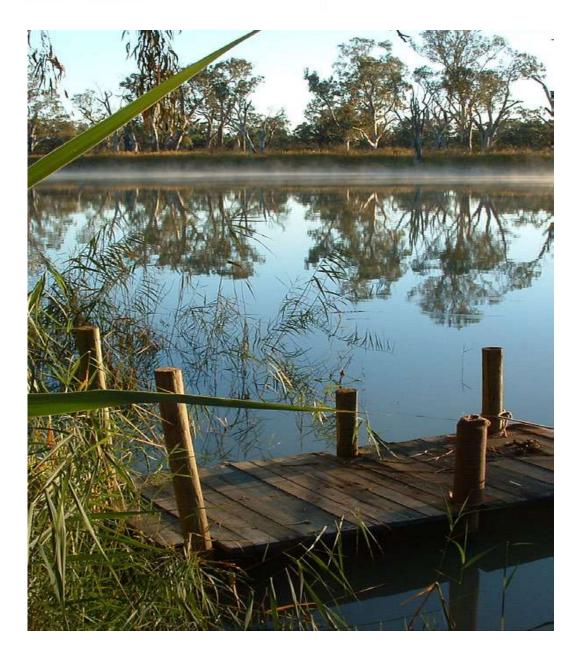
# 11. SA MURRAY-DARLING BASIN REGIONAL OILED WILDLIFE RESPONSE PLAN







#### **History of this Document**

This regional plan was developed by the Department for Environment and Water (DEW) and the Australian Marine Oil Spill Centre (AMOSC) to be consistent with the Western Australia (WA) Pilbara Regional Oiled Wildlife Response Plan which was produced jointly by the Western Australia Department of Parks and Wildlife (Parks and Wildlife) and AMOSC on behalf of the Petroleum Industry to set out the minimum standard for an OWR in state waters. The South Australian Oiled Wildlife Response Plan contains the general arrangements which apply across the state and seven chapters which comprise the local plans for each of the coastal regions. This chapter describe those local arrangements in the SA Murray-Darling Basin Region.

The SA Murray-Darling Basin Regional Oiled Wildlife Response Plan was developed in consultation with SA Murray-Darling Basin regional staff. The contribution and assistance of AMOSC and the Western Australian Government is both acknowledged and appreciated. The Plan was approved by the SA Murray-Darling Basin Regional Director and adopted on 26 October 2018.

#### **Exercise and Review periods**

#### **Exercising**

This plan will be exercised at least annually in accordance with South Australian Marine Oil Pollution Plans and petroleum titleholder oil pollution emergency plans, as required.

#### **Review**

This plan will be reviewed and updated by the Director, SA Murray-Darling Basin, DEW and AMOSC initially within twelve months of release. Thereafter it will be reviewed following an incident or at least once every two years. The table below will be updated as future revisions of the SA Murray-Darling Basin regional plan are reviewed.

Version	Date	Reviewed by	Approved by
V1.1	19/10/18	Sonia Dominelli	
V1.2	22/10/18	Claire Stephenson	
V1.3	26/10/18		Mike Williams, Regional Director

#### 11.1 INTRODUCTION

#### 11.1.1 Purpose of this plan

The purpose of the SA Murray-Darling Basin Oiled Wildlife Response Plan is to provide guidance to operational staff who respond to wildlife which have been injured or oiled by a marine based spill in the SA Murray-Darling Basin region. This plan sits beneath the South Australian Oiled Wildlife Response plan and provides regional context to it. Each region within South Australia has, or is developing, a similar regional operational plan. This plan forms an addendum to the State plan in the form of a 'Chapter' and both should be activated if an oil spill impacts wildlife in the region. The method of activation is detailed in section 2 of the State Plan.

#### 11.1.2 Scope

The SA Murray-Darling Basin region covers an area of 70,000 km² extending from the top of the Mount Lofty Ranges across the rangelands and southern Olary plains to the NSW and Victorian borders. In the south are the River Murray Lakes and Mallee. The River Murray and vast wilderness parks are prominent features of the region. The main townships include those in the Riverland, plus Blanchetown, Burra, Eudunda, Karoonda, Lameroo, Mannum, Meningie, Mt Barker, Morgan, Murray Bridge, Pinnaroo, Robertstown, Strathalbyn and Tailem Bend. The region incorporates all, or part of, 15 local government areas, with a population of ~125,000 people plus visitors. Agriculture is the basis of the regional economy, including intensive irrigation along the River Murray corridor, Mallee groundwater irrigation for horticulture and the diverse enterprises of the Eastern Mount Lofty Ranges. Dryland cropping and grazing occurs in the southern areas, while grazing occurs in the north. There are also very large areas of nature conservation in public lands and parks, Heritage Agreements on private land and on properties run by philanthropic organisations. The region is home to a number of endangered species.



Figure 11.1: Map of SA Murray-Darling Basin Region

#### 1.1.3 Management Objectives and Outcomes

Specific objectives include:

- Safe and efficient operational responses to oiled wildlife incidents by response teams
- Control and consistency of capturing, handling and treating oiled wildlife
- Ethical and total regard for the welfare of injured or oiled wildlife resulting from a marine oil pollution incident
- Guidance for decisions by the Incident Management Team on prioritising habitats on DEW managed reserves and wildlife aggregation areas
- Development of skills and knowledge within the SA Murray-Darling Basin region across government and industry to ensure oiled wildlife response can be undertaken safely, effectively and efficiently
- Knowledge and guidelines to facilitate the rapid rescue, stabilisation and rehabilitation of susceptible wildlife found in the SA Murray-Darling Basin region
- Detail existing resources in the SA Murray-Darling Basin region to respond to oiled wildlife response.

#### 11.1.4 Geographical and Cultural Settings

The SA MDB NRM region is one of eight natural resources regions in South Australia. It also forms the south-western portion of the Murray-Darling catchment into which the River Murray flows, South Australia's most substantial and important surface water resource. The region extends from the Victorian and New South Wales borders to the catchment boundary along the Mount Lofty Ranges, from the Rangelands in the north to the Murray Mallee and Murray Mouth in the south, and up to 14 kilometres into the Southern Ocean. The region is one of South Australia's most ecologically diverse and agriculturally productive areas. The Region comprises four districts:

- Ranges to River
- Mallee and Coorong
- Rangelands
- Riverland.

The SAMDB region covers 56,703 square kilometres or 7 per cent of the area of South Australia and has a population of 125,358 or nearly 8 per cent of South Australia's population. The Aboriginal population is 2% of the region's population. The majority of people live in the Ranges to River district (63% or 79,286 people), particularly in the major urban centres and high rainfall areas of the Eastern Hills and coastal areas. The Riverland district supports nearly a third of the region's population (27% or 33,413 people), particularly in the major towns adjacent the River Murray channel and floodplains. The region's population grew by 12% between 2001 and 2011, largely due to growth in the Ranges to River district). The Ranges to River population is expected to continue to increase significantly from now until 2026.

Despite the overall growth of the regional population, the Mallee-Coorong, Rangelands and Riverland districts have had a declining population over the same period (less 7%, 1% and 5% respectively). The population of these districts is expected to remain steady or experience minor decline. Twenty-eight per cent of households in the region do not have an internet connection. This figure is more pronounced in the Rangelands, Mallee and Coorong and Riverland districts (32%, 31% and 33% respectively).

The SA MDB region is a popular area with tourists and visitors, with peak visitation occurring from March to April and September to November. The region offers a range of recreational opportunities focussed on the River Murray, Coorong and Lower Lakes, and conservation areas such as Ngarkat

Conservation Park and Murray River National Park. The Murraylands and Riverland regions cover a large portion of the region and are two of the twelve recognised tourism regions of South Australia. Collectively these regions attracted more than 1.3 million visitors and close to 1.3 million overnight stays from 2010 to 2011. Annual surveys have found that more than 10% of visitors to the Riverland and Murraylands tourist regions participated in water related or nature based activity such as water sports, fishing, bushwalking, picnics or barbecues. These types of activities can place pressure on the natural resources they rely on, such through bank erosion from boat wash, loss of timber used for firewood and trampling of vegetation.

Agriculture is the dominant employment industry across the region (14%), followed by health care and social services (12%), retail trade (11%) and manufacturing (11%). Higher proportions of the population are employed in agriculture in three of the four districts: Mallee and Coorong, 41%; Rangelands, 31%; and Riverland, 19%. The Ranges to River district has a more diverse employment base with agriculture employing just 8% by comparison. Employment in most industries has remained relatively stable over the period 2001 to 2011, with the exceptions of agriculture, forestry and fishing (declined from 23% of the population to 14%, and health care and social services (increased from 8%to 12%).



Figure 11.2: Land use map of SA Murray-Darling Basin Region

Fleurieu Peninsula
Region
Marrie Park
Sarcitury Zonn
Sarcitury Zon

Figure 11.3: Fleurieu Peninsula marine park sanctuary zone

#### 11.2 REGIONAL OILED WILDLIFE RESPONSE PREPAREDNESS

Although pre-planning and organisation are important for successful management of an incident, assessment of the unique conditions and determination of specific strategies pertinent to an event is critical. There are numerous examples of effective wildlife rescue and rehabilitation in spill events, however there are few examples of successful operations in remote areas during periods of extreme heat.

A large scale marine oil pollution incident requiring capture and remediation of birds, marine mammals, or shoreline foraging mammals and reptiles would be unprecedented in Australia and is likely to present many challenges.

Environmental information pertaining to the region should be available in readiness for an oil spill. This should include maps of species distribution and seasonality, population information, and critical habitat data showing breeding, feeding, and roosting areas.

Surveys provide detailed information but there can be variability in wildlife populations from year to year and hence, if possible, a survey should be conducted immediately on advice that an incident has occurred. This may be critically important to the success of oiled wildlife response.

#### 11.2.1 Regional Values

The SA Murray-Darling Basin Region Priorities for Protection are summarised in Table 11.1. These are based on published information and scored against the consequence of an oil spill outlined in Table 11.2.

Factors used to assess the consequence of a spill event on wildlife include the following:

- Conservation status of wildlife on a local, Regional, State, National, or international context is a prime consideration.
- Marine and terrestrial conservation reserves. These areas are identified as important for maintaining species and ecosystem function and are a priority for protection.
- The importance of the all-natural habitats for flora, fauna, species and ecosystem function including those outside of the DEW managed reserves.
- The long term consequence of oiling or wildlife deaths in the area.

Priorities can be determined based on species, ecological communities, across all lands and waters and on social values for the area. Priorities may also be determined as a combination of these factors. However priorities for protection will differ with differing circumstances that may manifest in an incident. Only the stretch between Murray Mouth to the The Coorong is in the SAMDB region. From approximately The Coorong and south is in the South East (SE) region. The SE region manages the national park and would be the first responding region in the event of an oil spill.

Table 11.1 shows the highest priority areas in the region and is a summary of the more detailed information provided in the Operational Sectors section in this document. The priority scores have been allocated using the information outlined in table 11.2 in tandem with published literature and DEW field data supplemented with input from the Petroleum Industry. The scores are for guidance and will be reviewed as part of the plan's twelve month review process.

Table 11.1: SA Murray-Darling Basin Region Priorities for Protection Summary

PRIORITY	SECTOR	LOCATION	REASON	PRIORITY SCORE
1	20	Murray River Entrance	Wetland: Declared Wetland of National Importance (criteria 1,2,3,4,5,6) supporting a diversity of mangrove communities and associated birds. Birds: Declared Seabird Site supporting Fairy Terns (no data)	Very High
2	20	The Coorong	Wetland: Wetland of International Importance and RAMSAR Site. Back barrier lagoon consisting of interconnected basins partially fed by Murray River. Marginally intertidal. Supports a diversity of seabirds and waderbirds.  Birds: Features ten (10) Declared Coastal Seabird Sites supporting Caspian Terns, Fairy Terns, Crested Terns, Pied Cormorants and more and one (1) Declared Coastal Waderbird Site (>5000). These sites are just inland of Southern Ocean. Due to the transient nature of seabirds it is likely that they may become exposed to oiling so these sites and adjacent beach need to be monitored	Very High
3	20	Northern Channels - Murray Mouth to Pelican Point	Birds: Declared Coastal Waderbird Site supporting diversity of shorebirds (>5000)	Significant

Table 11.2: Allocation of Priority Based on the Consequences of Spill in Identified Location

POSSIBLE CONSEQUENCE OF SPILL	Priority from protection and response
Localised and short term (<1 year) effects on common wildlife or habitats outside of conservation reserves. Some oiled wildlife but no wildlife deaths.	Low
Localised and short term effects on habitats within conservation reserves. Some deaths <5% of a common species population outside of conservation reserves. Oiling of some common species inside conservation reserves.	Medium
Localised moderate term (<2 years) effects or widespread short term habitat effects (<6 months). On habitats Oiling of common species within a conservation reserve, or <10% of a local species population, oiling of >5% of local population of threatened species or detectable change in breeding capacity. Oiling or loss of any wildlife protected by treaty. Short term detectable loss of breeding capacity of any species.	Significant
Widespread significant regional habitat loss or moderate to long term (2-5 years) ecological effects (multiple species) of habitats or over 50% of shoreline or islands in a conservation reserve. Oiling of up to 10-50% of a Regional common species or deaths of <20% of regional or conservation reserve species population. Oiling of >10% or, deaths of <10% of WA threatened species population. Minor (5%) moderate term (<2 years) loss of breeding capacity for any species.	High
Significant long term ecological effects >5 years (affecting many species) on ecosystem function on a bioregional or conservation land unit scale. Deaths of >20% of a regional or conservation reserve population. Oiling of over 20% of a WA threatened, species or deaths of >10% threatened species population. Loss of breeding capacity of a regional threatened species population. Significant >5% Moderate term (2-5 years) loss of breeding capacity.	Very High

A current list of South Australian Endangered Species can be found in the South Australian Oiled Wildlife Response Plan or in Schedule 7 of the <u>National Parks and Wildlife Act 1972</u>. Petroleum industry companies must have an approved Oil Pollution Environment Plan (OPEP) and Environmental Plan (EP). Sensitive areas within the potential spill area are identified in this documentation. These plans should be used in conjunction with this oiled wildlife response plan and the SAOWRP to determine values and priorities for protection.

#### 11.2.2 Prioritised Ecological Values

Coastline, vegetation and habitat data in the SA Oil Spill Response Atlas Web Mapping Application are generally well populated and do not change quickly. Data on species at risk of oiling or impact to species habitat sites are however insufficient and currently being improved in the OSRA system. This plan provides a brief description of the landforms and coastal marine environment, and the broad environmental values for each of the predetermined sectors. Each sector is described including details of important wildlife populations.

#### 11.2.3 Zone of Confidence (ZoC)

To populate the environmental sensitivities (	(referred to as	'Coastal Area Units'	in Appendix x) this plan
utilises data contained in:			

DEW (SA) database 'NatureMaps',
DoE, National Conservation Values Atlas of BIAs,
Atlas of Living Australia,
Published surveys, reports and scientific papers, and the

Note: At the time of writing this plan the SA OSRA WMA database was still in development.

The above datasets have varying degrees of confidence. In order to provide the IMT with a tool to gauge the currency and accuracy of the data, we provide a Zone of Confidence (ZoC) for each of the identified Coastal Area Units. Table 11.3 below provides the ZoC scale.

Table 11.3: Zone of Confidence Scale

ZoC Scale	Confidence
1	Peer reviewed published paper < 5 years old
2	Peer reviewed published paper > 5 years old
3	Government published data (OSRA, SA NatureMaps) BDBSA has supporting meta data which underpins Naturemaps
4	Anecdotal data from a wildlife management agency officer (e.g. Parks and Wildlife)
Anecdotal data from an industry professional with local knowledge (e.g. commercial fisherman)	
NOTE: Ranking	g of 1 is the most reliable 'ZoC' while a ranking of 5 provides least confidence

#### 11.3. RESOURCES - EQUIPMENT

#### 11.3.1 Oiled Wildlife Response Equipment

A list of portable oiled wildlife response equipment in South Australia is included in the State Plan. The Australian Maritime Safety Authority (AMSA) oiled wildlife response first strike response kits contents can be found on the AMSA website. Further oiled wildlife response equipment can be sourced nationally in other jurisdictions from AMOSC and National Plan stockpiles, see Section 7 of the South Australian Oiled Wildlife Response Plan for further information (State Wide Resources and Arrangements).

#### 11.3.2 Communications

A Communications Support Unit forms part of the oil spill response. Within the oiled wildlife response structure, a Wildlife Communications Officer/unit role is also designated. The Communications Officer in the Logistics Unit is responsible for maintaining effective communication between the various response groups operating during the oiled wildlife response. In accordance with the Australasian Inter-service Incident Management System (AIIMS), a communications plan for the incident will be prepared.

If the field of operations for oil spill response and oiled wildlife response overlap, a single communications plan is preferred. The oiled wildlife response operations area may differ greatly to the oil spill response field and, if so, separate communications plans may be required. If a separate oiled wildlife response communications plan is put in place it should overlap at appropriate points in the AIIMS structure with the oil spill response communications plan.

#### 11.3.2.1 Communications when DEW is Coordinating Oiled Wildlife Response

If DEW is coordinating the oiled wildlife response, the communications plan in the South Australian Oiled Wildlife Response Plan should be followed. DEW radio networks and mobile phones are commonly used for normal DEW operations in the SA Murray-Darling Basin Region. Fixed communications are located in most vehicles, vessels and some offices and work centres. Satellite phones are infrequently used. SPOT devices are also used, particularly when travelling in remote or 'black-spot' areas.

DEW South Australian Government Radio Network Channels (SAGRN) for Murray Darling Basin Region (Zone C) are:

- SAMDB Region C11-NR-SAMDB (Day to day operational channel)
- SAMDB Secondary C10-NR-MLEE

#### DEW Statewide Marine & Heritage Channel: C20-NR-COAST

## 11.3.2.2 Communications when Petroleum Industry is Coordinating Oiled Wildlife Response

If the Petroleum Industry is leading the oiled wildlife response, the wildlife division should integrate into the existing communications structure of the oil spill response. Further communication resources are available through DEW if required.

#### 11.3.2.3 Ship to Ship/Ship to Shore Communication

Typically, ship to shore communication will be via VHF and secondarily through mobile phones where reception is available.

The communication channel during the response will be specified by the Communications Officer to all functional units when developing the communications plan.

#### 11.3.2.4 Ground to Ground Communication

In the event of shoreline wildlife capture, good communications is essential. A number of portable GRN units are held by Murray Bridge; additional units can be obtained from Adelaide. These units would be used by the oiled wildlife response field teams.

#### 11.3.2.5 Outside Communications

A log should be kept of all calls and emails/fax messages as is consistent with command and control requirements of incident response. To assist in this task, consideration should be given to the use of voice recorders to use during emergencies when notes cannot be taken.

#### 11.3.2.6 Communication Plan

As the oiled wildlife response is escalated, communication systems will need to meet the demands of the increasing number of responders and spatial complexities of the response effort. The Communications Officer in the logistics unit is responsible for developing and maintaining the communications plan through the response.

#### 11.3.3 Vessels

#### 11.3.3.1 Parks and Wildlife Vessels

The SA Murray-Darling Basin Region has vessels suitable for inland waters only.

#### 11.3.3.2 Industry Vessels

Industry has no vessels in the SA Murray-Darling Basin Region but this may change if oil exploration is undertaken. These may be identified in the petroleum industry OPEPs and the logistics section of their Oil Spill Response Plans.

#### 11.3.3.3 Other vessels available for hire

SA DPTI maintains lists of all Surveyed Passenger Vessels (SPV) and the DEW licensing system can be interrogated to find local tour operators. PIRSA Fisheries has registers of commercial fishers operating in the region which may be available if the need arises.

#### 11.3.3.4 Vessel Launch Sites

Site Name	General Location GPS Co-ordinates	Vessel Size Estimates	Description of Launch Area and Comments
Goolwa Aquatic Club	-35.513902, 138.785476	Medium sized	A two lane concrete ramp with floating pontoon.
Goolwa Wharf	-35.506157, 138.784478	Small to medium	Floating pontoons to provide short term moorings
Goolwa (Beacon 19)	-35.531071, 138.826727	Medium vessels	A two lane concrete ramp with two timber landing jetties and a mooring landing
Hindmarsh Island (Sugars Beach)	.35.548017, 138.876854	Small vessels	Single lane concrete ramp
Coorong (Marks Point)	-35.695667, 139.162491	Small vessels	High tide launching only from ramp. Lower quality concrete and rubble ramps. Difficult for deep draught boats.
Goolwa (Johnson Street)	-35.496661, 138.795954	Small vessels	A single lane concrete ramp with a timber small craft landing.
Goolwa (Liverpool Road)	-35.495535, 138.818882	Small vessels	A single lane concrete ramp with a timber small craft landing.

Tide prediction for all the above locations are available at: <a href="http://www.bom.gov.au/australia/tides/#!/sa">http://www.bom.gov.au/australia/tides/#!/sa</a>

#### 11.3.4 Aerial

#### 11.3.4.1 Aircraft Resource List

Operator	Aircraft	Capability	Availability	Key Contact for Release
DEW	Cessna	Observation and survey (6 seater)	On request	Matt Graham (pilot) Pilot phone 86485306, 0408089173 or Sat phone 0404090357

#### 11.3.4.2 Aircraft Landing Strips

Airfield name	Length	Latitude South Longitude E		de East	
	(m)	Degs.	Dec. Mins	Degs.	Dec. Mins
Goolwa Airport	315	35.28.54.1\$	-35.481701	138.45.07.2E	138.751999
Murray Bridge Airport	322	35.04.00.15	-35.066700	139.13.37.2E	139.227005
Strathalbyn Airport	305	35.18.42.15	-35.311699	138.59.24.0E	138.990005

#### 11.4. RESOURCES - PERSONNEL

#### 11.4.1 Trained personnel

The training required for those participating in an oiled wildlife response is explained in Section 5 of the South Australian Oiled Wildlife Response Plan (Oiled wildlife Response Incident Types and Personnel Required). This level informs the number of oiled wildlife response personnel and the skills they require. The State Plan also provides:

- Descriptions of each of the roles in detail can be found in Appendix A.
- A description of the oiled wildlife response incident structure and how responders interact is outlined in Section 3 (Oiled Wildlife Response Incident Management Structure)
- The stages of an oiled wildlife response in Section 4 (Stages of Oiled Wildlife Response)

Through a best endeavours approach between DEW and AMOSC, a state wide capacity to respond to an oiled wildlife response event will be maintained. DEW and AMOSC maintain a list of trained personnel and resources available. Either party may request assistance from the other if their internal pool of trained personnel or expertise has been exhausted.

#### 11.4.2 Wildlife Carers

There are few wildlife carers in the SA Murray-Darling Basin region. It is likely that wildlife would have to be relocated to Adelaide for long term rehabilitation.

Name	Carer Group Name	Species accepted	Location	Contact Details
Aaron Machado	Australian Marine Wildlife Research & Rescue Organisation	Sea birds, Seals, sealions, turtles	Torrens Island, Port Adelaide SA 5015	Mobile: 0411 057 551 Phone: (08) 8262 5452 Emergency Paging: +618 8378 3364
N/A	RSPCA	Animal Welfare	-	Emergency Hotline: 1 300 477 722
N/A	Fauna Rescue	Wildlife	-	(08) 8289 0896
N/A	SAVEM / DEW	Emergency wildlife response (disasters e.g. bushfire)	-	SAVEM: 0427 707 044 via ZEC (Zone emergency Centre) or Incident Management Team
Private Veterinarians	SA Vets	Wild native animals requiring euthanasia can usually be taken to a veterinarian cost free	-	http://www.yellowpages.co m.au/sa/veterinary- surgeons-32573- category.html
N/A	PIRSA Fisheries	Fishwatch	-	1 800 065 522
N/A	SA Bird of Prey rehabilitation centre	Birds of Prey	-	0422 114 023

#### 11.4.3 Veterinarians

There are several veterinarians in the SA Murray-Darling Basin region - list of vets in SA can be found at <a href="http://www.yellowpages.com.au/sa/veterinary-surgeons-32573-category.html">http://www.yellowpages.com.au/sa/veterinary-surgeons-32573-category.html</a>. It is likely that wildlife would have to be relocated to Adelaide for long term rehabilitation.

In the event of an oiled wildlife incident, professional veterinarian advice may be provided by an Adelaide Zoo or University of Adelaide veterinarian with experience in wildlife emergencies in cooperation with a regional wildlife officer (DEW or industry) until specialist wildlife veterinarian support can be provided if necessary.

After an emergency, the **South Australian Veterinary Emergency Management Inc. (SAVEM)** can be contracted **on mobile: 0427 707 044** or email: <u>info@savem.org.au</u> for veterinary care for all animals.

Table 11.5: SA Murray-Darling Basin Local Specialist Contacts

Category	Business name	Contact	Oiled Wildlife Response Availability
Vet service	Goolwa Veterinary Clinic	(08) 8555 1666	N/A
Vet Service	Riverport Vet Hospital, Goolwa	(08) 8555 5690	N/A
Vet Service	Murray Bridge Vet Clinic		Mon-Fri: 8.00am – 6.00pm Sat: 8.00am – 12.00 noon Sun: Closed
Vet Service	Meningie Veterinary Clinic	(08) 8575 1211	Mon-Fri: 8.30am – 5.30pm Sat: 9.00am -12.00 noon

#### 11.4.4 External Agencies and Emergency Volunteer Groups

Various local government agencies could be involved in emergency response scenarios in the SA Murray-Darling Basin Region and may be required to assist in an oiled wildlife response. These agencies and their contact numbers are listed below.

Table 11.6: SA Murray-Darling Basin Local Government Agencies

Agency	Location	Contact Number
	Goolwa	(08) 8555 2018 / 13 1444
	Narrung	(08) 8574 0031
Police	Meningie	(08) 8575 1202
	Murray Bridge	(08) 8535 6020
	Strathalbyn	(08) 8536 2044
Fisheries	PIRSA	1800 065 522
	Alexandrina Council	(08) 8555 7000
Council	Coorong District Council	1300 785 277
	Natural Resources SAMDB Murray Bridge	(08) 8532 9100
State Emergency Service (SES)	Riverland Operations & Support Unit	(08) 8586 3611 or 132 500
	Meningie	(08) 8575 1422

Agency	Location	Contact Number
	Murray Bridge	(08) 8532 3633
List any other relevant agencies	DPTI- Marine Safety	(08) 8260 0088
List any other relevant agencies	Environment Protection Authority	(08) 8204 2004

#### 11.5. OILED WILDLIFE FACILITY LOCATIONS AND CONTACTS

There are no dedicated oiled wildlife washing or rehabilitation centres in South Australia. Therefore existing facilities (i.e. sports clubs, showground's, ovals and warehouses) that are suitable for provision of a supporting role in oiled wildlife response need to be identified prior to an incident and permissions sought for their use in the event of an incident. Washing and rehabilitation centres are usually combined or located adjacent to each other and collectively known as Oiled Wildlife Facilities.

Oiled wildlife response containers are available to be transported and set up as washing facilities at suitable locations forming the nucleus of a larger Oiled Wildlife Facility. They have air conditioning and ability to soften and temperature control washing water. They require a water source, electricity source and suitable storage / drainage system for waste water. These oiled wildlife response containers were used during the Rena incident in New Zealand in 2011. For location and quantity of these oiled wildlife response containers please see the Section 7 of the State Plan page 41 (State Wide Resources and Arrangements).

A critical requirement for oiled wildlife response facilities in the SA Murray-Darling Basin Region is provisioning of air-conditioning to provide cooling and with sufficient power to allow for sufficient fresh air exchange. It is likely that any impacted wildlife would require transport to Adelaide.

Table 11.7: Staging Sites within the SA Murray-Darling Basin Region

Site Purpose	Location	Contact					
Charing Citae	Victor Harbour						
Staging Sites	Robe	DEM. (00) 0552 0200					
Temporary Holding Facilities	Robe	DEW: (08) 8552 0300.					
	Victor Harbour						
Oiled Wildlife Facilities	Kingscote (KI)	KI Council: (08) 85534500 DEW Kingscote: (08) 8553 4444.					

### 11.5.1 Potential facilities in the SA Murray-Darling Basin Region

Potential facilities have been identified to suit a range of situations including small response (1-5 birds per day and up to 20 birds), medium response (5-10 birds per day and up to 20-200 birds), and large or complex response (more than 10 birds per day, more than 200 total, and or terrestrial mammals, pinnipeds or other mega-fauna).

The criteria to determine Resource Readiness of Proposed Treatment Facilities listed in Section 5 is provided in Table 11.8 and represented by colour coding. The current population numbers for each location are provided against the location name in the following section. This will provide the reader with an initial understanding of capacity of the location to support a level 6 OWR event or a protracted incident.

Table 11.8: Resource readiness in proposed Treatment / Holding Facilities

Facilities have the prescribed resources in place with little or no modification necessary to make them operational.

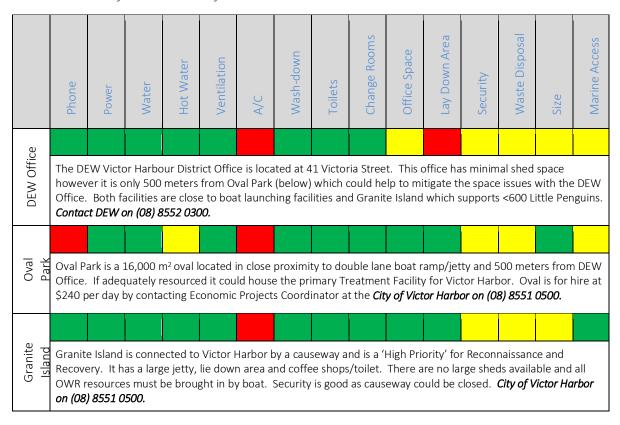
Facility could be equipped with prescribed resources with minor resourcing/modifications (<5 days).

Facility could not meet prescribed resources without major modifications or expense (>5 days).

# 1.5.2 Land Based Oiled Wildlife Facility in SA Murray-Darling Basin Region

There is no suitable location in the SA Murray-Darling Basin region. It is likely that any impacted wildlife would require transport to a centre such Victor Harbor or Adelaide.

Table 11.9: Identified Oiled Wildlife Facilities in Victor Harbor



#### 11.5.3 On-Water Oiled Wildlife Triage/Stabilisation

On islands and remote locations, where a treatment or holding/stabilisation facility cannot be located close enough to the site of collection to be acceptable in terms of wildlife welfare, an "on-water" facility may be established to enable stabilisation of oiled wildlife prior to transport to a treatment facility. In these circumstances, it is recommended that companies, who operate in these areas, consider resourcing vessels or barges that could fulfil these requirements. The SAMDB region has no vessels to suit this purpose.

#### 11.5.2.1 Vessels

An ideal on-water wildlife triage/stabilisation vessel would:

- Accommodate a minimum of 5 oiled wildlife responders
- Have suitable deck space to house at least one oiled wildlife response Container and airconditioned holding containers.
- Have an ability to safely load/unload wildlife to/from adjacent vessels (i.e. through rescue hatch or hiab).
- Facilitate some wash-down of animals and have the ability to store oily waste, or have an oily water separator and holding tanks for waste oil).

See Table 11.10 for indicative specifications and examples of on-water holding/stabilisation vessels.

Table 11.10: Indicative Specifications for On-Water Holding/Stabilisation Vessels

<b>Vessel Specification</b>	s
Length overall	38 metres
Beam	10.6 metres
Machinery	2 engines
Operating speed	10knots
Hull	Bow ramp configured to acccomodate toll-on-roll-off loading of 20ft shipping containers
Deck Area	200 m <sup>2</sup>
Water	120,000 Litres
Accomodation	5 + crew Airconditioned
Pollution control	Oily water seperator or oily waste holding tanks

# 11.6. SA MURRAY-DARLING BASIN REGION OPERATIONAL SECTORS

The oiled wildlife response may be a localised, contained operation, or it may extend to hundreds of islands or kilometres of coastline. The SA Murray-Darling Basin Region coastline and island groups have been divided into predetermined coastal compartments and sectors, each with a proposed staging/coastal access point. The sectors have been determined in consideration of available, central staging points and of the distances that vessels or vehicles could travel to, engage in operations and return within one operational day (in good to moderate conditions). The sectors are indicative only and should be adapted as conditions require. The nomenclature of the sectors and coastal compartments continue the Western Australian numbering system to ensure that the state plans are compatible and to minimise confusion in the event of an oil spill impacting both jurisdictions.

The sectors are further broken down, utilizing Coastal Compartments (CC) designed by Geoscience Australia. Coastal Compartment offer a consistent framework for regional planning and coastal management by defining natural management units. There are primary, secondary and tertiary compartments. This plan utilises the secondary (regional planning) compartments, which are based predominantly on landform associations such as extensive tracts of coast with continuous beach or dune field formations (Elliot I, 2011). Utilisation of prescribed coastal compartments and their boundaries means that this plan will align with other state OWR plans and other national marine planning documents and strategies. Each secondary compartment can be identified which its own unique Feature Identification (FID) number which corresponds to the FID from the GIS shapefile for that compartment.

#### 11.6.1 Population centres GPS locations and postcodes

#### 11.6.1.1 Ranges to River

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Postcodes
18	177	AMLR regional boundary	35.52° S	138.76° E	5214
18	177	Goolwa	35.50° S	138.79° E	5214
	177	Currency Creek	35.44° S	138.78° E	5214
	177	Hindmarsh Is.	35.46° S	138.93° E	5214
18	177	Clayton Bay	35.48° S	138.92° E	5256
	177	Mundoo island	35.45° S	139.04° E	5214
	177	Mulgundawa	35.32° S	139.23° E	5255
	177	Nalpa	35.37° S	139.31° E	5259
	177	Milang	35.41° S	138.98° E	5256
	177	Wellington	35.33° S	139.38° E	5259
18	177	Mallee and Coorong regional boundary	35.56° S	138.89° E	5259

#### 11.6.1.2 Mallee and Coorong

Sector	Compartment (FID#)	Location	Coordinate South (Decimal Degrees)	Coordinate East (Decimal Degrees)	Postcodes
18	177	Mallee and Coorong regional boundary	35.56° S	138.89° E	5264
	177	Narrung	35.50° S	139.17° E	5264
18	177	Poltalloch	35.47° S	139.28° E	5259
	177	Meningie West	35.66° S	139.18° E	5259
	177	Meningie	35.62° S	139.39° E	5264
18	177	Upper South East regional boundary	35.81° S	139.29° E	5264

Each sector identifies the fauna susceptible to oiling by secondary coastal compartments within the South Australian portion of the EMBA. Where quantitative data exists regarding the abundance and seasonal nature of fauna it is provided in the column 'Species susceptible to oiling'.

#### 11.6.2 Sector descriptions and contingency plans

#### 11.6.2.1 Sector 20: Middleton Point to Cape Banks Lighthouse (CC 177-176)

Figure 11.5: Map of Sector 20



**Note:** Only the stretch between Murray Mouth to the The Coorong is in the SAMDB region. From about the The Coorong and south is in the South East (SE) region.

#### 11.6.2.1.1 Terrestrial overview

Much of the terrestrial portion of this sector lies within Coorong National Park. The Murray River mouth lies in the west of the sector with farm land in the east of the sector.

#### 11.6.2.1.2 Marine Overview

This sector contains the eastern portion of the Encounter Marine Park and most of the Upper South East Marine Park. Represented by a diversity of habitats ranging from high-energy sandy beaches backed by sand dune, fringing limestone reefs, seagrass beds and kelp forests. It is strongly influenced by the Bonney Upwelling which helps drive the region's high biological productivity. The nutrients it brings stimulate the whole food chain, from plankton to whales (DENR, 2010).

Baudin Rocks (the only island group in the Upper South East) provide an important breeding and haulout site for seal species including the vulnerable Australian Sea Lion and Australian Fur Seals. Baudin Rocks is also an important roosting and breeding site for seabirds and coastal wader species (Baker, 2004). The Coorong National Park is a Wetland of International Importance (Ramsar site). The region is also considered to be a highly important nesting location for the state listed vulnerable hooded plover in the south east (Baker, 2004).

#### 11.6.2.1.3 Environmental Values

Table 11.13: Environmental Values for Sector 20

Coastal Compartments	Coastal Area Unit	Tenure	Species susceptible to oiling	Priority	ZoC
Middleton Point to Cape Jaffa	Northern Channels	MP (SZ)	Birds: Declared Coastal Waderbird Site (>5000).	Significant	3
(177)	Murray River Entrance	МР	Wetland: Declared Wetland of National Importance (criteria 1, 2, 3, 4,5 and 6) supporting a diversity of mangrove communities and associated birds.	Very High	3
	Mundoo Channel	MP	Birds: Declared Seabird Site supporting Caspian Terns (51-100).	Significant	3
	Murray Mouth	MP	Birds: Declared Seabird Site supporting Fairy Terns (no data).	Significant	3
	Northern Channels - Murray Mouth to Pelican Point	MP (SZ)	Birds: Declared Coastal Waderbird Site supporting diversity of shorebirds (>5000).	Significant	3
	North Lagoon - Pelican Point to the Needles	MP	Birds Declared Coastal Waderbird Site supporting diversity of shorebirds (>5000)	Significant	3
	The Coorong	СР	Wetland: Wetland of International Importance and RAMSAR Site. Back barrier lagoon consisting of interconnected basins partially fed by Murray River. Marginally intertidal. Supports a diversity of seabirds and waderbirds.  Birds: Features ten (10) Declared Coastal Seabird Sites supporting Caspian Terns, Fairy Terns, Crested Terns, Pied Cormorants and more and one (1) Declared Coastal Waderbird Site (>5000). These sites are just inland of Southern Ocean. Due to the transient nature of seabirds it is likely that they may become exposed to oiling so these sites and adjacent beach need to be monitored.	Very High	3
Cape Jaffa to Cape Banks Lighthouse (176)	Baudin Rocks	MP	Pinnipeds: ASL haul out site (<10) Birds: Declared Seabird Site supporting Little Penguins (101-200), Pied Cormorants (11-50), Black-faced Cormorant (51-100), Fairy Tern (11-50), and Crested Tern (601-1000).	High	2
Cape Banks Lighthouse	Robe to Beachport	MP/CP	Birds: There are eight (8) Declared Seabird sites along this coast supporting primarily Fairy Tern (<50 per site) and Black-faced Cormorant (<10 per site).	Significant	3
	Cape Martin	СР	Birds: Little Penguin (<10), Fairy Tern (11-50).	High	3
Cape Jaffa to Cape Banks Lighthouse (176)	Penguin Island	СР	Birds: Declared Seabird Site supporting Crested Tern (1001-2000), Short-tailed Shearwater (301-600) and Black-faced Cormorant (No data)	Significant	3

#### 11.6.2.1.4 Recommended Response Strategies

#### 11.6.2.1.4.1 Prevention

- Various hazing techniques may be useful for moving wildlife out of at risk areas.
- Pre-emptive capture of Little Penguins and shorebirds along the Coorong Coast.

#### 11.6.2.1.4.2 Personnel Deployment

Personnel in this sector would be deployed from Robe and Murray Bridge to access the SE of the Sector and Victor Harbour in the NW of the sector.

#### 11.6.2.1.4.3 Wildlife Reconnaissance and Wildlife Recovery

Aerial reconnaissance will help to further prioritise the response efforts throughout this sector. Wildlife can be collected from the beach at opportunistic Staging Sites. Nearly all of this sector will be focused on seabirds along the coasts. Opportunistic staging points can be established along the coast and delivered to either a Holding Facility in Robe or directly to the Treatment Facility in Victor Harbor.

#### 11.6.2.1.4.4 Logistics Options for Facility Establishment

Victor Harbor is an ideal location to stage wildlife response from in this sector. Although Victor Harbor is actually in Sector 19, it is situated only 85 km from Adelaide and would be the most resourced coastal community to host a Treatment Facility. Teams can be forward deployed from Victor Harbor along the coast towards Robe as required. Due to the distance from Robe (at the SE termination of this sector) to Victor Harbor (350 km) it would be ideal to have a Holding Facility or small Treatment Facility situated in Robe as well.

Table 11.14: Staging Sites for Sector 20

Site Purpose	Location	Contact
Staging Sites	Victor Harbor	DEW - (+61 8) 8204 1910
	Robe	DEW - (+61 8) 8204 1910
Temporary Holding Facilities	Robe	DEW - (+61 8) 8204 1910
Oiled Wildlife Facilities	Victor Harbor	See Oiled Wildlife Facilities in Section 5
	Kingscote (KI)	See Oiled Wildlife Facilities in Section 5
	Adelaide	See Oiled Wildlife Facilities in Section 5

#### 11.6.2.1.4.5 Equipment

The nearest First Strike OWR Equipment stockpile for this operational area is located in Adelaide. See 'Appendix I' for travel times.

## 11.7 SA Murray-Darling Basin Coastal Species by Functional Group and Location

The following list is from a South Australian State-wide coastal species search generated from the BirdLife Australia Atlas of Australian Birds database on 17 March 2016.

Conservation	n Acts and Agreements	Key t	o conservation	Key to	Postcodes	
		statu	s level			
EPBC	Listed threatened fauna under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth).	CR	Critically endangered	5214	Goolwa Hindmarsh Island	Currency Creek Mundoo Island
NPW	Status under the Threatened Species Schedules of the <i>National Parks and Wildlife Act 1972</i>	EN	Endangered	5255	Finniss Mulgundawa	Nalpa
JAMBA	Listed under the Japanand Australia Migratory Bird Bilateral Agreement 1974.	RA	Rare	5256	Clayton Bay Port Sturt	Milang
CAMBA	Listed under the <i>China and Australia Migratory Bird Bilateral Agreement</i> 1986	VU	Vulnerable	5259	Wellington	Poltalloch
RoKAMBA	Listed under the Republic of Korea and Australia Migratory Bird Bilateral Agreement 2007	NT	Not threatened	5264	Meningie Meningie West	Narrung Coorong
IUCN	Listed threatened species under the IUCN (International Union for Conservation of Nature) Red List.		Least concern			
		UP	Unprotected			
		MA	Marine			
		MI	Migratory			

Common Name	Scientific Name	EPBC	NPW	JAMBA	САМВА	RoKAMBA	IUCN	5214	5255	5256	5259	5264
Emus STRUTHION	NIFORMES											
Emu	Dromaius novaehollandiae	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Grebes PODICIPE	DIFORMES											
Great Crested Grebe	Podiceps cristatus	-	RA	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Hoary-headed Grebe	Poliocephalus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Australasian Grebe	Tachybaptus novaehollandiae	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Penguins SPHEN	IISCIFORMES											
Rockhopper Penguin	Eudypteschrysocome	-	-	-	-	-	VU		<b>√</b>		<b>√</b>	<b>√</b>
Little Penguin	Eudyptula minor	-	-	-	-	-	LC	✓	✓		✓	✓
Tube-Nosed So	eabirds PROCELLARIIFORMES											
Flesh-footed Shearwater	Ardennacarneipes (Puffinuscarneipes)	-	RA	Listed	-	Listed	LC	<b>√</b>	<b>√</b>		✓	<b>√</b>
Short-tailed Shearwater	Ardennatenuirostris	-	-	Listed	-	Listed	LC	<b>√</b>	<b>√</b>		✓	<b>√</b>
Southern Fulmar	Fulmarusglacialoides	-	-	-	-	-	LC	✓	✓			
Kerguelen Petrel	Lugensabrevirostris (Aphrodromabrevirostris) (Pterodromabrevirostris)	-	-	-	-	-	LC	<b>√</b>	✓			
Southern Giant- Petrel	Macronectesgiganteus	EN	VU	-	-	-	LC	<b>√</b>	<b>√</b>			
Northern Giant- Petrel	Macronecteshalli	VU MA MI	-	-	-	-	LC	<b>√</b>	<b>√</b>			
Wilson's Storm- Petrel	Oceanites oceanicus	-	-	Listed	-	-	LC	<b>√</b>	<b>√</b>			
Slender-billed Prion	Pachyptilabelcheri	-	-	-	-	-	LC	<b>√</b>	✓			

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN	5214	5255	5256	5259	5264
Fairy Prion	Pachyptilaturtur	VU	-	-	-	-	LC	<b>√</b>	<b>√</b>			
Mottled Petrel	Pterodromainexpectata	-	-	-	-	-	NT	✓	✓			
White-headed Petrel	Pterodromalessonii	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>			
Great-winged Petrel	Pterodromamacroptera	-	-	-	-	-	LC	<b>√</b>	<b>√</b>			
Fluttering Shearwater	Puffinusgavia	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>			<b>√</b>
Hutton's Shearwater	Puffinushuttoni	-	-	-	-	-	EN	<b>√</b>	<b>√</b>			
Shy Albatross	Thalassarchecauta (Diomedeacautacauta)	VU MA MI	VU	-	-	-	NT	<b>√</b>	<b>√</b>			
Yellow-nosed Albatross	Thalassarchechlororhynchos (Diomedeachlororhynchos)	-	EN	-	-	-	EN	<b>√</b>	<b>√</b>			
Black-browed Albatross	Thalassarchemelanophris(Thalassarchemelanophrys) (Diomedeamelanophrysimpavida)	VU MA MI	VU	-	-	-	NT	<b>√</b>	<b>√</b>			
Cormorants, Ga	annets and Pelicanspelecaniformes											
Australasian Darter	Anhinga novaehollandiae (Anahingamelanogaster)	-	RA	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>
Little Pied Cormorant	Microcarbomelanoleucos	-	-	-	-	-	LC	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>
Australasian Gannet	Morusserrator	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>√</b>
Australian Pelican	Pelecanusconspicillatus	-	-	-	-	-	LC	✓	$\checkmark$	✓	<b>√</b>	✓
<b>Great Cormorant</b>	Phalacrocorax carbo	-	-	-	-	-	LC	✓	✓		✓	<b>√</b>
Black-faced Cormorant	Phalacrocoraxfuscescens	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Little Black Cormorant	Phalacrocoraxsulcirostris	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>

Common Name	Scientific Name	EPBC	NPW	JAMBA	САМВА	RoKAMBA	IUCN	5214	5255	5256	5259	5264
Pied Cormorant	Phalacrocoraxvarius	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Herons, Ibises a	and Storks ardeiformes											
Cattle Egret	Ardea ibis (Bubulcus ibis) (Ardeola ibis)	-	RA	Listed	Listed	-	LC	✓	✓		✓	✓
Intermediate Egret	Ardea intermedia (Egretta intermedia)	-	RA	-	-	-	LC	✓	✓	✓	✓	✓
Eastern Great Egret	Ardeamodesta	-	-	-	-	-	NE	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
White-necked Heron	Ardeapacifica	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
Australasian Bittern	Botauruspoiciloptilus	EN	VU	-	-	-	EN	<b>✓</b>	<b>✓</b>		<b>√</b>	<b>√</b>
Little Egret	Egrettagarzetta	-	RA	-	-	-	LC		✓		✓	✓
White-faced Heron	Egretta novaehollandiae (Ardea novaehollandiae)	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Eastern Reef Egret	Egretta sacra	-	RA	-	Listed	-	LC	✓	✓			
Nankeen Night- Heron	Nycticoraxcaledonicus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Yellow-billed Spoonbill	Plataleaflavipes	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Royal Spoonbill	Platalearegia	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Glossy Ibis	Plegadisfalcinellus	-	RA	-	Listed	-	LC	✓	✓		✓	✓
Australian White Ibis	Threskiornismolucca	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>✓</b>	✓	<b>√</b>
Straw-necked Ibis	Threskiornisspinicollis	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Swans, Geese a	nd Ducksanseriformes											
Muscovy Duck								✓	✓		✓	✓
Domestic/Feral Duck								<b>√</b>	<b>✓</b>		<b>√</b>	<b>√</b>

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN	5214	5255	5256	5259	5264
Black Duck-								<b>√</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>
Mallard hybrid												
Domestic Goose								✓	✓		✓	✓
<b>Chestnut Teal</b>	Anascastanea	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Grey Teal	Anasgracilis	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Northern Mallard	Anasplatyrhynchos	-	-	-	-	-	LC	<b>√</b>	✓		<b>✓</b>	✓
Australasian Shoveler	Anasrhynchotis (Spatula rhynchotis)	-	RA	-	-	-	LC	✓	<b>√</b>		<b>√</b>	✓
Pacific Black Duck	Anassuperciliosa	_	_	_	_	_	LC	✓	✓	✓	✓	✓
Greylag Goose	Anseranser						LC	✓	✓		<b>√</b>	✓
Musk Duck	Biziuralobata	-	RA	-	-	-	LC	✓	✓		✓	✓
Cape Barren Goose	Cereopsis novaehollandiae	VU	RA	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Australian Wood Duck	Chenonettajubata	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>~</b>	<b>✓</b>	<b>√</b>
Black Swan	Cygnus atratus	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Plumed Whistling- Duck	Dendrocygnaeytoni	-	-	-	-	-	LC			<b>√</b>		
Pink-eared Duck	Malacorhynchusmembranaceus	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Blue-billed Duck	Oxyuraaustralis	-	RA	-	-	-	NT	<b>√</b>	✓		<b>✓</b>	✓
Freckled Duck	Stictonettanaevosa	-	VU	-	-	-	LC	✓	✓	✓	✓	✓
Australian Shelduck	Tadornatadornoides	-	-	-	-	-	LC	<b>√</b>	<b>✓</b>		<b>√</b>	<b>√</b>
Hardhead	Aythyaaustralis	-	-	-	-	-	LC	✓	✓	✓	<b>√</b>	✓
Birds of Prey A	CCIPITRIFORMES											
Collared Sparrowhawk	Accipiter cirrocephalus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Brown Goshawk	Accipiter fasciatus	-	-	-	-	-	LC	✓	✓	✓	✓	✓

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN	5214	5255	5256	5259	5264
Wedge-tailed	Aquila audax							<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Eagle	Aquita addax	-	-	-	-	-	LC					
Swamp Harrier	Circus approximans	-	-	-	-	-	LC	✓	✓		✓	✓
Spotted Harrier	Circus assimilis	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Black-shouldered Kite	Elanusaxillaris	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>√</b>
Brown Falcon	Falco berigora	-	-	-	-	-	LC	$\checkmark$	$\checkmark$	<b>✓</b>	✓	✓
Nankeen Kestrel	Falco cenchroides	-	-	-	-	-	LC	$\checkmark$	✓	$\checkmark$	✓	✓
<b>Grey Falcon</b>	Falco hypoleucos	-	RA	-	-	-	VU		$\checkmark$	$\checkmark$	✓	✓
Australian Hobby	Falco longipennis	-	-	-	-	-	LC	<b>√</b>	$\checkmark$	<b>✓</b>	✓	<b>✓</b>
Peregrine Falcon	Falco peregrinus	-	RA	-	-	-	LC	$\checkmark$	$\checkmark$	✓	$\checkmark$	$\checkmark$
Black Falcon	Falco subniger	-	-	-	-	-	LC		✓	✓	✓	✓
White-bellied Sea- Eagle	Haliaeetusleucogaster	-	EN	-	Listed	-	LC	<b>√</b>	✓		<b>√</b>	<b>√</b>
Whistling Kite	Haliastursphenurus	-	-	-	-	-	LC	✓	✓	✓	✓	$\checkmark$
Black-breasted Buzzard	Hamirostramelanosternon	-	RA	-	-	-	LC			<b>√</b>		
Little Eagle	Hieraaetusmorphnoides	-	-	-	-	-	LC	✓	$\checkmark$	✓	✓	✓
Square-tailed Kite	Lophoictiniaisura	-	EN	-	-	-	LC	✓	✓			
Black Kite	Milvus migrans	-	-	-	-	-	LC	$\checkmark$	$\checkmark$	✓	✓	✓
Eastern Osprey	Pandion cristatus	-	-	-	-	-	-	✓	✓		✓	✓
Megapodes an	d Allies GALLIFORMES											
Stubble Quail	Coturnix pectoralis	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Brown Quail	Coturnixypsilophora (Synoicusypsilophorus)	-	VU	-	-	-	LC	<b>√</b>	<b>√</b>		✓	✓
Malleefowl	Leipoaocellata	VU	VU	-	-	-	VU		✓		✓	<b>√</b>
Helmeted Guineafowl	Numidameleagris	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>			
Indian Peafowl	Pavocristatus	-	-	-	-	-	LC	✓	✓			

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN	5214	5255	5256	5259	5264
Black-tailed Native-hen	Tribonyxventralis (Gallinulaventralis)	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>
<b>Button Quails a</b>	nd Allies GRUIFORMES											
Australian Bustard	Ardeotisaustralis	-	VU	-	-	-	LC		✓		✓	<b>✓</b>
Buff-banded Rail	Gallirallusphilippensis (Hypotaenidiaphilippensis)	-	-	-	-	-	LC	<b>✓</b>	$\checkmark$		✓	<b>✓</b>
Brolga	Grus rubicunda (Antigone rubicunda)	-	VU	-	-	-	LC			✓		
Lewin's Rail	Lewinia pectoralis (Rallus pectoralis pectoralis)	-	VU	-	-	-	LC	<b>✓</b>	✓		✓	<b>✓</b>
Waders, Plover	s, Terns and Gulls CHARADRIFORMES											
Common Sandpiper	Actitishypoleucos (Tringahypoleucoshypoleucos)	-	RA	Listed	Listed	Listed	LC	<b>√</b>	<b>✓</b>		<b>√</b>	<b>√</b>
Ruddy Turnstone	Arenariainterpres	-	RA	Listed	Listed	Listed	LC	✓	✓		✓	<b>✓</b>
Bush Stone-curlew	Burhinusgrallarius	-	RA	-	-	-	LC	✓	✓			
Sharp-tailed Sandpiper	Calidrisacuminata	-	-	Listed	Listed	Listed	LC	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>
Sanderling	Calidris alba (Crocethia alba)	MA MI	RA	Listed	Listed	Listed	LC	<b>✓</b>	<b>√</b>		<b>√</b>	<b>√</b>
Red Knot	Calidriscanutus	-	-	Listed	Listed	Listed	NT	✓	✓		<b>√</b>	✓
Curlew Sandpiper	Calidrisferruginea	CR MA	-	Listed	Listed	Listed	NT	✓	✓		<b>√</b>	<b>√</b>
Pectoral Sandpiper	Calidrismelanotos	-	RA	Listed	-	Listed	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Little Stint	Calidrisminuta	-	RA	-	-	Listed	LC		✓		✓	<b>✓</b>
Red-necked Stint	Calidrisruficollis	-	-	Listed	Listed	Listed	NT	✓	✓		✓	<b>√</b>
Long-toed Stint	Calidrissubminuta	-	RA	Listed	Listed	Listed	LC	<b>√</b>	<b>✓</b>		✓	<b>√</b>
Great Knot	Calidristenuirostris	-	RA	Listed	Listed	Listed	EN	✓	✓		✓	<b>√</b>
Inland Dotterel	Charadriusaustralis (Peltohyasaustralis)	-	-	-	-	-	LC			✓		

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Double-banded	Charadriusbicinctus							<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Plover		-	-	-	-	-	LC					
<b>Greater Sand</b>	Charadriusleschenaultii	_	RA	Listed	Listed	Listed	LC	✓	$\checkmark$			
Plover			NA	Listeu			LC					
Lesser Sand Plover	Charadriusmongolus		RA	Listed	Listed	Listed	LC	<b>√</b>	$\checkmark$			
Red-capped	Charadriusruficapillus	_	_				LC	<b>✓</b>	✓	✓	$\checkmark$	✓
Plover			_	-	_	-	LC					
Whiskered Tern	Chlidoniashybrida	-	-	-	-	-	LC	$\checkmark$	$\checkmark$	✓	✓	✓
White-winged	Chlidoniasleucopterus	_	_	Listed	Listed	Listed	LC	<b>√</b>	✓		✓	<b>√</b>
Black Tern				Listed								
Silver Gull	Chroicocephalus novaehollandiae (Larus	-	_	-	-	-	LC	✓	✓	<b>√</b>	✓	✓
	novaehollandiae)							<b>✓</b>	<b>✓</b>	./	./	<b>✓</b>
Banded Stilt	Cladorhynchusleucocephalus	-	VU	-	-	-	LC	<b>V</b>		<b>∨</b>	<b>√</b>	<b>∨</b>
Black-fronted	Elseyornismelanops	-	-	-	-	-	LC	<b>V</b>	<b>√</b>	<b>V</b>	✓	•
Dotterel	5.4							<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Red-kneed Dotterel	Erythrogonyscinctus	-	-	-	-	-	LC	Ť	•	·	·	Ť
Eurasian Coot	Fulicaatra	_	_	_	-	_	LC	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
Latham's Snipe	Gallinagohardwickii		RA	Listed	Listed	Listed	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>✓</b>
Pin-tailed Snipe	Gallinagostenura		INA	-	Listed	Listed	LC		<b>√</b>		<b>√</b>	<b>√</b>
		-	-					✓	· ✓	<b>√</b>	✓	√ ·
Dusky Moorhen Gull-billed Tern	Gallinulatenebrosa Gelochelidonnilotica	-	-	-	-	-	LC LC	<b>·</b> ✓	<b>→</b>	<b>→</b>	<b>√</b>	<b>,</b>
Oriental Pratincole	Glareolamaldivarum	-	-	-	- Listed	- Listed	LC	· ✓	· ✓	·	· ✓	· ✓
		-	-	-	Listeu	Listeu	LC	<b>√</b>	<b>√</b>		<b>✓</b>	<b>√</b>
Sooty	Haematopusfuliginosus	-	RA	-	-	-	LC	•	•		•	•
Oystercatcher  Australian Pied	Ugomatonuslonairostris							<b>√</b>	<b>√</b>		<b>√</b>	<b>✓</b>
Oystercatcher	Haematopuslongirostris	-	RA	-	-	-	LC					
Black-winged Stilt	Himantopus	_	_	_	_	_	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Caspian Tern	Hydroprognecaspia	_	_	_	-	-	LC	✓	<b>√</b>		<b>√</b>	<b>√</b>
Caspian Term	Try at opt og recaspia			_	_	_	LC					

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Kelp Gull	Larusdominicanus	-	RA	-	-	-	LC	<b>√</b>	<b>√</b>			
Pacific Gull	Laruspacificus	-	-	-	-	-	LC	✓	✓		✓	✓
Broad-billed	Limicolafalcinellus (Calidrisfalcinellus)			Listed	Listed	Listed	LC					✓
Sandpiper		-	-									
Bar-tailed Godwit	Limosalapponica	-	RA	Listed	Listed	Listed	NT	<b>√</b>	$\checkmark$		<b>✓</b>	✓
Black-tailed Godwit	Limosalimosa	-	RA	Listed	Listed	Listed	NT	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Eastern Curlew	Numeniusmadagascariensis	CR	VU	Listed	Listed	Listed	EN	✓	✓		✓	✓
Whimbrel	Numeniusphaeopus	-	RA	Listed	Listed	Listed	LC	✓	✓			
Ruff	Philomachuspugnax (Calidrispugnax)		RA	Listed	Listed	Listed	LC	$\checkmark$	$\checkmark$		$\checkmark$	✓
Pacific Golden Plover	Pluvialisfulva	-	RA	-	-	Listed	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Grey Plover	Pluvialissquatarola	-	-	Listed	Listed	Listed	LC	<b>√</b>	✓		<b>✓</b>	✓
Purple Swamphen	Porphyrio	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Australian Spotted Crake	Porzanafluminea	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Baillon's Crake	Porzanapusilla (Zaporniapusilla)	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Spotless Crake	Porzanatabuensis (Zaporniatabuensis)	-	RA	-	-	-	LC	✓	✓	✓	✓	✓
Red-necked Avocet	Recurvirostra novaehollandiae	-	-	-	-	-	LC	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>
Australian Painted Snipe	Rostratulaaustralis (Rostratulabenghalensis)	ENMA	VU	-	Listed	-	EN	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Brown Skua	Stercorariusantarcticus (Catharactaantarctica)	-	-	-	-	-	LC	✓	✓			
Arctic Jaeger	Stercorariusparasiticus	-	-	Listed	-	Listed	LC	✓	✓			
Pomarine Jaeger	Stercorariuspomarinus	-	-	Listed	Listed	-	LC	<b>√</b>	✓			
Common Tern	Sterna hirundo	-	RA	Listed	Listed	Listed	LC	✓	<b>✓</b>		✓	✓
Arctic Tern	Sterna paradisaea	-	-	-	-	-	LC	✓	✓			

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White-fronted	Sterna striata							<b>√</b>	<b>√</b>			
Tern	Sterna strata	-	-	-	-	-	LC					
Little Tern	Sternulaalbifrons (Sterna albifrons)	-	EN	Listed	Listed	Listed	LC	✓	✓		✓	✓
Fairy Tern	Sternulanereis (Sterna nereis)	VU	EN	-	-	-	VU	✓	✓		✓	✓
Australian	Stiltiaisabella	_	_	-	_	_	LC	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>
Pratincole									<b>✓</b>			<b>✓</b>
Crested Tern	Thalasseusbergii ( Sterna bergii)	-	-	Listed	-	-	LC	<b>√</b>			<b>√</b>	
Hooded Plover	Thinornisrubricollis (Charadriusrubricollis)	VU MA	VU	-	-	-	VU	✓	<b>√</b>		✓	<b>√</b>
<b>Grey-tailed Tattler</b>	Tringabrevipes (Heteroscelusbrevipes)	-	RA	Listed	Listed	Listed	NT	<b>√</b>	✓		<b>√</b>	✓
Wood Sandpiper	Tringaglareola	-	RA	Listed	Listed	Listed	LC	✓	$\checkmark$		$\checkmark$	✓
Common Greenshank	Tringanebularia	-	-	Listed	Listed	Listed	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Marsh Sandpiper	Tringastagnatilis	-	-	Listed	Listed	Listed	LC	✓	✓		✓	✓
Common Redshank	Tringatotanus	-	-	-	Listed	Listed	LC	<b>√</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>
Painted Button- quail	Turnixvarius (Turnix varia)	-	RA	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Little Button-quail	Turnixvelox	-	-	-	-	-	LC	$\checkmark$	$\checkmark$	$\checkmark$	✓	✓
Masked Lapwing	Vanellus miles	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Banded Lapwing	Vanellustricolor	-	-	-	-	-	LC	$\checkmark$	✓	$\checkmark$	✓	✓
Terek Sandpiper	Xenuscinereus	-	RA	Listed	Listed	Listed	LC	<b>✓</b>	$\checkmark$		✓	✓
Pigeons and Do	oves Columbiformes											
Rock Dove	Columba livia	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Diamond Dove	Geopeliacuneata	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Peaceful Dove	Geopeliastriata	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Crested Pigeon	Ocyphapslophotes	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Common Bronzewing	Phapschalcoptera	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>

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Brush Bronzewing	Phapselegans	-	-	-	-	-	LC	<b>√</b>	✓		<b>✓</b>	<b>✓</b>
Spotted Dove	Streptopeliachinensis	-	-	-	-	-	-	✓	✓		✓	✓
Barbary Dove	Streptopeliaroseogrisea	-	-	-	-	-	LC	✓	✓			
Parrots and Co	ckatoos											
Corella species								✓	✓			
Australian Ringneck	Barnardiuszonarius	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>
Sulphur-crested Cockatoo	Cacatuagalerita	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Little Corella	Cacatuasanguinea	-	UP	-	-	-	LC	✓	✓	✓	✓	✓
Long-billed Corella	Cacatuatenuirostris	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>✓</b>
Gang-gang Cockatoo	Callocephalon fimbriatum	-	-	-	-	-	LC	✓	<b>√</b>			
Yellow-tailed Black-Cockatoo	Calyptorhynchusfunereus (Zandafunerea)	-	VU	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Galah	Eolophusroseicapillus (Cacatuaroseicapilla)	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Musk Lorikeet	Glossopsittaconcinna	-	-	-	-	-	LC	✓	✓		$\checkmark$	<b>√</b>
Purple-crowned Lorikeet	Glossopsittaporphyrocephala	-	-	-	-	-	LC	✓	<b>√</b>		<b>√</b>	<b>√</b>
Little Lorikeet	Glossopsittapusilla	-	EN	-	-	-	LC	✓	✓		<b>√</b>	<b>✓</b>
Budgerigar	Melopsittacusundulatus	-	UP	-	-	-	LC	✓	✓	✓	✓	✓
Orange-bellied Parrot	Neophemachrysogaster	CRMA	EN	-	-	-	CR	<b>√</b>	<b>√</b>		<b>✓</b>	<b>√</b>
Blue-winged Parrot	Neophemachrysostoma	-	VU	-	-	-	LC	✓	<b>√</b>		<b>√</b>	<b>√</b>
Elegant Parrot	Neophemaelegans	-	RA	-	-	-	LC	✓	✓		$\checkmark$	✓
Rock Parrot	Neophemapetrophila	-	RA	-	-	-	LC	✓	✓			

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Blue Bonnet	Northiellahaematogaster	-	RA	-	-	-	LC	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>
Cockatiel	Nymphicushollandicus	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Crimson Rosella	Platycercuselegans	-	-	-	-	-	LC	✓	✓		✓	✓
Eastern Rosella	Platycercuseximius	-	-	-	-	-	LC	✓	✓		✓	✓
Red-rumped Parrot	Psephotushaematonotus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Mulga Parrot	Psephotusvarius (Psephotellusvarius)	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Rainbow Lorikeet	Trichoglossushaematodus	-	-	-	-	-	LC	✓	✓		✓	✓
Cuckoos cuculi	FORMES											
Fan-tailed Cuckoo	Cacomantisflabelliformis	-	-	-	-	-	LC	✓	✓		✓	✓
Pallid Cuckoo	Cacomantis pallidus (Heteroscenes pallidus)	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Horsfield's Bronze-Cuckoo	Chalcites basalis (Chrysococcyx basalis)	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Shining Bronze- Cuckoo	Chalciteslucidus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Black-eared Cuckoo	Chalcitesosculans (Chrysococcyxosculans)	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>
Channel-billed Cuckoo	Scythrops novaehollandiae	-	-	-	-	-	LC	<b>√</b>	<b>√</b>			
Owls STRIGIFORM	ES											
Southern Boobook	Ninoxnovaeseelandiae	-	-	-	-	-	LC	✓	✓		✓	✓
Eastern Barn Owl	Tytojavanica (Tyto alba javanica)	-	-	-	-	-	-	✓	✓	<b>✓</b>	<b>✓</b>	✓
Frogmouths an	d Nightjars CAPRIMULGIFORMES											
Australian Owlet- nightjar	Aegothelescristatus	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Spotted Nightjar	Eurostopodusargus	-	-	-	-	-	LC	<b>√</b>	✓	<b>√</b>	✓	✓
White-throated Needletail	Hirundapuscaudacutus (Chaeturacaudacuta)	MA	-	Listed	Listed	Listed	LC		<b>√</b>		<b>√</b>	<b>√</b>

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Tawny Frogmouth	Podargusstrigoides	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Swifts APODIFORMES												
Fork-tailed Swift	Apus pacificus	-	-	Listed	Listed	Listed	LC	✓	✓		✓	✓
Kingfishers and	allies coraciformes											
Laughing Kookaburra	Dacelonovaeguineae	-	-		-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Dollarbird	Eurystomusorientalis	-	-	-	-	-	LC	<b>√</b>	$\checkmark$			
Rainbow Bee- eater	Meropsornatus	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Red-backed Kingfisher	Todiramphuspyrrhopygius (Todiramphuspyrrhopygia) (Todirhamphuspyrrhopygia)	-	-	-	-	-	LC		<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>
Sacred Kingfisher	Todiramphussanctus	-	-	-	-	-	LC	✓	✓		✓	✓
Perching Birds	PASSERIFORMES											
Spiny-cheeked Honeyeater	Acanthagenysrufogularis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Inland Thornbill	Acanthizaapicalis	-	-	-	-	-	LC		✓		<b>√</b>	✓
Yellow-rumped Thornbill	Acanthizachrysorrhoa	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>		<b>✓</b>	<b>√</b>
Striated Thornbill	Acanthizalineata	-	-	-	-	-	LC	✓	✓		<b>√</b>	✓
Yellow Thornbill	Acanthiza nana	-	-	-	-	-	LC	✓	✓		✓	✓
Brown Thornbill	Acanthizapusilla	-	-	-	-	-	LC	✓	✓		✓	<b>√</b>
Buff-rumped Thornbill	Acanthizareguloides	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Chestnut-rumped Thornbill	Acanthizauropygialis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>

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Eastern Spinebill	Acanthorhynchustenuirostris	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>		<b>✓</b>	<b>√</b>
Scrubtit	Acanthornis magna (Acanthornismagnus)	-	-	-	-	-	LC	✓	✓			
Australian Reed- Warbler	Acrocephalusaustralis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Eurasian Skylark	Alaudaarvensis	-	-	-	-	-	LC	✓	✓		✓	✓
EyreanGrasswren	Amytornisgoyderi	-	-	-	-	-	LC			✓		
Thick-billed Grasswren	Amytornistextilis	VU	-	-	-	-	LC			<b>✓</b>		
Red Wattlebird	Anthochaeracarunculata	-	UP	-	-	-	LC	✓	✓		✓	<b>√</b>
Little Wattlebird	Anthochaera chrysoptera	-	-	-	-	-	LC	✓	✓		<b>√</b>	✓
Australasian Pipit	Anthusnovaeseelandiae	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Southern Whiteface	Aphelocephalaleucopsis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
<b>Banded Whiteface</b>	Aphelocephalanigricincta	-	-	-	-	-	LC			✓		
Black-faced Woodswallow	Artamuscinereus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
Dusky Woodswallow	Artamuscyanopterus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		✓	<b>√</b>
White-breasted Woodswallow	Artamusleucorynchus	-	-	-	-	-	LC		<b>✓</b>	<b>√</b>	✓	<b>√</b>
Masked Woodswallow	Artamuspersonatus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>
White-browed Woodswallow	Artamussuperciliosus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Gibberbird	Ashbyialovensis	-	-	-	-	-	LC			✓		
Rufous Fieldwren	Calamanthuscampestris	-	-	-	-	-	LC	✓	✓	✓	<b>✓</b>	✓
Shy Heathwren	Calamanthuscautus (Hylacolacauta)	-	RA	-	-	-	LC	✓	✓		✓	✓
Striated Fieldwren	Calamanthusfuliginosus	-	-	-	-	-	LC		✓		✓	✓

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Chestnut- rumpedHeathwren	Calamanthuspyrrhopygia (Hylacolapyrrhopygia) Hylacolapyrrhopygius	EN	EN, VU	-	-	-	LC	✓	✓		<b>√</b>	✓
European Goldfinch, Common Greenfinch	Carduelischloris (Chloris chloris)	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>✓</b>
Pied Honeyeater	Certhionyxvariegatus	-	-	-	-	-	LC			✓		✓
White-backed Swallow	Cheramoecaleucosterna	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Brown Songlark	Cincloramphuscruralis	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Rufous Songlark	Cincloramphusmathewsi	-	-	-	-	-	LC	✓	$\checkmark$	$\checkmark$	<b>√</b>	$\checkmark$
Chestnut Quail- thrush	Cinclosomacastanotum (Cinclosomacastanotuscastanotus)	-	RA	-	-	-	LC		<b>✓</b>		<b>√</b>	<b>√</b>
Cinnamon Quail- thrush	Cinclosomacinnamomeum	-	-	-	-	-	LC			<b>√</b>		
Golden-headed Cisticola	Cisticolaexilis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
White-browed Treecreeper	Climacterisaffinis	-	RA	-	-	-	LC	<b>√</b>	<b>√</b>			
Brown Treecreeper	Climacterispicumnus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Grey Shrike-thrush	Colluricincla harmonica	-	-	-	-	-	LC	✓	✓	$\checkmark$	✓	<b>✓</b>
Ground Cuckoo- shrike	Coracina maxima	-	-	-	-	-	LC			<b>√</b>		
Black-faced Cuckoo-shrike	Coracina novaehollandiae	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
White-winged Chough	Corcoraxmelanorhamphos	-	RA	-	-	-	LC	<b>√</b>	✓		<b>√</b>	<b>√</b>

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White-throated	Cormobatesleucophaea						LC	<b>√</b>	<b>√</b>		<b>√</b>	✓
Treecreeper	(Cormobatesleucophaeusleucophaeus)						LC					
Crow and Raven								✓	$\checkmark$	✓	✓	✓
species												
Little Crow	Corvusbennetti	-	UP	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>		
Australian Raven	Corvuscoronoides	-	UP	-	-	-	LC	<b>√</b>	✓	✓	✓	✓
Little Raven	Corvusmellori	-	UP	-	-	-	LC	<b>✓</b>	<b>√</b>		<b>√</b>	✓
<b>Torresian Crow</b>	Corvusorru	-	UP	-	-	-	LC	<b>✓</b>	$\checkmark$			
Forest Raven	Corvustasmanicus	-	-	-	-	-	LC					✓
Pied Butcherbird	Cracticusnigrogularis	-	-	-	-	-	LC	✓	$\checkmark$		✓	✓
Australian Magpie	Cracticustibicen (Gymnorhinatibicen)	-	-	-	-	-	LC	✓	$\checkmark$	✓	✓	✓
Grey Butcherbird	Cracticustorquatus	-	-	-	-	-	LC	✓	$\checkmark$		✓	✓
Varied Sittella	Daphoenositta chrysoptera	-	-	-	-	-	LC	✓	✓		✓	✓
Rufous Bristlebird	Dasyornisbroadbenti	-	RA	-	-	-	LC	✓	✓		✓	✓
Mistletoebird	Dicaeumhirundinaceum	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Southern Scrub-	Drymodesbrunneopygia						LC	✓	✓		✓	✓
robin		-	_	-	-	-	LC					
Eastern Yellow	Eopsaltriaaustralis	_	_	_	_	_	LC					✓
Robin												_
White-fronted	Epthianuraalbifrons	_	_	_	_	_	LC	<b>√</b>	✓		✓	✓
Chat												
Orange Chat	Epthianuraaurifrons	-	-	-	-	-	LC		<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Crimson Chat	Epthianuratricolor	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>
Crested Shrike-tit	Falcunculusfrontatus	VU	RA	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
White-throated	Gerygonealbogularis (Gerygoneolivacea)	_	RA	_	_	_	LC	<b>√</b>	$\checkmark$			
Gerygone			100									
Tawny-crowned	Glyciphilamelanops (Phylidonyrismelanops)	_	_	-	-	_	LC	<b>✓</b>	<b>✓</b>		<b>√</b>	<b>√</b>
Honeyeater												

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Magpie-lark	Grallinacyanoleuca	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓
PictorellaMannikin	Heteromunia pectoralis	-	-	-	-	-	LC			✓		
Welcome Swallow	Hirundoneoxena	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Australian Little Bittern	Ixobrychusdubius	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
White-winged Triller	Lalage sueurii	-	-	-	-	-	LC		<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>
Yellow-faced Honeyeater	Lichenostomuschrysops	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Purple-gaped Honeyeater	Lichenostomuscratitius	-	RA	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Fuscous Honeyeater	Lichenostomusfuscus	-	-	-	-	-	LC					<b>√</b>
White-eared Honeyeater	Lichenostomusleucotis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		✓	<b>√</b>
Yellow-plumed Honeyeater	Lichenostomusornatus	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>		<b>√</b>	<b>√</b>
White-plumed Honeyeater	Lichenostomuspenicillatus	-	-	-	-	-	LC		<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Varied Honeyeater	Lichenostomus versicolor	-	-	-	-	-	LC		✓		✓	✓
Singing Honeyeater	Lichenostomusvirescens	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Superb Fairy-wren	Maluruscyaneus	-	-	-	-	-	LC	✓	✓		$\checkmark$	✓
Variegated Fairy- wren	Maluruslamberti	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
White-winged Fairy-wren	Malurusleucopterus	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>✓</b>		
Splendid Fairy- wren	Malurussplendens	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>

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Yellow-throated Miner	Manorinaflavigula	-	EN	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Noisy Miner	Manorinamelanocephala	-	-	-	-	-	LC	✓	✓		✓	✓
Little Grassbird	Megalurusgramineus	-	-	-	-	-	LC	✓	$\checkmark$	$\checkmark$	✓	<b>✓</b>
Hooded Robin	Melanodryascucullata	-	RA	-	-	-	LC	✓	✓	✓	✓	✓
Brown-headed Honeyeater	Melithreptusbrevirostris	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Black-chinned Honeyeater	Melithreptusgularis	-	VU	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
White-naped Honeyeater	Melithreptuslunatus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Jacky Winter	Microecafascinans	-	RA	-	-	-	LC	✓	✓	✓	✓	✓
Horsfields Bushlark	Mirafrajavanica	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Restless Flycatcher	Myiagrainquieta	-	RA	-	-	-	LC	✓	✓	✓	✓	✓
Leaden Flycatcher	Myiagrarubecula	-	-	-	-	-	LC	✓	✓			
Plum-headed Finch	Neochmiamodesta	-	-	-	-	-	LC	<b>√</b>	<b>√</b>			
Red-browed Finch	Neochmia temporalis	-	-	-	-	-	LC	✓	✓		✓	<b>✓</b>
Crested Bellbird	Oreoicagutturalis	-	-	-	-	-	LC	✓	✓		✓	✓
Olive-backed Oriole	Oriolussagittatus	-	RA	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Gilbert's Whistler	Pachycephalainornata	-	RA	-	-	-	LC		✓		✓	✓
Golden Whistler	Pachycephala pectoralis	-	-	-	-	-	LC	✓	✓		✓	✓
Rufous Whistler	Pachycephalarufiventris	-	-	-	-	-	LC	✓	✓	✓	✓	✓
<b>Spotted Pardalote</b>	Pardalotus punctatus	-	-	-	-	-	LC	✓	✓		✓	<b>✓</b>
Red-browed Pardalote	Pardalotusrubricatus	-	-	-	-	-	LC			✓		

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Striated Pardalote	Pardalotusstriatus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>√</b>
House Sparrow	Passer domesticus	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Fairy Martin	Petrochelidonariel (Hirundoariel)	-	-	-	-	-	LC	✓	$\checkmark$	✓	✓	✓
Tree Martin	Petrochelidonnigricans (Hirundonigricans)	-	-	-	-	-	LC	✓	$\checkmark$	✓	✓	✓
Scarlet Robin	Petroicaboodang	-	-	-	-	-	LC	✓	$\checkmark$		✓	<b>√</b>
Red-capped Robin	Petroicagoodenovii	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Flame Robin	Petroicaphoenicea	-	VU	-	-	-	NT	✓	✓		✓	<b>✓</b>
Pink Robin	Petroicarodinogaster	-	-	-	-	-	LC	✓	$\checkmark$			
Rose Robin	Petroicarosea	-	-	-	-	-	LC	✓	✓		✓	✓
Noisy Friarbird	Philemon corniculatus	-	-	-	-	-	LC	✓	✓			
New Holland Honeyeater	Phylidonyris novaehollandiae	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Crescent Honeyeater	Phylidonyrispyrrhopterus	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>			
Striped Honeyeater	Plectorhynchalanceolata	-	RA	-	-	-	LC		<b>✓</b>		<b>✓</b>	<b>✓</b>
Chestnut-crowned Babbler	Pomatostomusruficeps	-	-	-	-	-	LC		<b>√</b>		<b>√</b>	<b>√</b>
White-browed Babbler	Pomatostomussuperciliosus	-	-	-	-	-	LC	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>
Grey-crowned Babbler	Pomatostomus temporalis	-	EN	-	-	-	LC			<b>✓</b>		
Chirruping Wedgebill	Psophodescristatus	-	-	-	-	-	LC			<b>✓</b>		
Western Whipbird	Psophodesnigrogularis	EN	EN	-	-	-	LC		✓		✓	✓
White-fronted Honeyeater	Purnellaalbifrons (Phylidonyrisalbifrons)	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>
Redthroat	Pyrrholaemusbrunneus	-	-	-	-	-	LC		✓	<b>√</b>	✓	✓

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Grey Fantail	Rhipiduraalbiscapa (Rhipidurafuliginosa)	-	-	-	-	-	LC	<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>
Willie Wagtail	Rhipiduraleucophrys	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Yellow-throated Scrubwren	Sericorniscitreogularis	-	-	-	-	-	LC	<b>√</b>	<b>√</b>			
White-browed Scrubwren	Sericornis frontalis	-	-	-	-	-	LC	<b>✓</b>	<b>√</b>		<b>√</b>	<b>✓</b>
Weebill	Smicrornisbrevirostris	-	-	-	-	-	LC	✓	✓		✓	✓
Beautiful Firetail	Stagonopleurabella	-	RA	-	-	-	LC	✓	✓		✓	✓
Diamond Firetail	Stagonopleuraguttata	-	VU	-	-	-	LC	✓	✓		✓	✓
Southern Emu- wren	Stipiturusmalachurus	EN	EN	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Pied Currawong	Streperagraculina	-	EN	-	-	-	LC	✓	✓			
Grey Currawong	Strepera versicolor	-	EN	-	-	-	LC	✓	✓		✓	✓
Common Starling	Sturnus vulgaris	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Black Honeyeater	Sugomelniger (Certhionyxniger)	-	-	-	-	-	LC	✓	✓	✓	✓	✓
Zebra Finch	Taeniopygiaguttata	-	-	-	-	-	LC	$\checkmark$	$\checkmark$	✓	✓	$\checkmark$
Common Blackbird	Turdusmerula	-	-	-	-	-	LC	<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>
Bassian Thrush	Zootheralunulata	VU	RA	-	-	-	LC	✓	✓			
Silvereye	Zosteropslateralis	-	UP	-	-	-	LC	✓	✓		✓	✓