

Basic Fauna Assessment

Kent Street Sand Pit

Project No: EP20-055(06)

**Prepared for Town of Victoria Park
July 2021**

Basic Fauna Assessment

Kent Street Sand Pit



Document Control

Doc name:	Basic Fauna Assessment Kent Street Sand Pit				
Doc no.:	EP20-055(06)--004 MS				
Version	Date	Author		Reviewer	
1	July 2021	Melanie Schubert	MS	Rachel Weber	RAW
	Submitted for client review				

Basic Fauna Assessment Kent Street Sand Pit



Executive Summary

The Town of Victoria Park engaged Emerge Associates (Emerge) to conduct a 'basic' fauna survey to provide information on the fauna values within the 'Kent Street Sand Pit' which comprises part of Lot 705 Kent Street in Kensington (referred to herein as the 'site').

As part of the assessment a desktop review of relevant background information was completed and a field survey was undertaken on 23 June 2021. During the field survey opportunistic sightings of fauna were recorded and an assessment was made on the fauna habitat within the site and its suitability to provide habitat for conservation significant fauna.

Outcomes of the survey include the following:

- The site is directly adjacent to Kensington Bushland Reserve, which supports intact native vegetation.
- The majority of the site (93.98%) supports highly disturbed **parkland** habitat which provides limited habitat value to native fauna and is likely to primarily be used by common and widespread native and non-native fauna with non-specific habitat requirements.
- The highest fauna habitat value in the site is associated with the **native bushland** habitat which occurs over 6.02% of the site.
- A total of 14 native fauna species were recorded within the site, including two threatened fauna species: *Calyptorhynchus latirostris* (Carnaby's cockatoo) and *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo).
- It is possible that a further six conservation significant species not recorded during the field survey may occur within the site. *Apus pacificus* (pacific swift) and *Falco peregrinus* (peregrine falcon) may occur occasionally for short periods. *Idiosoma sigillatum* (Swan Coastal Plain shield-backed trapdoor spider), *Isoodon fusciventer* (quenda), *Lerista lineata* (Perth slider) and *Neelaps calonotos* (black-striped snake) may occasionally occur within the site due to it being adjacent to and part of a larger patch of native bushland (Kensington Bushland Reserve). In particular, quenda are considered likely to occur in the site, as the species has previously been recorded in Kensington Bushland Reserve. Targeted surveys would be required to confirm whether these species occur within the site.

Basic Fauna Assessment

Kent Street Sand Pit



This page has been left blank intentionally.

Basic Fauna Assessment

Kent Street Sand Pit



Table of Contents

1	Introduction	9
1.1	Purpose and scope of work.....	9
2	Environmental Context	10
2.1	Climate	10
2.2	Geomorphology and soils	10
2.3	Topography	11
2.4	Hydrology and wetlands	11
2.5	Regional vegetation	11
2.6	Historic land use.....	12
2.7	Significant fauna	12
2.7.1	Threatened fauna species	12
2.7.2	Priority fauna species	12
2.7.3	Migratory fauna species	12
2.7.4	Specially protected fauna species	13
2.7.5	Pest fauna species	13
2.8	Bush Forever	13
2.9	Environmentally sensitive areas	13
2.10	DBCA managed or legislated land.....	13
2.11	Ecological linkages	14
2.12	Previous surveys	14
3	Methods	16
3.1	Desktop assessment	16
3.1.1	Basic fauna	16
3.2	Field survey	16
3.3	Data analysis	16
3.3.1	Desktop assessment.....	16
3.3.2	Fauna habitat	16
3.3.3	Likelihood of occurrence	17
3.4	Nomenclature and sources of information.....	17
3.5	Survey limitations	17
4	Results	20
4.1	General site conditions	20
4.2	Fauna habitat	20
4.3	Fauna	22
4.3.1	Desktop assessment.....	22
4.3.2	Species inventory	22
4.3.3	Conservation significant fauna.....	22
4.3.4	Declared pests.....	24
5	Discussion	25
5.1	Conservation significant fauna.....	25
6	Conclusions	26
7	References	27
7.1	General references	27
7.2	Online references.....	28

Basic Fauna Assessment

Kent Street Sand Pit



List of Tables

Table 1: Likelihood of occurrence assessment categories and definitions	17
Table 2: Evaluation of survey methodology against standard constraints outlined in the EPA's Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA 2020)	18
Table 3: Fauna habitats identified within the site	20
Table 4: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site	23

List of Plates

Plate 1: Native bushland habitat	21
Plate 2: Parkland habitat.....	21

Figures

Figure 1: Site Location
Figure 2: Soils and Topography
Figure 3: Environmental Features
Figure 4: Fauna Habitat

Appendices

Appendix A

Additional Information

Appendix B

Database Search Results

Appendix C

Conservation Significant Species and Likelihood of Occurrence Assessment

Appendix D

Species List

Basic Fauna Assessment

Kent Street Sand Pit



Abbreviation Tables

Table A1: Abbreviations – Organisations

Organisations	
EPA	Environmental Protection Authority
DBCA	Department of Biodiversity, Conservation and Attractions
DAWE	Department of Agriculture, Water and the Environment
WA Museum	Western Australian Museum

Table A2: Abbreviations – General terms

General terms	
EN	Endangered
VU	Vulnerable
MI	Migratory
OS	Other specially protected
P3	Priority 3
P4	Priority 4

General terms	
BAM Act	<i>Biosecurity and Agriculture Management Act 2007</i>
EBPC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
BC Act	<i>Biodiversity Conservation Act 2016</i>

Table A4: Abbreviations – units of measurement

Units of measurement	
ha	Hectare
km	Kilometre
m	Metre
m AHD	m in relation to the Australian height datum

Basic Fauna Assessment

Kent Street Sand Pit



This page has been left blank intentionally.

Basic Fauna Assessment

Kent Street Sand Pit



1 Introduction

Emerge Associates (Emerge) were engaged by the Town of Victoria Park to characterise the fauna values within the Kent Street Sand Pit, which is part of Lot 705 Kent Street in Kensington (referred to herein as the 'site'). The site is located approximately five kilometres (km) south-east of the Perth Central Business District within the Town of Victoria Park.

The site is approximately 4.32 hectares (ha) in size and is bounded by Kent Street to the south-east, Baron-Hay Court to the south-west and Kensington Bushland Reserve to the other sides. The location and extent of the site is shown in **Figure 1**.

1.1 Purpose and scope of work

The scope of work was specifically to undertake a terrestrial vertebrate fauna assessment to the standard required of a 'basic' fauna survey with reference to the *Environmental Protection Authority's* (EPA's) technical guidance (EPA 2020).

As part of this scope of work, the following tasks were undertaken:

- Desktop assessment of relevant background information pertaining to the site and surrounds, including database and literature searches for fauna species.
- A field survey to identify fauna species and fauna habitats within the site.
- Compilation of a list of fauna species with potential to occur within the site as identified from the desktop assessment and opportunistically recorded as part of the field survey.
- Identification of potential habitat for conservation significant fauna species and an assessment of likelihood of occurrence.
- Mapping of fauna habitat.
- Documentation of the desktop assessment, survey methodology and results into a report.

Basic Fauna Assessment

Kent Street Sand Pit



2 Environmental Context

2.1 Climate

Climate has a strong influence on the fauna habitat and species present in a region and a site. The south-west of Western Australia experiences a Mediterranean climate of hot dry summers and cool wet winters.

A total of 113.6 millimetre (mm) of rainfall was recorded during the month prior to the survey (May 2021) from the Perth Metro weather station (no. 009225) which is the closest weather station located approximately 6.2 km north-west of the site (BoM 2021). This is slightly higher than the average rainfall of 88.6 mm for the same period and weather station (BoM 2021).

Temperatures recorded in May 2021 ranged from a mean maximum of 22.2°C to a mean minimum of 11.6°C, as recorded by the Perth Metro weather station (BoM 2021). This is similar to the average maximum temperature of 22.3°C and average minimum temperature of 10.5°C for the same period and weather station (BoM 2021).

On the day of the survey temperatures at the Perth Metro weather station ranged from a maximum of 14.7°C to a minimum of 10°C and approximately 5 mm of rainfall was recorded (BoM 2021).

2.2 Geomorphology and soils

Landform and soils influence fauna habitat and species at regional and local scales. The site occurs on the Swan Coastal Plain, which is the geomorphic unit that characterises much of the Perth metropolitan area.

The Swan Coastal Plain is approximately 500 km long and 20 to 30 km wide and is roughly bound by the Indian Ocean to the west and the Darling Scarp to the east. Broadly the Swan Coastal Plain consists of two sedimentary belts of different origin. Its eastern side comprises the Pinjarra Plain which formed from the deposition of alluvial material washed down from the Darling Scarp, while its western side comprises three dune systems that run roughly parallel to the Indian Ocean coastline (Seddon 2004). These dune systems, referred to as Quindalup, Spearwood and Bassendean associations, represent a succession of coastal deposition that has occurred since the late Quaternary period (approximately two million years ago) (Kendrick *et al.* 1991) and, as a result, they contain soils at different stages of leaching and formation.

Examination of physiographic mapping by Gozzard (2011) places the site within the Bassendean dunes, which was later confirmed during the field survey. The Bassendean dunes are characterised by non-calcareous sands and podolised soils with low-lying wet areas (Purdie *et al.* 2004). The Gozzard (2011) mapping in relation to the site is shown in **Figure 3**.

In addition to natural soils, the central parts of the site contain a layer of fill consisting of brown fine to medium grained sandy material with building materials throughout including fragments of bricks and concrete, gravels of blue metal, limestone and pea gravel (AECOM 2012).

The site is not known to contain any restricted landforms or unique geological features.

Basic Fauna Assessment

Kent Street Sand Pit



2.3 Topography

The elevation of the site ranges from 11 m in relation to the Australian height datum (mAHD) on the eastern side to 17 mAHD on the north-western side (DoW 2008) (**Figure 3**).

2.4 Hydrology and wetlands

Wetlands include “areas of seasonally, intermittently or permanently waterlogged soils or inundated land, whether natural or otherwise, fresh and saline, e.g. waterlogged soils, ponds, billabongs, lakes, swamps, tidal flats, estuaries, rivers and their tributaries” (Wetlands Advisory Committee 1977). Many wetlands provide important fauna habitat and support high levels of fauna biodiversity and endemism.

Wetlands of national or international significance may be afforded special protection under Commonwealth or international agreements. The following lists of important wetlands were checked as part of this assessment:

- *Ramsar List of Wetlands of International Importance* (DBCA 2017c)
- *A Directory of Important Wetlands in Australia* (DBCA 2018).

No Ramsar or listed ‘important wetlands’ are located within or near the site.

The Department of Biodiversity, Conservation and Attractions (DBCA) has developed the *Geomorphic Wetlands of the Swan Coastal Plain* dataset (DBCA 2020). This dataset maps geomorphic wetland features and classifies them based on their landform shape and water permanence. A review of the *Geomorphic Wetlands of the Swan Coastal Plain* dataset (DBCA 2020) indicated that no wetlands occur within or adjacent to the site.

Examination of the Department of Water and Environmental Regulation (DWER) hydrography dataset (DWER 2020) shows no wetland or water related features occur within the site.

2.5 Regional vegetation

Vegetation types and resulting fauna habitats strongly influence the diversity and composition of fauna taxa present within an area. Native vegetation is described and mapped at different scales in order to illustrate patterns in its distribution. At a continental scale the *Interim Biogeographic Regionalisation of Australia* (IBRA) divides the Swan Coastal Plain into two floristic subregions (Environment Australia 2000). The site is contained within the ‘SWA02’ or Perth subregion, which is characterised as mainly containing *Banksia* low woodland on leached sands with *Melaleuca* swamps where ill-drained; and woodland of *Eucalyptus gomphocephala* (tuart), *E. marginata* (jarrah) and *Corymbia calophylla* (marri) on less leached soils (Beard 1990). This subregion is recognised as a biodiversity hotspot and contains a wide variety of endemic fauna species.

Variations in native vegetation within the site can be further classified based on regional vegetation associations. Heddle *et al.* (1980) mapping shows the site as comprising the ‘Bassendean central and south complex’, which is described as vegetation ranging from woodland of *Eucalyptus marginata* - *Allocasuarina fraseriana* - *Banksia* spp. to low woodland of *Melaleuca* spp. and sedgelands on the moister sites.

Basic Fauna Assessment

Kent Street Sand Pit



2.6 Historic land use

A review of historical images available from 1953 onwards shows that the majority of the site was cleared of native vegetation by 1974 as part of sand mining operations (WALIA 2021).

The history of the site is not well documented, but it is generally thought to have been used for sand mining and landfill between the mid-1960s and 1992. From 1992 to 2006 the site was used for the storage and disposal of inert waste and the storage and washing of heavy vehicles (DWER 2021).

Given the historical use of the site, it was classified as a contaminated site for many years. After a series of site investigations to assess the extent of the contamination on-site and following the development of a site management plan, DWER reclassified the site to 'remediated for restricted' use in July 2017 (Town of Victoria Park 2021; DWER 2021).

2.7 Significant fauna

2.7.1 Threatened fauna species

Certain fauna taxa that are considered to be rare or under threat warrant special protection under Commonwealth and/or State legislation. At a Commonwealth level, fauna taxa may be listed as 'threatened' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Any action likely to have a significant impact on a taxon listed under the EPBC Act requires Ministerial approval.

In Western Australia fauna species may also be classed as 'threatened' under the *Biodiversity Conservation Act 2016* (BC Act). It is an offence to 'take' or 'disturb' threatened fauna without Ministerial approval.

Threatened fauna species listed under the EPBC Act and/or BC Act are assigned a conservation status according to attributes such as population size and geographic distribution. Further information on threatened species and their categories is provided in **Appendix A**.

2.7.2 Priority fauna species

Fauna species that do not currently meet the criteria for listing as threatened but are potentially rare or threatened may be added to the DBCA *Priority Fauna List*. These species are classified into 'priority' levels based on threat. Whilst priority species are not under direct statutory protection, they are considered during State approval processes. Further information on priority species and their categories is provided in **Appendix A**.

2.7.3 Migratory fauna species

Some fauna species that migrate to Australia and its external territories or pass through or over Australian waters during their annual migrations are protected under Commonwealth and State legislation. At a Commonwealth level, migratory fauna taxa may be listed as 'migratory' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Any action likely to have a significant impact on a taxon listed under the EPBC Act requires Ministerial approval. Further information on migratory species is provided in **Appendix A**.

Basic Fauna Assessment

Kent Street Sand Pit



2.7.4 Specially protected fauna species

In Western Australia, fauna species that are of special conservation interest, including migratory species and cetaceans, species subject to international agreement or species otherwise in need of special protection may be listed as 'specially protected' under the BC Act. Further information on specially protected species and their categories is provided in **Appendix A**.

2.7.5 Pest fauna species

The term 'pest fauna' can refer to any animal that requires some form of action to reduce its effect on the economy, the environment, human health and amenity. Pest fauna species are generally not native but some Australian or Western Australian fauna may also be considered pests.

A particularly invasive or detrimental pest species may be listed as a 'declared pest' pursuant to Western Australia's *Biosecurity and Agriculture Management Act 2007* (BAM Act), indicating that it warrants special management to limit its spread. Further information on categories of declared pests is provided in **Appendix A**.

2.8 Bush Forever

The Government of Western Australia's Bush Forever policy is a strategic plan for conserving regionally significant bushland within the Swan Coastal Plain portion of the Perth Metropolitan Region. The objective of *Bush Forever* is to protect comprehensive representations of all original ecological communities by targeting a minimum of 10% of each vegetation complex for protection (Government of WA 2000). *Bush Forever* sites are representative of regional ecosystems and habitat and have a key role in the conservation of Perth's biodiversity.

Bush Forever Site 48 (Kensington Bushland) lies adjacent to the northern, eastern and western boundaries of the site and extends into the south-western portion. The location of Bush Forever Site 48 is shown in **Figure 3**.

2.9 Environmentally sensitive areas

'Environmentally sensitive areas' (ESAs) are prescribed under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* and have been identified to protect native vegetation values of areas surrounding values such as significant wetlands, threatened flora, threatened communities and *Bush Forever* sites. Within an ESA none of the exemptions under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* apply.

Bush Forever Site 48 is mapped as an ESA and occurs within the south-western portion of the site, as shown in **Figure 3**.

2.10 DBCA managed or legislated land

DBCA has tenure of or interests in numerous areas of land across the state for a range of purposes. Tenure categories include national parks, nature reserves, conservation parks, marine parks, marine nature reserves, marine management areas, section 5(1)(g) reserves, state forest and timber

Basic Fauna Assessment

Kent Street Sand Pit



reserves. These areas are mapped within the *Legislated Lands and Waters (DBCA 2017a)* and *Lands of Interest (DBCA 2017b)* datasets. The *Legislated Lands and Waters (DBCA 2017a)* dataset includes lands subject to the following legislation; the *Conservation and Land Management Act 1984 (CALM Act 1984)*, *Swan and Canning Rivers Management Act 2006 (SCRM Act)* and lands identified under the *Land Administration Act 1997 (LA Act)*. The *Lands of Interest (DBCA 2017b)* dataset includes all other lands of which DBCA is recognised as the manager but is not vested under any act. These lands comprise of crown land and freehold land which DBCA has been acknowledged by the Department of Lands as the responsible agency.

No DBCA managed or legislated lands occur within the site or adjacent to the site. The closest legislated land is a small reserve listed under the CALM Act which lies approximately 400 m to the south-west of the site.

2.11 Ecological linkages

Ecological linkages are linear landscape elements that allow the movement of fauna, flora and genetic material between areas of remnant habitat. The movement of fauna and the exchange of genetic material between vegetation remnants improve the viability of those remnants by allowing greater access to breeding partners and food sources, refuge from disturbances such as fire and maintenance of genetic diversity of plant communities and populations. Ecological linkages are ideally continuous or near-continuous as the more fractured a linkage is, the less ease flora and fauna have in moving within the corridor (Alan Tingay and Associates 1998).

The Perth Biodiversity Project, supported by the Western Australia Local Government Association (WALGA), have identified and mapped regional ecological linkages within the Perth Metropolitan Region (WALGA and PBP 2004).

There are no mapped ecological linkages within or in close proximity to the site. Two ecological linkages occur approximately 3 km from the site and are associated with the Swan and Canning River Reserves.

Review of aerial imagery indicates that the vegetation within the site is connected to a larger area of native vegetation within the Kensington Bushland Reserve.

2.12 Previous surveys

Emergence previously prepared a *Design Opportunities and Considerations Report (DOCR)* for the site, which provided information on design options for rehabilitation of the site to inform future landscape planning, detailed design and project management (Emergence Associates 2020). During preparation of the DOCR, *Merops ornatus* (rainbow bee-eater) were noted breeding in the western portion of the site. Rainbow bee-eater is listed as 'marine' under the EPBC Act and has also recorded adjacent to the site in the Kensington Bushland Reserve (Eco Logical Australia 2017).

A 'black cockatoo habitat assessment' was undertaken within the Kensington Bushland Reserve and surrounding areas, which included the site. Five habitat trees were identified within the site (*Pinus* sp. (pine)). These trees provide foraging habitat for *Calyptorhynchus latirostris* (Carnaby's cockatoo) and *Calyptorhynchus baudinii* (Baudin's cockatoo) and roosting habitat for Carnaby's cockatoo,

Basic Fauna Assessment

Kent Street Sand Pit



Baudin's cockatoo and *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo). These three species of black cockatoo are listed as threatened under the EPBC Act and in WA.

Various fauna surveys have been undertaken within the adjacent Kensington Bushland Reserve (Eco Logical Australia 2017).

Basic Fauna Assessment

Kent Street Sand Pit



3 Methods

3.1 Desktop assessment

3.1.1 Basic fauna

A search was conducted for fauna species that have been recorded within a four to 10 km radius of the site using the *Protected Matters Search Tool* (DAWE 2021a), *NatureMap* (DBCA 2021), DBCA's conservation significant fauna database (reference no. FAUNA6746), previous surveys and literature references.

3.2 Field survey

A zoologist from Emerge visited the site on the 23 June 2021 between approximately 12:00 pm and 2:00 pm to conduct the field survey.

The weather conditions prior to and during the survey were warm and sunny with minimal wind (refer to **Section 2.1** for recorded weather conditions).

Transects were traversed across the site and the characteristics of fauna habitat and presence of fauna species was recorded. Microhabitats such as logs, rocks and leaf litter were investigated and secondary evidence of species presence such as tracks, scats, skeletal remains, foraging evidence or calls was also noted.

An opportunistic fauna species list was compiled and fauna habitat values were described, with particular reference to conservation significant fauna species with potential to occur within the site.

3.3 Data analysis

3.3.1 Desktop assessment

A total number of species within the desktop assessment search area was calculated by adding the total count of non-conservation significant species provided by *NatureMap* to the combined number of conservation significant species provided by *NatureMap* and *Protected Matters Search Tool*.

Habitat requirements of conservation significant vertebrate fauna was specifically reviewed in relation to habitat within the site to determine a total number of conservation significant fauna species with potential to occur. Fauna species with no potential to occur within the site were excluded from this count (e.g. marine mammals and marine fish).

3.3.2 Fauna habitat

Fauna habitats were described according to the dominant flora species and vegetation type present, as determined from observations made during the field survey and information provided in the '*Reconnaissance Flora and Vegetation Assessment*' (Emerge Associates 2021). The identified fauna habitats were mapped on aerial photography with the boundaries interpreted from aerial photography, Emerge Associates (2021) plant communities and notes taken in the field.

Basic Fauna Assessment

Kent Street Sand Pit



3.3.3 Likelihood of occurrence

Information on habitat preferences and distribution of conservation significant fauna species with potential occur within the site or wider area was reviewed and assessed against the general site conditions and fauna habitat types recorded during the field survey.

Based on the results of the desktop assessment and information recorded during the field survey, an assessment of the likelihood of occurrence of conservation significant fauna within the site was undertaken using the categories outlined in **Table 1**.

Table 1: Likelihood of occurrence assessment categories and definitions

Likelihood	Definition
Recorded	The species was recorded during the current field survey or during previous field surveys.
Likely	The site contains suitable habitat for the species and it is likely the species may occur based on presence of a recent historical record within or close to the site.
Possible	The site contains habitat of at least marginal quality and/or extent for the species and the site is located within the known distribution range of the species which is supported by recent literature records from near the site.
Unlikely	The site contains no or marginal habitat for the species and/or no recent literature records occur near the site.

3.4 Nomenclature and sources of information

Taxonomy and nomenclature of scientific and common names for fauna species follow *the Western Australian Museum (WAM) Checklist of the Terrestrial Vertebrate Fauna of Western Australia* (WAM 2020). Where common names were not provided by the *Western Australian Museum*, these have been derived from other sources as noted.

Literature listed in **Appendix A** represent the main publications used to identify fauna species and habitats within the site.

3.5 Survey limitations

It is important to note the specific constraints imposed on surveys and the degree to which these may have limited survey outcomes. An evaluation of the survey methodology against standard constraints outlined in the EPA's document *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA 2020) is provided in **Table 2**.

Basic Fauna Assessment

Kent Street Sand Pit



Table 2: Evaluation of survey methodology against standard constraints outlined in the EPA's Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA 2020)

Constraint	Degree of limitation	Details
Level of survey	No limitation	A basic survey (desktop study and field survey) was undertaken. The level of survey and survey effort are considered sufficient, given the relatively low fauna habitat values present within the site.
Scope	No limitation	The survey focused on vertebrate fauna and habitat values, with particular focus on conservation significant taxa with potential to occur within the site.
Proportion of fauna identified, recorded and/or collected.	No limitation	All observed vertebrate fauna were identified.
Sources of information e.g. previously available information (whether historic or recent) as distinct from new data.	No limitation	Adequate information was available from database searches and previous surveys.
The proportion of the task achieved and further work which might be needed.	No limitation	The task was achieved in its entirety.
Experience level of personnel	No limitation	This fauna assessment was undertaken by qualified zoologist with over four years' experience in undertaking fauna surveys. Technical review was undertaken by a senior environmental consultant with 10 years' experience in ecological assessments in Australia.
Suitability of timing, weather and season	No limitation	Survey timing is not considered to be of great importance for basic fauna assessments. Nonetheless, the survey was undertaken in winter which is a time of low activity for reptile species. Furthermore, the survey was undertaken in the afternoon which is not a time of peak activity for bird species. However, this is not considered a limitation given the level of the survey and the relatively low habitat values within the site. Rainbow bee-eaters are migratory, occurring in the south-west of Western Australia from approximately September to April and breeding between November and January. The survey timing was not suitable for this species but sufficient anecdotal evidence regarding this species was available.
Completeness	No limitation	The desktop assessment and field survey components of the survey were completed comprehensively.
Spatial coverage and access	No limitation	Site coverage was comprehensive (track logged).
	No limitation	All parts of the site could be accessed as required.
Survey intensity	No limitation	The intensity of the survey was adequate given the size of the site and the relatively low habitat value present.

Basic Fauna Assessment

Kent Street Sand Pit



Table 2: Evaluation of survey methodology against standard constraints outlined in the EPA's Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA 2020)(continued)

Constraint	Degree of limitation	Details
Influence of disturbance	No limitation	The site is highly modified due to historical disturbance and recent clearing of individual shrubs and trees was noted along the western, northern and eastern boundaries of the site. However, no recent disturbance that may have affected outcomes of the survey was noted.
Adequacy of resources	No limitation	All resources required to perform the survey were available.
Compliance with EPA (2020) guidance	Minor limitation	The EPA guidance requires that a full list of all fauna species with potential to occur within the site is compiled. As part of this assessment a comprehensive list of fauna species of conservation significance was compiled. Non-conservation taxa with potential to occur within the site were not compiled into a list but are provided as raw data in Appendix D . Given that all species with potential to occur within the site are still identified within the relevant appendices this is not considered to affect the outcomes of this assessment.
	Very minor limitation	The EPA guidance recommends that the <i>Australian Faunal Directory</i> (DAWE 2021b) nomenclature is used for bird species. This assessment uses the <i>WAM Checklist of the Terrestrial Vertebrate Fauna of Western Australia</i> (WAM 2020) nomenclature for birds and therefore does not strictly comply.

Basic Fauna Assessment

Kent Street Sand Pit



4 Results

4.1 General site conditions

As a result of previous quarrying, the site is lower than the surrounding area and has sloping banks on the perimeter. The soil is a light-coloured sand.

The site contains small areas of native vegetation located on the banks, where it has re-established or been planted. The remainder of the site comprises non-native or planted vegetation and bare areas.

Minor clearing of scattered shrubs or small trees was noted within along the western, northern and eastern portions of the site.

4.2 Fauna habitat

Two broad fauna habitats were identified within the site: ‘**native bushland**’ and ‘**parkland**’.

A description and the area of each habitat is provided in **Table 3** and representative photographs of each are provided in **Plate 1** to **Plate 2**. The location of each habitat is shown on **Figure 4**.

Table 3: Fauna habitats identified within the site

Fauna habitat	Description	Area (ha)
Native bushland	Scattered juvenile <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over tall open shrubland to open shrubland of <i>Banksia</i> spp., <i>Adenanthos cygnorum</i> , <i>Allocasuarina humilis</i> and <i>Acacia saligna</i> over scattered non-native grasses and herbs and bare ground.	0.26
Parkland	Heavily disturbed areas comprising scattered non-native or planted trees and shrubs including * <i>Agonis flexuosa</i> , * <i>Eucalyptus camaldulensis</i> , * <i>Chamelaucium uncinatum</i> and * <i>Pinus radiata</i> over non-native grassland or bare ground.	4.06

* indicates non-native

Basic Fauna Assessment Kent Street Sand Pit



Plate 1: **Native bushland** habitat



Plate 2: **Parkland** habitat

Basic Fauna Assessment

Kent Street Sand Pit



4.3 Fauna

4.3.1 Desktop assessment

A total of 798 fauna species were identified from database searches as occurring or potentially occurring within 10 km of the site¹ as listed in **Appendix D**.

Of these species, 94 are conservation significant, including 42 threatened, 17 priority, 32 migratory fauna and two other specially protected species as listed in **Appendix E**.

4.3.2 Species inventory

A total of 14 native and three introduced fauna species were directly or indirectly (from foraging evidence) recorded during the field survey. This includes two fauna species of conservation significance: Carnaby's cockatoo and forest red-tailed black cockatoo. A complete species list is provided in **Appendix F**.

4.3.3 Conservation significant fauna

Two conservation significant fauna species were recorded within the site. Forest red-tailed black cockatoo was recorded flying over the site. Secondary evidence of foraging by black cockatoos was recorded within the site in the form of chewed *Banksia attenuata* (candlestick banksia) cones and *Eucalyptus marginata* (jarrah) fruit. The banksia cones could have been chewed by either Carnaby's cockatoo or Baudin's cockatoo but, given that Baudin's cockatoo is uncommon within the vicinity of the site, is most likely attributed to Carnaby's cockatoo. Similarly, the chewed jarrah fruit could be due to any of the three species of black cockatoo but is most likely due to Carnaby's cockatoo and/or forest red-tailed black cockatoo.

The site does not contain any black cockatoo habitat trees² and so does not contain any black cockatoo breeding habitat. The site contains a small number of tall trees which may provide roosting habitat for black cockatoos. No evidence that roosting by black cockatoos occurs in the site was observed.

The **native bushland** habitat, and to a lesser extent the **parkland** habitat, support a range of plants that provide a food source black cockatoo species, including *Corymbia calophylla* (marri), jarrah, *Banksia menziesii* (firewood banksia) and candlestick banksia.

In addition to the aforementioned species of black cockatoo recorded during the field survey, six fauna species of conservation significance were considered to possibly occur in the site based on habitat requirements, species distribution and site conditions, as shown in **Table 4**.

The remainder of the conservation significant fauna species identified in the desktop assessment (86 species) are considered unlikely to occur in the site due to lack of suitable habitat or because the site lies outside of the species known distribution. Fauna species classed as unlikely to occur are listed in **Appendix F**.

¹ Includes native and non-native species

² Defined as a native eucalypt tree with a diameter at breast height ≥50 cm or ≥30 cm for *Eucalyptus wandoo* (wandoo) and *Eucalyptus salmonophloia* (salmon gum).

Basic Fauna Assessment

Kent Street Sand Pit



Table 4: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence within the site
		BC Act	EPBC Act		
Birds					
<i>Apus pacificus</i>	Pacific swift	MI	MI	Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities (Johnstone and Storr 1998).	Possible: May opportunistically occur in the site for short periods or fly over the site on commute or while foraging.
<i>Calyptrorhynchus banksii naso</i>	Forest red-tailed black cockatoo	VU	VU	<i>Eucalypt</i> and <i>Corymbia</i> forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding <i>Corymbia calophylla</i> , <i>Eucalyptus marginata</i> , introduced <i>Melia azedarach</i> and <i>Eucalyptus</i> spp. trees (Johnstone and Storr 1998).	Recorded Suitable foraging and roosting habitat occurs in the site.
<i>Calyptrorhynchus latirostris</i>	Carnaby's cockatoo	EN	EN	Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of <i>Pinus</i> spp. Attracted to seeding <i>Banksia</i> spp., <i>Dryandra</i> spp., <i>Hakea</i> spp., <i>Eucalyptus</i> spp., <i>Corymbia calophylla</i> , <i>Grevillea</i> spp., and <i>Allocasuarina</i> spp. (Johnstone and Storr 1998).	Recorded Suitable foraging and roosting habitat occurs in the site.
<i>Falco peregrinus</i>	Peregrine falcon	OS	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).	Possible: May opportunistically occur in the site for short periods or fly over the site on commute or while searching for prey.
Invertebrate					
<i>Idiosoma sigillatum</i>	Swan Coastal Plain shield-backed trapdoor spider	P3	-	Widely distributed in sandy areas on the Swan Coastal Plain and on Rottnest Island (Prince 2003).	Possible: The site contains potential habitat (sandy soils).

Basic Fauna Assessment

Kent Street Sand Pit



Table 4: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site (continued)

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence within the site
		BC Act	EPBC Act		
Mammals					
<i>Isoodon fusciventer</i>	Quenda	P4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012).	Likely: DBCA record of species adjacent to site within Kensington Bushland Reserve. The species may use areas of dense vegetation and tall grasses within the native bushland and parklands habitats.
Reptiles					
<i>Lerista lineata</i>	Perth slider	P3	-	Sandy coastal heath and low scrubland. <i>Banksia</i> spp. woodland, <i>Eucalyptus gomphocephala</i> open woodland over deep sands, and coastal dunes immediately adjacent to the beach.	Possible: May occasionally utilise the native bushland habitat in the site due to adjacent suitable habitat within Kensington Bushland Reserve.
<i>Neelaps calonotos</i>	Black-striped snake	P3	-	Coastal and near-coastal dunes, sandplains supporting heathlands and <i>Banksia</i> spp. woodlands.	Possible: May occasionally utilise the native bushland habitat in the site due to adjacent suitable habitat within Kensington Bushland Reserve.

4.3.4 Declared pests

Felis catus (cat) and *Trichoglossus moluccanus* (rainbow lorikeet), which are listed as declared pests (S22(2)) pursuant to the BAM Act, were recorded within the site.

Basic Fauna Assessment

Kent Street Sand Pit



5 Discussion

Most of the 14 native fauna species opportunistically recorded within the site are common and widespread across the Swan Coastal Plain.

The majority of the site (93.98%) supports highly modified **parkland** habitat. This habitat predominantly comprises short non-native grassland or bare ground and lacks vegetation structure and diversity. As such, it is of low value to most native fauna but may support native and non-native fauna species with non-specific habitat requirements.

The highest fauna habitat values are associated with the **native bushland** habitat which occurs over a small portion of the site (6.02%). Although this habitat is disturbed it has value for fauna, particularly as it forms part of a larger area of intact native bushland.

5.1 Conservation significant fauna

Two fauna species of conservation significance were recorded in the site during the field survey and a further six fauna of conservation significance are considered to have potential to occur in the site.

Both Carnaby's cockatoo and forest red-tailed black cockatoo were directly or indirectly identified as occurring within the site. The site provides suitable foraging and roosting habitat for both of these species.

Apus pacificus (pacific swift) and *Falco peregrinus* (peregrine falcon) may opportunistically fly over or occur within the site as for short periods of time. However, it is considered unlikely that these species would be resident within the site.

Idiosoma sigillatum (Swan Coastal Plain shield-backed trapdoor spider), *Isododon fusciventer* (quenda), *Lerista lineata* (Perth slider) and *Neelaps calonotos* (black-striped snake) have the potential to occur within the site on the basis that it is located adjacent to and comprises part of a larger patch of native bushland. As such, these species may occasionally occur within the site. In particular, quenda are likely to occur in the site as the species has previously been recorded in Kensington Bushland Reserve (refer to **Table 4**). Further targeted surveys would be required to confirm if and to what extent these fauna species utilise the site.

Rainbow bee-eaters, which are listed as marine under the EPBC Act, reportedly occur within and utilise the batters along the northern boundary of the site for nesting (Emerge Associates 2020). The species occurs in south-western Australia from approximately September to April and breeding occurs between November and January. As the survey was undertaken outside of these time frames, the use of the site by this species could not be confirmed. However, the site provides suitable foraging and breeding habitat for this species.

Basic Fauna Assessment Kent Street Sand Pit



6 Conclusions

The majority of the site (93.98%) supports highly disturbed **parkland** habitat which provides limited value to native fauna and is likely to primarily be used by common and widespread native and non-native fauna with non-specific habitat requirements. The **native bushland** habitat occurs over the remaining 6.02% of the site and provides the highest value habitat.

A total of 14 native fauna species were recorded within the site, including two threatened fauna species: Carnaby's cockatoo (endangered) and forest red-tailed black cockatoo (vulnerable).

It is possible that a further six conservation significant species not recorded during the field survey may occur within the site. Pacific swift (MI) and peregrine falcon (OS) may occur occasionally for short periods. Swan Coastal Plain shield-backed trapdoor spider (P3), quenda (P4), Perth slider (P3) and black-striped snake (P3) may occasionally occur within the site due to it being adjacent to and part of a larger patch of native bushland (Kensington Bushland Reserve). In particular, quenda are considered likely to occur in the site, as the species has previously been recorded in Kensington Bushland Reserve. Targeted surveys would be required to confirm whether these species occur within the site.

Basic Fauna Assessment Kent Street Sand Pit



7 References

7.1 General references

AECOM 2012, Additional Detailed Site Investigation Kent Street Sand Pit

Alan Tingay and Associates 1998, A Strategic Plan for Perth's Greenways - Final Report. December 1998.

Department of Biodiversity, Conservation and Attractions (DBCA) 2017a, DBCA - Legislated Lands and Waters (DBCA-011).

Department of Biodiversity, Conservation and Attractions (DBCA) 2017b, Lands of Interest (DBCA-012).

Department of Biodiversity, Conservation and Attractions (DBCA) 2017c, Ramsar Sites (DBCA-010).

Department of Biodiversity, Conservation and Attractions (DBCA) 2018, Directory of Important Wetlands in Australia - Western Australia (DBCA-045).

Department of Biodiversity, Conservation and Attractions (DBCA) 2020, Geomorphic Wetlands, Swan Coastal Plain (DBCA-019).

Department of Environment and Conservation (DEC) 2012, Fauna profiles, Quenda Isoodon obesulus (Shaw, 1797), Perth.

Eco Logical Australia 2017, Kensington Bushland Management Plan, Version 2.

Emerge Associates 2020, Design Opportunities and Considerations Report - Kent Street Sand Pit, EP20-055(03)--001C TAA, Version C.

Emerge Associates 2021, Reconnaissance Flora and Vegetation Assessment - Kent Street Sand Pit, EP20-055(05)--005 ASF, Version 1.

Environment Australia 2000, Revision of the Interim Biogeographic Regionalisation for Australia (IBRA) and Development of Version 5.1 - Summary Report, Department of Environment and Heritage.

Environmental Protection Authority (EPA) 2020, Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment, Joondalup, Western Australia.

Government of WA 2000, Bush Forever - Volume 1: Policies, principles and processes, Perth.

Gozzard, J. 2011, Sea to scarp - geology, landscape, and land use planning in the southern Swan Coastal Plain, Geological Survey of Western Australia.

Hedde, E. M., Loneragan, O. W. and Havel, J. J. 1980, 'Vegetation Complexes of the Darling System Western Australia', in Department of Conservation and Environment (ed.), Atlas of Natural Resources Darling System Western Australia, Perth.

Johnstone, R. E. and Storr, G. M. 1998, Handbook of Western Australian Birds. Volume 1 - Non-Passerines (Emu to Dollarbird), Western Australian Museum, Perth.

Basic Fauna Assessment

Kent Street Sand Pit



Kendrick, G. W., Wyrwoll, K. H. and Szabo, B. J. 1991, Pliocene-Pleistocene coastal events and history along the western margin of Australia, *Quaternary Science Reviews*, 10: 419-439.

Purdie, B., Tille, P. and Schoknecht, N. 2004, Soil-landscape mapping in south-Western Australia: an overview of methodology and outputs. Resource Management Technical Report 280, State of Western Australia.

Seddon, G. 2004, *A Sense of Place: a response to an environment*, the Swan Coastal Plain Western Australia, Blooming Books, Melbourne.

Western Australian Local Government Association and Perth Biodiversity Project (WALGA and PBP) 2004, *Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region*, Perth.

Western Australian Museum (WAM) 2020, *WA Museum Checklist of the Terrestrial Vertebrate Fauna of Western Australia*, Perth, Western Australia.

Wetlands Advisory Committee 1977, *The status of reserves in System Six*, Environmental Protection Authority, Perth.

7.2 Online references

Bureau of Meteorology (BoM) 2021, *Climate Averages*, viewed 10 July 2021, <<http://www.bom.gov.au/climate/data/>>.

Department of Biodiversity, Conservation and Attractions (DBCA) 2021, *NatureMap*, viewed 8 July 2021 <<http://naturemap.dbca.wa.gov.au/>>.

Department of Agriculture, Water and the Environment (DAWE) 2021, *Protected Matters Search Tool*, viewed 8 July 2021 <<https://www.environment.gov.au/epbc/protected-matters-search-tool>>.

Department of Agriculture, Water and the Environment (DAWE) 2021, *Australian Biological Resources Study, Australian Faunal Directory*, <<https://biodiversity.org.au/afd/home?>>>.

West Australian Land Information Authority (WALIA) 2021, *Landgate Map Viewer*, viewed 8 July 2021, <<http://landgate.wa.gov.au>>.

Figures



Figure 1: Site Location

Figure 2: Soils and Topography

Figure 3: Environmental Features

Figure 4: Fauna Habitat



Figure 1: Site Location

Project: Basic Fauna Assessment
Kent Street Sand Pit
Client: Town of Victoria Park

Plan Number:
EP20-055(06)-F05
Drawn: GAR
Date: 02/07/2021
Checked: IMS
Approved: RAW
Date: 12/07/2021



0 50 100
Metres
Scale: 1:2,500@A4
GDA 1994 MGA Zone 50

emerge
ASSOCIATES

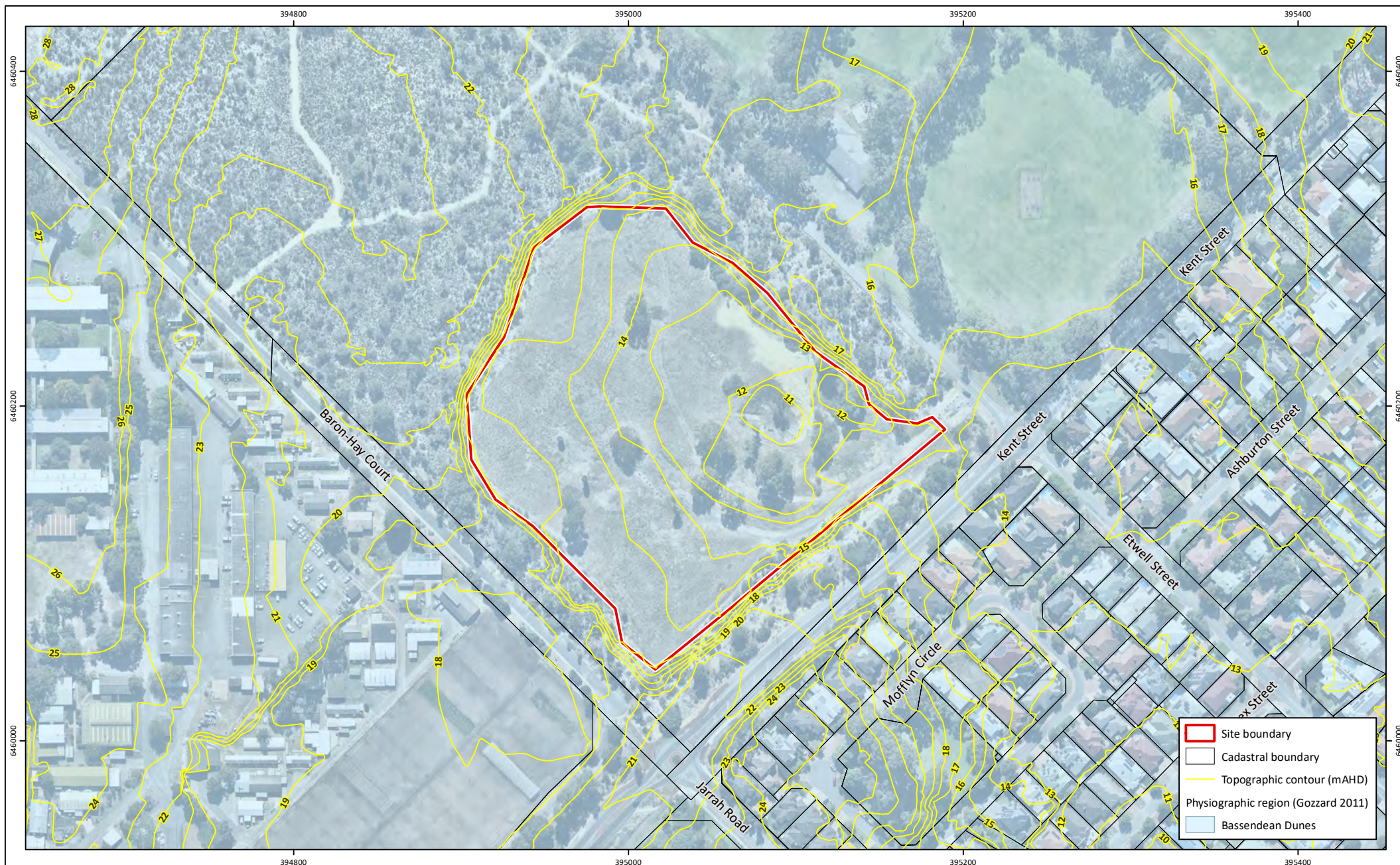


Figure 2: Soils and Topography

Project: Basic Fauna Assessment
Kent Street Sand Pit
Client: Town of Victoria Park

Plan Number:
EP20-055(06)--F06
Drawn: GAR
Date: 02/07/2021
Checked: IMS
Approved: RAW
Date: 12/07/2021



0 50 100
Metres
Scale: 1:3,000@A4
GDA 1994 MGA Zone 50

emerge
ASSOCIATES



Figure 3: Environmental Features

Project: Basic Fauna Assessment
Kent Street Sand Pit
Client: Town of Victoria Park

Plan Number:
EP20-055(06)-F07
Drawn: GAR
Date: 02/07/2021
Checked: IMS
Approved: RAW
Date: 12/07/2021



0 50 100
Metres
Scale: 1:3,000@A4
GDA 1994 MGA Zone 50

emerge
ASSOCIATES

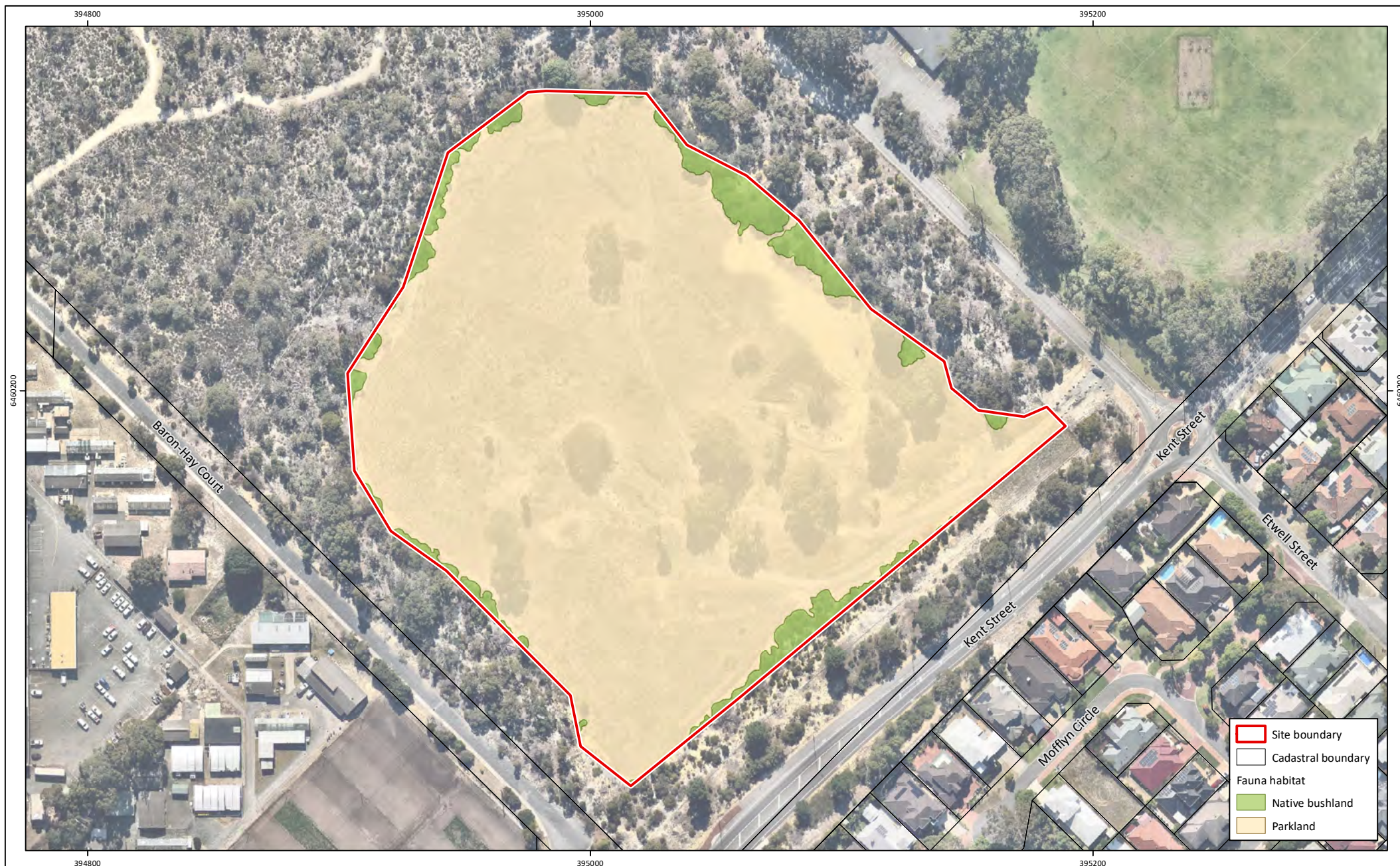


Figure 4: Fauna Habitat

Project: Basic Fauna Assessment
Kent Street Sand Pit
Client: Town of Victoria Park

Plan Number:
EP20-055(06)--F08
Drawn: GAR
Date: 02/07/2021
Checked: IMS
Approved: RAW
Date: 12/07/2021



0 40 80
Metres
Scale: 1:2,000@A4
GDA 1994 MGA Zone 50

emerge
ASSOCIATES

Appendix A

Additional Information



Additional Background Information

Conservation Significant Fauna

Threatened and priority fauna

Fauna species considered rare or under threat warrant special protection under Commonwealth and/or State legislation. At the Commonwealth level, fauna species can be listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as 'threatened', 'migratory' or 'marine' as described in **Table 1**.

Migratory species comprise birds recognised under international treaties including:

- *Japan Australia Migratory Bird Agreement 1981* (JAMBA)
- *China Australia Migratory Bird Agreement 1998* (CAMBA)
- *Republic of Korea-Australia Migratory Bird Agreement 2007* (ROKAMBA)
- *Bonn Convention 1979* (The Convention on the Conservation of Migratory Species of Wild Animals).

Fauna species listed as threatened and migratory are protected in Australia as 'matters of national environmental significance' (MNES) under the EPBC Act.

Table 1: Definitions of conservation significant fauna species pursuant to the EPBC Act

Conservation Code	Category
X	Threatened Fauna –Extinct There is no reasonable doubt that the last member of the species has died.
EW [#]	Threatened Fauna –Extinct in the Wild Taxa which are known only to survive in cultivation, captivity or as a naturalised population outside its past range, or taxa which have not been recorded in its known and/or expected habitat despite appropriate exhaustive surveys.
CR [#]	Threatened Fauna – Critically Endangered Taxa which are considered to be facing an extremely high risk of extinction in the wild.
EN [#]	Threatened Fauna – Endangered Taxa which are considered to be facing a very high risk of extinction in the wild.
VU [#]	Threatened Fauna – Vulnerable Taxa which are considered to be facing a high risk of extinction in the wild.
Migratory [#]	Migratory Fauna All migratory species that are: (i) native species; and (ii) from time to time included in the appendices to the Bonn Convention; and (b) all migratory species from time to time included in annexes established under JAMBA, CAMBA and ROKAMBA; and All native species from time to time identified in a list established under, or an instrument made under, an international agreement approved by the Minister.
Ma	Marine Fauna Species in the list established under s248 of the EPBC Act

[#]matters of national environmental significance (MNES) under the EPBC Act

Additional Background Information



In Western Australia, fauna taxa may be classed as ‘threatened’, ‘extinct’, or ‘specially protected’ under the *Biodiversity Conservation Act 2016* (BC Act), which is enforced by Department of Biodiversity Conservation and Attractions (DBCA) (DBCA 2019). The definitions of these categories are provided in **Table 2**.

Table 2: Definitions of specially protected fauna schedules under the BC Act (DBCA 2019)

Category	Conservation Code	Definition
Threatened	CR	Critically endangered Threatened species considered to be facing an extremely high risk of extinction in the wild in the immediate future.
	EN	Endangered Threatened species considered to be facing a very high risk of extinction in the wild in the near future.
	VU	Vulnerable Threatened species considered to be facing a high risk of extinction in the wild in the medium-term future.
Extinct	EX	Extinct Species where there is no reasonable doubt that the last member of the species has died.
	EW	Extinct in the wild Species that is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form. Note that no species are currently listed as EW.
Specially protected	MI	Migratory species Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth Includes birds that 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.
	CD	Species of special conservation interest (conservation dependent fauna) Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened.
	OS	Other specially protected species Fauna otherwise in need of special protection to ensure their conservation.

Additional Background Information

Fauna species that may be threatened or near threatened but lack sufficient information to be legislatively listed may be added to the DBCA's *Priority Fauna List* (DBCA 2018b). Species listed under priorities 1-3 comprise possible threatened species that do not meet survey criteria or are otherwise data deficient. Species listed under priority 4 are those 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 (DBCA 2019).

Priority fauna species are considered during State approval processes. Priority fauna categories and definitions are listed in **Table 3** (DBCA 2019).

Table 3: Definitions of priority fauna categories on DBCA's Priority Fauna List (DBCA 2019)

Conservation Code	Category
P1	Priority 1 – Poorly known Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
P2	Priority 2 – Poorly known Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
P3	Priority 3 – Poorly known Species that are known from several locations and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
P4	(a) Priority 4 – Rare species Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands. (b) Priority 4 – Near Threatened Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. (c) Priority 4 – Other Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Additional Background Information

Pest fauna

A number of legislative and policy documents exist in relation to pest fauna management at state and national levels. The *Biosecurity and Agriculture Management Act 2007* (BAM Act) is the principle legislation guiding pest fauna management in Western Australia and lists declared pest species.

Declared Pests

Part 2.3.23 of the BAM Act requires a person must not; “a) keep, breed or cultivate the declared pest; b) keep, breed or cultivate an animal, plant or other thing that is infected or infested with the declared pest; c) release into the environment the declared pest, or an animal, plant or other thing that is infected or infested with the declared pest; or d) intentionally infect or infest, or expose to infection or infestation, a plant, animal or other thing with a declared pest”.

Under the BAM Act, all declared pests are assigned a legal status, as described in **Table 4**. Species assigned to the ‘declared pest, prohibited - s12’ category are placed in one of three control categories, as described in **Table 5**.

The *Biosecurity and Agriculture Management Regulations 2013* specify keeping categories for species assigned to the ‘declared pest - s22(2)’ category, which relate to the purposes of which species can be kept, as well as the entities that can keep them. The categories are described in **Table 6**.

The Western Australian Organism List (WAOL) provides the status of organisms which have been categorised under the BAM Act (DAFWA 2016).

Table 4: Legal status of declared pest species listed under the BAM Act (DAFWA 2016)

Category	Description
Declared Pest Prohibited - s12	May only be imported and kept subject to permits. Permit conditions applicable to some species may only be appropriate or available to research organisations or similarly secure institutions.
Declared Pest s22(2)	Must satisfy any applicable import requirements when imported, and may be subject to an import permit if they are potential carriers of high-risk organisms. They may also be subject to control and keeping requirements once within Western Australia

Table 5: Control categories of declared pest species listed under the BAM Act (DAFWA 2016)

Category	Description
C1	Exclusion Not established in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State.
C2	Eradication Present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still a possibility.
C3	Management Established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest.

Additional Background Information

*Table 6: Keeping categories of declared pest species listed under the BAM Act (DAFWA 2016)*

Category	Description
Prohibited	Can only be kept under a permit for public display and education purposes, and/or genuine scientific research, by entities approved by the state authority.
Exempt	No permit or conditions are required for keeping.
Restricted	Organisms which, relative to other species, have a low risk of becoming a problem for the environment, primary industry or public safety and can be kept under a permit by private individuals.

Additional Background Information



Wetland Habitat

Geomorphic wetland types

On the Swan Coastal Plain DBCA (2017) have used the geomorphic wetland classification system developed by Semeniuk (1987) and Semeniuk and Semeniuk (1995) to classify wetlands based on the landform shape and water permanence (hydro-period) as outlined in **Table 10**. DBCA maintains a dataset of the *Geomorphic Wetlands of the Swan Coastal Plain* (DBCA 2018a).

Table 7: *Geomorphic Wetlands of the Swan Coastal Plain classification categories (DBCA 2017)*

Level of inundation	Geomorphology			
	Basin	Flat	Channel	Slope
Permanently inundated	Lake	-	River	-
Seasonally inundated	Sumpland	Floodplain	Creek	-
Seasonally waterlogged	Dampland	Palusplain	-	Paluslope

Additional Background Information



Literature

The main literature used for identifying fauna and fauna habitats is listed in **Table 7** below.

Table 8: Standard literature used for identifying fauna species and habitats.

Conservation Code	Category
Birds	Johnstone and Storr (1998b), Johnstone and Storr (1998a), Pizzev and Knight (2012), Slater <i>et al.</i> (2003)
Mammals	Menkhorst and Knight (2011), Triggs (2003)
Amphibia	Tyler and Doughty (2009), Bush <i>et al.</i> (2002)
Reptiles	Bush <i>et al.</i> (2002)

Additional Background Information



References

General references

Bush, B., Maryan, B., Browne-Cooper, R. and Robinson, D. 2002, *Reptiles and Frogs of the Perth Region*, UWA Press, Crawley.

Department of Biodiversity, Conservation and Attractions (DBCA) 2017, *A methodology for the evaluation of wetlands on the Swan Coastal Plain*, draft prepared by the Wetlands Section of the Department of Biodiversity, Conservation and Attractions and the Urban Water Branch of the Department of Water and Environmental Regulation, Perth.

Department of Biodiversity, Conservation and Attractions (DBCA) 2018a, *Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)*.

Department of Biodiversity, Conservation and Attractions (DBCA) 2018b, *Threatened and Priority Fauna List 15 February 2018*, Perth.

Department of Biodiversity Conservation and Attractions (DBCA) 2019, *Conservation Codes for Western Australian Flora and Fauna - last updated 3 January 2019*.

Johnstone, R. E. and Storr, G. M. 1998a, *Handbook of Western Australian Birds. Volume 2 - Passerines (Blue-Winged Pitta to Goldfinch)*, Western Australian Museum, Perth.

Johnstone, R. E. and Storr, T. 1998b, *Handbook of Western Australian Birds: Volume 1 - Non-passerines (Emu to Dollarbird)*, Western Australian Museum, Perth.

Menkhorst, P. and Knight, F. 2011, *Field guide to the mammals of Australia (Third edition)*, Oxford University Press Australia & New Zealand, Melbourne, VIC, Australia.

Pizzey, G. and Knight, F. 2012, *The Fieldguide to the Birds of Australia*, Harper Collins Publishers, Sydney, Australia.

Semeniuk, C. A. 1987, *Wetlands of the Darling System - a geomorphic approach to habitat classification*, Journal of the Royal Society of Western Australia, 69: 95-112.

Semeniuk, C. A. and Semeniuk, V. 1995, *A Geomorphic Approach to Global Classification for Inland Wetlands*, Vegetatio, 118(1/2): 103-124.

Slater, P., Slater, P. and Slater, R. 2003, *The Slater Field Guide to Australian Birds*, Reed New Holland, Australia.

Triggs, B. 2003, *Tracks, Scats and Other Traces A Field Guide to Australian Mammals*, Oxford University Press Australia, Melbourne, Victoria.

Tyler, M. J. and Doughty, P. 2009, *Field Guide to Frogs of Western Australia*, Western Australian Museum, Perth, Western Australia.

Appendix B

Database Search Results



NatureMap Species Report

Created By Guest user on 08/07/2021

Kingdom Animalia
Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 115° 53' 20" E, 31° 59' 22" S
Buffer 10km
Group By Conservation Status

Conservation Status	Species	Records
Non-conservation taxon	704	112008
Other specially protected fauna	4	70
Priority 2	3	4
Priority 3	7	185
Priority 4	9	834
Protected under international agreement	25	3803
Rare or likely to become extinct	29	5527
TOTAL	781	122431

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Rare or likely to become extinct				
1.	24506 <i>Anous tenuirostris</i> subsp. <i>melanops</i> (Australian Lesser Noddy)		T	
2.	24209 <i>Arctocephalus tropicalis</i> (Subantarctic fur-seal)		T	
3.	24345 <i>Botaurus poiciloptilus</i> (Australasian Bittern)		T	
4.	24784 <i>Calidris ferruginea</i> (Curlew Sandpiper)		T	
5.	24790 <i>Calidris tenuirostris</i> (Great Knot)		T	
6.	24731 <i>Calyptrorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)		T	
7.	24733 <i>Calyptrorhynchus baudinii</i> (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo)		T	
8.	24734 <i>Calyptrorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
9.	48400 <i>Calyptrorhynchus</i> sp. (white-tailed black cockatoo)		T	
10.	25575 <i>Charadrius leschenaultii</i> (Greater Sand Plover)		T	
11.	25576 <i>Charadrius mongolus</i> (Lesser Sand Plover)		T	
12.	25336 <i>Chelonia mydas</i> (Green Turtle)		T	
13.	24440 <i>Dasyornis longirostris</i> (Western Bristlebird)		T	
14.	24092 <i>Dasyurus geoffroyi</i> (Chuditch, Western Quoll)		T	
15.	24093 <i>Dasyurus hallucatus</i> (Northern Quoll)		T	
16.	25346 <i>Dermochelys coriacea</i> (Leatherback Turtle)		T	
17.	24473 <i>Falco hypoleucos</i> (Grey Falcon)		T	
18.	33983 <i>Leioproctus douglasiellus</i> (a short-tongued bee)		T	
19.	24557 <i>Leipoa ocellata</i> (Malleefowl)		T	
20.	24168 <i>Macrotis lagotis</i> (Bilby, Dalgyte, Ninu)		T	
21.	24146 <i>Myrmecobius fasciatus</i> (Numbat, Walpurti)		T	
22.	33984 <i>Neopasiphae simplicior</i> (a short-tongued bee)		T	
23.	24210 <i>Neophoca cinerea</i> (Australian Sea-lion)		T	
24.	24798 <i>Numenius madagascariensis</i> (Eastern Curlew)		T	
25.	24462 <i>Phoebastria fusca</i> (Sooty Albatross)		T	
26.	25345 <i>Pseudemys umbrina</i> (Western Swamp Tortoise, Western Swamp Turtle)		T	
27.	24145 <i>Setonix brachyurus</i> (Quokka)		T	
28.	48595 <i>Sternula nereis</i> subsp. <i>nereis</i> (Fairy Tern)		T	
29.	34113 <i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
Protected under international agreement				
30.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
31.	25554 <i>Apus pacificus</i> (Fork-tailed Swift, Pacific Swift)		IA	
32.	25736 <i>Arenaria interpres</i> (Ruddy Turnstone)		IA	
33.	24779 <i>Calidris acuminata</i> (Sharp-tailed Sandpiper)		IA	
34.	24780 <i>Calidris alba</i> (Sanderling)		IA	
35.	25738 <i>Calidris canutus</i> (Red Knot, knot)		IA	
36.	24786 <i>Calidris melanotos</i> (Pectoral Sandpiper)		IA	

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
37.	24788	<i>Calidris ruficollis</i> (Red-necked Stint)		IA	
38.	24789	<i>Calidris subminuta</i> (Long-toed Stint)		IA	
39.	48587	<i>Hydroprogne caspia</i> (Caspian Tern)		IA	
40.	30932	<i>Limosa lapponica</i> (Bar-tailed Godwit)		IA	
41.	25741	<i>Limosa limosa</i> (Black-tailed Godwit)		IA	
42.	24797	<i>Limosa limosa</i> subsp. <i>melanuiroides</i> (Black-tailed Godwit)		IA	
43.	24690	<i>Macronectes giganteus</i> (Southern Giant Petrel)		IA	
44.	25742	<i>Numenius phaeopus</i> (Whimbrel)		IA	
45.	48591	<i>Pandion cristatus</i> (Osprey, Eastern Osprey)		IA	
46.	24843	<i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
47.	24382	<i>Pluvialis fulva</i> (Pacific Golden Plover)		IA	
48.	24383	<i>Pluvialis squatarola</i> (Grey Plover)		IA	
49.	24716	<i>Puffinus pacificus</i> (Wedge-tailed Shearwater)		IA	
50.	48597	<i>Thalasseus bergii</i> (Crested Tern)		IA	
51.	24806	<i>Tringa glareola</i> (Wood Sandpiper)		IA	
52.	24808	<i>Tringa nebularia</i> (Common Greenshank, greenshank)		IA	
53.	24809	<i>Tringa stagnatilis</i> (Marsh Sandpiper, little greenshank)		IA	
54.	41351	<i>Xenus cinereus</i> (Terek Sandpiper)		IA	

Other specially protected fauna

55.	24724	<i>Cacatua pastinator</i> subsp. <i>pastinator</i> (Muir's Corella, Muir's Corella (Western Corella SW WA))		S	
56.	25624	<i>Falco peregrinus</i> (Peregrine Falcon)		S	
57.	24475	<i>Falco peregrinus</i> subsp. <i>macropus</i> (Australian Peregrine Falcon)		S	
58.	48070	<i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> (South-western Brush-tailed Phascogale, Wambenger)		S	

Priority 2

59.	48581	<i>Glossurocolletes bilobatus</i> (a short-tongued bee (southwest), short-tongued bee)		P2	
60.	24347	<i>Ixobrychus flavicollis</i> subsp. <i>australis</i> (Black Bittern (southwest subpop.), Australian Black Bittern)		P2	
61.	34039	<i>Phycodurus eques</i> (Leafy Sea Dragon)		P2	

Priority 3

62.	48574	<i>Australotomurus morbidus</i> (cemetery springtail, Guildford springtail)		P3	
63.	41641	<i>Ctenotus ora</i> (Coastal Plains Skink)		P3	
64.	48579	<i>Euoplos inornatus</i> (inornate trapdoor spider (northern Jarrah Forest))		P3	
65.	48935	<i>Idiosoma sigillatum</i> (Swan Coastal Plain shield-backed trapdoor spider)		P3	
66.	25147	<i>Lerista lineata</i> (Perth Slider, Lined Skink)		P3	
67.	25249	<i>Neelaps calonotos</i> (Black-striped Snake, black-striped burrowing snake)		P3	
68.	24855	<i>Tyto novaehollandiae</i> subsp. <i>novaehollandiae</i> (Masked Owl (southwest))		P3	

Priority 4

69.	25035	<i>Ctenotus delli</i> (Dell's skink, Darling Range southwest Ctenotus)		P4	
70.	24215	<i>Hydromys chrysogaster</i> (Water-rat, Rakali)		P4	
71.	48588	<i>Isaodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4	
72.	47975	<i>Ixobrychus dubius</i> (Australian Little Bittern)		P4	
73.	24328	<i>Oxyura australis</i> (Blue-billed Duck)		P4	
74.	24663	<i>Phaethon rubricauda</i> (Red-tailed Tropicbird)		P4	
75.	33992	<i>Synemon gratiosa</i> (Graceful Sunmoth)		P4	
76.	48135	<i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)		P4	
77.	24803	<i>Tringa brevipes</i> (Grey-tailed Tattler)		P4	

Non-conservation taxon

78.		? ?			
79.	24559	<i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)			
80.	24260	<i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
81.	24261	<i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
82.	24262	<i>Acanthiza inornata</i> (Western Thornbill)			
83.	24265	<i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)			
84.		<i>Acanthopagrus butcheri</i>			
85.	24560	<i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
86.	25535	<i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
87.	24281	<i>Accipiter cirrocephalus</i> subsp. <i>cirrocephalus</i> (Collared Sparrowhawk)			
88.	25536	<i>Accipiter fasciatus</i> (Brown Goshawk)			
89.	24283	<i>Accipiter fasciatus</i> subsp. <i>didimus</i> (Brown Goshawk)			
90.	24282	<i>Accipiter fasciatus</i> subsp. <i>fasciatus</i> (Brown Goshawk)			
91.		<i>Acentrogobius bifrenatus</i>			
92.		<i>Acerella falcipes</i>			
93.		<i>Achoerodus gouldii</i>			
94.	42368	<i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
95.	25755	<i>Acrocephalus australis</i> (Australian Reed Warbler)			
96.	25544	<i>Aegotheles cristatus</i> (Australian Owlet-nightjar)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
97.	24301	<i>Aegotheles cristatus</i> subsp. <i>cristatus</i> (Australian Owlet-nightjar)			
98.		<i>Afurcagobius suppositus</i>			
99.		<i>Agapornis</i> sp.			Y
100.		<i>Akamptogonus novarae</i>			
101.		<i>Aldrichetta forsteri</i>			
102.		<i>Allothereua maculata</i>			
103.		<i>Amblyomma albolimbatum</i>			
104.		<i>Amblyomma triguttatum</i>			
105.		<i>Ammotretis elongatus</i>			
106.		<i>Aname mainae</i>			
107.		<i>Aname tepperi</i>			
108.	24310	<i>Anas castanea</i> (Chestnut Teal)			
109.	24311	<i>Anas clypeata</i> (Northern Shoveler)			Y
110.	24312	<i>Anas gracilis</i> (Grey Teal)			
111.	24313	<i>Anas platyrhynchos</i> (Mallard)			
112.		<i>Anas platyrhynchos</i> subsp. <i>domesticus</i>			
113.	24315	<i>Anas rhynchotis</i> (Australasian Shoveler)			
114.	24316	<i>Anas superciliosa</i> (Pacific Black Duck)			
115.		<i>Anas superciliosa</i> subsp. <i>x platyrhynchos</i>			Y
116.		<i>Anguilla australis</i>			
117.	47414	<i>Anhinga novaehollandiae</i> (Australasian Darter)			
118.	44629	<i>Anilius australis</i>			
119.		<i>Anisops hyperion</i>			
120.		<i>Anoplocapros lenticularis</i>			
121.		<i>Anser anser</i>			
122.	25241	<i>Antaresia stimsoni</i> subsp. <i>stimsoni</i> (Stimson's Python)			
123.	24561	<i>Anthochaera carunculata</i> (Red Wattlebird)			
124.	24562	<i>Anthochaera lunulata</i> (Western Little Wattlebird)			
125.	25670	<i>Anthus australis</i> (Australian Pipit)			
126.	24599	<i>Anthus australis</i> subsp. <i>australis</i> (Australian Pipit)			
127.		<i>Apogon rueppellii</i>			
128.		<i>Apogon victoriae</i>			
129.	24990	<i>Aprasia pulchella</i> (Granite Worm-lizard)			
130.	24991	<i>Aprasia repens</i> (Sand-plain Worm-lizard)			
131.		<i>Aptychotrema vincentiana</i>			
132.	24285	<i>Aquila audax</i> (Wedge-tailed Eagle)			
133.		<i>Ara ararauna</i>			Y
134.		<i>Aracana aurita</i>			
135.		<i>Arachnura higginsii</i>			
136.		<i>Araneus cyphoxis</i>			
137.		<i>Araneus eburneiventris</i>			
138.		<i>Araneus eburnus</i>			
139.		<i>Araneus senicaudatus</i>			
140.		<i>Araneus talipedatus</i>			
141.	25557	<i>Ardea garzetta</i> (Little Egret)			
142.	24337	<i>Ardea garzetta</i> subsp. <i>nigripes</i> (Little Egret)			
143.	25558	<i>Ardea ibis</i> (Cattle Egret)			
144.	25559	<i>Ardea intermedia</i> (Intermediate Egret)			
145.	41324	<i>Ardea modesta</i> (great egret, white egret)			
146.	24340	<i>Ardea novaehollandiae</i> (White-faced Heron)			
147.	24341	<i>Ardea pacifica</i> (White-necked Heron)			
148.	25560	<i>Ardea sacra</i> (Eastern Reef Egret, Eastern Reef Heron)			
149.	24610	<i>Ardeotis australis</i> (Australian Bustard)			
150.		<i>Arenigobius bifrenatus</i>			
151.		<i>Argiope protensa</i>			
152.		<i>Argiope trifasciata</i>			
153.		<i>Argoctenus bidentatus</i>			
154.		<i>Argusianus argus</i>			Y
155.		<i>Argyrosomus japonicus</i>			
156.		<i>Arothron hispidus</i>			
157.		<i>Arripis georgiana</i>			
158.		<i>Arripis truttacea</i>			
159.	25566	<i>Artamus cinereus</i> (Black-faced Woodswallow)			
160.	24352	<i>Artamus cinereus</i> subsp. <i>melanops</i> (Black-faced Woodswallow)			
161.	24353	<i>Artamus cyanopterus</i> (Dusky Woodswallow)			
162.	24356	<i>Artamus personatus</i> (Masked Woodswallow)			
163.		<i>Artema atlanta</i>			
164.		<i>Artoria linnaei</i>			
165.		<i>Artoria taeniifera</i>			
166.		<i>Artoriopsis eccentrica</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
167.	<i>Artoriopsis expolita</i>			
168.	<i>Artoriopsis joergi</i>			
169.	<i>Atherinomorus lacunosus</i>			
170.	<i>Atherinomorus vaigiensis</i>			
171.	<i>Atherinosoma elongata</i>			
172.	<i>Atherinosoma presbyteroides</i>			
173.	<i>Atherinosoma wallacei</i>			
174.	<i>Aureocrypta lugubris</i>			
175.	<i>Austracantha minax</i>			
176.	<i>Australomimetes aurioculatus</i>			
177.	<i>Austrammo harveyi</i>			
178.	47713 <i>Austronomus australis</i> (White-striped Free-tailed Bat)			
179.	24318 <i>Aythya australis</i> (Hardhead)			
180.	<i>Backobourkia heroine</i>			
181.	<i>Badumna insignis</i>			
182.	<i>Ballarra longipalpus</i>			
183.	<i>Barnardius zonarius</i>			
184.	<i>Billima attrita</i>			Y
185.	24319 <i>Biziura lobata</i> (Musk Duck)			
186.	24251 <i>Bos taurus</i> (European Cattle)	Y		
187.	<i>Bostockia porosa</i>			
188.	42380 <i>Brachyurophis fasciolatus</i> subsp. <i>fasciolatus</i> (Narrow-banded Shovel-nosed Snake)			
189.	42381 <i>Brachyurophis semifasciatus</i> (Southern Shovel-nosed Snake)			
190.	24359 <i>Burhinus grallarius</i> (Bush Stone-curlew)			
191.	25713 <i>Cacatua galerita</i> (Sulphur-crested Cockatoo)			
192.	24721 <i>Cacatua galerita</i> subsp. <i>galerita</i> (Sulphur-crested Cockatoo)	Y		
193.	25714 <i>Cacatua pastinator</i> (Western Long-billed Corella)			
194.	25715 <i>Cacatua roseicapilla</i> (Galah)			
195.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
196.	24727 <i>Cacatua sanguinea</i> subsp. <i>westralensis</i> (Little Corella)			
197.	24729 <i>Cacatua tenuirostris</i> (Eastern Long-billed Corella)	Y		
198.	25598 <i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
199.	24427 <i>Cacomantis flabelliformis</i> subsp. <i>flabelliformis</i> (Fan-tailed Cuckoo)			
200.	42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)			
201.	<i>Calidris</i> sp.			
202.	<i>Callogobius mucosus</i>			
203.	25717 <i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
204.	<i>Cantherhines</i> sp.			
205.	<i>Carassius auratus</i>			
206.	<i>Carcharhinus leucas</i>			
207.	<i>Carcharhinus obscurus</i>			
208.	<i>Carcharhinus</i> sp.			
209.	25625 <i>Carduelis carduelis</i> (Goldfinch, European Goldfinch)	Y		
210.	24480 <i>Carduelis carduelis</i> subsp. <i>britannica</i> (Goldfinch)	Y		
211.	<i>Ceinidae</i> sp.			
212.	<i>Celaenia excavata</i>			
213.	<i>Ceratopogonidae</i> sp.			
214.	24086 <i>Cercartetus concinnus</i> (Western Pygmy-possum, Mundarda)			
215.	<i>Cercophonius granulosus</i>			
216.	<i>Cercophonius sulcatus</i>			
217.	<i>Chaetodermis penicilligera</i>			
218.	24186 <i>Chalinolobus gouldii</i> (Gould's Wattled Bat)			
219.	24187 <i>Chalinolobus morio</i> (Chocolate Wattled Bat)			
220.	24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)			
221.	<i>Cheilodactylus gibbosus</i>			
222.	<i>Chelidonichthys kumu</i>			
223.	<i>Chelmonops curiosus</i>			
224.	43380 <i>Chelodina colliei</i> (South-western Snake-necked Turtle)			
225.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
226.	47909 <i>Cheramoeca leucosterna</i> (White-backed Swallow)			
227.	33939 <i>Cherax cainii</i> (Marron)			
228.	<i>Cherax destructor</i>			
229.	<i>Cherax quinquecarinatus</i>			
230.	<i>Chironominae</i> sp.			
231.	24980 <i>Christinus marmoratus</i> (Marbled Gecko)			
232.	<i>Chroicocephalus novaehollandiae</i>			
233.	24431 <i>Chrysococcyx basalis</i> (Horsfield's Bronze Cuckoo)			
234.	25601 <i>Chrysococcyx lucidus</i> (Shining Bronze Cuckoo)			
235.	24432 <i>Chrysococcyx lucidus</i> subsp. <i>plagosus</i> (Shining Bronze Cuckoo)			
236.	24288 <i>Circus approximans</i> (Swamp Harrier)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
237.	24289 <i>Circus assimilis</i> (Spotted Harrier)			
238.	<i>Cirrhimuraena calamus</i>			
239.	24774 <i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
240.	<i>Cleidopus gloriamaris</i>			
241.	<i>Cnidoglanis macrocephalus</i>			
242.	<i>Collocalia esculenta</i>			
243.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
244.	24613 <i>Colluricincla harmonica</i> subsp. <i>rufiventris</i> (Grey Shrike-thrush)			
245.	24399 <i>Columba livia</i> (Domestic Pigeon)	Y		
246.	<i>Contusus brevicaudus</i>			
247.	<i>Copidognathus cooki</i>			Y
248.	24361 <i>Coracina maxima</i> (Ground Cuckoo-shrike)			
249.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
250.	24362 <i>Coracina novaehollandiae</i> subsp. <i>novaehollandiae</i> (Black-faced Cuckoo-shrike)			
251.	<i>Coris auricularis</i>			
252.	<i>Cormocephalus aurantipes</i>			
253.	<i>Cormocephalus novaehollandiae</i>			
254.	<i>Cormocephalus rubriceps</i>			
255.	<i>Cormocephalus strigosus</i>			
256.	<i>Cormocephalus turneri</i>			
257.	24416 <i>Corvus bennetti</i> (Little Crow)			
258.	25592 <i>Corvus coronoides</i> (Australian Raven)			
259.	24417 <i>Corvus coronoides</i> subsp. <i>perplexus</i> (Australian Raven)			
260.	24419 <i>Corvus splendens</i> (House Crow)			
261.	24671 <i>Coturnix pectoralis</i> (Stubble Quail)			
262.	24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird)			
263.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
264.	24422 <i>Cracticus tibicen</i> subsp. <i>dorsalis</i> (White-backed Magpie)			
265.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
266.	<i>Craterocephalus mugiloides</i>			
267.	25398 <i>Crinia georgiana</i> (Quacking Frog)			
268.	25399 <i>Crinia glauerti</i> (Clicking Frog)			
269.	25400 <i>Crinia insignifera</i> (Squelching Froglet)			
270.	25401 <i>Crinia pseudinsignifera</i> (Bleating Froglet)			
271.	<i>Cristiceps australis</i>			
272.	<i>Crustulina bicrucata</i>			
273.	30893 <i>Cryptoblepharus buchananii</i>			
274.	25020 <i>Cryptoblepharus plagiocephalus</i>			
275.	<i>Cryptoerithus quobba</i>			
276.	30899 <i>Ctenophorus adelaidensis</i> (Southern Heath Dragon, Western Heath Dragon)			
277.	25027 <i>Ctenotus australis</i>			
278.	25039 <i>Ctenotus fallens</i>			
279.	25040 <i>Ctenotus gemmula</i> (Jewelled South-west Ctenotus (Swan Coastal Plain subpop P3), skink)			
280.	25047 <i>Ctenotus impar</i>			
281.	25049 <i>Ctenotus labillardieri</i>			
282.	25087 <i>Cyclodomorphus celatus</i> (Western Slender Blue-tongue)			
283.	<i>Cyclosa trilobata</i>			
284.	24322 <i>Cygnus atratus</i> (Black Swan)			
285.	24323 <i>Cygnus olor</i> (Mute Swan)	Y		
286.	<i>Cynoglossus maculipinnis</i>			
287.	<i>Cypselurus</i> sp.			
288.	30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
289.	30902 <i>Dacelo novaeguineae</i> subsp. <i>novaeguineae</i> (Laughing Kookaburra)	Y		
290.	<i>Dactylopus dactylopus</i>			
291.	25673 <i>Daphoenositta chrysoptera</i> (Varied Sittella)			
292.	24606 <i>Daphoenositta chrysoptera</i> subsp. <i>pileata</i> (Varied Sittella, Black-capped Sittella)			
293.	<i>Deinopis unicolor</i>			Y
294.	<i>Delena cancerides</i>			
295.	25766 <i>Delma fraseri</i> (Fraser's Legless Lizard)			
296.	24999 <i>Delma grayii</i>			
297.	25296 <i>Demansia psammophis</i> subsp. <i>reticulata</i> (Yellow-faced Whipsnake)			
298.	25325 <i>Dendrelaphis punctulata</i> (Green Tree Snake)			
299.	25607 <i>Dicaeum hirundinaceum</i> (Mistletoebird)			
300.	<i>Dingosa murata</i>			
301.	<i>Dingosa serrata</i>			
302.	<i>Dinocambala ingens</i>			
303.	<i>Diodon nichthemerus</i>			
304.	24929 <i>Diplodactylus granariensis</i> subsp. <i>granariensis</i>			
305.	44654 <i>Diplodactylus lateroides</i> (Speckled Stone Gecko)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
306.	24939	<i>Diplodactylus polyophthalmus</i>			
307.		<i>Dipulus caecus</i>			
308.	24470	<i>Dromaius novaehollandiae</i> (Emu)			
309.		<i>Dytiscidae</i> sp.			
310.		<i>Echeneis naucrates</i>			
311.	25251	<i>Echiopsis curta</i> (Bardick)			
312.		<i>Edelia vittata</i>			
313.	25096	<i>Egernia kingii</i> (King's Skink)			
314.	25100	<i>Egernia napoleonis</i>			
315.		<i>Egretta garzetta</i>			
316.		<i>Egretta novaehollandiae</i>			
317.		<i>Elanus axillaris</i>			
318.	25540	<i>Elanus caeruleus</i> (Black-shouldered Kite)			
319.	24290	<i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite)			
320.	25250	<i>Elapognathus coronatus</i> (Crowned Snake)			
321.		<i>Elops hawaiiensis</i>			
322.	47937	<i>Elseyonis melanops</i> (Black-fronted Dotterel)			
323.		<i>Engraulis australis</i>			
324.		<i>Enoplosus armatus</i>			
325.		<i>Eodelena lapidicola</i>			
326.		<i>Eolophus roseicapillus</i>			
327.	24651	<i>Eopsaltria australis</i> subsp. <i>griseogularis</i> (Western Yellow Robin)			
328.		<i>Epinephelides armatus</i>			
329.	24567	<i>Epthianura albifrons</i> (White-fronted Chat)			
330.	24258	<i>Equus caballus</i> (Horse)	Y		
331.		<i>Eriophora biapicata</i>			
332.	24379	<i>Erythronyctes cinctus</i> (Red-kneed Dotterel)			
333.		<i>Ethmostigmus rubripes</i>			
334.	24818	<i>Eudyptula minor</i> subsp. <i>novaehollandiae</i> (Little Penguin)			
335.		<i>Eulimnadia</i> sp.			
336.		<i>Eupograptus kottae</i>			
337.	24368	<i>Eurostopodus argus</i> (Spotted Nightjar)			
338.	25591	<i>Eurystomus orientalis</i> (Dollarbird)			
339.		<i>Eurytion incisunguis</i>			Y
340.	25621	<i>Falco berigora</i> (Brown Falcon)			
341.	24471	<i>Falco berigora</i> subsp. <i>berigora</i> (Brown Falcon)			
342.	25622	<i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
343.	24472	<i>Falco cenchroides</i> subsp. <i>cenchrus</i> (Australian Kestrel, Nankeen Kestrel)			
344.	25623	<i>Falco longipennis</i> (Australian Hobby)			
345.	24474	<i>Falco longipennis</i> subsp. <i>longipennis</i> (Australian Hobby)			
346.		<i>Favonigobius lateralis</i>			
347.	24041	<i>Felis catus</i> (Cat)	Y		
348.		<i>Filicampus tigris</i>			
349.		<i>Fringilla coelebs</i>			Y
350.	25727	<i>Fulica atra</i> (Eurasian Coot)			
351.	24761	<i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
352.	30916	<i>Funambulus pennanti</i> (Indian Palm Squirrel)	Y		
353.		<i>Galaxias maculatus</i>			
354.	34028	<i>Galaxias occidentalis</i> (Western Minnow)			
355.		<i>Gallicolumba jobiensis</i>			Y
356.	25729	<i>Gallinula tenebrosa</i> (Dusky Moorhen)			
357.	24763	<i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
358.	25730	<i>Gallirallus philippensis</i> (Buff-banded Rail)			
359.	24765	<i>Gallirallus philippensis</i> subsp. <i>mellori</i> (Buff-banded Rail)			
360.		<i>Gallus gallus</i>			
361.		<i>Gambusia affinis</i>			
362.	42314	<i>Gavialis virescens</i> (Singing Honeyeater)			
363.		<i>Gea theridioides</i>			
364.	24959	<i>Gehyra variegata</i>			
365.		<i>Geogarypus taylori</i>			
366.	24401	<i>Geopelia cuneata</i> (Diamond Dove)			
367.		<i>Gerres subfasciatus</i>			
368.	25530	<i>Gerygone fusca</i> (Western Gerygone)			
369.	24271	<i>Gerygone fusca</i> subsp. <i>fusca</i> (Western Gerygone)			
370.		<i>Girella zebra</i>			
371.	30918	<i>Glossopsitta concinna</i> (Musk Lorikeet)	Y		
372.	47962	<i>Glyciphila melanops</i> (Tawny-crowned Honeyeater)			
373.		<i>Gobiomorphus coxii</i>			
374.		<i>Gonorynchus greyi</i>			
375.		<i>Gracula religiosa</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
376.	24443	<i>Grallina cyanoleuca</i> (Magpie-lark)			
377.		<i>Griopterygidae</i> sp.			
378.		<i>Gymnapistes marmoratus</i>			
379.		<i>Gymnothorax richardsoni</i>			
380.		<i>Gymnothorax woodwardi</i>			
381.	25627	<i>Haematopus fuliginosus</i> (Sooty Oystercatcher)			
382.	24487	<i>Haematopus longirostris</i> (Pied Oystercatcher)			
383.	24293	<i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)			
384.	24295	<i>Haliastur sphenurus</i> (Whistling Kite)			
385.	24689	<i>Halobaena caerulea</i> (Blue Petrel)			
386.		<i>Hasarius adansoni</i>			
387.		<i>Hebridae</i> sp.			
388.	25410	<i>Heleioporus eyrei</i> (Moaning Frog)			
389.	25412	<i>Heleioporus psammophilus</i> (Sand Frog)			
390.		<i>Hemicorduliidae</i> sp.			
391.	25232	<i>Hemidactylus frenatus</i> (Asian House Gecko)	Y		
392.	25115	<i>Hemiergis initialis</i> subsp. <i>initialis</i>			
393.	25475	<i>Hemiergis peronii</i>			
394.	25119	<i>Hemiergis quadrilineata</i>			
395.		<i>Henicops dentatus</i>			
396.	24961	<i>Heteronotia binoei</i> (Bynoe's Gecko)			
397.		<i>Heurodes turritus</i>			
398.	47965	<i>Hieraaetus morphnoides</i> (Little Eagle)			
399.	25734	<i>Himantopus himantopus</i> (Black-winged Stilt)			
400.	24775	<i>Himantopus himantopus</i> subsp. <i>leucocephalus</i> (Black-winged Stilt)			
401.		<i>Hippocampus elongatus</i>			
402.		<i>Hippocampus</i> sp.			
403.	24491	<i>Hirundo neoxena</i> (Welcome Swallow)			
404.		<i>Histrion histrio</i>			
405.		<i>Hogna crispipes</i>			
406.		<i>Hogna immansueta</i>			
407.		<i>Holasteron perth</i>			
408.		<i>Holasteron wamuseum</i>			Y
409.		<i>Holconia insignis</i>			Y
410.		<i>Holconia westralia</i>			
411.		<i>Holocnemus pluchei</i>			
412.		<i>Holoplatys dejongi</i>			
413.		<i>Hydrophilidae</i> sp.			
414.	34001	<i>Hylacola cauta</i> subsp. <i>whitlocki</i> (Shy Groundwren)			
415.		<i>Hyperlophus vittatus</i>			
416.		<i>Hypoblemum</i> sp.			Y
417.		<i>Hyporhamphus regularis</i>			
418.		<i>Idiomata blackwalli</i>			
419.		<i>Idiosoma hirsutum</i>			Y
420.		<i>Isometroides vescu</i>			
421.		<i>Isopeda leishmanni</i>			
422.		<i>Isopedella cana</i>			
423.		<i>Isopedella tindalei</i>			
424.		<i>Ixodes tasmani</i>			Y
425.		<i>Kangarosa ludwigi</i>			
426.		<i>Kangarosa properipes</i>			
427.		<i>Karaops jarrit</i>			
428.		<i>Lagocephalus sceleratus</i>			
429.	24367	<i>Lalage tricolor</i> (White-winged Triller)			
430.		<i>Lampona brevipes</i>			
431.		<i>Lampona cylindrata</i>			
432.		<i>Lampona punctigera</i>			
433.		<i>Lamprochernes savignyi</i>			
434.	24510	<i>Larus dominicanus</i> (Kelp Gull)			
435.	25637	<i>Larus novaehollandiae</i> (Silver Gull)			
436.	24511	<i>Larus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Silver Gull)			
437.	25638	<i>Larus pacificus</i> (Pacific Gull)			
438.		<i>Latrodectus hasselti</i>			
439.		<i>Latrodectus hasseltii</i>			
440.		<i>Lepidoblennius marmoratus</i>			
441.		<i>Leptoceridae</i> sp.			
442.	25131	<i>Lerista distinguenda</i>			
443.	25133	<i>Lerista elegans</i>			
444.	25137	<i>Lerista gerrardii</i>			
445.	25148	<i>Lerista lineopunctulata</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
446.	25165	<i>Lerista praepedita</i>			
447.		<i>Leucauge dromedaria</i>			Y
448.	25005	<i>Lialis burtonis</i>			
449.	25659	<i>Lichenostomus leucotis</i> (White-eared Honeyeater)			
450.	25661	<i>Lichmera indistincta</i> (Brown Honeyeater)			
451.	24582	<i>Lichmera indistincta</i> subsp. <i>indistincta</i> (Brown Honeyeater)			
452.	25415	<i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
453.		<i>Linyphia cupidinea</i>			Y
454.		<i>Lissocampus runa</i>			
455.	42413	<i>Lissolepis luctuosa</i> (Western Swamp Skink)			
456.	25378	<i>Litoria adelaidensis</i> (Slender Tree Frog)			
457.	25388	<i>Litoria moorei</i> (Motorbike Frog)			
458.		<i>Longepi woodman</i>			
459.		<i>Lophoictinia isura</i>			
460.	42414	<i>Lucasium alboguttatum</i>			
461.		<i>Lycosa ariadnae</i>			
462.		<i>Lycosa australicola</i>			
463.		<i>Lycosa gilberta</i>			
464.		<i>Lycosa godeffroyi</i>			
465.		<i>Lynceus</i> sp.			
466.	24132	<i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
467.	24326	<i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
468.	25651	<i>Malurus lamberti</i> (Variegated Fairy-wren)			
469.	25652	<i>Malurus leucopterus</i> (White-winged Fairy-wren)			
470.	24551	<i>Malurus pulcherrimus</i> (Blue-breasted Fairy-wren)			
471.	25654	<i>Malurus splendens</i> (Splendid Fairy-wren)			
472.	24583	<i>Manorina flavigula</i> (Yellow-throated Miner)			
473.		<i>Maratus pavonis</i>			
474.		<i>Masasteron tuart</i>			
475.		<i>Mecistocephalus tahitiensis</i>			Y
476.	25758	<i>Megalurus gramineus</i> (Little Grassbird)			
477.	24838	<i>Megalurus gramineus</i> subsp. <i>gramineus</i> (Little Grassbird)			
478.	47997	<i>Melanodryas cucullata</i> (Hooded Robin)			
479.	25663	<i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
480.	24586	<i>Melithreptus brevirostris</i> subsp. <i>leucogenys</i> (Brown-headed Honeyeater)			
481.	24587	<i>Melithreptus chloropsis</i> (Western White-naped Honeyeater)			
482.	24736	<i>Melopsittacus undulatus</i> (Budgerigar)			
483.	25184	<i>Menetia greyii</i>			
484.	24598	<i>Merops ornatus</i> (Rainbow Bee-eater)			
485.		<i>Metavelifer multiradiatus</i>			
486.		<i>Microcanthus strigatus</i>			
487.		<i>Microcarbo melanoleucos</i>			
488.		<i>Missulena granulosa</i>			
489.		<i>Missulena occatoria</i>			
490.		<i>Mituliodon tarantulinus</i>			
491.		<i>Mitzoruga insularis</i>			
492.		<i>Monacanthus chinensis</i>			
493.	25240	<i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)			
494.	25191	<i>Morethia lineoocellata</i>			
495.	25192	<i>Morethia obscura</i>			
496.	48008	<i>Morus serrator</i> (Australasian Gannet)			
497.		<i>Mugil cephalus</i>			
498.		<i>Muraenichthys</i> sp.			
499.		<i>Muraenichthys tasmaniensis</i>			
500.	24223	<i>Mus musculus</i> (House Mouse)	Y		
501.	24042	<i>Mustela putorius</i> (European Polecat, Ferret)	Y		
502.		<i>Myandra bicincta</i>			
503.		<i>Myandra cambridgei</i>			
504.	25610	<i>Myiagra inquieta</i> (Restless Flycatcher)			
505.		<i>Myliobatis australis</i>			
506.	25420	<i>Myobatrachus gouldii</i> (Turtle Frog)			
507.		<i>Nannoperca vittata</i>			
508.	25248	<i>Neelaps bimaculatus</i> (Black-naped Snake)			
509.		<i>Nematalosa come</i>			
510.		<i>Nematalosa erebi</i>			
511.		<i>Nematalosa vlaminghi</i>			
512.	25426	<i>Neobatrachus pelobatoides</i> (Humming Frog)			
513.	24738	<i>Neophema elegans</i> (Elegant Parrot)			
514.	24739	<i>Neophema petrophila</i> (Rock Parrot)			
515.		<i>Neosebastes pandus</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
516.	<i>Nephila edulis</i>			
517.	<i>Nicodamus mainae</i>			
518.	25747 <i>Ninox connivens</i> (Barking Owl)			
519.	<i>Ninox novaeseelandiae</i> subsp. <i>rufigaster</i>			Y
520.	25252 <i>Notechis scutatus</i> (Tiger Snake)			
521.	<i>Notiasemus glauerti</i>			
522.	<i>Notolabrus parilus</i>			
523.	<i>Novakiella trituberculosa</i>			
524.	<i>Numenius madagascariensis</i> subsp. <i>cyanopus</i>			
525.	<i>Nunciella aspera</i>			
526.	25564 <i>Nycticorax caledonicus</i> (Rufous Night Heron)			
527.	24194 <i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
528.	24195 <i>Nyctophilus gouldi</i> (Gould's Long-eared Bat)			
529.	24742 <i>Nymphicus hollandicus</i> (Cockatiel)			
530.	<i>Ocrisiona leucocomis</i>			
531.	<i>Ocrisiona parmelliae</i>			
532.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
533.	<i>Odax cyanomelas</i>			
534.	<i>Oecobius navus</i>			
535.	<i>Oligochaeta</i> sp.			
536.	<i>Ommatoiulus moreleti</i>			
537.	<i>Ommatoiulus moreletii</i>			
538.	<i>Ophisurus serpens</i>			
539.	<i>Opopaea</i> sp.			Y
540.	<i>Oratemnus curtus</i>			
541.	<i>Orectolobus ornatus</i>			
542.	<i>Orthocladinae</i> sp.			
543.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
544.	<i>Ostearius melanopygius</i>			
545.	34016 <i>Ovis aries</i> (Sheep)			
546.	<i>Oxidus gracilis</i>			
547.	<i>Oxyopes gracillipes</i>			
548.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
549.	24624 <i>Pachycephala rufiventris</i> subsp. <i>rufiventris</i> (Rufous Whistler)			
550.	24692 <i>Pachyptila belcheri</i> (Slender-billed Prion)			
551.	24693 <i>Pachyptila desolata</i> (Antarctic Prion)			
552.	25707 <i>Pachyptila salvini</i> (Salvin's Prion)			
553.	24696 <i>Pachyptila turtur</i> (Fairy Prion)			
554.	<i>Padda oryzivora</i>			
555.	<i>Palaemonidae</i> sp.			
556.	<i>Papillogobius punctatus</i>			Y
557.	<i>Parablennius postcolomaculatus</i>			
558.	<i>Parablennius tasmanianus</i>			
559.	25253 <i>Parasuta gouldii</i>			
560.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
561.	24625 <i>Pardalotus punctatus</i> subsp. <i>punctatus</i> (Spotted Pardalote)			
562.	24626 <i>Pardalotus punctatus</i> subsp. <i>xanthopyge</i> (Yellow-rumped Pardalote)			
563.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
564.	24630 <i>Pardalotus striatus</i> subsp. <i>westraliensis</i> (Striated Pardalote)			
565.	<i>Parma mccullochi</i>			
566.	<i>Parma microlepis</i>			
567.	<i>Paroaria coronata</i>			Y
568.	25687 <i>Passer domesticus</i> (House Sparrow)	Y		
569.	<i>Pediana occidentalis</i>			
570.	<i>Pegasus volitans</i>			
571.	<i>Pelates sexlineatus</i>			
572.	24649 <i>Pelecanoides urinatrix</i> subsp. <i>exsul</i> (Common Diving Petrel)			
573.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
574.	<i>Pempheris klunzingeri</i>			
575.	48060 <i>Petrochelidon ariel</i> (Fairy Martin)			
576.	48061 <i>Petrochelidon nigricans</i> (Tree Martin)			
577.	48066 <i>Petroica boodang</i> (Scarlet Robin)			
578.	24659 <i>Petroica goodenovii</i> (Red-capped Robin)			
579.	25697 <i>Phalacrocorax carbo</i> (Great Cormorant)			
580.	24664 <i>Phalacrocorax carbo</i> subsp. <i>novaehollandiae</i> (Great Cormorant)			
581.	24665 <i>Phalacrocorax fuscescens</i> (Black-faced Cormorant)			
582.	25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
583.	24666 <i>Phalacrocorax melanoleucos</i> subsp. <i>melanoleucos</i> (Little Pied Cormorant)			
584.	<i>Phalacrocorax</i> sp.			
585.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
586.	25699 <i>Phalacrocorax varius</i> (Pied Cormorant)			
587.	24668 <i>Phalacrocorax varius subsp. hypoleucos</i> (Pied Cormorant)			
588.	<i>Phalacrocorax caudimaculatus</i>			
589.	<i>Phalacrocorax harpagos</i>			Y
590.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
591.	<i>Phenasteron longiconductor</i>			
592.	<i>Pholcus phalangioides</i>			
593.	<i>Phreatoicidae</i> sp.			
594.	<i>Phryganoporus candidus</i>			
595.	<i>Phryganoporus gausapatus subsp. occidentalis</i>			Y
596.	48071 <i>Phylidonyris niger</i> (White-cheeked Honeyeater)			
597.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
598.	<i>Phyllopteryx taeniolatus</i>			
599.	<i>Physidae</i> sp.			
600.	<i>Physocyclus globosus</i>			
601.	<i>Pinkfloydia harveii</i>			
602.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
603.	24842 <i>Platalea regia</i> (Royal Spoonbill)			
604.	<i>Platax teira</i>			
605.	<i>Platycephalus endrachtensis</i>			
606.	25720 <i>Platycercus icterotis</i> (Western Rosella)			
607.	24747 <i>Platycercus spurius</i> (Red-capped Parrot)			
608.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
609.	24750 <i>Platycercus zonarius subsp. semitorquatus</i> (Twenty-eight Parrot)			
610.	24751 <i>Platycercus zonarius subsp. zonarius</i> (Port Lincoln Parrot)			
611.	25007 <i>Pletholax gracilis subsp. gracilis</i> (Keeled Legless Lizard)			
612.	<i>Plotosus unicolor</i>			Y
613.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
614.	24679 <i>Podargus strigoides subsp. brachypterus</i> (Tawny Frogmouth)			
615.	25704 <i>Podiceps cristatus</i> (Great Crested Grebe)			
616.	<i>Podykippus collinus</i>			
617.	<i>Poephila cincta</i>			
618.	25510 <i>Pogona minor</i> (Dwarf Bearded Dragon)			
619.	24907 <i>Pogona minor subsp. minor</i> (Dwarf Bearded Dragon)			
620.	24681 <i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe)			
621.	<i>Poltys laciniosus</i>			
622.	<i>Polygonarea imparata</i>			Y
623.	30854 <i>Polytelis anthopeplus subsp. westralis</i> (Regent Parrot)			
624.	<i>Pomatopus saltatrix</i>			
625.	25731 <i>Porphyrio porphyrio</i> (Purple Swamphen)			
626.	24767 <i>Porphyrio porphyrio subsp. bellus</i> (Purple Swamphen)			
627.	24769 <i>Porzana fluminea</i> (Australian Spotted Crane)			
628.	25732 <i>Porzana pusilla</i> (Baillon's Crane)			
629.	24770 <i>Porzana pusilla subsp. palustris</i> (Baillon's Crane)			
630.	24771 <i>Porzana tabuensis</i> (Spotless Crane)			
631.	<i>Prionosternum nitidiceps</i>			
632.	<i>Prionosternum scutatum</i>			
633.	<i>Psephotus dissimilis</i>			Y
634.	25261 <i>Pseudechis australis</i> (Mulga Snake)			
635.	<i>Pseudocaranx dentex</i>			
636.	<i>Pseudogobius olorum</i>			
637.	24234 <i>Pseudomys delicatulus</i> (Delicate Mouse)			
638.	25511 <i>Pseudonaja affinis</i> (Dugite)			
639.	25259 <i>Pseudonaja affinis subsp. affinis</i> (Dugite)			
640.	42416 <i>Pseudonaja mengdeni</i> (Western Brown Snake)			
641.	25263 <i>Pseudonaja modesta</i> (Ringed Brown Snake)			
642.	25433 <i>Pseudophryne guentheri</i> (Crawling Toadlet)			
643.	25434 <i>Pseudophryne occidentalis</i> (Western Toadlet)			
644.	<i>Pseudorhombus jenynsii</i>			
645.	48085 <i>Psittacula krameri</i> (Indian Ringnecked Parrot, Rose-ringed Parakeet)	Y		
646.	<i>Psittacus erithacus</i>			Y
647.	24702 <i>Pterodroma brevirostris</i> (Kerguelen Petrel)			
648.	24703 <i>Pterodroma lessonii</i> (White-headed Petrel)			
649.	<i>Pterygotrigla polyommata</i>			
650.	24711 <i>Puffinus assimilis subsp. assimilis</i> (Little Shearwater)			
651.	42344 <i>Purnella albifrons</i> (White-fronted Honeyeater)			
652.	<i>Purpureicephalus spurius</i>			
653.	25008 <i>Pygopus lepidopodus</i> (Common Scaly Foot)			
654.	<i>Rachycentron canadum</i>			
655.	24243 <i>Rattus fuscipes</i> (Western Bush Rat)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
656.	24244	<i>Rattus norvegicus</i> (Brown Rat)	Y		
657.	24245	<i>Rattus rattus</i> (Black Rat)	Y		
658.		<i>Raveniella cirrata</i>			
659.		<i>Raveniella peckorum</i>			
660.	24776	<i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
661.	48096	<i>Rhipidura albiscapa</i> (Grey Fantail)			
662.	25614	<i>Rhipidura leucophrys</i> (Willie Wagtail)			
663.	24454	<i>Rhipidura leucophrys</i> subsp. <i>leucophrys</i> (Willie Wagtail)			
664.		<i>Sardinella lemuru</i> ?			
665.		<i>Saurida undosquamis</i>			
666.		<i>Scolopendra laeta</i>			
667.		<i>Scolopendra morsitans</i>			
668.		<i>Scomberoides lysan</i>			
669.		<i>Scorpius aequipinnis</i>			
670.		<i>Scorpius georgianus</i>			
671.		<i>Scytodes thoracica</i>			
672.	25534	<i>Sericornis frontalis</i> (White-browed Scrubwren)			
673.		<i>Serinus canarius</i>			
674.		<i>Seriola hippos</i>			
675.		<i>Servaea melaina</i>			
676.		<i>Sillago bassensis</i>			
677.		<i>Sillago burrus</i>			
678.		<i>Sillago schomburgkii</i>			
679.		<i>Simaetha tenuior</i>			
680.	25266	<i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
681.		<i>Simuliidae</i> sp.			
682.		<i>Siphonognathus argyrophanes</i>			
683.		<i>Siphonotus flavomarginatus</i>			
684.		<i>Smeringopus natalensis</i>			
685.		<i>Smeringopus natalensis</i> ?			Y
686.	30948	<i>Smicrornis brevirostris</i> (Weebill)			
687.		<i>Sminthopsis murina</i>			
688.		<i>Solaenodolichopus pruvoti</i>			
689.		<i>Sparidentex hasta</i>			Y
690.		<i>Spratelloides robustus</i>			
691.	24645	<i>Stagonopleura oculata</i> (Red-eared Firetail)			
692.		<i>Steatoda capensis</i>			
693.		<i>Steatoda grossa</i>			
694.	24522	<i>Sterna bergii</i> (Crested Tern)			
695.	24525	<i>Sterna fuscata</i> subsp. <i>nubilosa</i> (Sooty Tern)			
696.	48594	<i>Sternula nereis</i> (Fairy Tern)			
697.	24329	<i>Stictonetta naevosa</i> (Freckled Duck)			
698.		<i>Stigmatopora argus</i>			
699.		<i>Storena formosa</i>			
700.	25597	<i>Strepera versicolor</i> (Grey Currawong)			
701.	25589	<i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
702.	30951	<i>Streptopelia chinensis</i> subsp. <i>tigrina</i> (Spotted Turtle-Dove)	Y		
703.	25590	<i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
704.	30950	<i>Streptopelia senegalensis</i> subsp. <i>senegalensis</i> (Laughing Turtle-Dove)	Y		
705.	24943	<i>Strophurus spinigerus</i> subsp. <i>inornatus</i>			
706.	24942	<i>Strophurus spinigerus</i> subsp. <i>spinigerus</i>			
707.	25752	<i>Sturnus vulgaris</i> (Common Starling)	Y		
708.		<i>Supunna funerea</i>			
709.		<i>Supunna picta</i>			
710.	24259	<i>Sus scrofa</i> (Pig)	Y		
711.		<i>Sutorectus tentaculatus</i>			
712.		<i>Synothele durokoppin</i>			
713.		<i>Synothele michaelsoni</i>			
714.		<i>Synothele rastelloides</i>			
715.		<i>Synsphyronus magnus</i>			
716.	25705	<i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
717.	24682	<i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
718.		<i>Tachybaptus</i> sp.			
719.	24207	<i>Tachyglossus aculeatus</i> (Short-beaked Echidna)			
720.	25552	<i>Tadorna radjah</i> (Radjah Shelduck)			
721.	24331	<i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
722.	30871	<i>Taeniopygia guttata</i> subsp. <i>castanotis</i> (Zebra Finch)			
723.		<i>Tamopsis facialis</i>			
724.		<i>Tamopsis perthensis</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
725.	<i>Tandanus bostocki</i>			
726.	24167 <i>Tarsipes rostratus</i> (Honey Possum, Noolbenger)			
727.	<i>Tasmanicosa leuckartii</i>			
728.	<i>Tegenaria atrica</i>			Y
729.	<i>Terapon</i> sp.			
730.	<i>Testudo</i> sp.			Y
731.	<i>Tetragnatha demissa</i>			
732.	<i>Thereuopoda lesueurii</i>			
733.	<i>Threpterus maculosus</i>			
734.	48136 <i>Threskiornis moluccus</i> (Australian White Ibis)			
735.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
736.	<i>Thysanophrys cirronasus</i>			
737.	25203 <i>Tiliqua occipitalis</i> (Western Bluetongue)			
738.	25519 <i>Tiliqua rugosa</i>			
739.	25204 <i>Tiliqua rugosa</i> subsp. <i>aspera</i>			
740.	25207 <i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
741.	<i>Tilodon sexfasciatum</i>			
742.	<i>Tipulidae</i> sp.			
743.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
744.	24309 <i>Todiramphus sanctus</i> subsp. <i>sanctus</i> (Sacred Kingfisher)			
745.	<i>Torquigener pleurogramma</i>			
746.	<i>Trachurus novaezelandiae</i>			
747.	48141 <i>Tribonyx ventralis</i> (Black-tailed Native-hen)			
748.	<i>Trichocyclops balladong</i>			
749.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
750.	24755 <i>Trichoglossus haematodus</i> subsp. <i>moluccanus</i> (Rainbow Lorikeet)	Y		
751.	24754 <i>Trichoglossus haematodus</i> subsp. <i>rubritorquis</i> (Red-collared Lorikeet)			
752.	25521 <i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
753.	24158 <i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
754.	<i>Tridentiger trigonocephalus</i>			
755.	30848 <i>Tringa guttifer</i> (Nordmann's Greenshank)			
756.	<i>Trygonoptera ovalis</i>			
757.	<i>Trygonorrhina fasciata</i>			
758.	48147 <i>Turnix varius</i> (Painted Button-quail)			
759.	30954 <i>Tursiops aduncus</i> (Indo-Pacific Bottlenose Dolphin)			
760.	24069 <i>Tursiops truncatus</i> (Bottlenose Dolphin)			
761.	25762 <i>Tyto alba</i> (Barn Owl)			
762.	24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl)			
763.	24983 <i>Underwoodisaurus milii</i> (Barking Gecko)			
764.	<i>Upeneus tragula</i>			
765.	<i>Urocampus carinirostris</i>			
766.	<i>Urodacus novaehollandiae</i>			
767.	25577 <i>Vanellus miles</i> (Masked Lapwing)			
768.	24386 <i>Vanellus tricolor</i> (Banded Lapwing)			
769.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
770.	25225 <i>Varanus rosenbergi</i> (Heath Monitor)			
771.	25526 <i>Varanus tristis</i> (Racehorse Monitor)			
772.	<i>Venator immansueta</i>			
773.	<i>Venatrix pullastra</i>			
774.	24206 <i>Vespadelus regulus</i> (Southern Forest Bat)			
775.	24040 <i>Vulpes vulpes</i> (Red Fox)	Y		
776.	<i>Weistrarchaea spinosa</i>			
777.	<i>Xysticus periscelis</i>			Y
778.	<i>Zachria flavicoma</i>			
779.	<i>Zebraplatys fractivittata</i>			
780.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			
781.	unknown unknown			Y

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.



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.

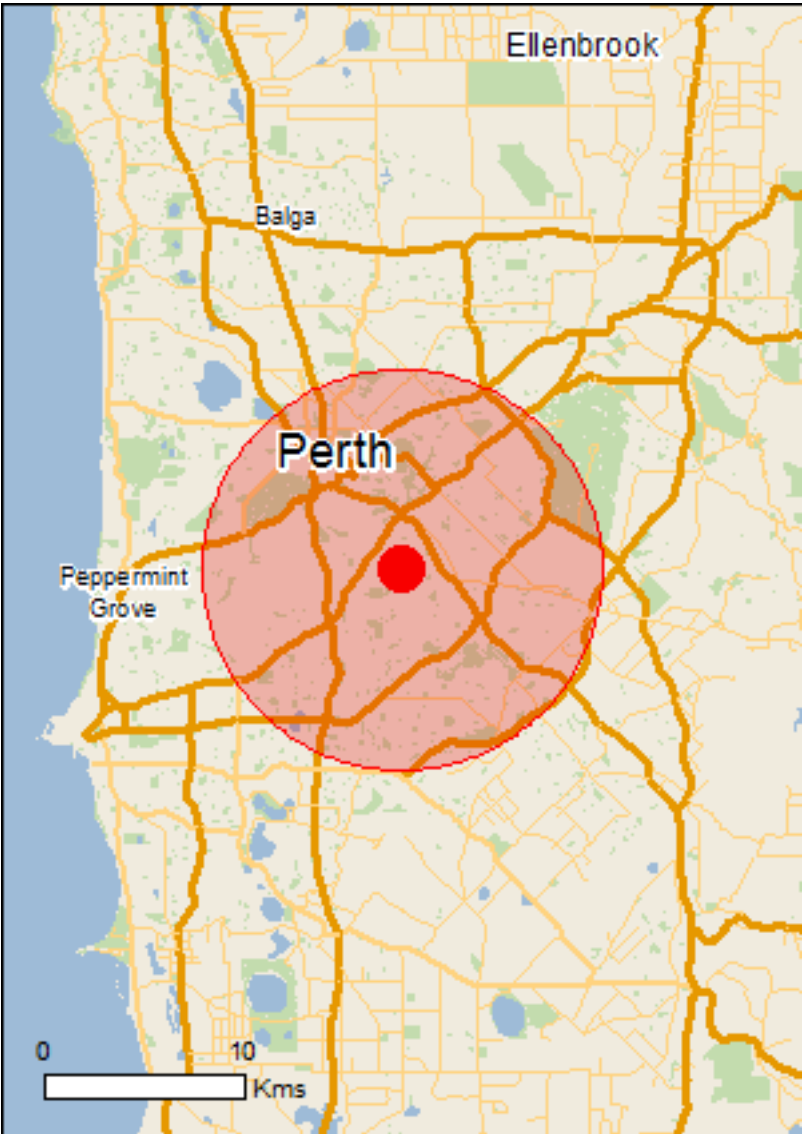
Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

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

Report created: 08/07/21 16:47:38

- [Summary](#)
- [Details](#)

[Matters of NES](#)[Other Matters Protected by the EPBC Act](#)[Extra Information](#)
- [Caveat](#)
- [Acknowledgements](#)



This map may contain data which are
©Commonwealth of Australia
(Geoscience Australia), ©PSMA 2015

[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:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	61
Listed Migratory Species:	48

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:	4
Commonwealth Heritage Places:	4
Listed Marine Species:	55
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	12
Regional Forest Agreements:	None
Invasive Species:	43
Nationally Important Wetlands:	3
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
Forrestdale and thomsons lakes		Within 10km of Ramsar

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
Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain	Endangered	Community known to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	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		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	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 known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known 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	Species or species habitat likely to occur within area
Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area

Name	Status	Type of Presence
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [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 known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat 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	Species or species habitat likely to occur within area
Insects		
Hesperocolletes douglasi Douglas' Broad-headed Bee, Rottnest Bee [66734]	Critically Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Leiproctus douglasiellus a short-tongued bee [66756]	Critically Endangered	Species or species habitat known to occur within area
Mammals		
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat likely to occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat known to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely 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 known to occur within area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat may occur within area
Austrostipa bronwenae [87808]	Endangered	Species or species habitat may occur within area
Banksia mimica Summer Honeypot [82765]	Endangered	Species or species habitat likely to 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
Calytrix breviseta subsp. breviseta Swamp Starflower [23879]	Endangered	Species or species habitat likely to occur within area
Chamelaucium sp. Gingin (N.G.Marchant 6) Gingin Wax [88881]	Endangered	Species or species habitat may occur within area
Conospermum undulatum Wavy-leaved Smokebush [24435]	Vulnerable	Species or species habitat known to occur within area
Diplolaena andrewsii [6601]	Endangered	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

Name	Status	Type of Presence
		habitat known to occur within area
Drakaea elastica Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat known 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 known to occur within area
Eremophila glabra subsp. chlorella [84927]	Endangered	Species or species habitat known to occur within area
Eucalyptus x balanites Cadda Road Mallee, Cadda Mallee [87816]	Endangered	Species or species habitat may occur within area
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat likely to occur within area
Grevillea thelemanniana Spider Net Grevillea [32835]	Critically Endangered	Species or species habitat known to occur within area
Lepidosperma rostratum Beaked Lepidosperma [14152]	Endangered	Species or species habitat known to occur within area
Macarthuria keigheryi Keighery's Macarthuria [64930]	Endangered	Species or species habitat likely to occur within area
Ptilotus pyramidatus Pyramid Mulla-mulla [18216]	Critically Endangered	Species or species habitat known to 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. Pinjarra Plain (A.S. George 17182) [86878]	Endangered	Species or species habitat may occur within area
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat likely to 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	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Listed Migratory Species

[Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat likely 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
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat 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	Species or species habitat likely to occur within area

Migratory Marine Species

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	Foraging, feeding or related behaviour known to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		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

Name	Threatened	Type of Presence
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
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to 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
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting 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 known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known 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 - AIRTC CANNINGTON Defence - HOLDFAST BARRACKS Defence - SWAN BARRACKS

Commonwealth Heritage Places	[Resource Information]
------------------------------	--

Name	State	Status
Historic		
Inglewood Post Office	WA	Listed place
Perth General Post Office	WA	Listed place
South Perth Post Office	WA	Listed place
Victoria Park Post Office	WA	Listed place

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 likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species

Name	Threatened	Type of Presence
Ardea ibis Cattle Egret [59542]		habitat likely to occur within area
Arenaria interpres Ruddy Turnstone [872]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]		Roosting known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]	Critically Endangered	Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]		Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]	Critically Endangered	Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]		Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]	Endangered	Roosting known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]		Roosting known to occur within area
Diomedea epomophora Southern Royal Albatross [89221]		Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Vulnerable	Species or species habitat likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Roosting likely to occur within area
		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting 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 known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat 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

Name	Threatened	Type of Presence
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	area Species or species habitat likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area

Mammals		
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat known to 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	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Alfred Cove	WA
Canning River	WA
Kenwick Wetlands	WA
Kings Park	WA
Matilda Bay Reserve	WA
Milyu	WA
Perth Zoo	WA
Swan River	WA
Unnamed WA36440	WA
Unnamed WA44414	WA
Unnamed WA49362	WA
Unnamed WA49363	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 Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		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
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
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
Funambulus pennantii Northern Palm Squirrel, Five-striped Palm Squirrel [129]		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

Name	Status	Type of Presence
Rattus norvegicus Brown Rat, Norway Rat [83]		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
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur 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 aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		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
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		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
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur

Name	Status	Type of Presence
Olea europaea Olive, Common Olive [9160]		within area
		Species or species habitat may occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to 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
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		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
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		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

Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name		State
Booragoon Swamp		WA
Perth Airport Woodland Swamps		WA
Swan-Canning Estuary		WA

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

-31.9895 115.88878

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.

[© Commonwealth of Australia](#)

[Department of Agriculture Water and the Environment](#)

GPO Box 858

Canberra City ACT 2601 Australia

+61 2 6274 1111

Appendix C

Conservation Significant Species and Likelihood of Occurrence Assessment



Species name	Common name	Level of		Habitat	Likelihood of occurrence
		WA	EPBC Act		
<i>Actitis hypoleucos</i>	Common sandpiper	MI	MI	Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Anous stolidus</i>	Common noddy	MI	MI	Tropical and subtropical seas, cayes, reefs, buoys and piles (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Anous tenuirostris melanops</i>	Australian lesser noddy	EN	VU	Very common in blue-water seas around the Abrolhos (endemic to this area, accidental occurrences on lower west coast of Australia) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Apus pacificus</i>	Pacific swift	MI	MI	Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities (Pizzey & Knight 2012).	Possible May opportunistically occur in the site for short periods or fly over the site on commute or while foraging.
<i>Ardenna pacifica</i>	Wedge-tailed Shearwater	MI	MI	Pelagic species that inhabits tropical and subtropical seas. Common in western and eastern Australian seas. In western Australia breeds on offshore islands from Montebello to Rottnest/Carnac (Morcombe & Stewart 2021; Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Arenaria interpres</i>	Ruddy turnstone	MI	MI	Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Botaurus poiciloptilus</i>	Australasian bittern	EN	EN	In or over water, in tall reedbeds, sedges, rushes, cumbungi, lignum. Also occurs in ricefields, drains in tussocky paddocks and occasionally in saltmarshes and brackish wetlands.	Unlikely No suitable habitat occurs in the site.
<i>Cacatua pastinator pastinator</i>	Muir's corella	CD	-	Wheat and sheep farming country with remnant native forest. Species is restricted to the south-west corner of WA, near Lake Muir (DPaW 2015).	Unlikely No suitable habitat occurs in the site.
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	MI	MI	Occurs in tidal mudflats, saltmarshes and mangroves, as well as, shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields.	Unlikely No suitable habitat occurs in the site.
<i>Calidris alba</i>	Sanderling	MI	MI	Mainly steeply shelving sandy beaches exposed to ocean swell. Also sandy inlets, estuarine sandbanks and near-coastal saltlakes (including saltwork ponds) (Johnstone & Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Calidris canutus</i>	Red knot	EN	EN (MI)	Mud and sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds.	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Calidris ferruginea</i>	Curlew sandpiper	CR	CR (MI)	Mainly shallows of estuaries and near-coastal saltlakes (including saltwork ponds) and drying near-coastal freshwater lakes and swamps. Also beaches and near-coastal sewage ponds.	Unlikely No suitable habitat occurs in the site.
<i>Calidris melanotos</i>	Pectoral sandpiper	MI	MI	Mainly fresh waters (swamps, lagoons, river pools, irrigation channels and sewage ponds); also samphire flats around estuaries and saltlakes (Johnstone & Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Calidris ruficollis</i>	Red-necked stint	MI	MI	Tidal mudflats, saltmarshes, sandy or shelly beaches, saline and freshwater wetlands (coastal and inland), saltfields, sewage ponds (Pizzey and Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Calidris subminuta</i>	Long-toed stint	MI	MI	Mainly freshwater swamps (especially when drying and where vegetation is short), river pools, lagoons and claypans; also brackish pools, sewage ponds and samphire flats around estuaries and saltlakes.	Unlikely No suitable habitat occurs in the site.
<i>Calidris tenuirostris</i>	Great knot	CR	CR (MI)	Mud or sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds.	Unlikely No suitable habitat occurs in the site.
<i>Calyptrorhynchus banksii naso</i>	Forest red-tailed black cockatoo	VU	VU	Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding Corymbia calophylla, Eucalyptus marginata, introduced Melia azdarach and Eucalyptus spp. trees.	Recorded Suitable foraging and roosting habitat occurs in the site.

		WA	EPBC Act		
<i>Calyptorhynchus baudinii</i>	Baudin's cockatoo	EN	EN	Mainly eucalypt forests. Attracted to seeding <i>Corymbia calophylla</i> , <i>Banksia</i> spp., <i>Hakea</i> spp., and to fruiting apples and pears (Johnstone and Storr 1998).	Unlikely The site is located outside of the species modelled distribution range.
<i>Calyptorhynchus latirostris</i>	Carnaby's cockatoo	EN	EN	Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of <i>Pinus</i> spp. Attracted to seeding <i>Banksia</i> spp., <i>Dryandra</i> spp., <i>Hakea</i> spp., <i>Eucalyptus</i> spp., <i>Corymbia calophylla</i> , <i>Grevillea</i> spp., and <i>Allocasuarina</i> spp. (Johnstone and Storr 1998).	Recorded Suitable foraging and roosting habitat occurs in the site.
<i>Charadrius bicinctus</i>	Double-banded plover	MI	MI	Wide beaches, tidal mudflats, saltmarsh, wide and sparsely vegetated margins of shallow saline and freshwater wetlands, paddocks with sparse vegetation, ploughed fields, airfields.	Unlikely No suitable habitat occurs in the site.
<i>Charadrius leschenaultii</i>	Great sand plover	VU	VU (MI)	Wide sandy or shelly beaches, sandpits, tidal mudflats, reefs, sand cays, mangroves, saltmarsh, dune wilderness, bare paddocks, seldom far inland (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Charadrius mongolus</i>	Lesser sand plover	EN	EN (MI)	Sandy beaches and tidal estuarine flats. Also near-coastal saltlakes, including saltwork ponds (Johnstone & Storr 1998).	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Dasyornis longirostris</i>	Western bristlebird	EN	EN	Dense, low, closed coastal heaths. Open heaths with dense clumps of shrubs, eucalypt thickets and tall swampy heaths. Much reduced by fire, draining for agriculture, but may need fire for optimal status over 50-10+ years. Current range in WA confined to south coast from Albany to Hopetoun (Pizzey and Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Diomedea amsterdamensis</i>	Amsterdam albatross	CR	EN (MI)	The Amsterdam albatross is a marine, pelagic seabird. It nests in open patchy vegetation (among tussocks, ferns or shrubs) near exposed ridges or hillocks (Weimerskirch et al. 1985). It sleeps and rests on ocean waters when not breeding (Marchant and Higgins 1990)	Unlikely No suitable habitat occurs in the site.
<i>Diomedea epomophora</i>	Southern royal albatross	VU	VU (MI)	Rare visitor to Western Australian seas; it breeds on subantarctic islands south of New Zealand (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Diomedea exulans</i>	Wandering albatross	VU	VU (MI)	Marine, pelagic and aerial species. It breeds on Macquarie Island and feeds in Australian portions of the Southern Ocean (DoE 2018).	Unlikely No suitable habitat occurs in the site.
<i>Diomedea sanfordi</i>	Northern royal albatross	EN	EN	Species is marine, pelagic and aerial. Habitat includes subantarctic, subtropical, and occasionally Antarctic waters (Marchant & Higgins 1990). Rare visitors to south Western Australian waters.	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Falco hypoleucos</i>	<i>Grey falcon</i>	VU	-	Species occurs in arid and semi-arid Australia, where it inhabits timbered lowland plains. In particular Acacia shrublands and that are crossed by tree-lined water courses. Species has also been observed hunting in treeless areas and frequenting tussock grassland and open woodlands (TSSC 2020).	Unlikely No suitable habitat occurs in the site.
<i>Falco peregrinus</i>	<i>Peregrine falcon</i>	OS	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).	Possible May opportunistically occur in the site for short periods or fly over the site on commute or while searching for prey.
<i>Gallinago megala</i>	<i>Swinhoe's snipe</i>	MI	MI	Wet, grassy ground; edges of reedy swamps (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Gallinago stenura</i>	<i>Pin-tailed snipe</i>	MI	MI	Boggy edges of vegetated wetlands; sewage and other ponds; stubbles, grasslands with shrubs, pastures (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Hydroprogne caspia</i>	<i>Caspian tern</i>	MI	MI	Mainly sheltered areas, estuaries (when not laden with silt) and tidal creeks; occasionally near-coastal saltlakes (including saltwork ponds) and brackish pools in lower courses of rivers; rarely fresh waters.	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Ixobrychus dubius</i>	<i>Australian little bittern</i>	P4	-	Dense vegetation surrounding/within freshwater pools, swamps and lagoons, well screened with trees. Shelters in dense beds of Typha spp., Baumea spp. and tall rushes in freshwater swamps around lakes and along rivers (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Ixobrychus flavicollis australis</i>	<i>Black bittern</i>	P2	-	Freshwater pools, swamps and lagoons, well-screened with trees. Occasionally feeding by day but mainly sheltering in dense waterside vegetation (Melaleuca spp., Eucalyptus camaldulensis, Pandanus spp. and long grass) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Leipoa ocellata</i>	<i>Mallefowl</i>	VU	VU	Scrubs and thickets of Eucalyptus spp., Melaleuca lanceolata and Acacia linophylla; also other dense litter-forming shrublands. Attracted to fallen wheat in stubbles and along roads (Johnstone and Storr 1998).	Unlikely Species is locally extinct.
<i>Limosa lapponica</i>	<i>Bar-tailed godwit</i>	MI (& VU or CR at subsp. level)	MI	Estuarine sand and mudflats and sandy beaches with loads of seaweed; also reef flats and near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Limosa lapponica menzbieri</i>	<i>Bar-tailed godwit</i>	CR	CR	Mainly coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. Has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (Higgins and Davies 1996).	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Limosa limosa</i>	<i>Black-tailed godwit</i>	MI	MI	Tidal mudflats, estuaries, sewage ponds, shallow river margins, brackish or saline inland lakes, flooded pastures, airfields (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Limosa limosa melanuroides</i>	<i>Black-tailed godwit</i>	MI	MI	Tidal mudflats, estuaries, sandpits, shallow river margins, sewage ponds and in inland areas on large, shallow fresh or brackish waters.	Unlikely No suitable habitat occurs in the site.
<i>Macronectes giganteus</i>	<i>Southern giant-petrel</i>	MI	EN (MI)	Breeds on southern subantarctic and antarctic islands. May visit Western Australian waters from February to December (mostly June to September) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Macronectes halli</i>	<i>Northern giant petrel</i>	MI	VU (MI)	Breeds on subantarctic islands. May visit Western Australian water from February to September (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Motacilla cinerea</i>	<i>Grey wagtail</i>	MI	MI	In Australia mostly near running water in disused quarries, sandy and rocky streams in escarpments and rainforests, sewage ponds, ploughed fields and airfields (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Numenius madagascariensis</i>	<i>Eastern curlew</i>	CR	CR (MI)	Mainly tidal mudflats; also reef flats, sandy beaches and rarely near-coastal lakes (including saltwork ponds) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Numenius minutus</i>	<i>Little curlew</i>	MI	MI	Dry grasslands, floodplains, margins of drying swamps; tidal mudflats, airfields, playing fields, crops, commercial saltfields, sewage ponds (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Numenius phaeopus</i>	<i>Whimbrel</i>	MI	MI	Estuaries, mangroves, tidal flats, coral cays, exposed reefs, flooded paddocks, sewage ponds, bare grasslands, sportsgrounds and lawns.	Unlikely No suitable habitat occurs in the site.
<i>Oxyura australis</i>	<i>Blue-billed duck</i>	P4	-	Mainly deeper freshwater swamps and lakes; occasionally saltlakes and estuaries freshened by flood waters (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Pachyptila turtur subantarctica</i>	<i>Fairy prion</i>	-	VU	Breeds on subantarctic islands and is presumed to frequent subtropical waters during non-breeding period (TSSC 2015).	Unlikely No suitable habitat occurs in the site.
<i>Pandion haliaetus</i>	<i>Osprey</i>	MI	MI	Coasts, estuaries, bays, inlets, islands, and surrounding waters; coral atolls, reefs, lagoons, rock cliffs, stacks (Pizze & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Phaethon rubricauda</i>	<i>Red-tailed tropicbird</i>	P4 (MI)	MI	Spend most of their lives at sea and rarely venture near land. This bird is normally found in tropical and subtropical seas around northern Australia. Though rarely seen in colder areas, a few pairs breed on Sugarloaf Rock, south of Cape Naturaliste (DPAW 2017b).	Unlikely No suitable habitat occurs in the site.
<i>Phalaropus lobatus</i>	<i>Red-necked phalarope</i>	MI	MI	Shallow pools in commercial saltfields, tidal mudflats, beaches, saltmarshes, freshwater wetlands.	Unlikely No suitable habitat occurs in the site.
<i>Phoebastria fusca</i>	<i>Sooty albatross</i>	EN	VU (MI)	Marine, pelagic species that tolerates a wide range of sea surface temperatures and salinities. breeds on subtropical and subantarctic islands in the Indian and Atlantic Oceans, on vegetated cliffs and steep slopes that are sheltered from prevailing winds, often amongst tussock grass.	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Plegadis falcinellus</i>	<i>Glossy Ibis</i>	MI	MI	Well-vegetated wetlands, wet pasture, ricefields, floodwaters, floodplains, brackish or occasionally saline wetlands, mangroves, mudflats and occasionally dry grassland (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Pluvialis fulva</i>	<i>Pacific golden plover</i>	MI	MI	Estuaries, mudflats, saltmarshes, mangroves; rocky reefs and stranded seaweed on ocean shores; margins of shallow open inland swamps; sewage ponds, short-grass paddocks, sportsgrounds, airfields, ploughed land (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Pluvialis squatarola</i>	<i>Grey Plover</i>	MI	MI	Mudflats, saltmarsh, tidal reefs and estuaries, rarely inland (Pizzey and Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Puffinus pacificus</i>	<i>Wedge-tailed shearwater</i>	MI	MI	Pelagic, marine bird known from tropical and subtropical waters. Tolerates a range of surface-temperatures and salinities, but is most abundant where temperatures are greater than 21 °C and salinity is greater than 34.6 ‰ (sprat).	Unlikely No suitable habitat occurs in the site.
<i>Rostratula australis</i>	<i>Australian painted snipe</i>	EN	EN	Mainly shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans (Marchant and Higgins 1993).	Unlikely No suitable habitat occurs in the site.
<i>Sternula nereis nereis</i>	<i>Australian fairy tern</i>	VU	VU	Sheltered blue-water seas close to land, estuaries (when free of silt) and near-coastal lakes (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Thalassarche cauta</i>	<i>Shy albatross</i>	VU	VU (MI)	Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Thalassarche melanophris</i>	<i>Black-browed albatross</i>	EN	VU (MI)	Seas of south and west coasts. Visitor to Western Australian mainland from January to early November (mostly May to September). Breeds on southern subantarctic and antarctic islands (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Thalassarche melanophris impavida</i>	<i>Campbell albatross</i>	VU	VU (MI)	Scarce visitor to south western and western seas. Breeds on Campbell island.	Unlikely No suitable habitat occurs in the site.
<i>Thalassarche steadi</i>	<i>White-capped albatross</i>	VU	VU (MI)	Marine species that occurs in subantarctic and subtropical waters. It reaches tropical areas associated with the cool Humboldt Current off South America (Marchant & Higgins 1990). The species has been noted in shelf-waters around breeding islands and over adjacent rises. During the non-breeding season, birds have been observed over continental shelves around continents. The species occurs both inshore and offshore (Marchant 1977) and enters harbours and bays (Jehl 1973). Birds gather to scavenge at commercial fishing grounds.	Unlikely No suitable habitat occurs in the site.
<i>Thalasseus bergii</i>	<i>Crested tern</i>	MI	MI	Mainly blue-water seas (especially within 3 km of land), including southern estuaries in summer and autumn (when free of silt); also tidal creeks in north, but not penetrating far into larger estuaries.	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Thinornis rubricollis</i>	<i>Hooded plover</i>	P4	VU	Margins and shallows of saltlakes, sandy and seaweedy beaches and estuaries; also dams (Johnstone & Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Tringa brevipes</i>	<i>Grey-tailed tattler</i>	P4 (MI)	MI	Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Unlikely No suitable habitat occurs in the site.
<i>Tringa glareola</i>	<i>Wood sandpiper</i>	MI	MI	Mainly shallow fresh waters (lagoons, swamps, claypans, river pools, dams, bore overflows and sewage ponds); occasionally brackish swamps, rarely saltlakes and estuaries (Pizzey & Knight).	Unlikely No suitable habitat occurs in the site.
<i>Tringa nebularia</i>	<i>Common greenshank</i>	MI	MI	Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Tringa stagnatilis</i>	<i>Marsh sandpiper</i>	MI	MI	Mainly shallow fresh or brackish waters: swamps, lakes, river pools, soaks, sewage ponds and bore overflows. Occasionally estuaries and salt ponds, and rarely coasts.	Unlikely No suitable habitat occurs in the site.
<i>Tringa totanus</i>	<i>Common redshank</i>	MI	MI	Sheltered coastal wetlands such as bays, river estuaries, lagoons, inlets and saltmarsh (with bare open flats and banks of mud or sand). Also found around saltlakes, freshwater lagoons, artificial wetlands and saltworks and sewage farms (Higgins & Davies 1996).	Unlikely No suitable habitat occurs in the site.

		WA	EPBC Act		
<i>Tyto novaehollandiae novaehollandiae</i>	<i>Australian masked owl</i>	P3	-	Forests, open woodlands, farmlands with large trees. E.g. river red gums, adjacent cleared country, timbered watercourses, paperbark woodlands and caves (Pizzey & Knight 2012).	Unlikely No marginal suitable/marginal habitat.
<i>Xenus cinereus</i>	<i>Terek sandpiper</i>	MI	MI	Tidal mudflats, estuaries; shores and reefs of islands; coastal swamps, commercial saltfields (Pizzey & Knight 2012).	Unlikely No suitable habitat occurs in the site.
<i>Australotomurus morbidus</i>	<i>Cemetery springtail</i>	P3	-	Unknown.	Unlikely No records occur nearby. Habitat within the site is likely too disturbed to support this species.
<i>Euoplos inornatus</i>	<i>Inornate trapdoor spider</i>	P3	-	Has previously been recorded in jarrah forest, including near clay banks and granite outcrop. Most records are from the Darling scarp/Jarrah Forest Region, with limited records from the Swan Coastal Plain (DBCA 2020).	Unlikely No records occur nearby. No suitable habitat present.
<i>Glossurocolletes bilobatus</i>	<i>a short-tongued bee</i>	P2	-	Unknown.	Unlikely No records occur nearby. Habitat within the site is likely too disturbed to support this species.

		WA	EPBC Act		
<i>Hesperocolletes douglasi</i>	<i>Douglas's broad-headed bee</i>	CR	CR	Banksia woodland vegetation (Pille Arnold 2019).	Unlikely No records occur near the site. Species has previously only been recorded on Rottnest island and in native bushland near Gnangara-Moore River State Forest.
<i>Idiosoma sigillatum</i>	<i>Swan Coastal Plain shield-backed trapdoor spider</i>	P3	-	Widely distributed in sandy areas on the Swan Coastal Plain and on Rottnest Island (Prince 2003).	Possible Potentially suitable habitat occurs in the site (sandy soil) and multiple records of this species occur in the wider area.
<i>Leioproctus douglasiellus</i>	<i>a short-tongued bee</i>	EN	CR	Life history and habits are poorly documented/unknown. It has been recorded only on the flowers of <i>Goodenia filiformis</i> and <i>Anthotium junctiforme</i> (Houston 2000).	Unlikely No records of this species occur near the site and the known plants were not recorded. The habitat in the site is likely too disturbed to support this species.

		WA	EPBC Act		
<i>Neopasiphae simplicior</i>	<i>a short-tongued bee</i>	EN	CR	This species of native bee has been collected on flowers of <i>Goodenia filiformis</i> , <i>Lobelia tenuior</i> , <i>Angianthus preissianus</i> and <i>Velleia</i> sp. (Houston 2000).	Unlikely No records of this species occur near the site and the known plants were not recorded. The habitat in the site is likely too disturbed to support this species.
<i>Synemon gratiosa</i>	<i>Graceful sunmoth</i>	P4	-	Coastal heathland on Quindalup dunes where it is restricted to secondary sand dunes due to the abundance of the preferred host plant <i>Lomandra maritima</i> . <i>Banksia</i> woodland on Spearwood and Bassendean dunes, where the second known host plant <i>L. hermaphrodita</i> is widespread (DEC 2011).	Unlikely No records of this species occur near the site and the known plants were not recorded. The habitat in the site is likely too disturbed to support this species.
<i>Westralunio carteri</i>	<i>Carter's freshwater mussel</i>	VU	VU	Occurs in greatest abundance in slower flowing streams with stable sediments that are soft enough for burrowing amongst woody debris and exposed tree roots. Also occupies lentic systems including large water supply dams and even on-stream farm dams. Salinity tolerance quite low (Morgan et al. 2011).	Unlikely No suitable habitat occurs in the site.
<i>Bettongia penicillata ogilbyi</i>	<i>Woylie</i>	CR	EN	Woodlands and adjacent heaths with a dense understorey of shrubs, particularly <i>Gastrolobium</i> spp. (TSSC 2018).	Unlikely Species is locally extinct.

		WA	EPBC Act		
<i>Dasyurus geoffroii</i>	<i>Chuditch</i>	VU	VU	Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along road sides in the wheatbelt (DEC 2012b).	Unlikely No recent records occur nearby and no suitable habitat occurs within the site.
<i>Dasyurus hallucatus</i>	<i>Northern quoll</i>	EN	EN	Most abundant in rocky eucalypt woodland but occurs in range of vegetation types, mostly within 200 km of the coast (Menkhorst & Knight 2011).	Unlikely Site is located outside of the species distribution range.
<i>Hydromys chrysogaster</i>	<i>Rakali</i>	P4	-	Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south west (Christensen et al. 1985).	Unlikely No suitable habitat occurs in the site.
<i>Isoodon fusciventer</i>	<i>Quenda</i>	P4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012)	Likely DBCA record of species adjacent to site within Kensington Bushland Reserve. The species may use areas of dense vegetation and tall grasses within the native bushland and parklands habitats.
<i>Macrotis lagotis</i>	<i>Bilby</i>	VU	VU	Open tussock grassland on uplands and hills, mulga woodland/shrubland growing on ridges and rises and hummock grassland (spinifex) growing on sandplains and dunes, drainage systems, salt lake systems and other alluvial areas (DBCA 2017a).	Unlikely Species is locally extinct.

		WA	EPBC Act		
<i>Myrmecobius fasciatus</i>	<i>Numbat</i>	EN	EN	Generally dominated by Eucalyptus spp. that provide hollow logs and branches for shelter and termites for food (van Dyck & Strahan 2008).	Unlikely Species is locally extinct.
<i>Phascogale tapoatafa wambenger</i>	<i>South-western brush-tailed phascogale</i>	CD	-	Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003).	Unlikely The site lacks suitable habitat (mature and hollow trees).
<i>Pseudocheirus occidentalis</i>	<i>Western ringtail possum</i>	CR	CR	On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017).	Unlikely Species is locally extinct.
<i>Setonix brachyurus</i>	<i>Quokka</i>	VU	VU	On the mainland mostly dense streamside vegetation or shrubland and heath areas, particularly around swamps (Cronin 2007).	Unlikely Species is locally extinct.
<i>Ctenotus delli</i>	<i>Dell's skink</i>	P4	-	Jarraah and marri woodland with a shrub dominated understorey, sheltering in dense vegetation, inside grass trees and beneath rocks, sometimes in burrows (Nevill 2005).	Unlikely No suitable habitat occurs in the site.
<i>Ctenotus ora</i>	<i>Coastal plains skink</i>	P3	-	Sandy substrates with low vegetation (including heath) in open Eucalyptus spp. and Corymbia calophylla woodland over Banksia spp. (Kay and Keogh 2012).	Unlikely No recent records occur near the site and the habitat in the site is not suitable/marginal.

		WA	EPBC Act		
<i>Lerista lineata</i>	<i>Perth slider</i>	P3	-	Sandy coastal heath and low scrubland. Banksia spp. woodland, Eucalyptus gomphocephala open woodland over deep sands, and coastal dunes immediately adjacent to the beach (Wilson and Swan 2017).	Possible May occasionally utilise the native bushland habitat in the site due to adjacent suitable habitat within Kensington Bushland Reserve.
<i>Neelaps calonotos</i>	<i>Black-striped snake</i>	P3	-	Coastal and near-coastal dunes, sandplains supporting heathlands and Banksia spp. woodlands (Bush et al. 2002).	Possible May occasionally utilise the native bushland habitat in the site due to adjacent suitable habitat within Kensington Bushland Reserve.
<i>Pseudemydura umbrina</i>	<i>Western swamp tortoise</i>	CR	CR	Clay based ephemeral swamps (Bush et al. 2002).	Unlikely No suitable habitat occurs in the site.

Note: CE=critically endangered, EN=endangered, VU=vulnerable, CD=conservation dependent, MI=migratory, OS=other specially protected, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4. Species recorded or considered to potentially occur within the site are shaded green.

References

- Bush, B., Maryan, B., Browne-Cooper, R. and Robinson, D. 2007, Reptiles and Frogs in the Bush: Southwestern Australia, UWA Press, Nedlands.
- Bray, D. J. and Gomon, M. F. 2018, Pouch Lamprey, *Geotria australis*.
- Christensen, P. and Strahan, R. 1984, The Australian Museum Complete Book of Australian Mammals, Angus and Robertson Publishers, Sydney.
- Cronin, L. 2007, Cronin's Key Guide to Australian Wildlife, Oxford University Press, Oxford, United Kingdom.
- Department of Biodiversity, Conservation and Attractions (DBCA) 2017, Fauna Profile: Western Ringtail Possum *Pseudocheirus occidentalis*, Perth, Western Australia.
- Johnstone, R. E. and Storr, G. M. 1998, Handbook of Western Australian Birds. Volume 1 - Non-Passerines (Emu to Dollarbird), Western Australian Museum, Perth.
- Marchant, S. and Higgins, P. J. 1993, Handbook of Australian, New Zealand and Antarctic Birds. Volume two - Raptors to Lapwings, Oxford University Press, Melbourne, Victoria.
- Morgan, D. L., Beatty, S. J., Klunzinger, M. W., Allen, M. G. and Burnham, Q. E. 2011, Field Guide to the Freshwater Fishes, Crayfishes and Mussels of South Western Australia, SERCUL, Perth, Western Australia.
- Morcombe, M. 2004, Field Guide to Australian Birds, Steve Parish Publishing, Archerfield, Queensland.

Appendix D

Species List



Category	Status	Species name	Common name	Record type
Birds				
		<i>Acanthiza chrysorrhoa</i>	Yellow-rumped thornbill	Sight
		<i>Accipiter sp.</i>	-	Sight
		<i>Anthochaera carunculata</i>	Red wattlebird	Sight
	VU	<i>Calyptorhynchus banksii naso</i>	Forest red-tailed black cockatoo	Foraging evidence and sight
	EN	<i>Calyptorhynchus latirostris</i>	Carnaby's cockatoo	Foraging evidence
		<i>Corvus coronoides</i>	Australian raven	Sight
		<i>Cracticus tibicen</i>	Australian magpie	Sight
		<i>Lichenostomus viresces</i>	Singing honeyeater	Sight
		<i>Pelecanus conspicillatus</i>	Pelican	Fly over
		<i>Petrochelidon nigricans</i>	Tree martin	Sight
		<i>Phylidonyris novaehollandiae</i>	New Holland honeyeater	Sight
		<i>Rhipidura albiscapa</i>	Grey fantail	Sight
		<i>Rhipidura leucophrys</i>	Willie wagtail	Sight
		<i>Smicrornis brevirostris occidentalis</i>	Weebill	Call
	*	<i>Streptopelia senegalensis</i>	Laughing dove	Sight
	*DP	<i>Trichoglossus haematodus</i>	Rainbow lorikeet	Sight
Mammals				
	*DP	<i>Felis catus</i>	Cat	Tracks

Note: * denotes introduced fauna species, DP=declared pest under the BAM Act, EN=Endangered under the EPBC Act, VU=Vulnerable under the EPBC Act.