements for appropriate level of surveys for these species.

This survey’s intensity and design comply with these guidelines.

4.2 Conservation Significant Fauna

The conservation status of fauna within Western Australia is determined by criteria outlined within two acts of legislation: Commonwealth EPBC Act 1999 and the State-based Western Australian *Biodiversity Conservation Act 2016* (WA).

Table 4 presents the definitions for fauna under the *Biodiversity Conservation Act (2016)* which was previously the *Wildlife Conservation Act 1950*.

These categories are consistent with the International Union for Conservation of Nature (IUCN) classifications and therefore link into a global ranking system for taxa at risk of extinction.

Table 4 Western Australian Fauna Conservation Codes (DPAW 2017)

CONSERVATION CODE	CATEGORY
Threatened species (T)	Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , and listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna Threatened fauna is that subset of ‘Specially Protected Fauna’ declared to be ‘likely to become extinct’ pursuant to section 14(4) of the Wildlife Conservation Act.
Critically endangered species (CR)	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 (Specially Protected Fauna) Notice.
Endangered species (EN)	Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Vulnerable species (VU)	Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CONSERVATION CODE	CATEGORY
Migratory birds protected under an International Agreement (IA)	Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Conservation dependent fauna (CD)	Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Other specially protected fauna (OS / S)	Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Priority species (P)	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 fauna. 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.

4.3 Expected Fauna

A list of fauna expected to occur within a 10-kilometre radius of the study site was compiled from searches conducted on the DBCA database (NatureMap) and the Commonwealth EPBC Protected Matters Search Tool and summarised in Table 4. Marine and freshwater species have been excluded due to the location of the Site.

The results of the fauna database search for Threatened species likely to be within or utilise the Site include *Pseudocheirus occidentalis* (Western Ringtail Possum), *Isoodon fusciventer* (Quenda), *Notamacropus irma* (Western Brush Wallaby), *Idiosoma sigillatum* (Swan Coastal Plain shielded-backed trapdoor spider) Priority species and the *Phascogale tapoatafa subsp. wambenger* (South-western Brush-tailed Phascogale), specially protected species, as potentially being within a 10 km radius of the Site.

The three Black Cockatoo species, *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo), *Calyptorhynchus baudinii* (Baudin's Cockatoo) and *Calyptorhynchus latirostris* (Carnaby's Cockatoo) species or species habitat may occur within the area.

Other fauna of conservation significance may use the site infrequently or as part of a larger patch, such as birds listed on International Agreements. Impacts to these species are considered negligible due to the small area of vegetation to be managed, so have not been considered further. Marine and estuarine species have also been excluded, due to the location of the Site.

Table 5 Conservation significant fauna species recorded within 10 km of the Site

Species	DBCA Conservation Code	EPBC Act Status
<i>Calyptorhynchus banksii naso</i> Forest Red-tailed Black Cockatoo	Threatened	Vulnerable
<i>Calyptorhynchus baudinii</i> Baudin's Cockatoo	Threatened	Endangered
<i>Calyptorhynchus latirostris</i> Carnaby's Cockatoo	Threatened	Endangered
<i>Ctenotus ora</i> Coastal Plains Skink	P3	
<i>Dasyurus geoffroii</i> Chuditch	Threatened	Vulnerable
<i>Falco peregrinus</i> Peregrine Falcon	S	
<i>Hydromys chrysogaster</i> Water-rat, Rakali)	P4	
<i>Isodon fusciventer</i> Quenda, southwestern brown bandicoot	P4	
<i>Notamacropus irma</i> Western Brush Wallaby	P4	
<i>Pandion cristatus</i> Osprey, Eastern Osprey	IA	
<i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> South-western Brush-tailed Phascogale	S	
<i>Pseudocheirus occidentalis</i> Western Ringtail Possum	Threatened	Critically Endangered
<i>Psophodes nigrogularis</i> subsp. <i>nigrogularis</i> Western Whipbird	Threatened	
<i>Setonix brachyurus</i> Quokka	Threatened	

4.4 Results and Discussion

4.4.1 Fauna Results

The Site was surveyed for fauna on Wednesday February 24th, 2021 by Kelly Lamp and Dani Cuthbert from Ecosystem Solutions. The Site was traversed in a systematic manner to cover the entire area.

There are no trees within the Site with a diameter at breast height (DBH) over 500 mm that can support nesting of any Black Cockatoo species. There were no Black Cockatoo species observed during the survey.

The canopy of the vegetation within the Site was thoroughly inspected and there were no dreys observed.

4.4.2 Discussion

No trees with a DBH over 500 mm were observed within the Site. There was no evidence of Black Cockatoos utilising the Site.

All local species of Black cockatoos can forage over extensive areas (up to 15-20 kms from their nesting sites (Saunders, 1980)) and given that there are large areas of habitat within their range, it could be assumed that Black Cockatoo species are not relying on the Site for habitat or food source.

The survey did not identify a population of WRP or any other fauna of significance within the Site.

While no other animals of significance were observed, either directly or through signs, the lack of this data should not be taken directly as an indication that those species are absent from the Site. No trapping or seasonal sampling was conducted.

Table 6 summarises the likely presence of the species based on habitat availability for mammals. Table 7 and Table 8 discuss the likely presence and impact on Western Ringtail Possums and Black Cockatoos.

The bird species protected under international agreements were not seen during the surveys.

Table 6 Significant Mammals Likelihood and Impact

Species	Potential impact in the Site
Chuditch	This species is listed as being found within 10 km of the Site, however these are historical records and/or the habitat within the Site is not considered suitable. It is listed here for completeness and no signs of this species were found within the Site.

Species	Potential impact in the Site
Phascogale	Given their large home range required (20-70 ha) and minimal vegetation to be cleared on Site with no evidence of the species found, there is no impact anticipated.
Quenda	Quenda will thrive in more open habitat subject to introduced predator control. The vegetation within the Site contained an open understory with limited protection from predators. It is highly unlikely that Quenda's would be located within the Site however they may be present in the bushland in proximity to the Site.
Quokka	This species is listed as being found within 10 km of the Site, however these are historical records and/or the habitat within the Site is not considered suitable. It is listed here for completeness and no signs of this species were found within the Site.
Western Brush Wallaby	This species is listed as being found within 10 km of the Site, however these are historical records and/or the habitat within the Site is not considered suitable. It is listed here for completeness and were not found within the Site.
Western Ringtail Possum	No dreys or animals were observed during the surveys. The area of remnant vegetation proposed for clearing is less than 0.5 ha. No impact is anticipated; however a fauna spotter should be used to monitor any vegetation removal to ensure no animals are present at the time of any clearing.

Survey Constraints

Field survey were confined to one day time flora/fauna survey. This was conducted to assess for Black Cockatoo and Western Ringtail Possum activity, along with any other conservation significant flora or fauna. The survey was conducted using an experienced ecologist.

The site was traversed by foot in a systematic way to cover the entire proposed clearing footprint.

Guidelines for the survey techniques for Black Cockatoo species (Dept. of Sustainability, Environment, Water Populations and Communities, 2012) state that all trees with a DBH of over 500 m should be inspected. It should be noted however, that all of the prerequisites that determine the suitability of a hollow for use by cockatoos is difficult to assess. In addition to entrance size, the depth, floor and orientation of the hollow are important factors. The presence of suitable hollows, even in breeding areas, does not make them available for breeding as hollows must be spatially, structurally and temporally correct (Johnstone and Johnston, 2006). There were no large trees of suitable size to support hollows.

Western Ringtail Possums are arboreal nocturnal species (Dept of BCA, 2017). They use up to 2-7 rest sites and up to 20 throughout the year. Rest sites can be within a tree hollow or drey, built in various tree canopies. In suburban areas, they may also rest in roof spaces and other dark cavities. Their home range is less than 5 ha. There are constraints in surveying Western Ringtail Possums due to the time they may arise from their rest site. There were no signs of WRP observed during the survey, however a home range may overlap the survey area, with a rest site being used outside the Site during the survey time.

There are constraints in monitoring flora which include some annual species that do not appear every season, with the survey limited to identifying only those flora that appear during the survey time. The survey was completed in February, and some annual species may not be present during this time.

Significance

Under the EPBC Act, an action that has, will have, or is likely to have, a significant impact on a matter of national environmental significance, requires approval from the Minister. A significant impact is defined as an impact which is important or of consequence, having regard for its context or intensity (Commonwealth of Australia, 2020).

Matters of environmental significance include listed threatened species and ecological communities. For this proposal, there is a limited potential for impact on threatened species. Significant Impact Guidelines 1.1 (Commonwealth of Australia, 2020) lists significant impact criteria for the assessment for activities which may impact on threatened species.

Table 7 and Table 8 discuss the referral triggers and the likely presence and impact on Black Cockatoos and Western Ringtail Possums.

Table 7 Significant Impact Criteria for Key Protected Species

Significant Impact Criterion	Discussion	Meets Criterion
Black Cockatoo Species		
Lead to a long-term decrease in the size of an important population ¹ of a species	<p>No signs of the species are present in the Site.</p> <p>No trees with a DBH over 500mm were observed within the Site.</p>	No
Reduce the area of occupancy of an important population	<p>No population was observed within the site. A slight reduction in area of remnant vegetation will occur, however trees no trees with a DBH over 500mm were observed within the Site.</p>	No
Fragment an existing important population into two or more populations	<p>Will not fragment current population. The clearing of remnant vegetation required for the proposed clearing area is less than 0.5 ha.</p>	No
Adversely affect habitat critical to the survival of a species	<p>None of the trees were observed being utilised by Black Cockatoos. No trees with a DHB of over 500mm were observed within the Site. Will not affect critical habitat.</p>	No

Western Ringtail Possum

No signs of the species are present in the Site.

¹ An 'important population' is a population that is necessary for a species' long-term survival and recovery.

Disrupt the breeding cycle of an important population	Will not affect critical habitat as no trees with a DBH over 500 mm were observed within the Site.	No signs of the species are present in the Site.	No
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No trees above 500 mm DBH were observed within the Site. No impact is anticipated.	The species was not observed within the Site. No impact is anticipated.	No
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	Introductions are unlikely to occur. Any introductions are highly unlikely to have any impact on species.	Introductions are unlikely to occur. Any introductions are highly unlikely to have any impact on species.	No
Introduce disease that may cause the species to decline	Highly unlikely to occur.	Highly unlikely to occur.	No
Interfere substantially with the recovery of the species.	Development will not impact on the recovery of the species.	Development will not impact on the recovery of the species.	No

Using these criteria, the proposed development will not significantly impact on any significant species to a point where a referral is required under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Referral guidelines for the three threatened Black Cockatoo species (Dept. of Sustainability, Environment, Water Populations and Communities, 2012) uses a decision tree and a set of criteria to determine whether actions significantly impact on Black Cockatoos. These are set out in Table 7, based on the details of the development and the data obtained from the surveys. Notes on the flow chart follow.

Table 8 Assessment of Significant Impact to Black Cockatoo

Question	Answer	High Risk of Significance - Referral Recommended
1. Could the impacts of your action occur within the modelled distribution of the Black Cockatoos?	No cockatoos observed utilizing the Site. No areas showing signs of foraging were observed within the Site. There were no trees with a DBH greater than 500 mm within the Site.	Low risk of significant impacts - referral may not be required.
2. Could the impacts of your action affect any Black Cockatoo habitat or individuals?	No cockatoos observed utilizing the Site. No areas showing signs of foraging were observed within the Site. There were no trees with a DBH greater than 500 mm within the Site.	Low risk of significant impacts - referral may not be required.
3. Have you surveyed for Black Cockatoos using the recommended methods?	Yes, no evidence was found of cockatoos utilising the site.	Low risk of significant impacts - referral may not be required.
4. Could your actions have an impact on Black Cockatoos or their habitats?	Unlikely impact. No animals were observed within the Site. No evidence of foraging was observed within the Site.	Low risk of significant impacts - referral may not be required.
5. Is your impact mitigation best practice so that it may reduce the significance of your impacts on Black Cockatoos?	Yes, there is no significant impact anticipated due to lack of evidence of animals within the proposed area of impact within Site. No trees with a DBH greater than 500 mm were located within the Site.	There are no areas of suitable habitat within the site for this species.

Question	Answer	High Risk of Significance - Referral Recommended
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6. Could your action require a referral to the federal environmental Minister for significant impact on Black Cockatoos?	No, as there are no direct signs of any of the three species present within the areas of proposed impact. It is unlikely that the species is dependent on the Site.	
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The summary of these responses are:

- The development is within the area of modelled distribution of Black Cockatoo and Western Ringtail Possum species.
- The Site has been surveyed using the recommended methods.
- There was no evidence of foraging by Black Cockatoo Species within the Site. There was no evidence of use or visitation by Western Ringtail Possums.
- There were no areas of good quality foraging vegetation within the proposed area of clearing.

Using the flow chart and criteria it is determined that there is a low risk of actions resulting in an impact upon Black Cockatoos and Western Ringtail Possums within the Site.

It is recommended that a referral pursuant to the *EPBC Act* is not required for the components of the development within the Site, as actions involved do not constitute

Summary and Recommendations

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

- There were no Threatened or Priority Flora observed within the Site.
- Given there were no signs of any flora of significance, a referral under the EPBC Act is not considered as required as any proposed actions are highly unlikely to significantly impact on the species or the local populations.
- There were no trees with a DBH greater than 500 mm within the Site, and there was no evidence of Black Cockatoos utilising the Site.
- There was no evidence of the Western Ringtail Possum within the Site.
- While no other animals of significance were observed, either directly or through signs, the lack of this data should not be taken directly as an indication that those species are absent from the Site. No trapping or seasonal sampling was conducted.
- A Fauna Spotter should be used to monitor any vegetation removal to ensure no animals are present, particularly the Western Ringtail Possum, at the time of any vegetation modification.
- Given there were no signs of threatened flora and the area to be managed is considerable small, less than 0.5 ha, 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.

References

- Commonwealth of Australia (2020). *Environment Protection and Biodiversity Conservation Act 1999*.
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- Department of Biodiversity, Conservation and Attractions (2019). *Conservation Codes for Western Australian Flora and Fauna*.
- Department of Sustainability, Environment, Water, Populations and Communities (2012). *EPBC Act referral Guidelines for three black cockatoo species*.
- Environmental Protection Authority (2020). *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia*.
- Government of Western Australia (2020). *Biodiversity Conservation Act 2016*.
- Johnstone, R.E., C. Johnstone, T. Kirkby & G. Humphreys (2006). *Perth-Bunbury Highway (Kwinana Freeway Extension and Peel Deviation): Targeted Threatened Fauna Survey. Unpublished Report to Main Roads Western Australia*.
- Saunders, D.A. (1980). *Food and movements of the short-billed form of the White-tailed Black Cockatoo. Australian Wildlife Research. 7:257--269*.

Appendix A NatureMap Species Reports

NatureMap Species Report

Created By Guest user on 02/03/2021

Kingdom	Plantae
Conservation Status	Conservation Taxon (T, X, IA, S, P1-P5)
Current Names Only	Yes
Core Datasets Only	Yes
Method	'By Circle'
Centre	115° 36' 35" E, 33° 23' 38" S
Buffer	10km

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
1.	3339 <i>Acacia flagelliformis</i>		P4	
2.	3537 <i>Acacia semitrullata</i>		P4	
3.	43201 <i>Adelphacme minima</i>		P3	
4.	7829 <i>Angianthus drummondii</i>		P3	
5.	141 <i>Aponogeton hexalepalus</i> (Stalked Water Ribbons)		P4	
6.	38480 <i>Austrostipa bronwenae</i>		T	
7.	38481 <i>Austrostipa jacobslana</i>		T	
8.	17804 <i>Boronia tetragona</i>		P3	
9.	1596 <i>Caladenia huegelii</i> (Grand Spider Orchid)		T	
10.	13862 <i>Caladenia speciosa</i>		P4	
11.	759 <i>Carex tereticaulis</i>		P3	
12.	19338 <i>Chamaescilla gibsonii</i>		P3	
13.	10796 <i>Diuris drummondii</i> (Tall Donkey Orchid)		T	
14.	13635 <i>Drakaea micrantha</i>		T	
15.	13512 <i>Eucaalyptus rudis</i> subsp. <i>cratyantha</i>		P4	
16.	1945 <i>Franklandia triaristata</i> (Lanoline Bush)		P4	
17.	5038 <i>Lasiopetalum membranaceum</i>		P3	
18.	17702 <i>Leptomeria furtiva</i>		P2	
19.	29492 <i>Leucopogon</i> sp. <i>Bussellton</i> (D. Cooper 243)		P2	
20.	36200 <i>Ornduffia submersa</i>		P4	
21.	11132 <i>Platysace ramosissima</i>		P3	
22.	31673 <i>Puccinellia vassica</i>		P1	
23.	4183 <i>Pultenaea skinneri</i> (Skinner's Pea)		P4	
24.	874 <i>Schoenus benthamii</i>		P3	
25.	999 <i>Schoenus loliaceus</i>		P2	
26.	7756 <i>Stylidium longitubum</i> (Jumping Jacks)		P4	
27.	16769 <i>Synaphea hians</i>		P3	
28.	1717 <i>Thelymitra variegata</i> (Queen of Sheba)		P2	
29.	12392 <i>Verticordia attenuata</i>		P3	

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

¹ 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.

NatureMap Species Report

Created By Guest user on 02/03/2021

Kingdom	Animalia
Conservation Status	Conservation Taxon (T, X, IA, S, P1-P5)
Current Names Only	Yes
Core Datasets Only	Yes
Method	'By Circle'
Centre	115° 36' 35" E, 33° 23' 38" S
Buffer	10km

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
1.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
2.	24209 <i>Arctocephalus tropicalis</i> (Subantarctic fur-seal)		T	
3.	41326 <i>Ardenia carneipes</i> (Flesh-footed Shearwater, Fleisty-footed Shearwater)		T	
4.	24780 <i>Calidris alba</i> (Sanderling)		IA	
5.	24731 <i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)		T	
6.	24733 <i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo)		T	
7.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
8.	48400 <i>Calyptorhynchus</i> sp. (white-tailed black cockatoo)		T	
9.	25335 <i>Caretta caretta</i> (Loggerhead Turtle)		T	
10.	25336 <i>Chelonia mydas</i> (Green Turtle)		T	
11.	41641 <i>Ctenopus ora</i> (Coastal Plains Skink)		P3	
12.	25618 <i>Diomedea exulans</i> (Wandering Albatross)		T	
13.	30836 <i>Diomedea exulans</i> subsp. <i>exulans</i> (Snowy Albatross)		T	
14.	24043 <i>Eubalaena australis</i> (Southern Right Whale)		T	
15.	25624 <i>Falco peregrinus</i> (Peregrine Falcon)		S	
16.	24189 <i>Falstrellus mackenziei</i> (Western False Pipistrelle, Western Falsistrelle)		P4	
17.	34030 <i>Geotria australis</i> (Pouched Lamprey)		P3	
18.	24215 <i>Hydromys chrysogaster</i> (Water-rat, Rakali)		P4	
19.	48587 <i>Hydroprogne caspia</i> (Caspian Tern)		IA	
20.	48935 <i>Idiosoma sigillatum</i> (Swan Coastal Plain shield-backed trapdoor spider)		P3	
21.	48588 <i>Isosodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4	
22.	30932 <i>Limosa lapponica</i> (Bar-tailed Godwit)		IA	
23.	25741 <i>Limosa limosa</i> (Black-tailed Godwit)		IA	
24.	24690 <i>Macronectes giganteus</i> (Southern Giant Petrel)		IA	
25.	24051 <i>Megaptera novaeangliae</i> (Humpback Whale)		S	
26.	25344 <i>Natator depressus</i> (Flatback Turtle)		T	
27.	24210 <i>Neophoca cinerea</i> (Australian Sea-lion)		T	
28.	48022 <i>Notamacropus irma</i> (Western Brush Wallaby)		P4	
29.	24798 <i>Numenius madagascariensis</i> (Eastern Curlew)		T	
30.	25742 <i>Numenius phaeopus</i> (Whimbrel)		IA	
31.	24497 <i>Oceanites oceanicus</i> (Wilson's Storm-petrel)		IA	
32.	41347 <i>Onychoprion anaethetus</i> (Bridled Tern)		IA	
33.	24328 <i>Oxyura australis</i> (Blue-billed Duck)		P4	
34.	48591 <i>Pandion cristatus</i> (Osprey, Eastern Osprey)		IA	
35.	25508 <i>Phascogale tapoatafa</i> (Brush-tailed Phascogale)		S	
36.	48070 <i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> (South-western Brush-tailed Phascogale, Wambenger)		S	
37.	24073 <i>Physeter macrocephalus</i> (Sperm Whale)		T	
38.	24843 <i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
39.	24186 <i>Pseudocheirus occidentalis</i> (Western Ringtail Possum, ngwayir)		T	
40.	24388 <i>Psophodes nigrogularis</i> subsp. <i>nigrogularis</i> (Western Whipbird (western heath))		T	
41.	24145 <i>Setonix brachyurus</i> (Quokka)		T	
42.	48114 <i>Stenella longirostris</i> (Spinner Dolphin)		P4	
43.	25642 <i>Sterna hirundo</i> (Common Tern)		IA	
44.	34134 <i>Thalassarche carteri</i> (Indian Yellow-nosed Albatross)		T	
45.	44607 <i>Thalassarche melanophris</i> (Black-browed Albatross)		T	
46.	48597 <i>Thalasseus bergii</i> (Crested Tern)		IA	
47.	24000 <i>Tringa nebularia</i> (Common Greenshank, greenshank)		IA	

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
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Conservation Codes
 T - Rare or likely to become extinct
 X - Presumed extinct
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 S - Other specially protected fauna
 1 - Priority 1
 2 - Priority 2
 3 - Priority 3
 4 - Priority 4
 5 - Priority 5

¹ 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 Protected Matters Search Tool 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: 24/02/21 18:02:08

[Summary](#)

[Details](#)

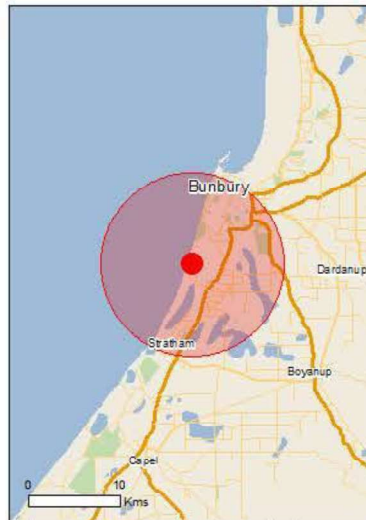
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 10.0km](#)



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:	1
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	65
Listed Migratory Species:	44

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:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	69
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	1

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:	29
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	2

Details

Matters of National Environmental Significance

Commonwealth Marine Area [\[Resource Information \]](#)

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside the Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area. Generally the Commonwealth Marine Area stretches from three nautical miles to two hundred nautical miles from the coast.

Name

EEZ and Territorial Sea

Marine Regions [\[Resource Information \]](#)

If you are planning to undertake action in an area in or close to the Commonwealth Marine Area, and a marine bioregional plan has been prepared for the Commonwealth Marine Area in that area, the marine bioregional plan may inform your decision as to whether to refer your proposed action under the EPBC Act.

Name

[South-west](#)

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
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area
Clay Pans of the Swan Coastal Plain	Critically Endangered	Community likely to occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area

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

Name	Status	Type of Presence
Birds		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
Calyptorhynchus baudinii Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Endangered	Breeding known to occur within area

Name	Status	Type of Presence
Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area

Name	Status	Type of Presence
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Fish		
Nannatherina balstoni Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat may occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Dasyurus geoffroi Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Congregation or aggregation known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Breeding known to occur within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat known to occur within area
Other		
Westralunio carteri Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat known to occur within area
Plants		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Austrostipa bronwenae [87808]	Endangered	Species or species habitat known to occur within area
Austrostipa jacobiana [87809]	Critically Endangered	Species or species habitat known to occur within area
Banksia nivea subsp. uliginosa Swamp Honeypot [82766]	Endangered	Species or species habitat may occur within area
Banksia squarrosa subsp. argillacea Whicher Range Dryandra [82769]	Vulnerable	Species or species habitat may occur within

Name	Status	Type of Presence area
Brachyscias verecundus Ironstone Brachyscias [81321]	Critically Endangered	Species or species habitat may occur within area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat known to occur within area
Chamelaucium sp. S coastal plain (R.D.Royce 4872) Royce's Waxflower [87814]	Vulnerable	Species or species habitat may occur within area
Diuris drummondii Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat known to occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
Drakaea elastica Glossy-leaved Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat known to occur within area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat likely to occur within area
Gastrolobium papilio Butterfly-leaved Gastrolobium [78415]	Endangered	Species or species habitat may occur within area
Lambertia echinata subsp. occidentalis Western Prickly Honeysuckle [64528]	Endangered	Species or species habitat may occur within area
Petrophile latericola Laterite Petrophile [64532]	Endangered	Species or species habitat may occur within area
Synaphea sp. Fairbridge Farm (D. Papenfus 696) Selena's Synaphea [82881]	Critically Endangered	Species or species habitat likely to occur within area
Synaphea sp. Serpentine (G.R. Brand 103) [86879]	Critically Endangered	Species or species habitat may occur within area
Synaphea stenoloba Dwellingup Synaphea [66311]	Endangered	Species or species habitat may occur within area
Verticordia densiflora var. pedunculata Long-stalked Featherflower [55689]	Endangered	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known

Name	Status	Type of Presence
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	to occur within area Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Sharks		
Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat known to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus 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		
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or

Name	Threatened	Type of Presence
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	related behaviour likely to occur within area Species or species habitat may occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Breeding known to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Manta alfredi 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
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Congregation or aggregation known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
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 known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia 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 -
Defence - BUNBURY TRAINING DEPOT

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 known to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may 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
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleishy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Sterna anaethetus Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Sterna caspia Caspian Tern [59467]		Foraging, feeding or related behaviour known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Fish		
Acentronura australe Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Lissocampus rufa Javelin Pipefish [66251]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area

Name	Threatened	Type of Presence
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Congregation or aggregation known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Australian Marine Parks		[Resource Information]
Name	Label	
Geographe	Special Purpose Zone (Mining	

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Tuart Forest	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		
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
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		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
Mammals		
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

Name	Status	Type of Presence within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus declinatus Bridal Veil, Bridal Veil Creeper, Pale Berry Asparagus Fern, Asparagus Fern, South African Creeper [66908]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		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
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		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 habitat may occur within area
Pinus radiata 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
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area
Key Ecological Features (Marine)		[Resource Information]
Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.		

Name	Region
Commonwealth marine environment within and	South-west
Western rock lobster	South-west

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

-33.39389 115.60972

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.

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