

Appendix 1. Protected Matters Search Tool report



EPBC Act Protected Matters Report

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

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

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

Report created: 04/01/17 18:10:33

[Summary](#)

[Details](#)

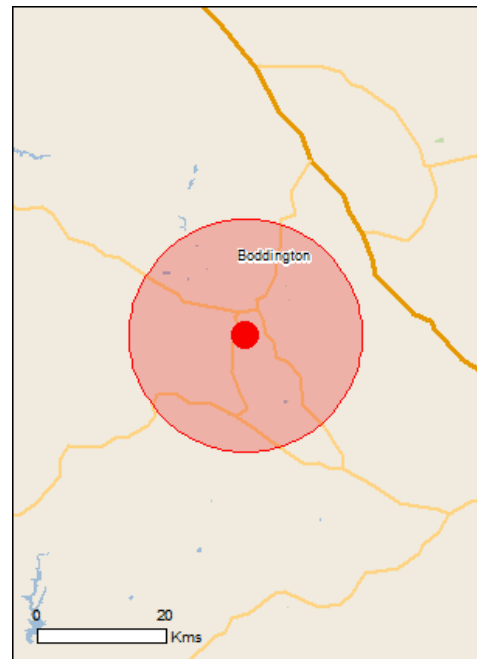
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

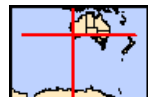
[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 18.0Km



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:	None
Listed Threatened Species:	18
Listed Migratory Species:	5

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	11
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	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:	2
Regional Forest Agreements:	1
Invasive Species:	22
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name	Proximity	
Peel-ylgorup system	50 - 100km upstream	

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
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, Baudin's Black-Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Roosting known to occur within area
Calyptorhynchus latirostris Carnaby's Cockatoo, Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Mammals		
Bettongia penicillata Brush-tailed Bettong, Woylie [213]	Endangered	Species or species habitat known to occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area
Phascogale calura Red-tailed Phascogale, Red-tailed Wambenger, Kenngoor [316]	Vulnerable	Species or species habitat known to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Vulnerable	Species or species habitat may occur within area
Plants		
Commersonia erythrogyna Trigwell's Rulingia [86397]	Endangered	Species or species habitat may occur within

Name	Status	Type of Presence area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat may occur within area
Lasiopetalum pterocarpum Wing-fruited Lasiopetalum [64922]	Endangered	Species or species habitat may occur within area
Pultenaea pauciflora Narrogen Pea [14013]	Vulnerable	Species or species habitat likely to occur within area
Thelymitra dedmaniarum Cinnamon Sun Orchid [65105]	Endangered	Species or species habitat may occur within area

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

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

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Migratory Terrestrial Species

Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
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Migratory Wetlands Species

Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

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

Name
Commonwealth Land -

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

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

Name	Threatened	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species

Name	Threatened	Type of Presence
Ardea alba Great Egret, White Egret [59541]		habitat likely to occur within area Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		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 may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Lane Poole Reserve	WA
Mooradung	WA

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
South West WA RFA	Western Australia

Invasive Species [Resource Information]

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

Name	Status	Type of Presence
Birds		

Name	Status	Type of Presence
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom		Species or species habitat likely to occur

Name	Status	Type of Presence
[20126] Genista sp. X Genista monspessulana Broom [67538]		within area Species or species habitat may occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-32.89556 116.43209

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.

Appendix 2. NatureMap Search

1009025-002 PBA Data Search Sorted

Created By Eddy Cannella on 25/01/2017

Kingdom Animalia
Current Names Only Yes
Species Group All Animals
Method 'By Circle'
Centre 116° 25' 55" E, 32° 53' 44" S
Buffer 20km
Group By Species Group

Species Group	Species	Records
Amphibian	13	95
Bird	180	6019
Fish	3	8
Invertebrate	593	1858
Mammal	37	1167
Reptile	41	1761
TOTAL	867	10908

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Amphibian				
1.	25398 <i>Crinia georgiana</i> (Quacking Frog)			
2.	25401 <i>Crinia pseudinsignifera</i> (Bleating Froglet)			
3.	25408 <i>Heleioporus albopunctatus</i> (Western Spotted Frog)			
4.	25410 <i>Heleioporus eyrei</i> (Moaning Frog)			
5.	25411 <i>Heleioporus inornatus</i> (Whooping Frog)			
6.	25412 <i>Heleioporus psammophilus</i> (Sand Frog)			
7.	25415 <i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
8.	25378 <i>Litoria adelaidensis</i> (Slender Tree Frog)			
9.	25383 <i>Litoria cyclorhyncha</i> (Spotted-thighed Frog)			
10.	25388 <i>Litoria moorei</i> (Motorbike Frog)			
11.	25420 <i>Myobatrachus gouldii</i> (Turtle Frog)			
12.	25426 <i>Neobatrachus pelobatoides</i> (Humming Frog)			
13.	25433 <i>Pseudophryne guentheri</i> (Crawling Toadlet)			
Bird				
14.	<i>Acanthiza</i> (<i>Geobasileus</i>) <i>chrysorrhoa</i>			
15.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
16.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
17.	24262 <i>Acanthiza inornata</i> (Western Thornbill)			
18.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
19.	<i>Accipiter</i> (<i>Paraspizias</i>) <i>cirrocephalus</i>			
20.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
21.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
22.	25755 <i>Acrocephalus australis</i> (Australasian Reed Warbler)			
23.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
24.	25544 <i>Aegotheles cristatus</i> (Australian Owlet-nightjar)			
25.	<i>Anas</i> (<i>Anas</i>) <i>superciliosa superciliosa</i>			
26.	<i>Anas</i> (<i>Nettion</i>) <i>gracilis</i>			
27.	24312 <i>Anas gracilis</i> (Grey Teal)			
28.	24315 <i>Anas rhynchotis</i> (Australasian Shoveler)			
29.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
30.	<i>Anhinga novaehollandiae</i>			
31.	<i>Anthochaera</i> (<i>Anellobia</i>) <i>lunulata</i>			
32.	<i>Anthochaera</i> (<i>Anthochaera</i>) <i>carunculata</i>			
33.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
34.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
35.	<i>Anthus</i> (<i>Anthus</i>) <i>novaeseelandiae</i>			
36.	25670 <i>Anthus australis</i> (Australian Pipit)			
37.	<i>Aquila</i> (<i>Uroaetus</i>) <i>audax</i>			
38.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
39.	<i>Ardea</i> (<i>Ardea</i>) <i>pacifica</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
40.	41324	<i>Ardea modesta</i> (Eastern Great Egret)		IA	
41.	24341	<i>Ardea pacifica</i> (White-necked Heron)			
42.	25566	<i>Artamus cinereus</i> (Black-faced Woodswallow)			
43.	24353	<i>Artamus cyanopterus</i> (Dusky Woodswallow)			
44.	24318	<i>Aythya australis</i> (Hardhead)			
45.		<i>Barnardius zonarius</i>			
46.		<i>Barnardius zonarius semitorquatus</i>			
47.	24319	<i>Biziura lobata</i> (Musk Duck)			
48.	25715	<i>Cacatua roseicapilla</i> (Galah)			
49.		<i>Cacomantis (Vidgenia) flabelliformis</i>			
50.	25598	<i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
51.	42307	<i>Cacomantis pallidus</i> (Pallid Cuckoo)			
52.	24269	<i>Calamanthus campestris</i> (Rufous Fieldwren)			
53.		<i>Calyptorhynchus (Calyptorhynchus) banksii</i>			
54.		<i>Calyptorhynchus (Zanda) latirostris</i>			
55.	25717	<i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
56.	24731	<i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black-Cockatoo)		T	
57.	24733	<i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo (long-billed black-cockatoo), Baudin's Cockatoo)		T	
58.	24734	<i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo (short-billed black-cockatoo), Carnaby's Cockatoo)		T	
59.	24321	<i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
60.		<i>Cheramoeca leucosterna</i>			
61.	24431	<i>Chrysococcyx basalis</i> (Horsfield's Bronze Cuckoo)			
62.	25601	<i>Chrysococcyx lucidus</i> (Shining Bronze Cuckoo)			
63.	24833	<i>Cincloramphus cruralis</i> (Brown Songlark)			
64.	24834	<i>Cincloramphus mathewsi</i> (Rufous Songlark)			
65.	24288	<i>Circus approximans</i> (Swamp Harrier)			
66.		<i>Climacteris (Climacteris) rufa</i>			
67.	24396	<i>Climacteris rufa</i> (Rufous Treecreeper)			
68.	25675	<i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
69.	24399	<i>Columba livia</i> (Domestic Pigeon)	Y		
70.		<i>Coracina (Coracina) novaehollandiae</i>			
71.	25568	<i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
72.	25592	<i>Corvus coronoides</i> (Australian Raven)			
73.		<i>Corvus coronoides coronoides</i>			
74.	24671	<i>Coturnix pectoralis</i> (Stubble Quail)			
75.	25595	<i>Cracticus tibicen</i> (Australian Magpie)			
76.	25596	<i>Cracticus torquatus</i> (Grey Butcherbird)			
77.		<i>Cygnus (Chenopsis) atratus</i>			
78.	24322	<i>Cygnus atratus</i> (Black Swan)			
79.		<i>Dacelo (Dacelo) novaeguineae</i>			
80.	30901	<i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
81.	25673	<i>Daphoenositta chrysoptera</i> (Varied Sittella)			
82.	25607	<i>Dicaeum hirundinaceum</i> (Mistletoebird)			
83.	24470	<i>Dromaius novaehollandiae</i> (Emu)			
84.		<i>Egretta novaehollandiae</i>			
85.		<i>Elanus axillaris</i>			
86.		<i>Euseiornis melanops</i>			
87.		<i>Eolophus roseicapillus</i>			
88.	24651	<i>Eopsaltria australis</i> subsp. <i>griseogularis</i> (Western Yellow Robin)			
89.	24652	<i>Eopsaltria georgiana</i> (White-breasted Robin)			
90.	24567	<i>Epthianura albifrons</i> (White-fronted Chat)			
91.		<i>Falco (Hierofalco) peregrinus</i>			
92.		<i>Falco (Ieracidea) berigora berigora</i>			
93.		<i>Falco (Tinnunculus) cenchroides</i>			
94.	25621	<i>Falco berigora</i> (Brown Falcon)			
95.	25622	<i>Falco cenchroides</i> (Australian Kestrel)			
96.	25623	<i>Falco longipennis</i> (Australian Hobby)			
97.	25624	<i>Falco peregrinus</i> (Peregrine Falcon)		S	
98.	25727	<i>Fulica atra</i> (Eurasian Coot)			
99.		<i>Gallus gallus</i>			
100.	42314	<i>Gavicalis virescens</i> (Singing Honeyeater)			
101.	25530	<i>Gerygone fusca</i> (Western Gerygone)			
102.	24735	<i>Glossopsitta porphyrocephala</i> (Purple-crowned Lorikeet)			
103.	24443	<i>Grallina cyanoleuca</i> (Magpie-lark)			
104.	24295	<i>Haliastur sphenurus</i> (Whistling Kite)			
105.	24296	<i>Hamirostra isura</i> (Square-tailed Kite)			
106.	25734	<i>Himantopus himantopus</i> (Black-winged Stilt)			
107.		<i>Hirundo (Hirundo) neoxena</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
108.	24491	<i>Hirundo neoxena</i> (Welcome Swallow)			
109.	25629	<i>Hirundo nigricans</i> (Tree Martin)			
110.	25571	<i>Lalage leucomela</i> (Varied Triller)			
111.	24367	<i>Lalage tricolor</i> (White-winged Triller)			
112.	24557	<i>Leipoa ocellata</i> (Malleefowl)		T	
113.	25659	<i>Lichenostomus leucotis</i> (White-eared Honeyeater)			
114.		<i>Lichmera</i> (<i>Lichmera</i>) <i>indistincta</i>			
115.	25661	<i>Lichmera indistincta</i> (Brown Honeyeater)			
116.		<i>Malurus</i> (<i>Malurus</i>) <i>splendens</i>			
117.	25654	<i>Malurus splendens</i> (Splendid Fairy-wren)			
118.	25758	<i>Megalurus gramineus</i> (Little Grassbird)			
119.		<i>Melithreptus</i> (<i>Eidopsarus</i>) <i>brevirostris</i>			
120.	25663	<i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
121.	24587	<i>Melithreptus chloropsis</i> (Western White-naped Honeyeater)			
122.		<i>Merops</i> (<i>Merops</i>) <i>ornatus</i>			
123.	24598	<i>Merops ornatus</i> (Rainbow Bee-eater)		IA	
124.		<i>Microcarbo melanoleucos</i>			
125.	25610	<i>Myiagra inquieta</i> (Restless Flycatcher)			
126.		<i>Neophema</i> (<i>Neonanodes</i>) <i>elegans</i>			
127.	24738	<i>Neophema elegans</i> (Elegant Parrot)			
128.		<i>Ninox</i> (<i>Ninox</i>) <i>novaeseelandiae</i>			
129.	25748	<i>Ninox novaeseelandiae</i> (Boobook Owl)			
130.	25564	<i>Nycticorax caledonicus</i> (Rufous Night Heron)			
131.	24407	<i>Ocyphaps lophotes</i> (Crested Pigeon)			
132.	24618	<i>Oreoica gutturalis</i> (Crested Bellbird)			
133.		<i>Pachycephala</i> (<i>Alisterornis</i>) <i>rufiventris</i>			
134.		<i>Pachycephala</i> (<i>Pachycephala</i>) <i>pectoralis</i>			
135.	25679	<i>Pachycephala pectoralis</i> (Golden Whistler)			
136.	25680	<i>Pachycephala rufiventris</i> (Rufous Whistler)			
137.		<i>Pardalotus</i> (<i>Pardalotinus</i>) <i>striatus</i>			
138.		<i>Pardalotus</i> (<i>Pardalotus</i>) <i>punctatus</i>			
139.	25681	<i>Pardalotus punctatus</i> (Spotted Pardalote)			
140.	25682	<i>Pardalotus striatus</i> (Striated Pardalote)			
141.		<i>Petrochelidon</i> (<i>Hylochelidon</i>) <i>nigricans</i>			
142.		<i>Petroica</i> (<i>Petroica</i>) <i>boodang</i>			
143.	24659	<i>Petroica goodenovii</i> (Red-capped Robin)			
144.	25695	<i>Petroica multicolor</i> (Scarlet Robin)			
145.	24660	<i>Petroica multicolor</i> subsp. <i>campbelli</i> (Scarlet Robin)			
146.	25698	<i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
147.	24667	<i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
148.		<i>Phaps</i> (<i>Phaps</i>) <i>chalcoptera</i>			
149.		<i>Phaps</i> (<i>Phaps</i>) <i>elegans</i>			
150.	24409	<i>Phaps chalcoptera</i> (Common Bronzewing)			
151.	25587	<i>Phaps elegans</i> (Brush Bronzewing)			
152.		<i>Phylidonyris</i> (<i>Meliornis</i>) <i>novaehollandiae</i>			
153.	24594	<i>Phylidonyris melanops</i> (Tawny-crowned Honeyeater)			
154.	25669	<i>Phylidonyris nigra</i> (White-cheeked Honeyeater)			
155.	24596	<i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
156.		<i>Platalea</i> (<i>Platibis</i>) <i>flavipes</i>			
157.	24841	<i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
158.	25720	<i>Platycercus icterotis</i> (Western Rosella)			
159.	24746	<i>Platycercus icterotis</i> subsp. <i>xanthogenys</i> (Western Rosella (inland))		P4	
160.	24747	<i>Platycercus spurius</i> (Red-capped Parrot)			
161.	25721	<i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
162.	25703	<i>Podargus strigoides</i> (Tawny Frogmouth)			
163.	25704	<i>Podiceps cristatus</i> (Great Crested Grebe)			
164.	24681	<i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe)			
165.	25722	<i>Polytelis anthopeplus</i> (Regent Parrot)			
166.	24684	<i>Pomatostomus temporalis</i> subsp. <i>rubeculus</i> (Grey-crowned Babbler)			
167.	25731	<i>Porphyrio porphyrio</i> (Purple Swamphen)			
168.		<i>Purpureicephalus spurius</i>			
169.		<i>Rhipidura</i> (<i>Rhipidura</i>) <i>albiscapa</i>			
170.		<i>Rhipidura</i> (<i>Sauloprocta</i>) <i>leucophrys</i>			
171.	25613	<i>Rhipidura fuliginosa</i> (Grey Fantail)			
172.	24452	<i>Rhipidura fuliginosa</i> subsp. <i>preissi</i> (Grey Fantail)			
173.	25614	<i>Rhipidura leucophrys</i> (Willie Wagtail)			
174.		<i>Sericornis</i> (<i>Sericornis</i>) <i>frontalis</i>			
175.	25534	<i>Sericornis frontalis</i> (White-browed Scrubwren)			
176.	30948	<i>Smicornis brevirostris</i> (Weebill)			
177.	24645	<i>Stagonopleura oculata</i> (Red-eared Firetail)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
178.	<i>Strepera (Neostrepera) versicolor</i>			
179.	<i>Strepera (Neostrepera) versicolor versicolor</i>			
180.	25597 <i>Strepera versicolor</i> (Grey Currawong)			
181.	25590 <i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
182.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
183.	<i>Tadorna (Casarca) tadornoides</i>			
184.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
185.	24844 <i>Threskiornis molucca</i> (Australian White Ibis)			
186.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
187.	<i>Todiramphus (Todiramphus) sanctus</i>			
188.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
189.	<i>Turnix (Austroturnix) varius</i>			
190.	25761 <i>Turnix varia</i> (Painted Button-quail)			
191.	24851 <i>Turnix velox</i> (Little Button-quail)			
192.	25762 <i>Tyto alba</i> (Barn Owl)			
193.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

Fish

194.	34028 <i>Galaxias occidentalis</i> (Western Minnow)			
195.	<i>Nannoperca vittata</i>			
196.	<i>Pseudogobius olorum</i>			

Invertebrate

197.	<i>Abantiades</i> sp. fc761			
198.	<i>Abantiades</i> sp. fc958			
199.	<i>Acantholophus</i> sp. fc1523			
200.	<i>Acantholophus</i> sp. fc869			
201.	<i>Acariformes</i> sp.			
202.	<i>Adelium</i> sp. fc904			
203.	<i>Adreppus</i> sp. fc868			
204.	<i>Aedriodes fastgatus</i>			Y
205.	<i>Agrotis munda</i>			
206.	<i>Agrotis</i> sp. fc844			
207.	<i>Ahamitermes hillii</i>			
208.	<i>Allothreua maculata</i>			
209.	<i>Amitermes dentosus</i>			
210.	<i>Amitermes obeuntis</i>			
211.	<i>Amorbus bispinus</i>			
212.	<i>Amphineurus fergusonii</i>			Y
213.	<i>Aname tepperi</i>			
214.	<i>Anilaria</i> sp.			
215.	<i>Anthela ferruginosa</i>			
216.	<i>Anthela</i> sp. fc381			
217.	<i>Antichiropus variabilis</i>			
218.	<i>Apis mellifera</i>			
219.	<i>Araiobelus</i> sp. fc201			
220.	<i>Araneus arenaceus</i>			
221.	<i>Araneus cyphoxis</i>			
222.	<i>Araneus eburneiventris</i>			
223.	<i>Arhodia</i> sp. fc2			
224.	<i>Arhodia</i> sp. fc320			
225.	<i>Arkys alticephala</i>			
226.	<i>Arkys walckenaeri</i>			
227.	<i>Artoria cingulipes</i>			
228.	<i>Australomimetes aurioculatus</i>			
229.	<i>Austrochthonius muchmorei</i>			
230.	33972 <i>Austromerope poultoni</i> (scorpionfly)		P2	
231.	<i>Badumna insignis</i>			
232.	<i>Baiami</i> sp. fc732			
233.	<i>Baiami teganarioides</i>			
234.	<i>Baiami volucripes</i>			
235.	<i>Beierolpium bornemisszai</i>			Y
236.	<i>Blackbolbus</i> sp. fc831			
237.	<i>Bolborhachium triumum</i>			
238.	<i>Bostrychopsis jesuita</i>			
239.	<i>Caenidae</i> sp.			
240.	<i>Calliphora</i> sp. fc53			
241.	<i>Camponotus</i> sp. fc1585			
242.	<i>Camponotus</i> sp. fc1602			
243.	<i>Camponotus</i> sp. fc275			
244.	<i>Camponotus</i> sp. fc423			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
245.	<i>Carthaea saturnioides</i>			
246.	<i>Cedarinia</i> sp. fc1452			
247.	<i>Cedarinia</i> sp. fc726			
248.	<i>Cedarinia</i> sp. fc890			
249.	<i>Cedarinia</i> sp. fc892			
250.	<i>Ceinidae</i> sp.			
251.	<i>Cenogmus</i> sp. fc264			
252.	<i>Ceratopogonidae</i> sp.			
253.	<i>Cercophonius sulcatus</i>			
254.	<i>Chalcopteroides</i> sp. fc930			
255.	<i>Chironominae</i> sp.			
256.	<i>Chlorocoma dicloraria</i>			
257.	<i>Chlorocoma</i> sp. fc22			
258.	<i>Chrostyus</i> sp. fc1121			
259.	<i>Chrysodeixis argentifera</i>			
260.	<i>Chrysodeixis eriosoma</i>			
261.	<i>Chrysopa</i> sp. fc822			
262.	<i>Ciampa arietaria</i>			
263.	<i>Cirphula</i> sp. fc1699			
264.	<i>Cisseis</i> sp. fc1437			Y
265.	<i>Coccinella repanda</i>			
266.	<i>Coenagrionidae</i> sp.			
267.	<i>Colpochila antennalis</i>			
268.	<i>Conoderus</i> sp. fc135			
269.	<i>Conoderus</i> sp. fc26			
270.	<i>Conoderus</i> sp. fc444			
271.	<i>Coptotermes acinaciformis raffrayi</i>			
272.	<i>Coptotermes michaelsoni</i>			
273.	<i>Corduliidae</i> sp.			
274.	<i>Corixidae</i> sp.			
275.	<i>Cormocephalus aurantiipes</i>			
276.	<i>Cormocephalus hartmeyerii</i>			
277.	<i>Cormocephalus strigosus</i>			
278.	<i>Coryphistes</i> sp. fc231			
279.	<i>Crypsiphona ocultaria</i>			
280.	<i>Cryptocheilus fabricolor</i>			
281.	<i>Cryptodus</i> sp. fc1160			
282.	<i>Cryptodus</i> sp. fc189			
283.	<i>Culicidae</i> sp.			
284.	<i>Dasypodia selenophora</i>			
285.	<i>Deinopsis</i> sp. fc1544			Y
286.	<i>Demadiana cerula</i>			
287.	<i>Destolmia</i> sp. fc4			
288.	<i>Doratifera</i> sp. fc81			
289.	<i>Drasterius</i> sp. fc1120			
290.	<i>Dytiscidae</i> sp.			
291.	<i>Ecnomidae</i> sp.			
292.	<i>Ectropis</i> sp. fc23			
293.	<i>Elassoctenus harpax</i>			
294.	<i>Empididae</i> sp.			
295.	<i>Entometa</i> sp. fc426			
296.	<i>Epicoma melanostica</i>			
297.	<i>Erigone prominens</i>			
298.	<i>Eriophora biapicata</i>			
299.	<i>Ero aphana</i>			
300.	<i>Ethmostigmus</i> sp. fc223			
301.	<i>Eucyclodes buprestaria</i>			
302.	<i>Eucyrtops latior</i>			
303.	<i>Eunatalis spinicornis</i>			
304.	<i>Gea theridioides</i>			
305.	<i>Genus fc1022</i> sp. fc1022			
306.	<i>Genus fc1026</i> sp. fc1026			
307.	<i>Genus fc1031</i> sp. fc1031			
308.	<i>Genus fc1037</i> sp. fc1037			
309.	<i>Genus fc1038</i> sp. fc1038			
310.	<i>Genus fc1042</i> sp. fc1042			
311.	<i>Genus fc1043</i> sp. fc1043			
312.	<i>Genus fc1044</i> sp. fc1044			
313.	<i>Genus fc1046</i> sp. fc1046			
314.	<i>Genus fc1049</i> sp. fc1049			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
315.	Genus fc1051 sp. fc1051			
316.	Genus fc1055 sp. fc1055			
317.	Genus fc1057 sp. fc1057			
318.	Genus fc1075 sp. fc1075			
319.	Genus fc1077 sp. fc1077			Y
320.	Genus fc1078 sp. fc1078			Y
321.	Genus fc1079 sp. fc1079			
322.	Genus fc1081 sp. fc1081			
323.	Genus fc1084 sp. fc1084			
324.	Genus fc1085 sp. fc1085			
325.	Genus fc1090 sp. fc1090			
326.	Genus fc1095 sp. fc1095			Y
327.	Genus fc1101 sp. fc1101			
328.	Genus fc1106 sp. fc1106			
329.	Genus fc1110 sp. fc1110			
330.	Genus fc1112 sp. fc1112			Y
331.	Genus fc12 sp. fc12			
332.	Genus fc1210 sp. fc1210			
333.	Genus fc1212 sp. fc1212			
334.	Genus fc1224 sp. fc1224			
335.	Genus fc1227 sp. fc1227			
336.	Genus fc123 sp. fc123			
337.	Genus fc1258 sp. fc1258			
338.	Genus fc126 sp. fc126			
339.	Genus fc132 sp. fc132			
340.	Genus fc133 sp. fc133			
341.	Genus fc137 sp. fc137			
342.	Genus fc14 sp. fc14			
343.	Genus fc140 sp. fc140			
344.	Genus fc1415 sp. fc1415			
345.	Genus fc1421 sp. fc1421			
346.	Genus fc1424 sp. fc1424			
347.	Genus fc1430 sp. fc1430			
348.	Genus fc1431 sp. fc1431			
349.	Genus fc1436 sp. fc1436			
350.	Genus fc1438 sp. fc1438			Y
351.	Genus fc144 sp. fc144			
352.	Genus fc1440 sp. fc1440			Y
353.	Genus fc1442 sp. fc1442			
354.	Genus fc1445 sp. fc1445			Y
355.	Genus fc1446 sp. fc1446			Y
356.	Genus fc1447 sp. fc1447			
357.	Genus fc1448 sp. fc1448			Y
358.	Genus fc1449 sp. fc1449			
359.	Genus fc145 sp. fc145			
360.	Genus fc1451 sp. fc1451			
361.	Genus fc1459 sp. fc1459			
362.	Genus fc146 sp. fc146			
363.	Genus fc1460 sp. fc1460			
364.	Genus fc1464 sp. fc1464			Y
365.	Genus fc1465 sp. fc1465			
366.	Genus fc1489 sp. fc1489			
367.	Genus fc1490 sp. fc1490			
368.	Genus fc1491 sp. fc1491			
369.	Genus fc1492 sp. fc1492			
370.	Genus fc1493 sp. fc1493			
371.	Genus fc1494 sp. fc1494			
372.	Genus fc1495 sp. fc1495			
373.	Genus fc1496 sp. fc1496			Y
374.	Genus fc1497 sp. fc1497			
375.	Genus fc1498 sp. fc1498			Y
376.	Genus fc150 sp. fc150			
377.	Genus fc1503 sp. fc1503			
378.	Genus fc1511 sp. fc1511			
379.	Genus fc1513 sp. fc1513			
380.	Genus fc1514 sp. fc1514			Y
381.	Genus fc1516 sp. fc1516			
382.	Genus fc1520 sp. fc1520			Y
383.	Genus fc1524 sp. fc1524			
384.	Genus fc1525 sp. fc1525			Y

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
385.	Genus fc1531 sp. fc1531			
386.	Genus fc1532 sp. fc1532			Y
387.	Genus fc1538 sp. fc1538			
388.	Genus fc1545 sp. fc1545			Y
389.	Genus fc1548 sp. fc1548			
390.	Genus fc1555 sp. fc1555			Y
391.	Genus fc1563 sp. fc1563			
392.	Genus fc1564 sp. fc1564			
393.	Genus fc1568 sp. fc1568			
394.	Genus fc1570 sp. fc1570			
395.	Genus fc1574 sp. fc1574			
396.	Genus fc1579 sp. fc1579			
397.	Genus fc1580 sp. fc1580			
398.	Genus fc1581 sp. fc1581			Y
399.	Genus fc1583 sp. fc1583			
400.	Genus fc1584 sp. fc1584			Y
401.	Genus fc1586 sp. fc1586			
402.	Genus fc1588 sp. fc1588			
403.	Genus fc1589 sp. fc1589			
404.	Genus fc1598 sp. fc1598			Y
405.	Genus fc16 sp. fc16			
406.	Genus fc1600 sp. fc1600			
407.	Genus fc1601 sp. fc1601			Y
408.	Genus fc163 sp. fc163			
409.	Genus fc1643 sp. fc1643			
410.	Genus fc174 sp. fc174			
411.	Genus fc178 sp. fc178			
412.	Genus fc180 sp. fc180			
413.	Genus fc1834 sp. fc1834			
414.	Genus fc1842 sp. fc1842			
415.	Genus fc1872 sp. fc1872			
416.	Genus fc1875 sp. fc1875			
417.	Genus fc1899 sp. fc1899			
418.	Genus fc1907 sp. fc1907			
419.	Genus fc1926 sp. fc1926			
420.	Genus fc1938 sp. fc1938			
421.	Genus fc204 sp. fc204			
422.	Genus fc217 sp. fc217			
423.	Genus fc2192 sp. fc2192			
424.	Genus fc221 sp. fc221			
425.	Genus fc225 sp. fc225			
426.	Genus fc226 sp. fc226			
427.	Genus fc228 sp. fc228			
428.	Genus fc2423 sp. fc2423			
429.	Genus fc25 sp. fc25			
430.	Genus fc251 sp. fc251			
431.	Genus fc257 sp. fc257			
432.	Genus fc258 sp. fc258			
433.	Genus fc262 sp. fc262			
434.	Genus fc2647 sp. fc2647			
435.	Genus fc2648 sp. fc2648			
436.	Genus fc268 sp. fc268			
437.	Genus fc2709 sp. fc2709			
438.	Genus fc2851 sp. fc2851			
439.	Genus fc2876 sp. fc2876			Y
440.	Genus fc2895 sp. fc2895			
441.	Genus fc2901 sp. fc2901			
442.	Genus fc2905 sp. fc2905			
443.	Genus fc2953 sp. fc2953			
444.	Genus fc2970 sp. fc2970			
445.	Genus fc3026 sp. fc3026			
446.	Genus fc3108 sp. fc3108			
447.	Genus fc311 sp. fc311			
448.	Genus fc313 sp. fc313			
449.	Genus fc314 sp. fc314			
450.	Genus fc3151 sp. fc3151			
451.	Genus fc3152 sp. fc3152			
452.	Genus fc3158 sp. fc3158			
453.	Genus fc316 sp. fc316			
454.	Genus fc3162 sp. fc3162			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
455.	Genus fc317 sp. fc317			
456.	Genus fc32 sp. fc32			
457.	Genus fc3220 sp. fc3220			
458.	Genus fc3229 sp. fc3229			
459.	Genus fc324 sp. fc324			
460.	Genus fc326 sp. fc326			
461.	Genus fc33 sp. fc33			
462.	Genus fc333 sp. fc333			
463.	Genus fc336 sp. fc336			
464.	Genus fc3379 sp. fc3379			
465.	Genus fc3428 sp. fc3428			
466.	Genus fc3446 sp. fc3446			
467.	Genus fc3450 sp. fc3450			Y
468.	Genus fc3451 sp. fc3451			Y
469.	Genus fc3458 sp. fc3458			Y
470.	Genus fc3460 sp. fc3460			Y
471.	Genus fc3505 sp. fc3505			Y
472.	Genus fc3512 sp. fc3512			
473.	Genus fc3513 sp. fc3513			Y
474.	Genus fc3514 sp. fc3514			Y
475.	Genus fc3515 sp. fc3515			
476.	Genus fc3516 sp. fc3516			Y
477.	Genus fc3518 sp. fc3518			Y
478.	Genus fc3519 sp. fc3519			
479.	Genus fc3527 sp. fc3527			Y
480.	Genus fc3528 sp. fc3528			Y
481.	Genus fc3529 sp. fc3529			
482.	Genus fc3544 sp. fc3544			Y
483.	Genus fc3545 sp. fc3545			Y
484.	Genus fc3546 sp. fc3546			Y
485.	Genus fc3547 sp. fc3547			Y
486.	Genus fc3548 sp. fc3548			Y
487.	Genus fc360 sp. fc360			
488.	Genus fc364 sp. fc364			
489.	Genus fc366 sp. fc366			
490.	Genus fc374 sp. fc374			
491.	Genus fc376 sp. fc376			
492.	Genus fc38 sp. fc38			
493.	Genus fc380 sp. fc380			
494.	Genus fc383 sp. fc383			
495.	Genus fc386 sp. fc386			
496.	Genus fc389 sp. fc389			
497.	Genus fc391 sp. fc391			
498.	Genus fc394 sp. fc394			
499.	Genus fc396 sp. fc396			
500.	Genus fc397 sp. fc397			
501.	Genus fc400 sp. fc400			
502.	Genus fc403 sp. fc403			
503.	Genus fc407 sp. fc407			
504.	Genus fc41 sp. fc41			
505.	Genus fc410 sp. fc410			
506.	Genus fc411 sp. fc411			
507.	Genus fc413 sp. fc413			
508.	Genus fc414 sp. fc414			
509.	Genus fc417 sp. fc417			
510.	Genus fc420 sp. fc420			
511.	Genus fc421 sp. fc421			
512.	Genus fc422 sp. fc422			
513.	Genus fc424 sp. fc424			
514.	Genus fc430 sp. fc430			
515.	Genus fc433 sp. fc433			
516.	Genus fc436 sp. fc436			
517.	Genus fc439 sp. fc439			
518.	Genus fc441 sp. fc441			
519.	Genus fc451 sp. fc451			
520.	Genus fc452 sp. fc452			
521.	Genus fc454 sp. fc454			
522.	Genus fc460 sp. fc460			
523.	Genus fc466 sp. fc466			
524.	Genus fc467 sp. fc467			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
525.	Genus fc48 sp. fc48			
526.	Genus fc489 sp. fc489			
527.	Genus fc491 sp. fc491			
528.	Genus fc50 sp. fc50			
529.	Genus fc512 sp. fc512			
530.	Genus fc523 sp. fc523			
531.	Genus fc524 sp. fc524			
532.	Genus fc535 sp. fc535			
533.	Genus fc538 sp. fc538			
534.	Genus fc54 sp. fc54			
535.	Genus fc559 sp. fc559			
536.	Genus fc584 sp. fc584			
537.	Genus fc609 sp. fc609			
538.	Genus fc61 sp. fc61			
539.	Genus fc611 sp. fc611			
540.	Genus fc62 sp. fc62			
541.	Genus fc625 sp. fc625			
542.	Genus fc63 sp. fc63			
543.	Genus fc64 sp. fc64			
544.	Genus fc641 sp. fc641			
545.	Genus fc642 sp. fc642			
546.	Genus fc646 sp. fc646			
547.	Genus fc648 sp. fc648			
548.	Genus fc649 sp. fc649			
549.	Genus fc652 sp. fc652			
550.	Genus fc656 sp. fc656			
551.	Genus fc658 sp. fc658			
552.	Genus fc66 sp. fc66			
553.	Genus fc661 sp. fc661			
554.	Genus fc662 sp. fc662			
555.	Genus fc67 sp. fc67			
556.	Genus fc674 sp. fc674			
557.	Genus fc680 sp. fc680			
558.	Genus fc682 sp. fc682			
559.	Genus fc683 sp. fc683			
560.	Genus fc687 sp. fc687			
561.	Genus fc691 sp. fc691			
562.	Genus fc692 sp. fc692			
563.	Genus fc694 sp. fc694			
564.	Genus fc714 sp. fc714			
565.	Genus fc715 sp. fc715			
566.	Genus fc716 sp. fc716			
567.	Genus fc72 sp. fc72			
568.	Genus fc73 sp. fc73			
569.	Genus fc740 sp. fc740			
570.	Genus fc743 sp. fc743			
571.	Genus fc75 sp. fc75			
572.	Genus fc750 sp. fc750			
573.	Genus fc751 sp. fc751			
574.	Genus fc753 sp. fc753			
575.	Genus fc754 sp. fc754			
576.	Genus fc755 sp. fc755			
577.	Genus fc757 sp. fc757			
578.	Genus fc758 sp. fc758			
579.	Genus fc759 sp. fc759			
580.	Genus fc76 sp. fc76			
581.	Genus fc760 sp. fc760			
582.	Genus fc764 sp. fc764			
583.	Genus fc765 sp. fc765			
584.	Genus fc766 sp. fc766			
585.	Genus fc77 sp. fc77			
586.	Genus fc770 sp. fc770			
587.	Genus fc776 sp. fc776			
588.	Genus fc782 sp. fc782			
589.	Genus fc784 sp. fc784			
590.	Genus fc794 sp. fc794			
591.	Genus fc797 sp. fc797			
592.	Genus fc799 sp. fc799			
593.	Genus fc80 sp. fc80			
594.	Genus fc812 sp. fc812			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
595.	<i>Genus fc821 sp. fc821</i>			
596.	<i>Genus fc855 sp. fc855</i>			
597.	<i>Genus fc857 sp. fc857</i>			
598.	<i>Genus fc861 sp. fc861</i>			
599.	<i>Genus fc864 sp. fc864</i>			
600.	<i>Genus fc873 sp. fc873</i>			
601.	<i>Genus fc891 sp. fc891</i>			
602.	<i>Genus fc903 sp. fc903</i>			
603.	<i>Genus fc916 sp. fc916</i>			
604.	<i>Genus fc925 sp. fc925</i>			
605.	<i>Genus fc95 sp. fc95</i>			
606.	<i>Genus fc950 sp. fc950</i>			
607.	<i>Genus fc954 sp. fc954</i>			
608.	<i>Genus fc978 sp. fc978</i>			
609.	<i>Genus fc983 sp. fc983</i>			
610.	<i>Genus fc986 sp. fc986</i>			
611.	<i>Genus fc996 sp. fc996</i>			
612.	<i>Gomphidae sp.</i>			
613.	<i>Goniaea opomaloides</i>			
614.	<i>Goniaea sp. fc1441</i>			
615.	<i>Goniaea sp. fc233</i>			
616.	<i>Goniaea sp. fc235</i>			
617.	<i>Goniaea sp. fc2682</i>			
618.	<i>Goniaea sp. fc304</i>			
619.	<i>Goniaea sp. fc871</i>			
620.	<i>Goniaea sp. fc872</i>			
621.	<i>Goniaea vocans</i>			
622.	<i>Gripopterygidae sp.</i>			
623.	<i>Gyrinidae sp.</i>			
624.	<i>Habronestes bradleyi</i>			
625.	<i>Hadrotarsus fulvus</i>			
626.	<i>Harpobittacus phaeoscius</i>			
627.	<i>Harpobittacus similis</i>			
628.	<i>Heliomystis sp. fc663</i>			
629.	<i>Hemicorduliidae sp.</i>			
630.	<i>Henicops dentatus</i>			
631.	<i>Hesperotermes infrequens</i>			
632.	<i>Heteronyx sp. fc1073</i>			
633.	<i>Heteronyx sp. fc28</i>			
634.	<i>Heteronyx sp. fc347</i>			
635.	<i>Heteronyx sp. fc363</i>			
636.	<i>Heterotermes platycephalus</i>			
637.	<i>Hoggicosa storri</i>			
638.	<i>Hogna immansueta</i>			
639.	<i>Hydraenidae sp.</i>			
640.	<i>Hydrophilidae sp.</i>			
641.	<i>Hydrophilus triangulans</i>			
642.	<i>Hydropsychidae sp.</i>			
643.	<i>Hylurgus ligniperda</i>			
644.	<i>Idiommatia blackwalli</i>			
645.	<i>Indolpium sp.</i>			
646.	<i>Iphierga sp. fc1454</i>			
647.	<i>Karaops jarrit</i>			
648.	<i>Lagynochthonius australicus</i>			
649.	<i>Lampona ampeinna</i>			
650.	<i>Lampona cylindrata</i>			
651.	<i>Lancetes lanceolatus</i>			
652.	<i>Laperousea blattifera</i>			
653.	<i>Laxta sp. fc27</i>			
654.	<i>Leptoceridae sp.</i>			
655.	<i>Lestidae sp.</i>			
656.	<i>Libellulidae sp.</i>			
657.	<i>Lissomma serpentaria</i>			
658.	<i>Lycidas chlorophthalmus</i>			
659.	<i>Lycosa ariadnae</i>			
660.	<i>Lycosa godeffroyi</i>			
661.	<i>Lycosa leuckartii</i>			
662.	<i>Lycosura bispinosa</i>			
663.	<i>Lyncestis melanoschista</i>			
664.	<i>Masasteron maini</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
665.	<i>Megapodagrionidae</i> sp.			
666.	<i>Melobasis gloriosa</i>			
667.	<i>Melobasis</i> sp.			Y
668.	<i>Melobasis</i> sp. fc1443			Y
669.	<i>Metistete</i> sp. fc1104			
670.	<i>Metistete</i> sp. fc340			
671.	<i>Metistete</i> sp. fc839			
672.	<i>Metriolagria</i> sp. fc192			
673.	<i>Microcerotermes newmani</i>			
674.	<i>Microctenonyx subitaneus</i>			
675.	<i>Mituliodon tarantulinus</i>			
676.	<i>Moerarchis clathrella</i>			
677.	<i>Molycia quadricauda</i>			
678.	<i>Muziris carinatus</i>			
679.	<i>Myrmecia inquilina</i>			Y
680.	<i>Myrmecia nigriceps</i>			
681.	<i>Myrmecia</i> sp. fc2046			
682.	<i>Myrmecia</i> sp. fc252			
683.	<i>Myrmecia</i> sp. fc487			
684.	<i>Myrmecia vindex</i>			
685.	<i>Neotemnopteryx</i> sp. fc591			
686.	<i>Nephila edulis</i>			
687.	<i>Nerthra</i> sp. fc1567			
688.	<i>Nesogaster</i> sp. fc1113			
689.	<i>Nicodamus mainae</i>			
690.	<i>Notonomus</i> sp. fc747			
691.	<i>Ochrogaster</i> sp. fc10			
692.	<i>Ochrogaster</i> sp. fc7			
693.	<i>Oecobius navus</i>			
694.	<i>Oenochroma cerasiplaga</i>			
695.	<i>Oenochroma vinaria</i>			
696.	<i>Oenosandra boisduvalii</i>			
697.	<i>Oligochaeta</i> sp.			
698.	<i>Omorgus</i> sp. fc1097			
699.	<i>Omorgus</i> sp. fc848			
700.	<i>Oniscidae</i> sp.			
701.	<i>Onosandrus</i> sp. fc526			
702.	<i>Onthophagus ferox</i>			
703.	<i>Ophion</i> sp. fc87			
704.	<i>Oratemnus curtus</i>			
705.	<i>Orthetrum caledonicum</i>			
706.	<i>Orthocladinae</i> sp.			
707.	<i>Oxyops fasciata</i>			
708.	<i>Oxyops pictipennis</i>			
709.	<i>Pachysaga</i> sp. fc688			
710.	<i>Palaemonidae</i> sp.			
711.	<i>Pantydia</i> sp. fc329			
712.	<i>Pantydia</i> sp. fc388			
713.	<i>Pantydia</i> sp. fc5			
714.	<i>Paracapritermes kraepelinii</i>			
715.	<i>Parastacidae</i> sp.			
716.	<i>Paropsis</i> sp. fc667			
717.	<i>Pediana occidentalis</i>			
718.	<i>Pelrorhinus sulcirostris</i>			
719.	<i>Pergula turneri</i>			Y
720.	<i>Peripya sanguinipuncta</i>			
721.	<i>Periscepta polysticta</i>			
722.	<i>Persectania ewingii</i>			
723.	<i>Perthiidae</i> sp.			
724.	<i>Philopotamidae</i> sp.			
725.	<i>Pholodes</i> sp. fc384			
726.	<i>Phonographa graeffei</i>			
727.	<i>Phryganoporus candidus</i>			
728.	<i>Planorbidae</i> sp.			
729.	<i>Platycoelus</i> sp. fc2127			
730.	<i>Platyzosteria</i> sp. fc1474			
731.	<i>Platyzosteria</i> sp. fc266			
732.	<i>Platyzosteria</i> sp. fc781			
733.	<i>Platyzosteria</i> sp. fc899			
734.	<i>Platyzosteria</i> sp. fc905			

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735.	<i>Platyzosteria</i> sp. fc968			
736.	<i>Platyzosteria</i> sp. fc971			
737.	<i>Podykipus leptoiuloides</i>			
738.	<i>Pollanisus cupreus</i>			
739.	<i>Pollanisus</i> sp. fc78			
740.	<i>Polyphrades aesalon</i>			
741.	<i>Porela</i> sp. fc749			
742.	<i>Prionopelta robynmae</i>			Y
743.	<i>Proteuxoa pissonephra</i>			
744.	<i>Raveniella cirrata</i>			
745.	<i>Raveniella peckorum</i>			
746.	<i>Rebilus</i> sp. fc1427			
747.	<i>Rhadinomus lacordaire</i>			
748.	<i>Rhantus suturalis</i>			
749.	<i>Rhytidoponera</i> sp. fc543			
750.	<i>Rhytidoponera</i> sp. fc888			
751.	<i>Sandalodes scopifer</i>			
752.	<i>Sandava scitisigna</i>			
753.	<i>Scolobrotus</i> sp. fc1041			
754.	<i>Scolopendra laeta</i>			
755.	<i>Semanopterus</i> sp. fc824			
756.	<i>Simuliidae</i> sp.			
757.	<i>Sondra aurea</i>			
758.	<i>Soroma bicolor</i>			
759.	<i>Staphylinidae</i> sp.			
760.	<i>Stibaroma melanotoxa</i>			
761.	<i>Storena formosa</i>			
762.	<i>Supunna funerea</i>			
763.	<i>Synothele mullaloo</i>			
764.	<i>Talaurinus</i> sp. fc1461			
765.	<i>Tanypodinae</i> sp.			
766.	<i>Tasmanicosa leuckartii</i>			
767.	<i>Telephlebiidae</i> sp.			
768.	<i>Teyl luculentus</i>			
769.	<i>Thalaina clara</i>			
770.	<i>Thalamarchella alveola</i>			
771.	<i>Tipulidae</i> sp.			
772.	<i>Trachycosmus sculptilis</i>			
773.	<i>Trachymela</i> sp. fc1444			
774.	<i>Tranes vigorsii</i>			
775.	<i>Trissodon</i> sp. fc2084			
776.	<i>Trissolcus eetion</i>			
777.	<i>Trissolcus ogyges</i>			
778.	<i>Uresiphita ornithopteralis</i>			
779.	<i>Urodacus novaehollandiae</i>			
780.	<i>Utetheisa pulchelloides</i>			
781.	<i>Veliidae</i> sp.			
782.	<i>Venator immansueta</i>			
783.	<i>Venatrix arenaris</i>			
784.	<i>Venatrix pullastra</i>			
785.	<i>Venonia micarioides</i>			
786.	<i>Xanthorhoe</i> sp. fc42			
787.	<i>Xanthorhoe</i> sp. fc455			
788.	<i>the dart</i> sp. fc322			
789.	unidentifiable unidentifiable			

Mammal

790.	25449	<i>Antechinus flavipes</i> (Yellow-footed Antechinus)		
791.	24088	<i>Antechinus flavipes</i> subsp. <i>leucogaster</i> (Yellow-footed Antechinus, Mardo)		
792.	24162	<i>Bettongia penicillata</i> subsp. <i>ogilbyi</i> (Woylie, Brush-tailed Bettong)	T	
793.	24086	<i>Cercartetus concinnus</i> (Western Pygmy-possum, Mundarda)		
794.	24186	<i>Chalinolobus gouldii</i> (Gould's Wattled Bat)		
795.	24187	<i>Chalinolobus morio</i> (Chocolate Wattled Bat)		
796.	24092	<i>Dasyurus geoffroii</i> (Chuditch, Western Quoll)	T	
797.	24189	<i>Falsistrellus mackenziei</i> (Western False Pipistrelle)	P4	
798.		<i>Falsistrellus tasmaniensis</i>		
799.	24041	<i>Felis catus</i> (Cat)	Y	
800.	24215	<i>Hydromys chrysogaster</i> (Water-rat)		P4
801.	25478	<i>Isodon obesulus</i> (Southern Brown Bandicoot)		P5
802.	24153	<i>Isodon obesulus</i> subsp. <i>fusciventer</i> (Quenda, Southern Brown Bandicoot)		P5
803.	24132	<i>Macropus fuliginosus</i> (Western Grey Kangaroo)		

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804.	24133	<i>Macropus irma</i> (Western Brush Wallaby)		P4	
805.	24168	<i>Macrotis lagotis</i> (Bilby, Dalgyte)		T	
806.	24184	<i>Mormopterus planiceps</i> (Southern Freetail-bat)			
807.	24223	<i>Mus musculus</i> (House Mouse)	Y		
808.	24146	<i>Myrmecobius fasciatus</i> (Numbat, Walpurti)		T	
809.	24194	<i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
810.		<i>Nyctophilus geoffroyi</i> subsp. <i>geoffroyi</i>			
811.	24195	<i>Nyctophilus gouldi</i> (Gould's Long-eared Bat)			
812.	43366	<i>Nyctophilus major</i> subsp. <i>major</i> (Southwestern Long-eared Bat)			
813.	24085	<i>Oryctolagus cuniculus</i> (Rabbit)	Y		
814.	24098	<i>Phascogale calura</i> (Red-tailed Phascogale, Kenngoor)		T	
815.	24099	<i>Phascogale tapoatafa</i> subsp. <i>tapoatafa</i> (Southern Brush-tailed Phascogale, Wambenger)		T	
816.	24166	<i>Pseudocheirus occidentalis</i> (Western Ringtail Possum)		T	
817.	24245	<i>Rattus rattus</i> (Black Rat)	Y		
818.	24111	<i>Sminthopsis gilberti</i> (Gilbert's Dunnart)			
819.	25515	<i>Sminthopsis griseoventer</i> (Grey-bellied Dunnart)			
820.	24259	<i>Sus scrofa</i> (Pig)	Y		
821.	24207	<i>Tachyglossus aculeatus</i> (Short-beaked Echidna)			
822.	24185	<i>Tadarida australis</i> (White-striped Freetail-bat)			
823.	24167	<i>Tarsipes rostratus</i> (Honey Possum, Noolbenger)			
824.	24158	<i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
825.	24206	<i>Vespadelus regulus</i> (Southern Forest Bat)			
826.	24040	<i>Vulpes vulpes</i> (Red Fox)	Y		

Reptile

827.	42368	<i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
828.	24990	<i>Aprasia pulchella</i> (Granite Worm-lizard)			
829.	25236	<i>Aspidites ramsayi</i> (Woma)		S	
830.	42381	<i>Brachyurophis semifasciatus</i> (Southern Shovel-nosed Snake)			
831.	24980	<i>Christinus marmoratus</i> (Marbled Gecko)			
832.	24918	<i>Crenadactylus ocellatus</i> subsp. <i>ocellatus</i> (Clawless Gecko)			
833.	30893	<i>Cryptoblepharus buehneri</i>			
834.	25020	<i>Cryptoblepharus plagiocephalus</i>			
835.	24883	<i>Ctenophorus ornatus</i> (Ornate Crevice-Dragon)			
836.	25035	<i>Ctenotus delli</i> (Dell's Ctenotus, Darling Range Heath Ctenotus)		P4	
837.	25049	<i>Ctenotus labillardieri</i>			
838.	24995	<i>Delma australis</i>			
839.	25766	<i>Delma fraseri</i> (Fraser's Legless Lizard)			
840.	24929	<i>Diplodactylus granariensis</i> subsp. <i>granariensis</i>			
841.	44654	<i>Diplodactylus lateroides</i> (Speckled Stone Gecko)			
842.	24939	<i>Diplodactylus polyophthalmus</i>			
843.	25096	<i>Egernia kingii</i> (King's Skink)			
844.	25100	<i>Egernia napoleonis</i>			
845.	24959	<i>Gehyra variegata</i>			
846.	25474	<i>Hemiergis initialis</i>			
847.	25115	<i>Hemiergis initialis</i> subsp. <i>initialis</i>			
848.	42408	<i>Hesperoedura reticulata</i>			
849.	25131	<i>Lerista distinguenda</i>			
850.	25005	<i>Lialis burtonis</i>			
851.	25184	<i>Menetia greyii</i>			
852.	25240	<i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)		S	
853.	25192	<i>Morethia obscura</i>			
854.	25248	<i>Neelaps bimaculatus</i> (Black-naped Snake)			
855.	25253	<i>Parasuta gouldii</i>			
856.	25255	<i>Parasuta nigriceps</i>			
857.	24907	<i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
858.	25259	<i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
859.	25008	<i>Pygopus lepidopodus</i> (Common Scaly Foot)			
860.	25266	<i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
861.	25519	<i>Tiliqua rugosa</i>			
862.	25204	<i>Tiliqua rugosa</i> subsp. <i>aspera</i>			
863.	25207	<i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
864.	24983	<i>Underwoodisaurus milii</i> (Barking Gecko)			
865.	25218	<i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
866.	25225	<i>Varanus rosenbergi</i> (Heath Monitor)			
867.	25227	<i>Varanus tristis</i> subsp. <i>tristis</i> (Racehorse Monitor)			

Conservation Codes
T - Rare or likely to become extinct
X - Presumed extinct

Name	ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
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.

Appendix 3. Bat Survey Results

**South 32 PBA Expansion,
Boddington, WA,
Fauna Survey December 2016**

Echolocation Survey of Bat Activity.

Prepared for Biostat Pty Ltd

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Issue 1
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Document Revision History

Date	Issue	Revision History
19 Dec 16	A	Initial draft prepared for Biostat review
20 Dec 16	1	First formal issue

Summary

Microbat species presence, with activity levels, is presented for three sites near Boddington, approximately 120 km southeast of Perth, WA. Biostat Pty Ltd (Biostat) carried out an echolocation based survey in December 2016. Bat Call WA has reviewed the recordings made and provided species lists for the bats present.

Recordings were made at sites representative of the bat habitat in the study area covered by Jarrah/Marri woodland. Eight species of insectivorous microbats were recorded. Seven are common in the jarrah forest of the southwest of Western Australia. Multiple foraging calls of the WA Department of Parks and Wildlife (DPAW) Priority 4 species, *Falsistrellus mackenziei*, were detected at one site.

Habitats

The study area is a mixture of remnant woodland patches, primarily Jarrah/Marri and Wandoo, amongst active mining and regrowth areas. Sites for the microbat survey were chosen by Biostat. Sites cover the range of habitats present in the study area including remnant woodland and young regrowth. Details of the sites are presented in Table 1. The general locations of the sites are shown in relation to the regional features in Figure 1.

Bat Fauna Result

A microbat assemblage of eight insectivorous species was confirmed as present at the study sites in December (details of calls analysed are provided in Table 2 as recommended by Australasian Bat Society (ABS 2006)). The single priority bat species present in the SW forest, *Falsistrellus mackenziei*, was detected at one site with multiple foraging calls recorded.

The three sites recorded species richness between five and seven species with the two highest being recorded in Jarrah/Marri forest sites SM2-01 and SM2-03.

Five of the species (*A. australis*, *C. gouldii*, *N. geoffroyi*, *O. kitcheneri*, and *V. regulus*) were detected ubiquitously, i.e. at all three sites. Of the other three, *C. morio* was detected at two sites while the largest *Nyctophilus* species (*N. major*) was detected at site '01, in woodland immediately adjacent to a diversion dam and *Falsistrellus mackenziei*, was detected at site '-03 in woodland nearby the Hotham River riparian line.

Falsistrellus mackenziei is a large, 20g, insectivorous, air superiority foraging bat. It is common only in the high rainfall areas of the SW forest south of Collie and the Swan coastal plain south of Lake Clifton (authors unpublished data). It roosts in tree hollows and forages in the woodlands and forests (Start and McKenzie 2008). It is not listed in the EPBC Act but has IUCN status of Near Threatened and a DPAW Priority 4 status.

The activity levels for the majority of species were at low levels. Only the common *Vespadelus regulus* recorded a high activity level, at site '-03.

Survey Timing, Moon Phase and Weather

The echolocation survey was conducted between 11th and 15th December 2016. Sampling evenings were cool with minimum overnight temperatures between 10 and 15°C. The moon in this period was between first quarter and full. Rain fell across the study areas on the night of the 11th December. On the dry nights, these conditions are optimum for recording bat echolocation activity for the season.

Survey Team

A team of Biostat ecologists conducted the bat sampling work. Mr. R. Bullen of Bat Call WA completed analysis of echolocation recordings.

Sampling

The survey consisted of completing six overnight bat sound recordings, beginning at twilight, at locations within the survey area. The recordings were “continuous” (Hyder *et al.* 2010) made using SM2BAT SongMeter detectors (Wildlife Acoustics Inc, USA). The jumper and audio settings used for the detectors followed the manufacturers recommendations contained in the user manual (Wildlife Acoustics 2010). Selectable filters and triggers were also set using the manufacturer’s recommendations and are given in Appendix 1.

For the SM2BAT recordings, once reformatted as .wav files, COOL EDIT 2000 (Now available as AUDITION from Adobe Systems Inc.) was used to display each call sequence for identification. Calls were identified manually. Only good quality call sequences were used. Details of calls analysed are provided in Table 2 as recommended by Australasian Bat Society (ABS 2006). Reference data for the species identified are available in Bullen and McKenzie (2002) and Bullen and Dunlop (2012).

Bat activity was then characterised as “Low”, “Medium” or “High” based on the rate of call sequences recorded.

- Low species activity is referred when a species is recorded with call spacing less often than ten minutes,
- Medium species activity refers to call recordings more often than 10 minutes but less often than two minutes apart for at least an hour followed by sporadic records for the remainder of the session.
- High species activity refers to call recording more often than two minutes apart for at least two hours followed by reasonably regular records for the remainder of the session.

Further details of the calls analysed including graphical presentations are available from Bat Call WA on request.

Survey Limitations

All sites surveyed were accessible on foot and the recorders were set with the omnidirectional microphone aligned horizontally. Bat sound recording was carried out overnight beginning at twilight. The survey method using SM2 detectors gives optimum recorder effectiveness.

Bat species density is impossible to estimate from echolocation records. Bat activity is therefore substituted as an approximate guide to the relative numbers of each species using the study area.

References

- ABS (2006). Recommendations of the Australasian Bat Society Inc for reporting standards for insectivorous bat surveys using bat detectors. *The Australasian Bat Society Newsletter* 27: 6-9.
- Bullen, R.D. and Dunlop, J.N. (2012). Assessment of habitat usage by bats in the rangelands of Western Australia: comparison of echolocation call count and stable isotope methods. *The Rangeland Journal* 34 277-284
- Bullen R.D. and McKenzie N.L. (2002). Differentiating Western Australian *Nyctophilus* (Chiroptera: Vespertilionidae) echolocation calls. *Australian Mammalogy*. 23: 89-93
- Hyder, B.M., Dell, J. and Cowan, M.A. (eds) (2010). *Technical guide – Terrestrial vertebrate fauna surveys for environmental impact assessment*. Technical report of the Environmental Protection Authority and the Department of Environment and Conservation.
- Reardon, T.B., McKenzie, N.L., Cooper, S.J., Appleton, B. Carthew, S. and Adams, M. (2014). A molecular and morphological investigation of species boundaries and phylogenetic relationships in Australian free-tailed bats *Mormopterus* (Chiroptera: Molossidae). *Australian Journal of Zoology*, available on-line 23 April 2014.
- Parnaby, H. E. (2009). A taxonomic review of Australian Greater Long-eared Bats previously known as *Nyctophilus timoriensis* (Chiroptera: Vespertilionidae) and some associated taxa. *Australian Zoologist*, 35(1), 39-81.
- Start, A.N. and McKenzie, N.L. (2008). Western False Pipistrelle, *Falsistrellus mckenziei*. In *Mammals of Australia*, third edition (S. Van Dyck and R. Strahan eds); Reed New Holland, Sydney
- Wildlife Acoustics (2010). Song Meter User Manual, Model SM2, with Song Meter SM2BAT 192kHz Stereo or 384kHz Mono Ultrasonic Recorders addendum.

Table 1 Site Specific details.

Site	Date	SM2 Serial Number	Habitat	Easting Note 1	Northing Note 1
SM2-01	11 – 12 Dec	S/N 7566	Jarrah/Marri forest over <i>Banksia grandis</i>	439938	6378648
SM2-02	11 – 12 Dec	S/N 5288	Jarrah/Marri forest over <i>Banksia grandis</i>	445383	6368136
SM2-03	13 – 14 Dec	S/N 7566	Jarrah/Marri forest regenerating after recent fire	444755	6353325

Note 1: Coordinates are GDA94 Zone 50H

Table 2: Summary of taxonomy and echolocation call characteristics for microbat species present. Taxonomy follows Van Dyck and Strahan (2008) as updated by Parnaby (2009) and Reardon *et al.* (2014).

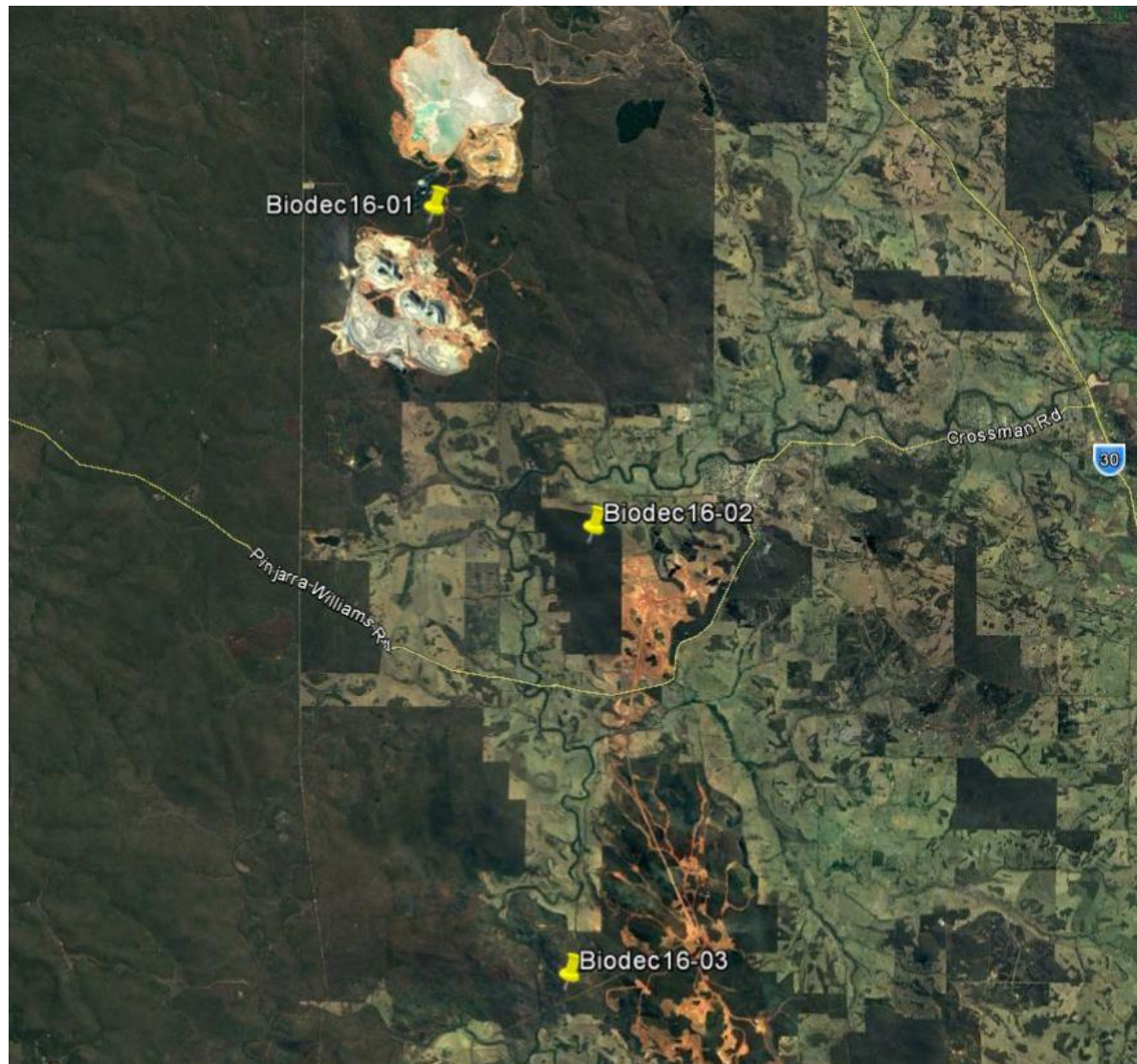
Genus species Authority	Common name	Typical F_{peak} kHz	Ave. Q	Typical Duration msec	Typical Call Shape
<i>Austronomus australis</i> (Grey 1838)	White-striped free-tailed bat	12	7	12 - 23	CF– shallow FM
<i>Chalinolobus gouldii</i> (Gray 1841)	Gould’s wattled bat	32	10	7 - 11	FM
<i>Chalinolobus morio</i> (Grey 1841)	Chocolate wattled bat	50	10	7	FM
<i>Falsistrellus mckenziei</i> (Kitchener <i>et al.</i> 1986)	Western false pipistrelle	35	6	6-9	FM
<i>Nyctophilus geoffroyi</i> Leach 1821	Lesser long-eared bat	47	2.5	5	Steep FM
<i>Nyctophilus major</i> Gray 1844	Western greater long-eared bat	43	3	5	Steep FM
<i>Ozimops kitcheneri</i> Reardon 2014	South-western free-tailed bat	25	10	7 - 14	Shallow FM
<i>Vespadelus regulus</i> (Thomas 1906)	Southern forest bat	43	10	4 - 10	FM

Note: F_{peak} and Q are defined in Bullen and McKenzie 2002, Bullen and Dunlop 2012.

Table 3. Microbat lists obtained presented by site and phase.

Site	<i>Austronomus australis</i>	<i>Chalinolobus gouldii</i>	<i>Chalinolobus morio</i>	<i>Falsistrellus mckenziei</i>	<i>Nyctophilus geoffroyi</i>	<i>Nyctophilus major</i>	<i>Ozimops kitcheneri</i>	<i>Vespadelus regulus</i>
SM2-01	Low	Low	Low		Low	Low	Low	Low
SM2-02	Low	Low			Low		Low	Low
SM2-03	Low	Low	Low	Low	Low		Low	High

Figure 1. Bat Echolocation Sites in relation to features in the study area.



Appendix 1 SM2 Audio settings used during survey.

Parameter	Setting
Sample rate	384,000 kHz
Channel used	Left
Compression protocol	WAC2 (14 bit audio samples)
Gain - left channel	0.00
Digital high pass filter Left channel	fs/48 (giving 8 kHz minimum frequency)
Digital high pass filter Left channel	Off
Triggering level Left channel	6SNR (adaptive +6 dB triggering)
Triggering window Left channel	0.5 sec.

Note: These settings are as recommended in Wildlife Acoustics (2010) except the high pass filter. This is set lower to 8kHz to record any *Austronomus australis* that may be present

Appendix 4. Vegetation Community and Fauna Habitat key.

Fauna Habitat Code	Fauna Habitat Description	Veg unit	Description
RP	Melaleuca shrublands on seasonally wet valley floors. This also includes areas of <i>Melaleuca raphiophylla</i> woodlands fringing the Hotham river.	A	Tall shrubland of <i>Melaleuca lateritia</i> , <i>Hakea varia</i> , <i>Melaleuca viminea</i> and <i>Melaleuca incana</i> subsp. <i>incana</i> on clay-loams in seasonally wet valley floors.
		A1	Mixed tall shrubland of <i>Melaleuca viminea</i> , <i>Melaleuca lateritia</i> , <i>Taxandria linearifolia</i> , <i>Astartea scoparia</i> over <i>Baumea juncea</i> and <i>Lepidosperma tetraquetrum</i> with occasional patches of <i>Banksia littoralis</i> and <i>Melaleuca raphiophylla</i> over low herbs on seasonally water-logged clays and clay loams on valley floors.
	<i>E. rudis</i> woodlands which may include Jarrah, Marri, <i>Banksia littoralis</i> or Wandoo. Riparian community.	AX	Open woodland of <i>Eucalyptus rudis</i> over <i>Acacia saligna</i> , <i>Melaleuca incana</i> subsp. <i>incana</i> and <i>Hypocalymma angustifolium</i> on clay-loams on valley floors.
		AY	Open woodland of <i>Eucalyptus rudis</i> and <i>Eucalyptus wandoo</i> over <i>Acacia saligna</i> , <i>Hakea prostrata</i> and <i>Hypocalymma angustifolium</i> on clay-loams on valley floors.
FD	Mosaic of FG and DL	AY/D	Mosaic of AY and D
BB	Blackbutt woodlands on lower slopes	L	Open woodland of <i>Eucalyptus patens</i> with some <i>Eucalyptus wandoo</i> over <i>Xanthorrhoea preissii</i> , <i>Macrozamia riedlei</i> , <i>Trymalium ledifolium</i> , <i>Acacia saligna</i> and <i>Hakea prostrata</i> on clay and clay loam soils on lower slopes.
DL	Marri/Jarrah on lower slopes	D	Open forest of <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over <i>Hakea lissocarpha</i> , <i>Macrozamia riedlei</i> , <i>Acacia alata</i> , <i>Babingtonia camphorosmae</i> , <i>Hypocalymma angustifolium</i> and <i>Phyllanthus calycinus</i> on clay-loams on lower slopes.
		DG	Open forest of <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over <i>Hakea lissocarpha</i> , <i>Macrozamia riedlei</i> , <i>Pericalymma ellipticum</i> , <i>Grevillea bipinnatifida</i> , <i>Allocasuarina humilis</i> , <i>Acacia alata</i> , <i>Babingtonia camphorosmae</i> , <i>Hypocalymma angustifolium</i> and <i>Phyllanthus calycinus</i> on clay-loams on lower slopes with localized patches of outcropping.
		Z	Open forest of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over <i>Macrozamia riedlei</i> , <i>Xanthorrhoea preissii</i> , <i>Hakea lissocarpha</i> and <i>Phyllanthus calycinus</i> on sandy-loam to sandy-loam gravel soils on slopes.
PH	Heath/perched heath	G	Open Heath of <i>Grevillea bipinnatifida</i> , <i>Hakea undulata</i> , <i>Banksia squarrosa</i> subsp. <i>squarrosa</i> , <i>Hakea incrassata</i> , <i>Hakea undulata</i> and <i>Petrophile serruriae</i> over <i>Borya sphaerocephala</i> on shallow soils and outcrops.
		G3	Open heath of <i>Banksia squarrosa</i> subsp. <i>squarrosa</i> , <i>Hakea incrassata</i> , <i>Hakea undulata</i> , <i>Petrophile heterophylla</i> and <i>Petrophile serruriae</i> on shallow soils over granite outcrops on slopes with occasional emergent mallee species including <i>Eucalyptus drummondii</i> .
JM	Jarrah/Marri on slopes	H	Open forest to woodland of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over <i>Petrophile striata</i> , <i>Daviesia decurrens</i> , <i>Daviesia longifolia</i> and <i>Daviesia rhombifolia</i> on sandy loam to sandy gravels on slopes and ridges.

Fauna Habitat Code	Fauna Habitat Description	Veg unit	Description
		H1	Open forest to woodland of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over <i>Petrophile striata</i> , <i>Daviesia decurrens</i> and <i>Daviesia longifolia</i> on sandy-gravel soils of slopes and less undulating hills.
		H2	Open forest to woodland of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> with occasional admixtures of <i>Banksia grandis</i> and <i>Persoonia longifolia</i> over <i>Acacia celastrifolia</i> , <i>Daviesia preissii</i> , <i>Leucopogon capitellatus</i> and <i>Styphelia tenuiflora</i> on gravel and sandy-gravel soils of slopes and less undulating hills.
		HG	Open forest to woodland of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over <i>Petrophile striata</i> , <i>Lepidosperma squamatum</i> , <i>Styphelia tenuiflora</i> , <i>Daviesia preissii</i> , <i>Daviesia decurrens</i> , <i>Grevillea bipinnatifida</i> , <i>Allocasuarina humilis</i> and <i>Hakea undulata</i> on shallower sandy-gravel soils over granites or secondary laterisation areas on slopes and less undulating hills.
WO	Wandoo woodlands	M	Open woodland of <i>Eucalyptus wandoo</i> over <i>Trymalium ledifolium</i> , <i>Macrozamia riedlei</i> and <i>Hakea lissocarpa</i> on clay loams with some gravel on mid to upper slopes and ridges.
		M2	Woodland to open woodland of <i>Eucalyptus accedens</i> , <i>Eucalyptus wandoo</i> , <i>Eucalyptus marginata</i> , <i>Corymbia calophylla</i> over <i>Hakea lissocarpa</i> , <i>Macrozamia riedlei</i> , <i>Banksia squarrosa</i> subsp. <i>squarrosa</i> , <i>Hypocalymma angustifolium</i> , <i>Babingtonia camphorosmae</i> , <i>Grevillea bipinnatifida</i> and <i>Allocasuarina humilis</i> on clay-loams over shallow granites on mid to upper slopes.
		MG	Open woodland of <i>Eucalyptus wandoo</i> over <i>Trymalium ledifolium</i> , <i>Macrozamia riedlei</i> , <i>Pericalymma ellipticum</i> , <i>Hypocalymma angustifolium</i> , <i>Grevillea bipinnatifida</i> , <i>Allocasuarina humilis</i> and <i>Hakea lissocarpa</i> on clay-loams over shallow granite on mid to upper slopes and ridges.
		Y	Open woodland of <i>Eucalyptus wandoo</i> over <i>Gompholobium marginatum</i> , <i>Acacia nervosa</i> , <i>Babingtonia camphorosmae</i> , <i>Hypocalymma angustifolium</i> , <i>Macrozamia riedlei</i> , <i>Phyllanthus calycinus</i> and <i>Gastrolobium calycinum</i> on clay and clay-loam soils on lower slopes.
		YG	Open woodland of <i>Eucalyptus wandoo</i> over <i>Gompholobium marginatum</i> , <i>Acacia nervosa</i> , <i>Babingtonia camphorosmae</i> , <i>Hypocalymma angustifolium</i> , <i>Macrozamia riedlei</i> , <i>Pericalymma ellipticum</i> , <i>Grevillea bipinnatifida</i> , <i>Allocasuarina humilis</i> , <i>Phyllanthus calycinus</i> and <i>Gastrolobium calycinum</i> on clay and clay-loam soils with localized outcropping on lower slopes.
JC	Jarrah/Marri/Allocasuarina on slopes and ridges. These areas represent rockier habitats with large rocky material relatively common. For most, <i>Banksia grandis</i> is also a characteristic plant for this habitat.	P	Open forest of <i>Eucalyptus marginata</i> and <i>Allocasuarina fraseriana</i> with admixtures of <i>Corymbia calophylla</i> and <i>Banksia grandis</i> over <i>Lasiopetalum cardiophyllum</i> (P4), <i>Lasiopetalum floribundum</i> , <i>Lechenaultia biloba</i> and <i>Ptilotus drummondii</i> var. <i>drummondii</i> on sandy gravels on slopes and ridges.
		S	Open forest of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> with admixtures of <i>Allocasuarina fraseriana</i> , <i>Banksia grandis</i> and <i>Persoonia longifolia</i> over <i>Acacia celastrifolia</i> ,

Fauna Habitat Code	Fauna Habitat Description	Veg unit	Description
			<i>Hovea chorizemifolia</i> , <i>Daviesia preissii</i> , <i>Leucopogon capitellatus</i> and <i>Styphelia tenuiflora</i> on sandy-gravels on slopes and ridges.
		ST	Open forest of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> with admixtures of <i>Allocasuarina fraseriana</i> , <i>Persoonia longifolia</i> and <i>Banksia grandis</i> over <i>Stylidium dichotomum</i> , <i>Acacia urophylla</i> , <i>Acacia celastrifolia</i> , <i>Leucopogon verticillatus</i> , <i>Clematis pubescens</i> and <i>Leucopogon capitellatus</i> on sandy-loam gravel soils on slopes and ridges.
RM	Remnant forest on agricultural land. These areas lack understory and are of limited ecological value providing some nesting/denning and arboreal feeding habitat for a limited number of species. Their open nature allows for easy access by predators such as cats and foxes.	No equivalent	
RE	Rehabilitation Areas and Plantations (includes replanting on agricultural lands for shelter belts).	RE	Rehabilitation Areas
		PL	Plantation and Planted Trees
Dam	Dam	Dam	Dam

Appendix 5. Photographic examples of fauna habitats



Plate 1: Disturbed remnant community



Plate 2: Disturbed remnant community



Plate 3: Riparian community



Plate 4: Riparian community



Plate 5: Riparian community (Blackbutt merging into wandoo fringing river)



Plate 6: Jarrah/Marri Community (DL)



Plate 7: Jarrah/Marri Community (JC)



Plate 8: Jarrah/Marri Community (JM)



Plate 9: Wandoo woodland community



Plate 10: Wandoo woodland community

Appendix 6. Bird assemblages

Key

Status – Australian Government (EPBC Act 1999)	
CE	Critically Endangered
EN	Endangered
VU	Vulnerable
M	Migratory species
J	JAMBA international agreement
C	CAMBA international agreement
R	ROKAMBA international agreement
Status – Western Australia (WC Act 1950 and DPaW Priority Species)	
S1	Schedule 1 of the WC Act 1950 (Critically Endangered fauna)
S2	Schedule 2 of the WC Act 1950 (Endangered fauna)
S3	Schedule 3 of the WC Act 1950 (Vulnerable fauna)
S5	Schedule 5 of the WC Act 1950 (Protected under international agreements)
S6	Schedule 6 of the WC Act 1950 (Special conservation needs fauna)
S7	Schedule 7 of the WC Act 1950 (Other fauna in need of special protection)
P1	DPaW Priority 1 – Poorly known taxa
P4	DPaW Priority 4 – Rare, near threatened and other taxa in need of monitoring
P5	DPaW Priority 5 – Conservation dependent fauna

The basis of this table is data derived from field surveys which allows associations with fauna habitat types. Where species were added from database searches, they were not allocated to any fauna habitat type.

			Fauna Habitat Type									
			RP	BB	PH	DL	JC	JM	WO	RE	Dam	
Status												
CASUARIIDAE												
Dromaius novaehollandiae	Emu		X	X	X	X	X	X	X	X	X	
MEGAPODIIDAE												
Leipoa ocellata	Malleefowl	S3/VU										
PHASIANIDAE												
Coturnix pectoralis	Stubble Quail											
ANATIDAE												
Biziura lobata	Musk Duck										X	
Cygnus atratus	Black Swan										X	
Tadorna tadornoides	Australian Shelduck		X								X	
Chenonetta jubata	Australian Wood Duck			X				X			X	
Anas rhynchotis	Australasian Shoveler											
Anas gracilis	Grey Teal										X	
Anas superciliosa	Pacific Black Duck							X			X	
Aythya australis	Hardhead											
PODICIPEDIDAE												
Tachybaptus novaehollandiae	Australasian Grebe										X	
Poliiocephalus poliocephalus	Hoary-headed Grebe										X	
Podiceps cristatus	Great Crested Grebe											
COLUMBIDAE												
Phaps chalcoptera	Common Bronzewing		X		X	X	X	X	X	X	X	
Phaps elegans	Brush Bronzewing			X					X			
Ocyphaps lophotes	Crested Pigeon											
PODARGIDAE												

			Fauna Habitat Type									
			RP	BB	PH	DL	JC	JM	WO	RE	Dam	
Status												
<i>Podargus strigoides</i>	Tawny Frogmouth					X	X	X	X			
AEGOTHELIDAE												
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar		X	X	X		X	X	X			
APODIDAE												
<i>Apus pacificus</i>	Fork-tailed Swift	S5/M/J/C/R										
ANHINGIDAE												
<i>Anhinga melanogaster</i>	Darter											
PHALACROCORACIDAE												
<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant										X	
<i>Phalacrocorax carbo</i>	Great Cormorant										X	
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant										X	
ARDEIDAE												
<i>Ardea pacifica</i>	White-necked Heron		X									
<i>Ardea modesta</i>	Eastern Great Egret	S5/M/J/C										
<i>Ardea ibis</i>	Cattle Egret	S5/M/J/C										
<i>Egretta novaehollandiae</i>	White-faced Heron										X	
<i>Nycticorax caledonicus</i>	Nankeen Night Heron											
THRESKIORNITHIDAE												
<i>Threskiornis molucca</i>	Australian White Ibis											
<i>Threskiornis spinicollis</i>	Straw-necked Ibis											
<i>Platalea flavipes</i>	Yellow-billed Spoonbill										X	
ACCIPITRIDAE												
<i>Pandion cristatus</i>	Eastern Osprey	S5/M										
<i>Elanus axillaris</i>	Black-shouldered Kite											
<i>Lophoictinia isura</i>	Square-tailed Kite				X		X	X	X	X		
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	M/C										
<i>Haliastur spheurnus</i>	Whistling Kite											
<i>Accipiter fasciatus</i>	Brown Goshawk		X			X	X	X	X	X		
<i>Accipiter cirrhocephalus</i>	Collared Sparrowhawk		X	X	X	X	X					
<i>Circus approximans</i>	Swamp Harrier								X			
<i>Aquila audax</i>	Wedge-tailed Eagle		X	X	X	X	X	X	X	X	X	
<i>Hieraetus morphnoides</i>	Little Eagle				X		X		X			
FALCONIDAE												
<i>Falco cenchroides</i>	Nankeen Kestrel									X		
<i>Falco berigora</i>	Brown Falcon						X		X			
<i>Falco longipennis</i>	Australian Hobby						X		X			
<i>Falco peregrinus</i>	Peregrine Falcon	S7	X				X	X		X	X	
RALLIDAE												
<i>Porphyrio porphyrio</i>	Purple Swamphen										X	
<i>Fulica atra</i>	Eurasian Coot										X	
RECURVIROSTRIDAE												
<i>Himantopus himantopus</i>	Black-winged Stilt											
<i>Cladorhynchus leucocephalus</i>	Banded Stilt										X	
CHARADRIIDAE												
<i>Elseyornis melanops</i>	Black-fronted Dotterel										X	
<i>Thinornis rubricollis</i>	Hooded Plover	P4										
ROSTRATULIDAE												
<i>Rostratula australis</i>	Australian Painted Snipe	S2/VU/M/C										
SCOLOPACIDAE												
<i>Numenius madagascariensis</i>	Eastern Curlew	S3/S5/EN/M/J/C/R										

			Fauna Habitat Type									
			RP	BB	PH	DL	JC	JM	WO	RE	Dam	
Status												
<i>Actitis hypoleucos</i>	Common Sandpiper	S5/EN/M/J/C/R									X	
<i>Calidris ferruginea</i>	Curlew Sandpiper	S3/S5/CE/M/J/C/R										
TURNICIDAE												
<i>Turnix varius</i>	Painted Button-quail		X	X	X	X	X	X	X	X	X	
<i>Turnix velox</i>	Little Button-quail											
CACATUIDAE												
<i>Calyptorhynchus banksii</i>	Red-tailed Black-Cockatoo	S3/EN	X	X	X	X	X	X	X	X	X	
<i>Calyptorhynchus latirostris</i>	Carnaby's Black-Cockatoo	S2/EN	X			X	X	X	X	X		
<i>Calyptorhynchus baudinii</i>	Long-billed Black-Cockatoo	S2/VU	X		X	X	X	X	X	X	X	
<i>Eolophus roseicapillus</i>	Galah							X				
PSITTACIDAE												
<i>Glossopsitta porphyrocephala</i>	Purple-crowned Lorikeet		X		X	X	X	X	X			
<i>Polytelis anthopeplus</i>	Regent Parrot											
<i>Platycercus icterotis</i>	Western Rosella		X	X	X	X	X	X	X	X	X	
<i>Barnardius zonarius</i>	Australian Ringneck		X	X	X	X	X	X	X	X	X	
<i>Purpureicephalus spurius</i>	Red-capped Parrot		X	X	X	X	X	X	X	X	X	
<i>Neophema elegans</i>	Elegant Parrot		X		X	X	X	X	X	X		
CUCULIDAE												
<i>Chalcites basalis</i>	Horsfield's Bronze-Cuckoo		X	X	X	X	X	X	X	X	X	
<i>Chalcites lucidus</i>	Shining Bronze-Cuckoo		X	X	X	X	X	X	X	X		
<i>Cuculus pallidus</i>	Pallid Cuckoo						X	X	X	X	X	
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo		X	X	X	X	X	X	X	X	X	
STRIGIDAE												
<i>Ninox novaeseelandiae</i>	Southern Boobook	M/J	X				X		X	X		
TYTONIDAE												
<i>Tyto javanica</i>	Eastern Barn Owl											
HALCYONIDAE												
<i>Todirhamphus sanctus</i>	Sacred Kingfisher		X		X	X	X	X	X		X	
MEROPIIDAE												
<i>Merops ornatus</i>	Rainbow Bee-eater	S5/M	X		X	X	X	X	X	X	X	
CLIMACTERIDAE												
<i>Climacteris rufa</i>	Rufous Treecreeper		X		X	X	X	X	X		X	
MALURIDAE												
<i>Malurus splendens</i>	Splendid Fairy-wren		X	X	X	X	X	X	X	X	X	
<i>Malurus elegans</i>	Red-winged Fairy-wren		X	X	X		X		X	X		
ACANTHIZIDAE												
<i>Sericornis frontalis</i>	White-browed Scrubwren		X	X	X	X	X	X	X	X	X	
<i>Calamanthus c. campestris</i>	Rufous Fieldwren											
<i>Smicrornis brevirostris</i>	Weebill		X	X	X	X	X	X	X	X	X	
<i>Gerygone fusca</i>	Western Gerygone		X	X	X	X	X	X	X	X	X	
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill		X		X	X	X	X	X		X	
<i>Acanthiza uropygialis</i>	Chestnut-rumped Thornbill											
<i>Acanthiza inornata</i>	Western Thornbill		X	X	X	X	X	X	X	X	X	
<i>Acanthiza apicalis</i>	Inland Thornbill		X	X	X	X	X	X	X	X	X	
PARDALOTIDAE												
<i>Pardalotus punctatus</i>	Spotted Pardalote		X	X	X	X	X	X	X	X	X	
<i>Pardalotus striatus</i>	Striated Pardalote		X	X	X	X	X	X	X	X	X	
MELIPHAGIDAE												
<i>Acanthorhynchus superciliosus</i>	Western Spinebill		X	X	X	X	X	X	X	X	X	
<i>Lichenostomus virescens</i>	Singing Honeyeater		X			X	X	X	X	X		

			Fauna Habitat Type									
			RP	BB	PH	DL	JC	JM	WO	RE	Dam	
Status												
<i>Lichenostomus leucotis</i>	White-eared Honeyeater		X							X		
<i>Lichenostomus ornatus</i>	Yellow-plumed Honeyeater				X		X		X	X		
<i>Anthochaera lunulata</i>	Western Little Wattlebird		X	X	X	X	X	X	X	X	X	
<i>Anthochaera carunculata</i>	Red Wattlebird		X	X	X	X	X	X	X	X	X	
<i>Epthianura albifrons</i>	White-fronted Chat											
<i>Glyciphila melanops</i>	Tawny-crowned Honeyeater				X		X	X	X	X		
<i>Lichmera indistincta</i>	Brown Honeyeater		X	X	X	X	X	X	X	X	X	
<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater		X		X	X	X	X	X	X	X	
<i>Phylidonyris niger</i>	White-cheeked Honeyeater				X		X		X	X		
<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater		X		X	X	X	X	X	X		
<i>Melithreptus chloropsis</i>	Western White-naped Honeyeater		X	X	X	X	X	X	X	X	X	
POMATOSTOMIDAE												
<i>Pomatostomus temporalis rubeculus</i>	Grey-crowned Babbler						X					
NEOSITTIDAE												
<i>Daphoenositta chrysoptera</i>	Varied Sittella		X	X	X	X	X	X	X	X		
CAMPEPHAGIDAE												
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike		X	X	X	X	X	X	X	X	X	
<i>Lalage sueurii</i>	White-winged Triller				X		X		X			
PACHYCEPHALIDAE												
<i>Falcunculus frontatus leucogaster</i>	Crested Shrike-tit								X			
<i>Pachycephala pectoralis</i>	Golden Whistler		X	X	X	X	X	X	X	X	X	
<i>Pachycephala rufiventris</i>	Rufous Whistler		X		X	X	X	X	X	X	X	
<i>Colluricincla harmonica</i>	Grey Shrike-thrush		X	X	X	X	X	X	X	X	X	
<i>Oreoica gutturalis gutturalis</i>	Crested Bellbird											
ARTAMIDAE												
<i>Artamus cinereus</i>	Black-faced Woodswallow											
<i>Artamus cyanopterus</i>	Dusky Woodswallow		X	X	X	X	X	X	X	X	X	
<i>Cracticus torquatus</i>	Grey Butcherbird						X	X				
<i>Gymnorhina tibicen</i>	Australian Magpie		X		X	X	X	X	X	X	X	
<i>Strepera versicolor</i>	Grey Currawong		X	X	X	X	X	X	X	X	X	
RHIPIDURIDAE												
<i>Rhipidura albiscapa</i>	Grey Fantail		X	X	X	X	X	X	X	X	X	
<i>Rhipidura leucophrys</i>	Willie Wagtail								X			
CORVIDAE												
<i>Corvus coronoides</i>	Australian Raven		X	X	X	X	X	X	X	X	X	
MONARCHIDAE												
<i>Myiagra inquieta</i>	Restless Flycatcher		X				X		X			
<i>Grallina cyanoleuca</i>	Magpie-lark											
PETROICIDAE												
<i>Microeca fascinans</i>	Jacky Winter		X						X			
<i>Petroica boodang campbelli</i>	Scarlet Robin		X	X	X	X	X	X	X	X	X	
<i>Petroica goodenovii</i>	Red-capped Robin		X		X		X		X	X		
<i>Melanodryas cucullata</i>	Hooded Robin											
<i>Eopsaltria griseogularis</i>	Western Yellow Robin		X	X	X	X	X	X	X	X		
<i>Eopsaltria georgiana</i>	White-breasted Robin		X	X	X		X	X	X	X		
ACROCEPHALIDAE												
<i>Acrocephalus stentoreus</i>	Australian Reed-Warbler											
MEGALURIDAE												

			Fauna Habitat Type									
			RP	BB	PH	DL	JC	JM	WO	RE	Dam	
Status												
<i>Megalurus gramineus</i>	Little Grassbird											
<i>Cinclorhamphus mathewsi</i>	Rufous Songlark											
<i>Cinclorhamphus cruralis</i>	Brown Songlark											
TIMALIIDAE												
<i>Zosterops lateralis</i>	Silvereye		X	X	X	X	X	X	X	X	X	
HIRUNDINIDAE												
<i>Cheramoeca leucosternus</i>	White-backed Swallow											
<i>Hirundo neoxena</i>	Welcome Swallow										X	
<i>Petrocheilidon ariel</i>	Fairy Martin											
<i>Petrochelidon nigricans</i>	Tree Martin		X	X	X	X	X	X	X	X	X	
NECTARINIIDAE												
<i>Dicaeum hirundinaceum</i>	Mistletoebird		X			X	X	X	X	X		
ESTRILDIDAE												
<i>Stagonopleura oculata</i>	Red-eared Firetail				X					X		
MOTACILLIDAE												
<i>Anthus novaeseelandiae</i>	Australian Pipit								X	X	X	
<i>Motacilla cinerea</i>	Grey Wagtail	S5/M/I/C/R										

Appendix 7. Native mammal assemblages

Key

Status – Australian Government (EPBC Act 1999)	
CE	Critically Endangered
EN	Endangered
VU	Vulnerable
M	Migratory species
J	JAMBA international agreement
C	CAMBA international agreement
R	ROKAMBA international agreement
Status – Western Australia (WC Act 1950 and DPaW Priority Species)	
S1	Schedule 1 of the WC Act 1950 (Critically Endangered fauna)
S2	Schedule 2 of the WC Act 1950 (Endangered fauna)
S3	Schedule 3 of the WC Act 1950 (Vulnerable fauna)
S5	Schedule 5 of the WC Act 1950 (Protected under international agreements)
S6	Schedule 6 of the WC Act 1950 (Special conservation needs fauna)
S7	Schedule 7 of the WC Act 1950 (Other fauna in need of special protection)
P1	DPaW Priority 1 – Poorly known taxa
P4	DPaW Priority 4 – Rare, near threatened and other taxa in need of monitoring
P5	DPaW Priority 5 – Conservation dependent fauna

The basis of this table is data derived from field surveys which allows associations with fauna habitat types. Where species were added from database searches, they were not allocated to any fauna habitat type.

		Fauna Habitat Type									
		Status	RP	BB	PH	DL	JC	JM	WO	RE	Dam
TACHYGLOSSIDAE											
<i>Tachyglossus aculeatus acanthion</i>	Echidna		X		X	X	X	X	X	X	X
DASYURIDAE: Dasyurinae											
<i>Dasyurus geoffroi fortis</i>	Chuditch	S3/VU	X		X	X	X	X	X	X	
DASYURIDAE: Phascogalinae											
<i>Antechinus flavipes leucogaster</i>	Mardo		X		X	X	X	X	X	X	X
<i>Phascogale calura</i>	Red-tailed Phascogale	S6/VU									
<i>Phascogale tapoatafa wambenger</i>	Common Wambenger	S6/VU	X			X	X	X	X	X	
DASYURIDAE: Planigalinae											
<i>Sminthopsis fuliginosus fuliginosus</i>	Grey-bellied Dunnart		X	X	X	X	X	X	X	X	
<i>Sminthopsis gilberti</i>	Gilbert's Dunnart		X	X	X	X	X	X	X	X	
MYRMECOBIIDAE											
<i>Myrmecobius fasciatus rufus</i>	Numbat	S2/VU									
PERAMELIDAE: Peramelinae											
<i>Isodon obesulus fusciventer</i>	Quenda	P5	X		X	X	X		X	X	
THYLACOMYIDAE											
<i>Macrotis lagotis</i>	Bilby	S3/VU									
BURRAMYIDAE											
<i>Cercartetus concinnus</i>	Western Pygmy-possum		X		X	X	X	X	X	X	
PSEUDOCHEIRIDAE: Pseudocheirinae											
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum	S1/VU									
TARSIPEDIDAE											
<i>Tarsipes rostratus</i>	Honey Possum				X	X	X	X	X	X	
PHALANGERIDAE: Phalangerinae											
<i>Trichosurus vulpecula vulpecula</i>	Common Brushtail Possum		X			X	X	X	X	X	X
POTOROIDAE: Potoroinae											
<i>Bettongia penicillata ogilbyi</i>	Brush-tailed Bettong, Woylie	S1/EN	X				X				
MACROPODIDAE: Macropodinae											

		Fauna Habitat Type									
		Status	RP	BB	PH	DL	JC	JM	WO	RE	Dam
<i>Macropus fuliginosus melanops</i>	Western Grey Kangaroo		X	X	X	X	X	X	X	X	X
<i>Notamacropus irma</i>	Western Brush Wallaby	P4	X	X	X	X	X	X	X	X	
MURIDAE: Murinae											
<i>Hydromys chrysogaster</i>	Water-rat	P4									X
MOLOSSIDAE: Molossinae											
<i>Austronomus australis</i>	White-striped Free-tailed Bat					X	X		X	X	X
<i>Ozimops kitcheneri</i>	Western Free-tailed Bat					X	X		X	X	X
VESPERTILIONIDAE: Nyctophilinae											
<i>Nyctophilus geoffroyi</i>	Lesser Long-eared Bat		X				X		X	X	X
<i>Nyctophilus gouldi</i>	Gould's Long-eared Bat		X			X	X		X		X
<i>Nyctophilus major major</i>	Western Long-eared Bat		X				X		X	X	X
VESPERTILIONIDAE: Vespertilioninae											
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat					X	X		X	X	X
<i>Chalinolobus morio</i>	Chocolate Wattled Bat						X		X	X	
<i>Falsistrellus mackenziei</i>	Western Falsistrelle	P4								X	
<i>Vespadelus regulus</i>	Southern Forest Bat		X			X	X		X	X	X

Appendix 8. Amphibian assemblages

Key

Status – Australian Government (EPBC Act 1999)	
CE	Critically Endangered
EN	Endangered
VU	Vulnerable
M	Migratory species
J	JAMBA international agreement
C	CAMBA international agreement
R	ROKAMBA international agreement
Status – Western Australia (WC Act 1950 and DPaW Priority Species)	
S1	Schedule 1 of the WC Act 1950 (Critically Endangered fauna)
S2	Schedule 2 of the WC Act 1950 (Endangered fauna)
S3	Schedule 3 of the WC Act 1950 (Vulnerable fauna)
S5	Schedule 5 of the WC Act 1950 (Protected under international agreements)
S6	Schedule 6 of the WC Act 1950 (Special conservation needs fauna)
S7	Schedule 7 of the WC Act 1950 (Other fauna in need of special protection)
P1	DPaW Priority 1 – Poorly known taxa
P4	DPaW Priority 4 – Rare, near threatened and other taxa in need of monitoring
P5	DPaW Priority 5 – Conservation dependent fauna

The basis of this table is data derived from field surveys which allows associations with fauna habitat types. Where species were added from database searches, they were not allocated to any fauna habitat type.

		Fauna Habitat Type									
		Status	RP	BB	PH	DL	JC	JM	WO	RE	Dam
HYLIDAE											
<i>Litoria adelaidensis</i>	Slender Tree Frog		X		X				X		X
<i>Litoria moorei</i>	Motorbike Frog		X					X	X		X
LYMNODYNASTIDAE											
<i>Heleioporus albopunctatus</i>	Western Spotted Frog		X								
<i>Heleioporus barycragus</i>	Hooting Frog		X				X	X	X		X
<i>Heleioporus eyrei</i>	Moaning Frog			X			X		X		
<i>Heleioporus inornatus</i>	Whooping Frog		X		X		X		X	X	
<i>Heleioporus psammophilus</i>	Sand Frog			X			X	X		X	
<i>Limnodynastes dorsalis</i>	Western Banjo Frog				X	X	X	X	X	X	X
<i>Neobatrachus pelobatoides</i>	Humming Frog		X			X	X	X	X		
MYOBATRACHIDAE											
<i>Crinia georgiana</i>	Tschudi's Froglet		X		X	X	X	X	X	X	
<i>Crinia glauerti</i>	Glauert's Froglet		X						X	X	X
<i>Crinia pseudinsignifera</i>	Bleating Froglet		X		X	X	X	X	X	X	X
<i>Myobatrachus gouldii</i>	Turtle Frog										
<i>Pseudophryne guentheri</i>	Gunther's Toadlet		X	X	X		X	X	X	X	

Appendix 9. Reptile assemblages

Key

Status – Australian Government (EPBC Act 1999)	
CE	Critically Endangered
EN	Endangered
VU	Vulnerable
M	Migratory species
J	JAMBA international agreement
C	CAMBA international agreement
R	ROKAMBA international agreement
Status – Western Australia (WC Act 1950 and DPaW Priority Species)	
S1	Schedule 1 of the WC Act 1950 (Critically Endangered fauna)
S2	Schedule 2 of the WC Act 1950 (Endangered fauna)
S3	Schedule 3 of the WC Act 1950 (Vulnerable fauna)
S5	Schedule 5 of the WC Act 1950 (Protected under international agreements)
S6	Schedule 6 of the WC Act 1950 (Special conservation needs fauna)
S7	Schedule 7 of the WC Act 1950 (Other fauna in need of special protection)
P1	DPaW Priority 1 – Poorly known taxa
P4	DPaW Priority 4 – Rare, near threatened and other taxa in need of monitoring
P5	DPaW Priority 5 – Conservation dependent fauna

The basis of this table is data derived from field surveys which allows associations with fauna habitat types. Where species were added from database searches, they were not allocated to any fauna habitat type.

		Fauna Habitat Type									
		Status	RP	BB	PH	DL	JC	JM	WO	RE	Dam
CARPHODACTYLIDAE											
<i>Underwoodisaurus milii</i>	Barking Gecko			X		X	X	X	X	X	
DIPLODACTYLIDAE											
<i>Crenadactylus o. ocellatus</i>	Clawless Gecko				X				X		
<i>Diplodactylus g. granariensis</i>	Western Stone Gecko		X								
<i>Diplodactylus lateroides</i>			X	X	X	X	X	X	X	X	X
<i>Diplodactylus polyopthalmus</i>	Speckled Stone Gecko					X	X	X	X		
<i>Hesperoedura reticulata</i>	Reticulated Velvet Gecko		X		X				X		
GEKKONIDAE											
<i>Christinus marmoratus</i>	Marbled Gecko		X		X	X	X	X	X	X	X
<i>Gehyra variegata</i>							X	X			
PYGOPODIDAE											
<i>Aprasia pulchella</i>	Granite Worm-lizard		X		X	X	X	X	X	X	
<i>Delma australis</i>			X								
<i>Delma f. fraseri</i>				X	X	X	X	X	X	X	
<i>Lialis burtonis</i>	Burton's Snake-lizard		X		X	X	X	X	X	X	
<i>Pygopus lepidopodus</i>	Common Scaly-foot										
SCINCIDAE											
<i>Acritoscincus trilineatus</i>	Western Three-lined Skink		X	X	X	X	X	X	X	X	
<i>Cryptoblepharus buchananii</i>	Buchanan's Snake-eyed Skink		X	X	X	X	X	X	X	X	
<i>Ctenotus delli</i>	Darling Range Heath Ctenotus	P4	X		X		X	X			
<i>Ctenotus labillardieri</i>						X	X	X		X	
<i>Egernia kingii</i>	King's Skink									X	
<i>Egernia napoleonis</i>			X	X	X	X	X	X	X	X	X
<i>Hemiergis i. initialis</i>			X	X	X	X	X	X	X	X	
<i>Lerista distinguenda</i>			X	X	X	X	X	X	X	X	
<i>Lerista m. microtis</i>										X	
<i>Menetia greyii</i>			X		X	X	X	X	X	X	

		Fauna Habitat Type										
		Status	RP	BB	PH	DL	JC	JM	WO	RE	Dam	
<i>Morethia obscura</i>			X	X	X	X	X	X	X	X		
<i>Tiliqua r. rugosa</i>	Shingleback		X		X	X	X	X	X	X	X	
AGAMIDAE												
<i>Ctenophorus ornatus</i>	Ornate Dragon											
<i>Pogona m. minor</i>	Dwarf Bearded Dragon		X		X	X	X	X	X	X	X	
VARANIDAE												
<i>Varanus gouldii</i>	Gould's Goanna		X			X	X	X	X	X		
<i>Varanus rosenbergi</i>	Heath Monitor		X				X	X	X	X		
<i>Varanus tristis</i>	Black-headed Monitor		X				X					
TYPHLOPIDAE												
<i>Anilius australis</i>	Southern Blind Snake		X		X	X	X	X	X	X		
<i>Anilius pinguis</i>	Fat Blind Snake						X	X	X			
<i>Anilius waitii</i>												
PYTHONIDAE												
<i>Aspidites ramsayi</i>	Woma	P1										
<i>Morelia spilota imbricata</i>	Carpet Python						X					
ELAPIDAE: Elapinae												
<i>Brachyuropsis s. semifasciatus</i>	Southern shovel-nosed Snake											
<i>Neelaps bimaculatus</i>	Black-naped Snake				X							
<i>Parasuta gouldii</i>	Gould's Hooded Snake		X	X	X	X	X	X	X	X		
<i>Parasuta nigriceps</i>	Mitchell's Short-tailed Snake		X			X	X	X		X		
<i>Pseudonaja affinis</i>	Dugite				X		X	X		X		
<i>Simoselaps bertholdi</i>	Jan's Banded Snake											

Appendix 10. Introduced species

INTRODUCED BIRDS										
		Fauna Habitat Type								
		RP	BB	PH	DL	JC	JM	WO	RE	Dam
PHASIANIDAE										
<i>Gallus gallus</i>	Domestic Chicken									
COLUMBIDAE										
<i>Columba livia</i>	Rock Dove									
<i>Streptopelia senegalensis</i>	Laughing Turtle-Dove									
<i>Streptopelia chinensis</i>	Spotted Turtle-Dove									
HALCYONIDAE										
<i>Dacelo novaeguineae</i>	Laughing Kookaburra	X	X	X	X	X	X	X	X	X
PASSERIDAE										
<i>Passer domesticus</i>	House Sparrow									
<i>Passer montanus</i>	Eurasian Tree Sparrow									
INTRODUCED MAMMALS										
MURIDAE: Murinae										
<i>Mus musculus</i>	House Mouse	X	X	X	X	X	X	X	X	
<i>Rattus rattus</i>	Black Rat			X	X	X			X	
LEPORIDAE										
<i>Oryctolagus cuniculus</i>	Rabbit	X		X	X	X		X	X	
CANIDAE										
<i>Canis f. familiaris</i>	Fox	X		X	X	X		X	X	X
<i>Vulpes vulpes</i>	Wild/Domestic Dog									
FELIDAE: Felinae										
<i>Felis catus</i>	Cat			X		X	X	X	X	X
SUIDAE										
<i>Sus scrofa</i>	Pig					X	X	X	X	X
BOVIDAE: Bovinae										
<i>Bos taurus</i>	Domesticated Cattle									
BOVIDAE: Antilopinae										
<i>Capra hircus</i>	Goat									
<i>Ovis aries</i>	Sheep									