

8. ALINYTJARA WILURARA AND EYRE PENINSULA REGIONAL OILED WILDLIFE RESPONSE PLAN



Government of South Australia
Department for Environment
and Water



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 describes those local arrangements in the Alinytjara Wilurara and Eyre Peninsula Regions.

The Alinytjara Wilurara and Eyre Peninsula Regional Oiled Wildlife Response Plan was developed in consultation with Alinytjara Wilurara and Eyre Peninsula regional staff. The contribution and assistance of AMOSC and the Western Australian Government is both acknowledged and appreciated. The Plan was approved by the Alinytjara Wilurara and Eyre Peninsula Regional Directors and adopted on 25 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 Directors, Alinytjara Wilurara and Eyre Peninsula Regions, 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 Alinytjara Wilurara and Eyre Peninsula regional plan are reviewed.

Version	Date	Reviewed by	Approved by
V1.1	16/10/2018	Shelley Paull, Dirk Holman, Brett Backhouse and Mark Anderson	Jonathan Clark, EP Regional Director
V1.1	25/10/2018	Pia Richter and Brett Backhouse	Mary-Anne Healey AW Regional Director

8.1 INTRODUCTION

8.1.1 Purpose of this regional plan

The purpose of the *AW and EP (Alinytjara Wilurara and Eyre Peninsula) 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 AW and EP regions. 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.

8.1.2 Scope

The *AW and EP Oiled Wildlife Response Plan* provides regional details to the State Plan for an oiled wildlife response in state waters adjacent to the AW and EP regions and can be used as guidance for Commonwealth waters surrounding the region for DEW staff and petroleum title holders. The AW coast extends from the Western Australia border to the western edge of the Wahgunya Conservation Park, as shown in Figure 8.1

Figure 8.1 Location of AW and EP Regions.



The EP regional coastline comprises 2,355 kilometres of coastline spanning from the Great Australian Bight to the upper Spencer Gulf. It further includes 182 offshore islands and surrounding marine environments, as shown in Figure 8.1.

8.1.3 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 AW and EP regions 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 AW and EP regions
- Detail existing resources in the AW and EP regions to respond to oiled wildlife response.

8.1.4 Geographical and Cultural Settings

The Alinytjara Wilurara (AW) Natural Resource Management (NRM) region covers the north-west third of South Australia. In Pitjantjatjara, 'alinytjara' means 'north' and 'wilurara' means 'west'.

The AW NRM region covers more than 250,000 square kilometres, stretching from the Northern Territory and West Australian borders south to the Great Australian Bight. The regional boundary extends to the edge of the State Waters (three nautical miles off-shore) in the Great Australian Bight and includes the South Australian waters adjoining the Commonwealth Great Australian Bight Marine Park i.e. the waters of the Far West Coast Marine Park. The land and its 340 kilometres of coastline are mostly dedicated to conservation and traditional Aboriginal use and occupation. The homelands and community townships are inhabited by approximately 4,000 people. The region is managed as [nine distinct landscapes](#).

There is no privately owned land in the region. More than half of AW is held as dedicated Aboriginal lands and is owned or in the trust of three key land holding authorities:

- Yalata (vested in the Aboriginal Lands Trust under the Aboriginal Lands Trust Act 1966)
- Anangu Pitjantjatjara Yankunytjatjara (APY) Lands (vested in the Anangu Pitjantjatjara under the Pitjantjatjara Land Rights Act 1981)
- Maralinga Tjarutja (MT) Lands (vested in the Maralinga Tjarutja under the Maralinga Tjarutja Land Rights Act 1984)

The region also includes areas adjoining the Yalata and Maralinga Tjarutja Lands, dedicated under the National Parks and Wildlife Act:

- Mamungari Conservation Park
- Tallaringa Conservation Park
- Yumbarra Conservation Park
- Pureba Conservation Park
- Nullarbor Regional Reserve

- Nullarbor Wilderness Protection Area
- Nullarbor National Park
- Yellabinna Regional Reserve k
- Yellabinna Wilderness Protection Area.

The AW NRM region is diverse in its fauna, flora and cultural heritage. With some of the hottest and most remote areas in South Australia and no permanent rivers or creeks, water is a limiting factor throughout the region.

People of the AW region have a high degree of cultural connection to country and a recognised traditional ownership of country. 'Country' is the term commonly used to explain the land or waters with which an Aboriginal person, persons, community or homeland family has an association. These associations may also mean a responsibility to care for specific parts of the country or for particular species. Traditional owners may not necessarily live in their local community or on their homeland, but they nevertheless have a role in 'speaking for country' and taking a leadership role in managing the land. The connection to country is built upon 'Tjukurpa', which forms the basis of Anangu law and culture.

Natural resources management is similar to the Aboriginal notion of 'caring for country'. Although the methods may be quite different in practice, natural resources management and caring for country both focus on protection of the land for the mutual benefit of people and the environment. The unique nature of the region requires a balance between 'traditional' authority and 'government' authority. With this balance in mind, the vision for natural resources in the AW region is for 'a healthy and valued region, managed responsibly now, for the future benefit of people and country'.

The Eyre Peninsula Region covers approximately 8% of South Australia, covering an area of 80,000 square kilometres. It extends from Whyalla in the east, along the Gawler Ranges in the north, and to the edge of the Nullarbor Plain in the west. The Region includes 2,355 kilometres of coastline spanning from the upper Spencer Gulf to the Great Australian Bight. It further includes 182 offshore islands and surrounding marine environments

Figure 8.2: EP Region land use.



Eyre Peninsula has a diversity of land and sea environments that provide habitat for many unique plants and animals, as well as underpinning the Region's industries and community's wellbeing.

The Region's coast and marine systems are diverse and impressive, and they include ten of the State's Marine Parks. On the west coast, the Southern Ocean provides a high energy system with big swells and strong winds. The rugged west coast joins the Great Australian Bight, with a coastline of limestone cliffs up to 100 metres high, undulating sand dunes, rocky headlands and islands, and sheltered bays. Marine life is influenced by the Flinders current that moves ocean waters west during summer months; and the Leeuwin current that moves water east during winter months. Marine food webs are dependent upon the nutrient rich upwelling associated with the Flinders current.

On the east coast, the Spencer Gulf is an inverse estuary where density driven waters move in a clockwise direction, entering from the south-western side and exiting at the south-eastern side. The Spencer Gulf has a range of habitats including seagrass meadows, sandy seafloors, reefs, samphire and mangroves. Coastal Temperate Saltmarshes (e.g. samphire) habitats are now listed as threatened ecological community under the *Environmental Protection and Biodiversity Conservation Act 1999*. Spencer Gulf's habitats support commercial species including western king prawns, tuna (aquaculture), abalone, mussels (aquaculture) and kingfish (aquaculture); along with a diversity of marine life including sharks, whales and sea lions³. Over 60 islands exist in the Spencer Gulf, ranging from small granite outcrops to human occupied islands such as Thistle and Boston Islands. Offshore islands are rich with terrestrial and marine biodiversity.

The most western portion of the Region is characterized by undulating sand dunes and limestone areas. There is large area of calcareous sands that has been cleared for cropping and grazing. This area is boarded to the north by a large corridor of remnant Mallee woodland with open grassy or shrubby understorey. The Dog Fence runs along the north of the subregion.

The central western coast of the Region has been described as the Musgrave subregion. It is characterized by shallow and outcropping limestone country that is used predominantly for grazing. The underground limestone stores groundwater associated with the Musgrave Prescribed Wells Areas. This groundwater is used for potable water supply, and by local irrigators and stock and domestic users. This groundwater supports red gum woodlands and wetlands such as Lake Newland, which are habitat for migratory birds. The area is further characterized by large areas of remnant vegetation including mallee heath, shrub lands, and tussock grasslands. The area once included large areas of Sheoak grassy woodlands however grazing pressure, fire and soil erosion have all contributed to its clearance.

The large agricultural expanses of eastern and central Eyre has been described as Central Eyre subregion, where land use is predominately for broad scale cropping and grazing. The landscape contrasts between undulating sand dunes and steep hills associated with outcrops of the Gawler Craton. The outcropping geology is highly complex with metamorphic rocks and numerous fault lines, which allows for a diversity of soils and plant species. Remnant vegetation is highly fragmented, yet there are large patches at Hincks Conservation Park, Pinkawillinie Conservation Park, and Hambidge Wilderness Protection Area and Gawler Ranges National Park. Ephemeral watercourses are located throughout the hills, however many are saline to highly saline from both naturally occurring processes and dryland salinity. Franklin Harbour and Arno Bay provide important mangrove and samphire habitats, and they support oyster and kingfish aquaculture production respectively.

The southern portion of the Region is described as Southern Eyre subregion, and it is characterised by steep hills along the eastern and western margins, which is infilled by limestone or floodplains. The landscape has been highly modified with over 70% of the area cleared for cropping and grazing. The hills are associated with the outcropping geology of the Gawler Craton, and remnant vegetation in these areas provides a wide variety of habitats with high species richness and endemic plants.

The hills also have a number of ephemeral watercourses that discharge into the Spencer Gulf or Coffin Bay. Within the central and western extents there are a number of saline and ephemeral wetlands that are receive flows from watercourses and/or groundwater. Areas of limestone often store groundwater, and the Region's major water source is located within the Uley Basin of the Southern Basins Prescribed Wells Area. Coffin Bay and Lincoln National Parks are situated on the south-western and southern-eastern extents of the subregion.

Figure 8.3: Far West Coast marine park restricted access zone – 1 May – 31 October

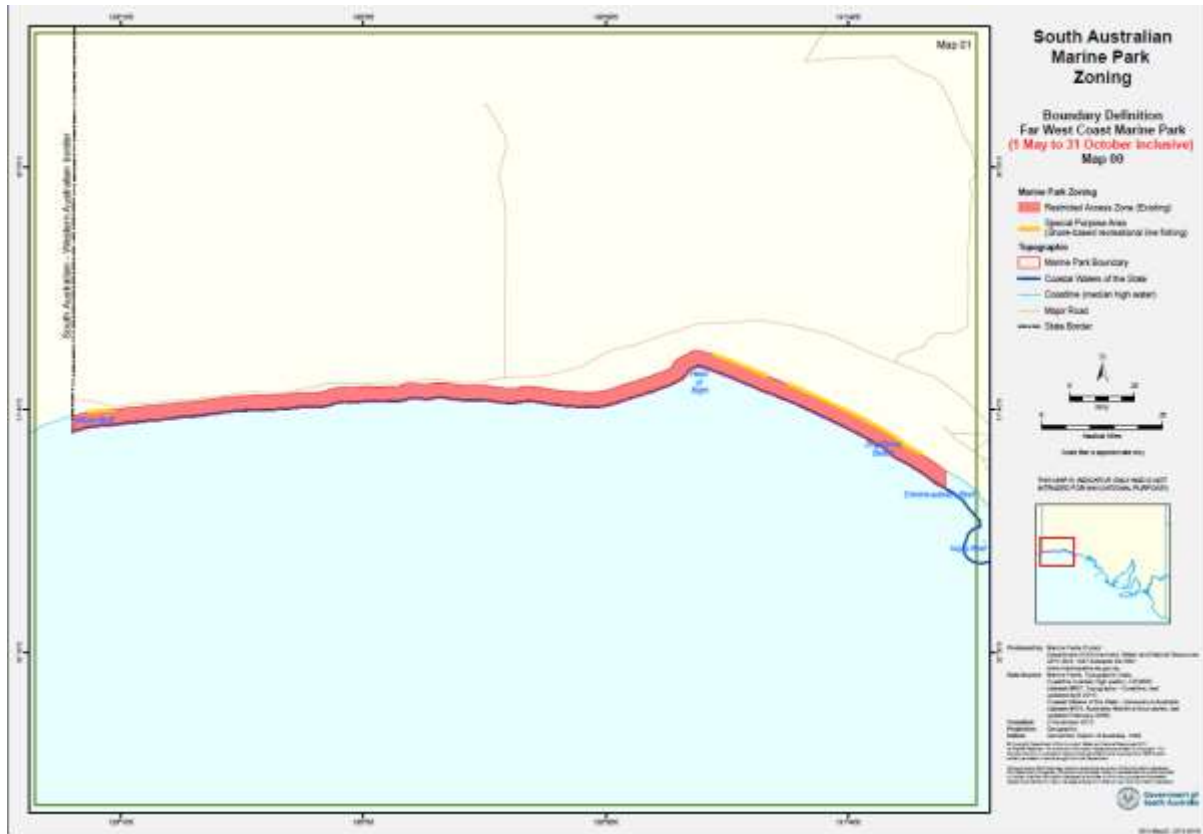


Figure 8.4: Far West Coast marine park restricted access zone and sanctuary zones – 1 November – 30 April

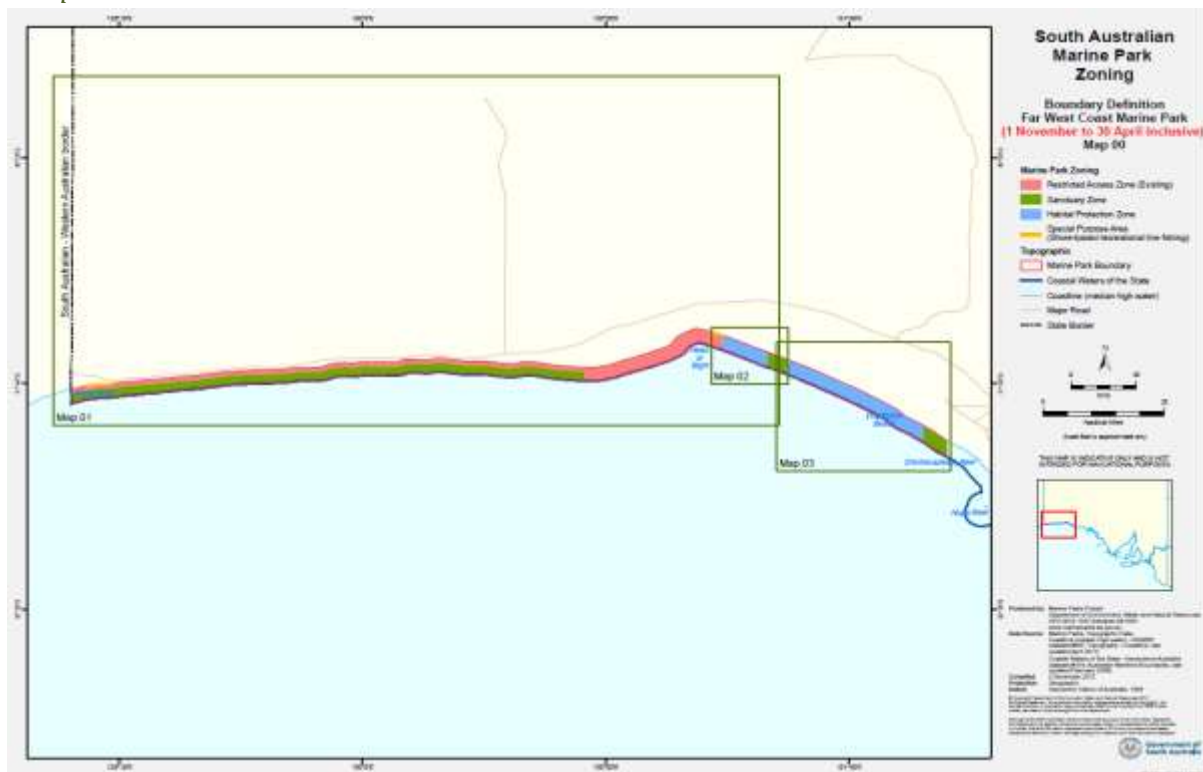


Figure 8. 5: Nuyts Archipelago marine park sanctuary zones

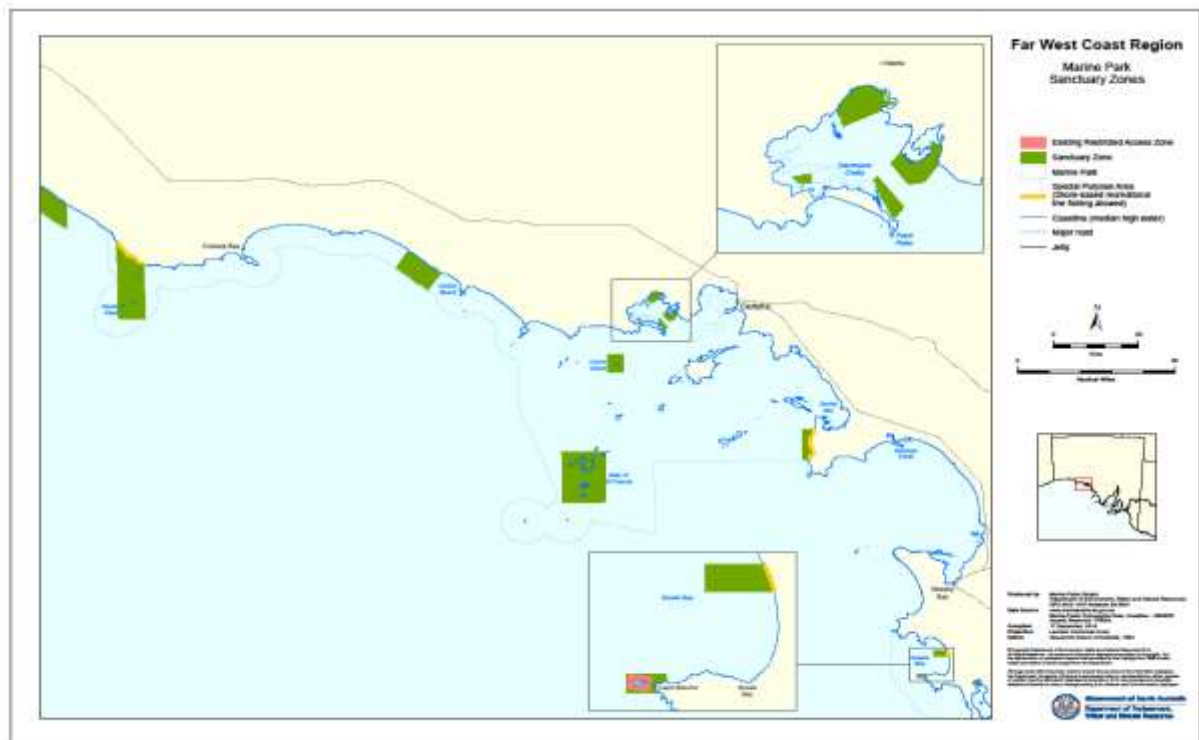


Figure 8.6: West Coast Bays marine park sanctuary zones



Figure 8.7: Investigator marine park sanctuary zones

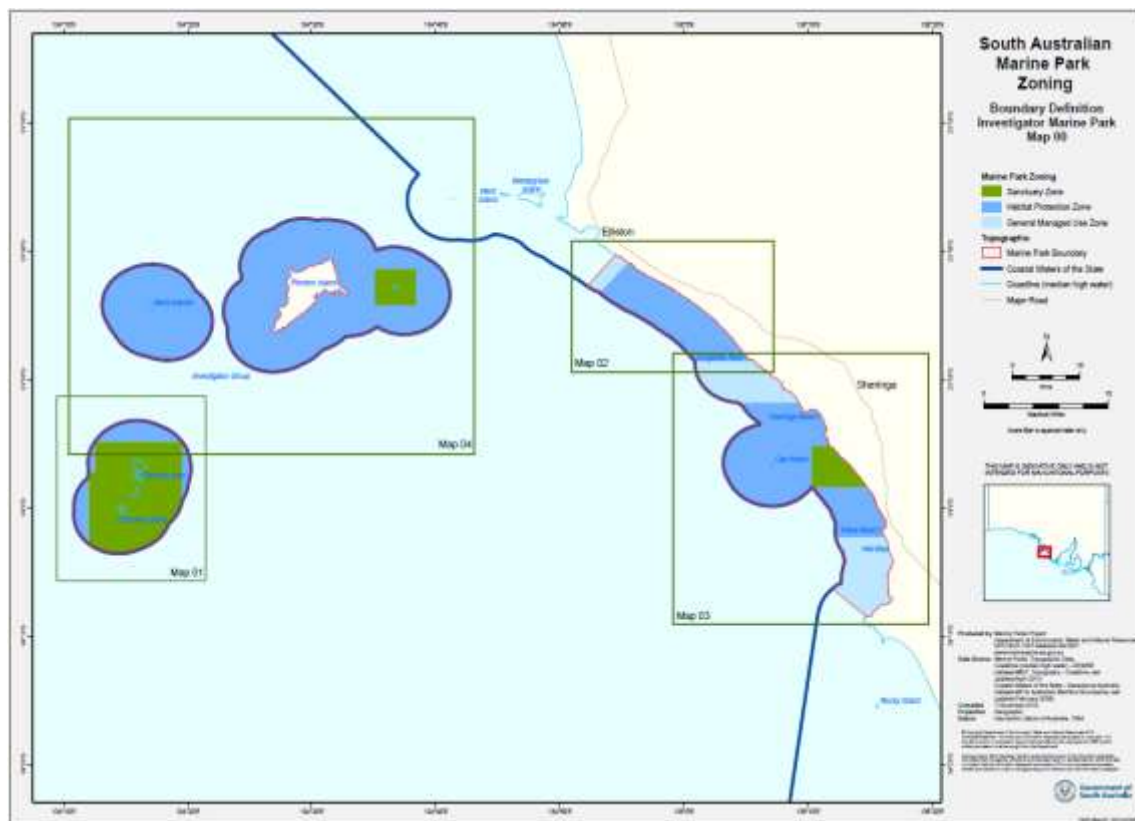


Figure 8.8:: Lower Eyre Peninsula marine park sanctuary zones

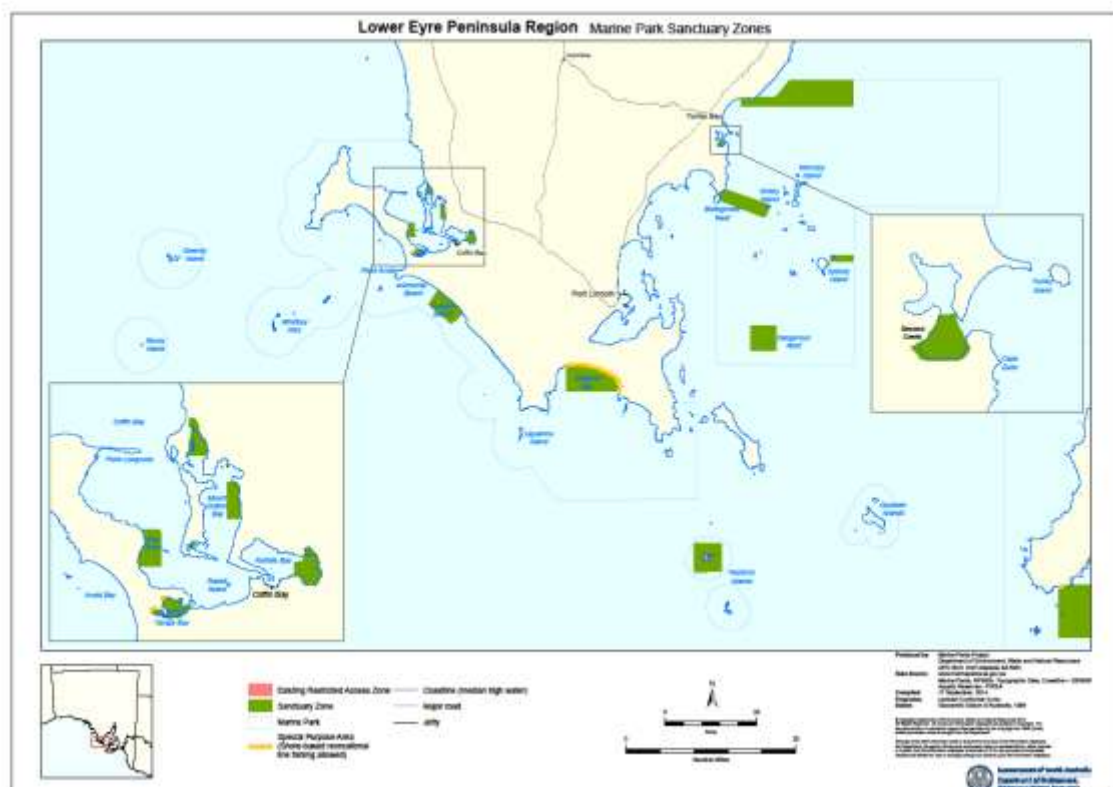
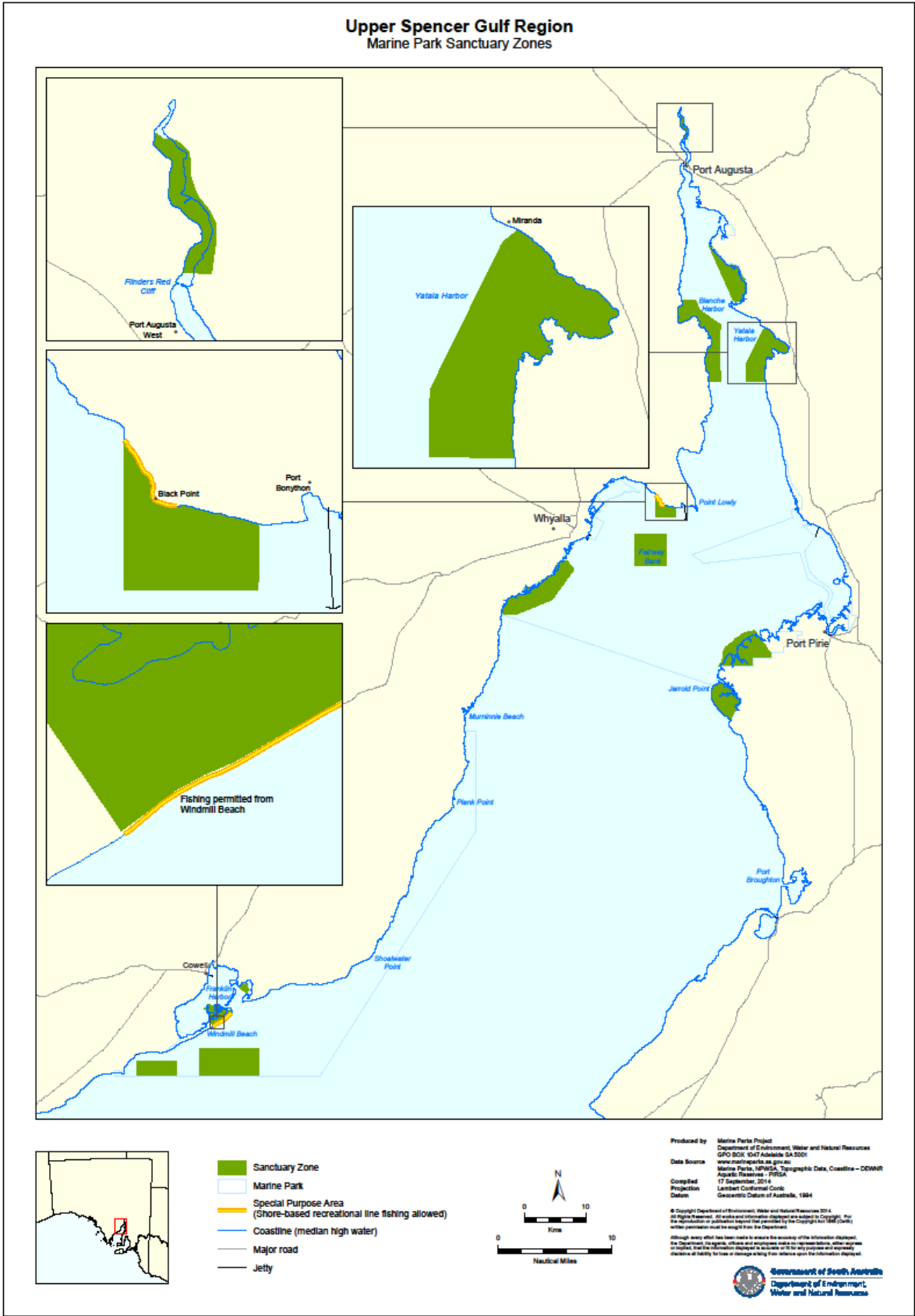


Figure 8.9: Upper Spencer Gulf marine park sanctuary zones



8.2 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.

In the AW and EP Regions there are three critical inter-related challenges for response operations and the survival of compromised animals in an oiled wildlife response:

- remoteness and difficulty of access to much of the region
- distances involved
- The high temperatures experienced for much of the year.

Other unique issues are manageable with sufficient planning, adequate strategies and resources and include for example:

- Low population so potentially a lack of volunteer assistance
- Sparsity of water
- Lack of facilities and other key resources.
- Accessing off-shore islands
- High wind and swell energy environments
- Inaccessible parts of the coastline

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. Areas of coastline should also be broadly classified to outline their accessibility and exposure to swell energy.

8.2.1 Regional Values

The AW and EP Regions' Priorities for Protection are summarised in Table 8.1 This table is a summary of the more detailed information provided in the Operational Sectors section in this document.

The Table is based on published information and scored against the consequence of an oil spill. The priority scores have been allocated using the information outlined in Table 8.2, 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.

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.

Table 8.1 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 8.2 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 8.1: AW and EP Regions Priorities for Protection Summary

PRIORITY	SECTOR	LOCATION	REASON	PRIORITY SCORE
1	13	Investigator Group WPA (Pearson, Dorothee, Veteran, Ward & Topgallant Islands), Pearson Isles Sanctuary Zone, Investigator MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
2	12	St Francis Island Group (NA WPA) (St Francis, West, Masillon, Feelon, Dog, Egg, Smooth, Freeling, Hart, Lacy, Evans, Goat, Franklin, Liliput, Blefescu, Lounds & Purdie Islands). St Francis Isles Sanctuary Zone, Nuyts Archipelago MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, high energy surf beach system, large demersal fish (snapper, salmon) aggregations, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
3	10	Fowlers Bay (CP), Habitat Protection Zone, Nuyts Archipelago MP.	Southern right whale breeding & aggregation area, Australian sea lions, deep and shallow water reefs, seagrass, migratory large pelagic, high energy surf beach system, large demersal fish (mullovey, snapper, salmon) aggregations, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species , various migratory and semi-resident cetacean species	Very High

PRIORITY	SECTOR	LOCATION	REASON	PRIORITY SCORE
4	7	Yalata Beach (IPA), Coomبرا Lagoons Sanctuary Zone, Far West Coast MP	Deep and shallow water reefs, high energy surf beach system, large demersal fish (mullo way, snapper, salmon) aggregations, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
		Wahgunyah CP, Wahgunyah sanctuary zone, Far West Coast marine park	Deep and shallow water reefs, high energy surf beach system, large demersal fish (mullo way, snapper, salmon) aggregations, various pelagic and demersal shark species, rays & skates, demersal reef fish species , various migratory and semi resident cetacean species	Very High
5	10	Nuyts Reef CP, Nuyts Reef Sanctuary Zone, Nuyts Archipelago MP	Australian sea lions, long nosed fur seals, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
6	7	D'Entrecasteaux Reef	, Deep and shallow water reefs, seagrass, migratory large pelagic, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
7	11	Davenport Creek, Davenport Creek Sanctuary Zones, Nuyts Archipelago MP	Mangrove system, nursery for juvenile fish, invertebrates (prawns), large numbers of shorebirds, rays and skates	Very High
8	11	St Peters Island (NA CP), Nuyts Archipelago MP	Significant mangrove ecosystem, major wintering ground for migratory shorebird populations, sub-tidal soft sediment ecosystem (bivalves, molluscs, crustaceans, elasmobranchs)	Very High
9	11	Eyre Island (NA CP), Nuyts Archipelago MP	Significant mangrove ecosystem, major wintering ground for migratory shorebird populations, sub-tidal soft sediment ecosystem (bivalves, molluscs, crustaceans , elasmobranchs)	Very High
10	11	Franklin Islands (NA WPA), Nuyts Archipelago MP	Australian sea lions, long nosed fur seals, (Liliput & Blefuscu Islands), Little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
11	12	Acraman Creek (CP)	Mangrove system, nursery for juvenile fish, invertebrates (prawns), rays and skates, large numbers of migratory shorebirds and wader birds	Very High
12	12	Olive Island CP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic,	Very High

PRIORITY	SECTOR	LOCATION	REASON	PRIORITY SCORE
			coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	
13	12	Nic Baudin Island CP, Nic Baudin Sanctuary Zone and Restricted Access Zone, West Coast Bay MP	Australian sea lions, long nosed fur seals, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
14	12	Point Labatt CP, Point Labatt SZ, West Coast Bays MP.	Australian sea lions, long nosed fur seals, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
15	12	Baird Bay Islands CP, West Coast Bay MP	Australian sea lions, nurse for various fish species, major wintering ground for migratory shorebird populations, sub-tidal soft sediment ecosystem (bivalves, molluscs, elasmobranchs)	Very High
16	12	Waldegrave Islands CP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
17	13	Rocky Island North CP, Thorny Passage MP	Australian sea lions, long nosed fur seals, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
18	13	Whidbey Islands CP (Four Hummocks, Perforated, Price, Golden Islands), Thorny Passage MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
19	13	Whidbey WPA / Coffin Bay NP, Thorny Passage MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, , high energy surf beach system, large	Very High

PRIORITY	SECTOR	LOCATION	REASON	PRIORITY SCORE
			demersal fish (snapper, salmon) aggregations, demersal reef fish species, various migratory and semi-resident cetacean species	
20	13	Greenly Island CP, Thorny Passage MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
21	13	Rocky Island South CP, Thorny Passage MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
22	14	Neptune Islands CP, North Neptune Island Sanctuary Zone, Neptune Islands Group (Ron and Valerie Taylor) Marine Park	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
23	14	Memory Cove WPA (Smith, Lewis, Little, Williams, Hopkins Islands)	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Significant
24	13	Port Lincoln National Park	Southern right whale aggregation area, Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, high energy surf beach, large demersal fish (snapper, salmon) aggregations, system, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High
25	14	Dangerous Reef , Dangerous Reef Sanctuary Zone and Restricted Access Zone, Sir Joseph Banks Group MP	Australian sea lions, long nosed fur seals, deep and shallow water reefs, seagrass, migratory large pelagic, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Very High

PRIORITY	SECTOR	LOCATION	REASON	PRIORITY SCORE
26	14	Sir Joseph Banks Group CP, MP	Australian sea lions, long nosed fur seals, little penguins, deep and shallow water reefs, seagrass, coastal raptors, migratory shorebirds, migratory sea birds, various pelagic and demersal shark species, rays & skates, demersal reef fish species, various migratory and semi-resident cetacean species	Significant

Table 8.2: 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 >5years (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 [National Parks and Wildlife Act 1972](#).

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.

8.2.2 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.

8.2.3 Zone of Confidence (ZoC)

To populate the environmental sensitivities 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 contained in this plan we provide a Zone of Confidence (ZoC) for each of the identified Coastal Area Units. Table 8.4 below provides the ZoC scale.

Table 8.3: 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 (e.g. OSRA, SA NatureMaps) with no supporting meta data
4	Anecdotal data from a wildlife management agency officer (e.g. Parks and Wildlife)
5	Anecdotal data from an industry professional with local knowledge (e.g. commercial fisherman)
NOTE: Ranking of 1 is the most reliable 'ZoC' while a ranking of 5 provides least confidence	

8.3. RESOURCES - EQUIPMENT

8.3.1 Oiled Wildlife Response Equipment

A list of portable oiled wildlife response equipment in SA 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 equipment and supplies will be required to establish facilities and rehabilitation care. Specialist and general oiled wildlife response equipment suppliers and contractors accessible to the region are listed below.

Table 8.4: Sources of oiled wildlife response equipment

Product	Purpose	Company/Agency	Location	Phone
Wildlife capture nets	Marine mammal disentanglements	DEW	Port Lincoln	(08) 86883111

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).

8.3.2 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.

8.3.2.1 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, satellite phones, and mobile phones are commonly used for normal DEW operations in the AW and EP Regions. Fixed communications are located in vehicles, vessels and some offices and work centres.

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

- 1. Eyre District C17-NR-EYRE Primary channel**
- 2. Far West District C18-NR-FWEST**
- 3. Gawler Ranges District C29-NRRPT-3**

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

8.3.2.2 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.

8.3.2.3 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. Permanent VHF repeater stations are located at: Elliston (Channel 80), Port Lincoln (Channel 81) & St Francis Island (Channel 82). Workboats all have VHF and along with all other vessels will have a listening watch on VHF Channels 16 & 81; 27 MHz Channels 88 & 86; HF Channel 2524. The communication channel during the response will be specified by the Communications Officer to all functional units when developing the communications plan.

8.3.2.4 Ground to Ground Communication

In the event of shoreline wildlife capture, good communications is essential. A number of VHF and UHF units are held by DEW Port Lincoln, DEW Streaky Bay & DEW Ceduna.; additional units can be obtained from SES Port Lincoln, SES Ceduna, SES Streaky Bay, SES Tumby Bay, SES Cummins; CFS Port Lincoln & CFS Ceduna. These units would be used by the OWR field teams.

8.3.2.5 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.

8.3.2.6 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.

8.3.3 Vessels

8.3.3.1 Parks and Wildlife Vessels

The Eyre Peninsula Region has 2 vessels used for operations. Both of these vessels are trailer-able.

1. Nuytilus: 6.4 m fibreglass catamaran, 2 X 130 HP Honda motors
2. Blubber: 4.2 m inflatable vessel, 30 HP Evinrude
3. 3.2 metre zodiac, 15 HP Mercury (Ceduna).
4. 4m aluminium Quintrex trailer boat, 60Hp Yamaha (Venus Bay)

For a list of available vessel resources, contact the **Regional Duty Officer on (08) 86883223**.

8.3.3.2 Industry Vessels

Industry has no vessels in the AW & EP Regions 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.

8.3.3.3 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.

8.3.3.4 Vessel Launch Sites

Site Name	General Location GPS Co-ordinates	Vessel Size Estimates	Description of Launch Area and Comments
Fowlers Bay	-31.9901, 132.4381	< 5 metres	Beach launch
Point Sinclair	-32.0975, 132.9875	< 5 metres	Beach launch
Denial Bay	-32.101617, 133.579484	< 5 metres	Beach launch
Ceduna	-32.137531, 133.664792	< 8 metres	Concrete ramp with 2 pontoons
Thevenard	-32.149915, 133.655323	< 8 metres	Concrete ramp
Smoky Bay	-32.38014, 133.930811	< 5 metres	Concrete ramp with 1 pontoon
Haslam	-32.510812, 134.213746	< 5 metres	Concrete on beach
Streaky Bay	-32.755352, 134.197237	< 8 metres	Concrete ramp into deep water with 2 pontoons
Sceale Bay	-33.015854, 134.189173	< 5 metres	Concrete on beach
Port Kenny	-33.1712, 134.6903	< 5 metres	Beach launch (high tide only)
Venus Bay	-33.231244, 134.672576	< 5 metres	Concrete on beach
Anxious Bay	-33.613853, 134.843739	< 5 metres	Concrete on beach
Elliston	-33.644731, 134.886373	< 5 metres	Concrete on beach
Farm Beach	-34.495845, 135.395342	< 5 metres	Beach launch
Dutton Bay	-34.532066, 135.433459	< 8 metres	Concrete ramp with 1 pontoon
Coffin Bay	-34.616413, 135.464731	< 8 metres	Concrete ramp into deep water with 3 pontoons
Avoid Bay	-34.6687, 135.3450	< 5 metres	Beach launch (hazardous sand & swell)
Proper Bay	-34.758802, 135.838666	< 5 metres	Concrete on beach
Billy Lights Point	-34.744723, 135.889393	< 8 metres	Concrete ramp with 2 pontoons
Snapper Point	34.723942, 135.883606	< 5 metres	Concrete / rock ramp
Port Lincoln Marina	-34.7428, 135.873576	< 8 metres	Concrete ramp into deep water
Axel Stenross	-34.703193, 135.85504	< 8 metres	Concrete ramp into deep water with 1 pontoon
North Shields	-34.628014, 135.867224	< 5 metres	Concrete on beach
Louth Bay	-34.541284, 135.930487	< 5 metres	Beach launch
Trinity Haven	-34.425147, 136.109641	< 5 metres	Beach launch
Tumby Bay Marina	-34.387808, 136.105632	< 8 metres	Concrete ramp into deep water with 1 pontoon
Port Neil	-34.116923, 136.354346	< 8 metres	Concrete ramp into deep water with 1 pontoon
Arno Bay	-33.912409, 136.583812	< 5 metres	Concrete ramp with 1 pontoon
Franklin Harbour	-33.686462, 136.930255	< 8 metres	Concrete ramp into deep water
Lucky Bay	-33.706626, 137.042155	< 5 metres	Concrete on beach

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

8.3.4 Aerial

8.3.4.1 Aircraft Resource List

Operator	Aircraft	Capability	Availability	Key Contact for Release
China Air	Rockwell Shrike, Aero Commander PA-31, Cessna 210, Cessna 206, Cessna 182.	N/A	N/A	(08) 8625 9051 0428 244 682
Helifarm	R44 Robinson, AS 350-SD1 Squirrel, BELL 206-L3 Long Ranger.	N/A	N/A	(08) 8762 0554 0407 820 554

Operator	Aircraft	Capability	Availability	Key Contact for Release
Becker Helicopters	Bell 206 Jet Ranger	N/A	N/A	0436485075
Lincoln Air Charter	Piper PA34-200T	N/A	N/A	(08) 8684 3788
DEW aircraft	Cessna 206H	2-3 seater	Available	0428 814 410

8.3.4.2 Aircraft Landing Strips

Airfield name (S-sealed) /(u-unsealed)	Length (m)	Latitude South		Longitude East	
		Degs.	Dec. Mins	Degs.	Dec. Mins
Port Lincoln (s)	316m	34.3619.1S	-34.605301	135.52.48.0E	135.880005
Cummins (u)	365m	34.12.29.9S	-34.208302	135.38.31.2E	135.641998
Coffin Bay (u)	305m	34.37.59.0S	-34.633301	135.31.01.2E	135.516998
Elliston (u)	311m	33.38.17.9S	-33.638302	134.53.59.9E	134.899994
Streaky Bay (s)	326m	32.50.08.9S	-32.835800	134.17.34.8E	134.292999
Ceduna (s)	328m	32.07.50.2S	-32.130600	133.42.36.0E	133.710007
Tumby Bay (s)	308m	34.21.42.1S	-34.361698	136.05.42.0E	136.095001
Coorabie (u)	305m	31.53.39.8S	-31.894400	132.17.45.6E	132.296005
Nullarbor (u)	325m	31.26.30.1S	-31.441700	130.54.07.2E	130.901993
Border Village (u)	399m	31.38.21.8S	-31.639400	129.00043.2E	129.011993
Yalata IPA (sealed)	305m	31.28.14.1S	-31.470600	131.49.29.9E	131.824997

8.4. RESOURCES – PERSONNEL

8.4.1 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.

8.4.2 Wildlife Carers

There are few wildlife carers in the AW and EP regions. There is some capacity at Ceduna but this is limited. It is likely that wildlife would have to be relocated to Adelaide for long term rehabilitation.

Table 8.6: AW and EP Carers Contacts

Name	Carer Group Name	Species accepted	Location	Contact Details
Aaron Machado	Australian Marine Wildlife Rescue and Research Organisation	Seals, seabirds, pinnipeds, sea turtles	Torrens Island, Port Adelaide	0411 057 551
N/A	Fauna Rescue	Birds	various	(08) 8289 0896
N/A	Adelaide Koala and wildlife hospital	Marsupials, reptiles, birds	Plympton	(08) 8297 2455
N/A	Natural Resources Eyre Peninsula has a list of 19 wildlife carers that hasn't been updated since 2016.	Various terrestrial species. None specialised in coastal and marine species.	Eyre Peninsula	NREP (08) 8688 3111

8.4.3 Veterinarians

There are a few veterinarians in the AW and EP regions, however there are no known oiled wildlife specialist contacts. 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 contacted on mb: 0427 707 044 or email: info@savem.org.au for veterinary care for all animals.

Table 8.7: AW and EP Local Specialist Contacts

Category	Business name	Contact	Oiled Wildlife Response Availability
Vet service	Lincoln Veterinary Centre	(08) 8682 3100 0427 823 100	24/7 (mobile emergency number)
Vet service	Vets on Eyre	(08) 8683 4299	8:00am -5:30pm (Mon – Fri) 9.00am – 12.00 noon (Sat)
Vet service	Veterinary Clinic	(08) 8645 5000	8.30 am – 5.30 am (Mon-Fri)
Vet service	Care for Pets Veterinary Clinic	(08) 8645 5228	9.00am – 6.00 pm (Mon-Fri)
Vet service	Whyalla Veterinary Clinic	(08) 86549926	9.00am – 6.00 pm (Mon-Fri) 9.00am – 1.00pm (Sat –Sun)

8.4.4 External Agencies and Emergency Volunteer Groups

Various local government agencies could be involved in emergency response scenarios in the AW and EP Regions and may be required to assist in an oiled wildlife response. These agencies and their contact numbers are listed below.

Table 8.8: AW and EP Local Government Agencies

Agency	Location	Contact Number
Police	Port Lincoln	08 8688 3020
	Coffin Bay	0428 966 839
	Elliston	(08) 8687 9006
	Streaky Bay	(08) 8626 1003
	Ceduna	(08) 8626 2020
	Penong	(08) 8625 1006
	Yalata	(08) 8625 6093
Fisheries	Port Lincoln	(08) 8683 5315
	Ceduna	(08) 8626 9240
Council	DC Lower Eyre Peninsula	(08) 8676 0400
	Port Lincoln City Council	(08) 8621 2300
	DC Elliston	(08) 8687 9177
	DC Streaky Bay	(08) 8626 1016
	DC Ceduna	(08) 8625 3407
	DC Tumby Bay	(08) 8688 2101
State Emergency Service (SES)	Ceduna	(08) 8625 2480
	Streaky Bay	(08) 8626 1143
	Tumby Bay	(08) 8688 2212
	Port Lincoln	(08) 8683 0211
	Cummins	(08) 8676 2165
List any other relevant agencies	DPTI Port Lincoln	1300 116 336

8.5. 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 AW and EP Regions 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 a centre such as Ceduna, Port Lincoln or Adelaide.

Table 8.8: Staging Sites within the AW and EP Regions

Site Purpose	Location	Contact
Port Lincoln	Centenary Oval	(08) 8621 2300
	Ravendale Park Racecourse	(08) 8682 3851
	Ravendale Sporting Complex	(08) 8682 2547 / 0429 822 547
Coffin Bay	N/A	N/A
Far West Coast	N/A	N/A
Thevenard Workshop	50b McKenzie Street, Ceduna	(08) 8625 3144

8.5.1 Potential Facilities in the AW and EP Regions

Potential facilities in the AW and EP Regions 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 8.8 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 8.9: 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).

8.5.2 Land Based Oiled Wildlife Facility in EP Region

8.5.2.1 Ceduna (Population 3480)

Due to the isolation of sectors 8, 9 and 10 it is necessary to establish a Treatment Facility in Ceduna. The locations of the proposed OWR Facility areas are provided in Table 8.9. Ceduna is the District Office for the Eyre Peninsula Region and is the obvious location to stage reconnaissance and recovery operations from as it has the largest port in the west of South Australia to access the remote sectors of 8, 9 and 10. There are several football ovals in Ceduna that can be modified to operate as Holding or OWR Facilities if adequately resourced.

Table 8.10: Identified Oiled Wildlife Facilities in Ceduna

Location	Phone	Power	Water	Hot Water	Ventilation	A/C	Wash-down	Toilets	Change	Office Space	Lay Down	Security	Waste Disposal	Size	Marine Access
DEW Ceduna															
DEW Ceduna District Office at 50B, McKenzie Street. This location would also be the command centre for any DEW OWR in the western portion of the DEW Eyre Peninsula Region as per SAOWRP. The small shed could expand into vacant land to the south. 4 km from Port Thevenard. Contact DEW Ceduna on (08) 8625 3144.															
Thevenard Oval															
Thevenard Oval is located less than 1 km from Port Thevenard Jetty. It features a 13,000 sq. meter sporting oval. Proximity is fair to marine facilities and security could be readily established with existing fencing. All OWR equipment would need to be brought in. Contact Ceduna District Council on (08) 8625 3407.															

8.5.2.2 Port Lincoln (Population 14,088)

It will be necessary to establish a Treatment Facility in Port Lincoln due to its proximity to abundant fauna (Dangerous Reef, Coffin Bay, etc.). The locations of the proposed OWR Facility areas are provided in Table 8.11. DEW has a large regional office established in Port Lincoln which would be the command centre for any OWR in the Eyre Peninsula. While there is not adequate space at the DEW office it is located near the town jetty and Centenary Oval where there is ample room to establish a Treatment Facility. Negotiation for use of the oval would be through the City of Port Lincoln and may conflict with other business at oval.

Table 8.11: Identified Oiled Wildlife Facilities in Port Lincoln

	Phone	Power	Water	Hot Water	Ventilation	A/C	Wash-down	Toilets	Change Rooms	Office Space	Lay Down Area	Security	Waste Disposal	Size	Marine Access
DEW Pt. Lincoln															
DEW Port Lincoln Office at 86 Tasman Terrace, Port Lincoln SA. This location would also be the command centre for any DEW OWR in the Eyre Peninsula Region as per SAOWRP. Large office with several sheds behind. Very close to town jetty and 1 km from commercial jetty. Contact DEW Port Lincoln on (08) 8688 3111.															
Centenary Oval															
Centenary Oval is located less than 1 km from the commercial jetty and 300 meters from the town jetty. It features a 17,000 sq. meter sporting oval. Proximity is closed to DEW Office and town jetty. All OWR equipment would need to be brought in. Contact City of Port Lincoln on (08) 8621 2300.															

8.5.2.3 Port Augusta (Population 13,257)

Port Augusta is central to its related Operational Sector 15, Appendix A. Port Augusta resides within the DEW Northern and Yorke Region. The waters of Port Augusta have extremely strong and often unpredictable tides.

There is little need for water based reconnaissance and recovery in Sector 15 as most of the identified sensitivities are terrestrial based. Forward staged field teams could work either side of the upper Spencer Gulf and transport recovered wildlife back to Port Augusta for treatment. The locations of the proposed OWR Facility areas are provided in Table 8.12.

Table 8.12: Identified Oiled Wildlife Facilities in Port Augusta

	Phone	Power	Water	Hot Water	Ventilation	A/C	Wash-down	Toilets	Change Rooms	Office Space	Lay Down Area	Security	Waste Disposal	Size	Marine Access
DEW Pt. Augusta															
	DEW Port Augusta Office at 9 Mackay Street Port Augusta 5700, is the largest DEW Facility in this area and is central to the sector. Moderate sized office with sheds. Limited space. Further space could be accessed at nearby Central Oval (see below). Contact DEW Port Augusta on (08) 8648 5300 .														
Central Oval															
	Central Oval is located less than 1 km from marine access. It features a 17,000 sq. meter sporting AFL sized sporting oval. Proximity is closed to DEW Office. Oval facilities available for hire. All OWR equipment would need to be brought in. Contact Port Augusta City Council on 08 8641 9100 .														

8.5.3 On-Water Oiled Wildlife Triage/Stabilisation

In scenarios such as the AW and EP Regions, 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.

8.5.2.1 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 air-conditioned 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 8.13 for indicative specifications and examples of on-water holding/stabilisation vessels.

Table 8.13: Indicative Specifications for On-Water Holding/Stabilisation Vessels

Vessel Specifications	
Length overall	38 metres
Beam	10.6 metres
Machinery	2 engines
Operating speed	10knots
Hull	Bow ramp configured to accommodate roll-on-roll-off loading of 20ft shipping containers
Deck Area	200 m ²
Water	120,000 Litres
Accommodation	5 + crew Airconditioned
Pollution control	Oily water separator or oily waste holding tanks

8.6. AW REGION OPERATIONAL SECTORS

There is no privately owned land in the region. More than half of AW is held as dedicated Aboriginal lands and is owned or in the trust of land holding authorities. The region also includes areas adjoining the Yalata and Maralinga Tjarutja Lands, dedicated under the National Parks and Wildlife Act.

The oiled wildlife response may be a localised, contained operation, or it may extend to hundreds of islands or kilometres of coastline. The AW 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 Compartments 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 with its own unique Feature Identification (FID) number which corresponds to the FID from the GIS shapefile for that compartment.

Each sector identifies the fauna susceptible to oiling by secondary coastal compartments within the SA 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'.

Table 8.14: Sector Geographical Locations

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
6	206	WA-SA Border	31°41.280'S	129°00.000'E	6443
6	206	Border Village	31°41.280'S	129°00.000'E	5690
		Wilson's Bluff	31.68° S	129.01° E	5690
		Allan Chadwick Roadstop	31.57° S	130.17° E	5690
		Wiguna Cave	31.58° S	130.45° E	5690
		Eyre Well	31°27.600'S	131°07.980'E	5690
7	205	Eyre Well	31°27.600'S	131°07.980'E	5690
		Yalata	31.37° S	131.64° E	5690
7	205	EP AW Boundary	31.65° S	131.69° E	N/A

8.6.1 Sector descriptions and contingency plans

8.6.1.1 Sector 6: WA/SA Border to Eyre Well (Head of Bight) (CC 206)

Figure 8.10: Map of Sector 6



8.6.1.1.1 Terrestrial Overview

The Nullarbor National Park covers the terrestrial expanse of this sector. It is a dry, arid landscape featuring dramatic cliffs. There are no estuarine systems in this sector.

8.6.1.1.2 Marine Overview

This sector lies within the Far West Coast Marine Park (DEW) which was designated with the prime purpose of protecting the Australian Sea Lion (IUCN Endangered) and the Southern Right Whale. Seasonal upwelling provide for a nutrient rich environment which supports a diversity of marine life. This sector is heavily exposed to the Southern Ocean.

The Far West Coast Marine Park extends three nautical miles seaward of the Mean Low Water Mark from the West Australian border to 132° 0.083' E. During the period 1 May to 31 October, this entire area is a restricted access zone, which prohibits the entry of any vessel into the area to prevent disturbance to the southern right whale aggregation / migration. During the remainder of the year (1 November to 30 April) the Far West Coast marine park reverts to a combination of a restricted access zone, multiple sanctuary zones, and multiple habitat protection zones (as per Figure 8.4)

These zones protect Australian sea lion colonies at the Bunda Cliffs and other ecosystem types previously mentioned. The Commonwealth Great Australian Bight marine park adjoins the Far West Coast marine park at its seaward extent, and incorporates various levels of zoning protection, including a sanctuary zone and a marine mammal protection zone.

8.6.1.1.3 Environmental Values

Table 8.15: Environmental Values for Sector 6

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
WA/SA Border to Eyre Well (206)	8.1 14-18 km ENE Delisser Sandhills	MP	Birds: Nankeen Kestrels, Silver Gulls, Red-capped Plovers (7 – 2012), Greater Crested Terns and Pied Oyster Catchers.	Medium	1
	8.2 Bunda Cliffs -31°39.000', 129°18.000' E to -31°37.800' S, 129°30.000' E	MP	Pinnipeds: LNFS (2 haul out sites ranging 1-10 animals), ASL (3 haul out site of 11-50 animals and 2 breeding colonies of 11-50 animals). Birds: Osprey nesting site	Medium	2
	8.3 Bunda Cliffs 31°37.800' S, 129°30.000' E to 31°37.200' S, 129°42.000' E	MP	Pinnipeds: LNFS (2 haul out sites ranging 1-10 animals each), ASL (4 haul out site of 1-10 animals and 1 haul out of 11-50 animals and 2 breeding colonies of 11-50 animals). Birds: No data	Very High	2
	8.4 Bunda Cliffs 31°37.200' S, 129°42.000' E to 31°35.400' S, 129°24.000' E	MP	Birds: Little Penguin colony (1-10 animals observed). Pinnipeds: ASL (1 breeding colony of 11-50 animals and 1 haul out site of 1-10 animals).	Very High	2
	8.5 Bunda Cliffs 31°35.400' S, 129°24.000' E to 31°35.400' S, 130°06.000' E	MP	Pinnipeds: ASL (1 breeding colony of 11-50 animals and 1 breeding of 1-10 animals. 1 haul out site of 11-50 animals and 1 haul out site of 1-10 animals). Birds: No data	Very High	1
	8.6 Bunda Cliffs 31°35.400' S, 130°06.000' E to 31°34.800' S, 130°18.000' E	MP	Pinnipeds: ASL (1 breeding colony of 11-50 animals). Birds: No data	Very High	1
	8.7 17.7 km SW of Wahgunyah (homestead) 31°34.800' S, 130°48.000' E	NP	Birds: Nankeen Kestrels. NOTE: Result of SA biological survey concluding in 2002.	Medium	2
WA/SA Border to Eyre Well (206)	8.8 31°35.400' S, 130°34.800' E	MP	Pinnipeds: ASL Haul out site of 11-50 animals. There is a haul out site 3 nautical miles to east of this point consisting of 1-10 animals. (2003 data.). Birds: No data.	Significant	2

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
WA/SA Border to Eyre Well (206)	8.9 31°36.000' S, 130°43.200' E	MP	Pinnipeds: LNFS haul out site of 1-10 animals. Birds: No data	Medium	2
	8.10 31°36.000' S, 130°48.000' E	MP	Pinnipeds: ASL haul out site of 1-10 animals. Birds: No data.	Significant	2
	8.11 31°34.800' S, 130°54.000' E	MP	Cetacean: Southern Right Whale (IUCN Vulnerable) – 206 animals. NOTE: central coordinate from a 29/07/2014 aerial survey from Fowlers Bay to WA/SA Border.	Low	3
	8.12 31°31.200' S, 131°03.600' E	MP	Pinnipeds: ASL Breeding Site of 11-50 Animals (2013) – Haul out site of 1-10 animals reported in 1996 of 1-10 ASLs and 1-10 s (1996 data). Birds: Osprey nesting site	Very High	1

8.6.1.1.4 Recommended Response Strategies

8.6.1.1.4.1 Prevention

- Pre-emptive capture of Little Penguins once identified by aerial reconnaissance if responders can access colonies.
- Various hazing techniques may also be useful for moving wildlife out of at risk areas on the mainland.

8.6.1.1.4.2 Personnel Deployment

Field teams could be dispatched from Eucla WA / Border Town, SA to access the western portion of the sector, or, from Fowlers Bay, SA to access the eastern portion of the sector by vessel. Eucla can be reached by road from Esperance (913 km) or Perth (1430 km) or Adelaide (1280 km). Eucla and Border Town also have unsealed airstrips. Fowlers Bay is 610 kilometres by sealed road from Port Augusta. Field teams could likely be deployed by vessel to access the eastern portion of this sector. They could be deployed (and retrieved from) Fowlers Bay, SA or alternative locations off of the South Australian coast depending on the nature and location of the spill event.

8.6.1.1.4.3 Wildlife Reconnaissance and Wildlife Recovery

Aerial reconnaissance would be crucial in determining the method and deployment locations for Wildlife Recovery in this sector. It is possible to access the coast via the myriad of 4WD tracks between Eucla and the 'Head of the Bight' (aka Eyre Well in approximate position -34.500, 128.850). Lateral access along the coastline is by ATV or foot.

This sector is extremely remote and often inaccessible due to the steep cliffs, lack of towns and resources and exposed coastline. For the eastern portion of this sector, any wildlife response would need to consider on water facilities.

8.6.1.1.4.4 Logistics Options for Facility Establishment

Staging sites could be established at opportunistic locations on, or close to, the shoreline. Once collected, wildlife could be transported from staging sites to a temporary holding facility in Eucla before being transported by road to the Treatment Facility in Ceduna (508 km) or Esperance (913 km).

Table 8.16: Staging Sites for Sector 6

Site Purpose	Location	Reference
Staging Sites	Border Town, SA	DEW - (+61 8) 8204 1910
Temporary Holding Facility	Eucla	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Esperance	See Oiled Wildlife Facilities in Section B.4
	Ceduna	See Oiled Wildlife Facilities in Section B.4

8.6.1.1.4.5 Equipment

The nearest First Strike oiled wildlife response equipment stockpile for this operational area is located in Adelaide. See 'Appendix B' for travel times.

8.6.1.2 Sector 7: Eyre Well (Head of Bight) to Cape Adieu (CC 205)

Figure 8.11: Map of Sector 7



8.6.1.2.1 Terrestrial overview

The Yalata Aboriginal Reserve lies in the western terrestrial expanse of this sector with the Waygunyah Conservation Park and UCL and pastoral leases in the east of the sector. It is a dry, arid landscape featuring dramatic cliffs and sand dunes. There are no estuarine systems in this sector.

8.6.1.2.2 Marine Overview

Exposed steep cliffs and sand dunes face the full force of the Southern Ocean. The cliffs and rocks provide habitat for Australian sea lions (ASL) and a variety of sea birds. This area is a migration path, breeding, nursery and aggregation area for the southern right whale. There is little quantified data regarding ASL breeding and haul out sites, though both long nosed fur seals (LNFS) and ASL will forage in the adjacent waters and haul out on the beaches

8.6.1.2.3 Environmental Values

Table 8.17: Environmental Values for Sector 7

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Eyre Well to Cape Adieu (FID 205)	9.1 Eyre Well to 31°41.400' S, 131°41.400' E	MP	Birds: Pied Oyster Catchers (<200), Sooty Oyster Catchers (<150), hooded plovers (<50). Southern right whales – adults and calves – up to 200 animals between May - November	Significant	3
	9.2 31°41.400' S, 131°41.400' E to 31°52.800' S, 132°00.000' E	MP	Birds: Pied Oyster Catchers, Sooty Oyster Catchers, hooded plovers (no data available however similar ecosystem to above listed Coastal Area Unit).	Significant	3
	D'Entrecasteaux Reef	MP	Pinnipeds: ASL haul out site of 11-50 animals (1996 data)	Significant	2
	9.3 31°52.800' S, 132°00.000' E to Cape Adieu	MP	Birds: Sooty Oyster Catchers, Pied Oyster Catchers, hooded plovers, Blue-billed ducks, Sanderlings. Pinnipeds: Occasional ASL haul out areas. No breeding colonies quantified in this sector.	Significant	3

8.6.1.2.4 Recommended Response Strategies

8.6.1.2.4.1 Prevention

- Various hazing techniques may be useful for moving wildlife out of at risk areas on the mainland and Islands.
- There are no quantified pinniped or penguin breeding colonies in this sector so pre-emptive capture is not likely to be necessary.

8.6.1.2.4.2 Personnel Deployment

Field teams in this could be deployed from various locations depending on the nature and extent of the event.

It is likely that field teams would be deployed by vessel to access the eastern portion of this sector. They could be deployed (or retrieved from) Fowlers Bay, SA or alternative locations off the South Australian coast depending on the nature and location of the spill event.

In addition, there are various access points off the Eyre Highway. The Yalata Aboriginal Corporation operates a community 25 kilometres inland from the centre of this sector. There are basic facilities and coastal access tracks that can be utilised by 4WD/ATV to various coastal points. Permission of the traditional owners would need to be sought prior to accessing Aboriginal Lands.

8.6.1.2.4.3 Wildlife reconnaissance and wildlife recovery

Reconnaissance and recovery in this area could be conducted by ATV, 4WD, boat and aircraft. In areas where vehicle access to the beach is not possible, reconnaissance and collection by foot would be required (e.g. rocky coastline). D'Entrecasteaux Reef is realistically only accessible by helicopter in a small swell. With the largest portion of the reef being < 1 Ha in size and with low elevation it is often inundated by waves. Boat access is not an option due to the lack of protection from swell energy and steep gradient into the ocean from the shoreline.

8.6.1.2.4.4 Logistics Options for Facility Establishment

Staging sites could be established at opportunistic locations on, or close to, the shoreline. There is the option to have staging sites at the non-coastal roadhouses of Nullarbor Roadhouse and Nundroo Roadhouse and utilise the coastal access tracks to access the coast from there.

The Yalata Roadhouse closed down in 2006. There are minimal public facilities in the Yalata Community, however this location is central to the sector. Permission of the traditional owners would need to be sought prior to accessing Aboriginal Lands. A small workforce of 2-6 people from Yalata Land Management may be available to assist, depending on availability and other workloads. Once collected, wildlife could be transported to a Temporary Holding Facility in Fowlers Bay or direct to a Treatment Facility in Ceduna. Fowlers Bay is 142 kilometres by sealed road from Ceduna.

Table 8.18: Proposed Staging Sites for Sector 7

Site Purpose	Location	Contact
Staging Sites	Fowlers Bay	DEW - (+61 8) 8204 1910
Temporary Holding Facility	Fowlers Bay	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Ceduna	See Oiled Wildlife Facilities in Section B.4
	Esperance	See Oiled Wildlife Facilities in Section B.4

8.6.1.2.4.5 Equipment

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

8.7. EP 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 EP 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 Compartments 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 with its own unique Feature Identification (FID) number which corresponds to the FID from the GIS shapefile for that compartment.

8.7.1 Population centres GPS locations and postcodes

8.7.1.1 Eyre Peninsula Western

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
9	205	Boundary with AW Region	31.65° S	131.69° E	5690
9	205	Eyre Well	31.39° S	131.17° E	5690
		Wahgunya Conservation Park	31.75° S	131.87° E	5690
		Nundroo	31.70° S	132.36° E	5690
		Cape Adieu	32.00° S	132.16° E	5690
10	204	Cape Adieu	32.00° S	132.16° E	5690
		Fowlers Bay	31.92° S	132.49° E	5690

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
		Bookabie	31.93° S	132.68° E	5690
		Penong	31.92° S	133.01° E	5690
		Point Peter	32.12° S	133.38° E	5690
11	203	Point Peter	32.12° S	133.38° E	5690
		Ceduna	32.07° S	133.69° E	5690
		Point Colinson	32.54° S	133.89° E	5690
		Cape Vivonne	32.20° S	133.68° E	5690
		Whittleby Point	32.21° S	133.74° E	5690
		Cape D'estres	32.26° S	133.77° E	5690
		Laura Bay	32.24°S	133.82°E	5680
		Kopitucka Rockhides	32.34°S	133.91°E	5680
		Smokey Bay	32.38°S	133.93°E	5690
		Cape Missiessy	32.40°S	133.87°E	5680
		Nuyts Archipelago	32.40°S	133.86°E	5680
		Point Dillon	32.51°S	133.85°E	5680
		Point Brown	32.32°S	133.53°E	5680
12	202	Point Brown	32.32°S	133.53°E	5680
		Point Collinson	32.54° S	133.89°E	5680
		Point De Molle	32.50° S	133.99° E	5680
		Dunn Well	32.46° S	134.03° E	5680
		Point Lindsey	32.47° S	134.09°E	5680
		Haslam	32.51° S	134.21°E	5680
		Perlubie Hill	32.64° S	134.28°E	5680
		EBA Anchorage	32.68° S	134.29°E	5680
		Windmill Point	32.71° S	134.28°E	5680
		Oyster Spit	32.76° S	134.23°E	5680
		Target Point	32.78° S	134.22°E	5680
		Streaky Bay	32.80°	134.22°E	5680
		Shag Point	32.76° S	134.20°E	5680
		Moore's Shute	32.75° S	134.20°E	5680
		Point Gibson	32.73° S	134.21°E	5680
		The Bushes	32.72° S	134.15°E	5680

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
	201	Cape Bauer	32.43°S	134. 03°E	5680
		Cape Bauer	32.43°S	134.03°E	5680
		High Cliff	32.87°S	134.10°E	5680
		The Granites	32.88°S	134.08°E	5680
		Point Westall	32.91°S	134.06°E	5680
		Speed's Point	32.9.4° S	134.12°E	5680
		Yanerbie	32.93° S	134.14°E	5680
		Sceale Bay	33.01° S	134.19°E	5680
		Cape Blanche	33.01°S	134.14°E	5680
		Slade Point	33.05°S	134.17°E	5680
		Point Labatt	33.15°S	134.26°E	5680
		Cape Radstock	33.03°S	134°19'E	5680
	200	Cape Radstock	33.03°S	134°19'E	5680
		Shag Rock	33.16° S	134.41°E	5671
		Point Weylland	33.24°S	134.63°E	5671
		North Head	33.23°S	134.66°E	5671
		Port Kenny	33.17°S	134.69°E	5671
		Cheetena	33.18°S	134.71°E	5671
		Harbour Point	33.22°S	134.70°E	5607
		Venus Bay	33.23°S	134.67°E	5607
		South Head	33.23°S	134.66°E	5607
		Cape Finniss	33.37°S	134.49°E	5670
13	199	Cape Finniss	33.37°S	134.49°E	5670
		Salmon Point	33.64° S	134.86°E	5670
		Wallesley Point	33.64° S	134.87°E	5670
		Elliston	33.64° S	134.89°E	5670
		Sheringa	33.87° S	135.16°E	5607
		Boundary with EY South	33.94° S	135.22°E	5607

8.7.1.2 Eyre Peninsula South

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
13	199	Boundary with EY West	33.94° S	135.22°E	5607
13	199	Kiana	34.06° S	135.28°E	5607
		Blackfellow's Cliff	34.09° S	135.27°E	5607
		Coulta	34.37° S	135.35°E	5607
		Frenchman Bluff	34.25°S	135.21°E	5607
	198	Frenchman Bluff	34.25°S	135.21°E	5607
		Farm Beach	34.49° S	135.40°E	5607
		Mount Dutton Head	34.60° S	135.42°E	5607
		Seal Corner	34.60° S	135.43°E	5607
		Oyster Town	34.62° S	135.50°E	5607
		Coffin Bay	34.61° S	135.47°E	5607
		Eely Point	34.59° S	135.36°E	5607
		Point Longnose	34.53° S	135.35°E	5607
		Point Burgess	34.45° S	135.22°E	5607
		Point Sir Issac	34.25°S	135.13°E	5607
	197	Point Sir Issac	34.25°S	135.13°E	5607
		Reef Point	34.50° S	135.14° E	5607
		Point Whidbey	34.35°S	135.06°E	5607
	196	Point Whidbey	34.35°S	135.06°E	5607
		Shoal Point	34.78°S	135.50°E	5607
		Redbanks	34.92°S	135.62°E	5607
		Cape Cermot	34.95°S	135.63°E	5607
		Cape Wiles	34.94°S	135.68°E	5607
		Cape Tournafort	34.93°S	135.86°E	5607
		Cape Catastrophe	34.58°S	136.00°E	5607
14	195	Cape Catastrophe	34.58°S	136.00°E	5607
		Point Hazelgrove	34.83°S	135.99°E	5607
		Maclaren Point	34.79° S	136.02° E	5607
		Cape Donnington	34.73° S	135.99° E	5607
		Fisherman Point	34.76° S	135.98° E	5607
		Surfleet Point	34.76° S	135.96° E	5607

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
		Tulka	34.80° S	135.80° E	5607
		Port Lincoln	34.75° S	135.84° E	5606
		Murray Point	34.77° S	135.86° E	5606
		Billy Lights Point	34.74° S	135.89° E	5606
		Kirton Point	34.72° S	135.88° E	5606
		Point Boston	34.62° S	135.93° E	5607
		Louth Bay	34.54° S	135.93° E	5607
		Peake Point	34.51° S	136.02° E	5607
		Point Bolingbroke	34.54° S	136.09° E	5605
		Red Point	34.51° S	136.11° E	5605
		Tumby Bay	34.39° S	136.11° E	5605
		Cape Hardy	34.18° S	136.32° E	5607
		Cape Burr	34.12° S	136.36° E	5604
		Port Neill	34.12° S	136.35° E	5604
14	195	EY South/East Boundary	33.99° S	136.50° E	5604

8.7.1.3 Eyre Peninsula East

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
14	195	EY South/East Boundary	33.99° S	136.50° E	5603
		Cape Driver	33.94° S	136.58° E	5603
		Arno Bay	33.92° S	136.58°E	5603
		Gibbon Point	33.83° S	136.78°E	5602
		Port Gibbon	33.80° S	136.80°E	5602
		The Knob	33.80° S	136.85°E	5602
		Cowell	33.69° S	136.94°E	5602
		Point Germein	33.74° S	136.97°E	5602
		Victoria Point	33.73° S	136.99°E	5602
		Lucky Bay	33.71° S	137.05°E	5602
		Shoalwater Point	34.58°S	136.00°E	5602
15	194	Shoalwater Point	34.58°S	136.00°E	5602
		Plank Point	33.44° S	137.36°	5602

Sector	Compartment (FID#)	Location	Coordinate South (Dec. Deg.)	Coordinate East (Dec. Deg.)	Post Code
		Whyalla	33.04° S	137.59°E	5601
		Port Bonython	32.98° S	137.79°E	5601
		Backy Point	32.91° S	137.79°E	5601
		Douglas Point	32.85° S	137.81°E	5601
		Boundary with AMLR	32.77° S	137.80°E	5601

Each sector identifies the fauna susceptible to oiling by secondary coastal compartments within the SA 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'.

8.7.2 Sector descriptions and contingency plans

8.7.2.1 Sector 10: Cape Adieu to Point Peter (CC 204)

Figure 8.12: Map of Sector 10



8.7.2.1.1 Terrestrial overview

Extensive dune fields, while to the south, it covers a significant portion of the Nullarbor Plain and is bounded by the rugged coastline of the Great Australian Bight. Rocky headlands, high cliffs, sheltered

bays and long, sandy beaches. Tenure is partly nature reserves and part UCL/pastoral leases. Fowlers Bay lies in the west of the sector and Ceduna just to the east of the sector.

8.7.2.1.2 Marine Overview

Offshore reefs and rocky islets provide extensive habitat for sea birds and ASL. Seasonal upwellings provide for a high level of biodiversity as compared to the sectors to the west. This sector is mostly comprised of the Nuyts Archipelago Marine Park (DEW). Diverse habitats comprised of offshore islands, deep water and intertidal reefs, high energy surf beaches, shallow bays and estuaries provide for a high level of biodiversity throughout this sector. Species including the Australian sea lion, long-nosed fur seal, and little penguins are abundant and use the diverse habitats as a major food sources and breeding grounds (Baker, 2004).

8.7.2.1.3 Environmental Values

Table 8.19: Environmental Values for Sector 10

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Cape Adieu to Point Peter (204)	Cape Adieu	MP	Birds: Sooty Oystercatcher, Pacific Reef Heron, Sanderling, (Australian) Pied Oystercatcher (mating pairs). Pinnipeds: Haul out sites on coastal rocks for ASL	Significant	3
	Nuyts Reef	MP	Pinnipeds: <u>South Reef</u> : ASL haul out site (11-50) <u>Middle Reef</u> : ASL breeding site (11-50) <u>West Reef</u> : ASL breeding site (51-100), haul out (11-50), <u>East Reef</u> : ASL haul out site (11-50), Breeding (11-50)	Very High	1
	Cape Adieu Rocks	MP	Pinnipeds: LNFS haul out site (no quantified data)	Medium	3
	Cabbots Well to Cape Souflett	MP	Birds: Pied Oyster Catcher, Sooty Oyster Catcher (small numbers)	Significant	3
	Cape Souflett to Point Fowler	MP	Birds: Pied Oyster Catcher, Sooty Oyster Catcher, Sandpiper, white-bellied Sea Eagle (small numbers)	Significant	3
	Point Fowler	MP	Pinnipeds: ASL haul out site in cover on SSW side of Point Fowler (11-50)	Significant	2
	Fowlers Bay	MP	Birds: Pied Oyster Catcher, Sooty Oyster Catcher, Sandpiper, white-bellied Sea Eagle (small numbers)	Significant	3
	Fowlers Bay to Port Irvine (aka Chadinga Hill/Cape Vien)	MP	Birds: Pied Oyster Catcher, Sooty Oyster Catcher, Sandpiper, white-bellied Sea Eagle, Pacific Golden Plover, Hooded Plover (small numbers sighted along coast)	Significant	3
	Sinclair Island	MP	Pinnipeds: ASL haul out site (11-50)	Significant	2
	Point Bell	MP	Birds: Pacific Reef Heron, Sooty Oyster Catcher, Ruddy Turnstone, Pied Oyster Catcher and Sanderling	Significant	3
	Point Bell Rocks	MP	Pinnipeds: ASL haul out site (11-50)	Significant	2
	Purdie Island	MP	Pinnipeds: ASL breeding site (301-600). 34-142 pups. Birds: Fairy Tern	Very High	1
	Lound Island	MP	Pinnipeds: ASL breeding site (101-150). 20 pups counted in 2015. Birds: Ruddy Turnstone, Sanderling, Sooty Oyster Catcher, Rock Parrot	Very High	1

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
	Rocky Point to Point James	MP	Birds: Pacific Reef Heron, Sooty Oyster Catcher, Pied Oyster Catcher, Hooded Plover	Significant	3
Cape Adieu to Point Peter (204)	Point James to Point Peter	MP	Birds: Pied Oyster Catcher, Sooty Oyster Catcher, Fairy Tern (1 sighted 2011, Hooded Plover. Pinnipeds: ASL (7 sighted on rocks 800 meters west of Point Peter).	Significant	2

8.7.2.1.4 Recommended Response Strategies

8.7.2.1.4.1 Prevention

- Various hazing techniques may be useful for moving wildlife out of at risk areas.

8.7.2.1.4.2 Personnel Deployment

Field teams in this area could be deployed from two locations depending on nature and extent of event. If oil is threatening wildlife in Sector 10 it is also likely affecting Sector 11 which has even more ecological sensitivities; any response in Sector 10 will likely be done in unison with Sector 11. Personnel deploying to Coastal Area Units in Sector 10 should be deployed from:

Ceduna

- Board Vessel to access offshore islands. Note that for a vessel to access Nuyts Reef in the west of this sector it would need a range of > 200 nautical miles (it is 80 nautical miles to Nuyts Reefs from Ceduna). It is nearly impossible to get ashore on Nuyts Reef via vessel. Helicopter access would be recommended for safety.
- Further teams could be deployed from Ceduna by 4WD to access the coastal beaches on the east end of the sector (Point Bell Sanctuary and Cactus Beach). There are several 4WD tracks that head south from Penong off of the Eyre Highway.

Fowler Bay

- Teams can drive to Fowlers Bay from Ceduna (142 km). From Ceduna, coastal access is made possible in this western half of this sector through a host of 4WD tracks paralleling the coast by travelling east and west from Fowlers Bay,
- Teams could launch a small craft in Fowlers Bay to access Nuyts Reef ASL colonies (16 nautical miles), or, teams could be retrieved from the Fowlers Bay Jetty by a larger response vessel that departed from Ceduna.

8.7.2.1.4.3 Wildlife Reconnaissance and Wildlife Recovery

For stretches of sandy beach, reconnaissance and recovery will be conducted by ATV or 4WD. In areas where beach access is not possible with a vehicle, reconnaissance and collection by foot will be required (e.g. cliff areas).

Virtually no islands can be accessed by vessel due to lack of protection from swell and / or steep gradients from the shoreline to the sea bed. Nuyts Reef, Lound Island and Purdie Island(s) can best be accessed via helicopter from Ceduna, with possible re-fuel sites at Fowlers Bay when required.

These colonies should be considered a Very High Priority given their isolation and the identified need to maintain genetic diversity in outlying ASL colonies.

There are <900 ASL breeding throughout this sector.

8.7.2.1.4.4 Logistics Options for Facility Establishment

Staging sites will be established as necessary at opportunistic locations on or close to the shoreline. Collected wildlife may be transported from staging sites on the island to the designated Oiled Wildlife Facility in Ceduna. A temporary Holding Facility can be established at Fowlers Bay for wildlife collected from the beaches in the western half of this sector. Once stabilised wildlife can be transported by road (142 km) or by vessel (110 km of 6 hours steaming at 10 knots) to the Treatment Facility in Ceduna.

Table 8.20: Staging Sites for Sector 10

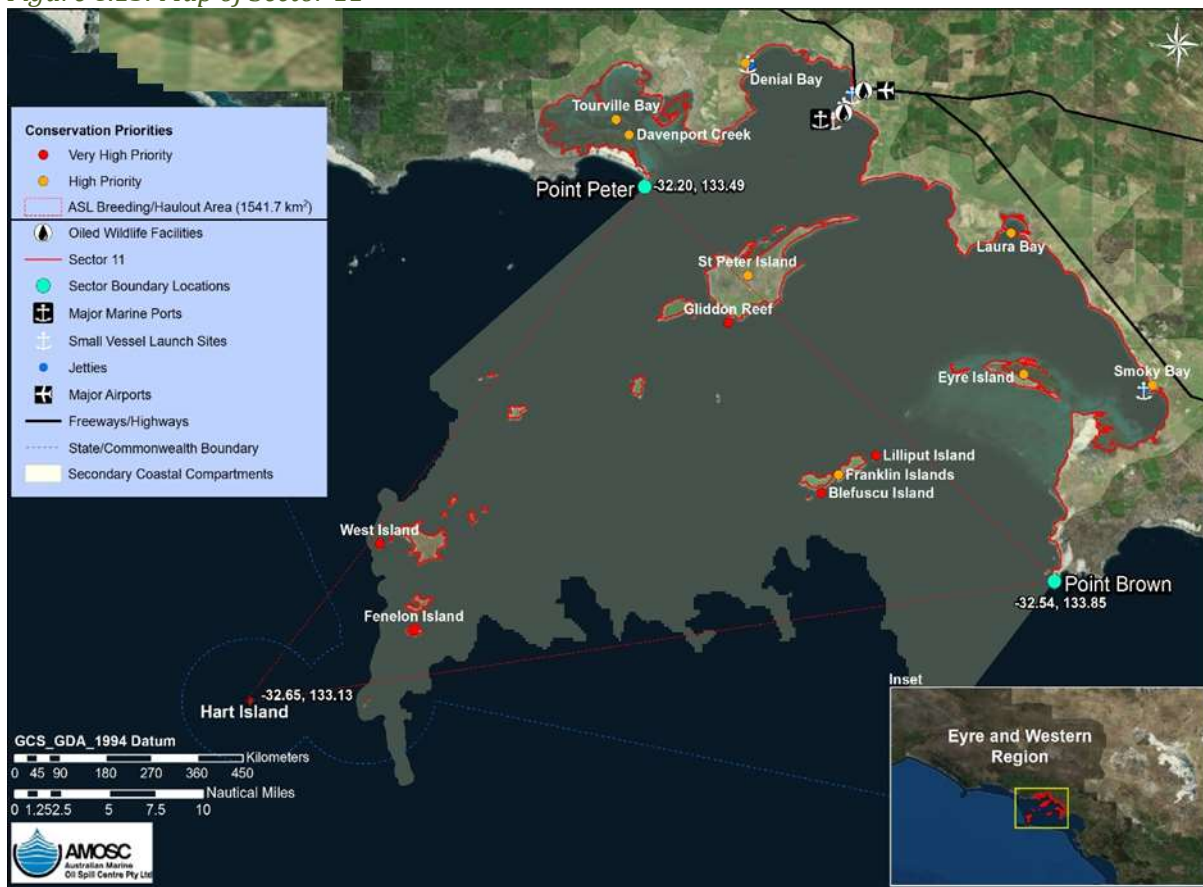
Site Purpose	Location	Contact
Staging Sites	Cactus Beach	DEW - (+61 8) 8204 1910
	Ceduna	DEW - (+61 8) 8204 1910
Temporary Holding Facility	Fowlers Bay	DEW - (+61 8) 8204 1910
	On Water Facility	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Ceduna	See Oiled Wildlife Facilities in Section 5

8.7.2.1.4.5 Equipment

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

8.7.2.2 Sector 11: Point Peter to Point Brown (CC 203)

Figure 8.13: Map of Sector 11



8.7.2.2.1 Terrestrial overview

Agriculture and pastoral lease occupy the western half of this sector. The eastern portion of the sector is taken up with urban development and broad acre farming in the interior.

8.7.2.2.2 Marine Overview

This sector is mostly comprised of the Nuyts Archipelago Marine Park (DEW). Diverse habitats contain islands, shallow bays, deepwater and intertidal reefs, high energy surf beaches and estuaries providing for a very high level of biodiversity throughout this sector. Wetlands of National Importance such as those found in Tourville Bay support a diversity of shorebirds and mangrove communities. Offshore Islands support large colonies of Australian sea lion and long-nosed fur seals. St. Peter Island is home to over 1% of the world populations of short-tailed shearwaters, white-faced storm-petrels and pied oystercatchers (BA, 2016).

8.7.2.2.3 Environmental Values

Table 8.21: Environmental Values for Sector 11

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Point Peter to Point Brown (FID 203)	Davenport Creek	MP	Wetland: Ecologically sensitive wetland system which lies within the Nuyts Archipelago Marine Park. Features mangroves and diversity of shorebirds. Birds: Declared Coastal Waderbirds Site featuring population of 4000 to 5000 birds.	High	3
	Tourville Bay	MP	Wetland: Declared Wetland of National Importance (Criteria 1, 3, 5, 6) featuring intertidal mangrove communities and a diversity of invertebrates and shorebirds. Birds: Eastern Curlew, Fairy Tern, Great Knot, Red Knot, Bar-tailed Godwit, Curlew Sandpiper (CR), Lesser Sand Plover (EN), Greater Sand Plover (VU)	High	3
	Denial Bay	MP	Wetland: Extensive intertidal mangrove community. Birds: There is a declared coastal waterbird site in Murat Bay. Frequented by Great Knot, Curlew Sandpiper (CR), Far Eastern Curlew (CR), Red Knot (EN), Fairy Tern (VU), Curlew Sandpiper (CR)	High	3
	St Peter Island	MP	Wetland: Intertidal mangrove community supporting a diversity of invertebrates and shorebirds. Birds: Declared Coastal Wader Bird Site frequented by Fairy Tern, Hooded Plover, Far Eastern Curlew (CR), Red Knot, Curlew Sandpiper, Bar-tailed Godwit, Little Penguin (51-100)	High	3
	Nuyts Archipelago	MP	Pinnipeds: ASL breeding and haul out sites in the waters triangulated by Point Brown, Hart Island and Point Peter (500 square Nautical miles) there are: Breeding sites: <ul style="list-style-type: none"> □ West Island (200-300) – 14-56 pups □ Breakwater Island (11-50) (6-17 pups) □ Fenelon Island (100-200) – 10-40 pups □ Lilliput Island (201-300) – 62-69 pups □ Blefuscu Island (301-600) – 92-106 pups □ Gliddon Reef (11-50) – 7 pups Haul out sites: <ul style="list-style-type: none"> □ 14 sites (1-10) □ 3 sites (11-50) NOTE: Source (Shaughnessy et al. 2011). Use of Goldsworthy <i>et al.</i> 2015 survey data and local Nuyts Marine Park Wildlife Officer during reconnaissance would prove valuable.	Very High	1
Point Peter to Point Brown (FID 203)	Franklin Island	MP	Birds: Little Penguin (600-1000 animals) NOTE: Access is prohibited without permits from DEW	High	2

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Point Peter to Point Brown (FID 203)	Eyre Island	MP	Wetland: Intertidal Mangrove Community supporting a diversity of shorebirds. Birds: Caspian Tern, Fairy Tern, Bar-tailed Godwit, Curlew Sandpiper, Far Eastern Curlew, Great Knot, Red Knot	High	3
	Laura Bay	MP	Birds: Declared Coastal Waterbird Site (1000-2000 animals) comprised of Fairy Tern, Bar-tailed Godwit, Curlew Sandpiper, Far Eastern Curlew, Great Knot, Red Knot Wetland: Intertidal Wetland Community and Saltmarsh in the north and west of Laura Bay.	High	3
	Smoky Bay	MP	Wetland: Intertidal Samphire estuarine system featuring mangrove communities supporting a diversity of invertebrates and coastal Wading birds. Birds: Declared Coastal Waterbird Site (<1000).	High	3

8.7.2.2.4 Recommended Response Strategies

8.7.2.2.4.1 Prevention

- Pre-emptive capture Little Penguins from Franklin Island and St. Peter Island
- Implement Tactical Response Plans for wetlands to prevent oiling of wetland fauna
- Auditory hazing techniques may also be useful for moving wildlife out of at risk areas.

8.7.2.2.4.2 Personnel Deployment

Field teams in this area will be deployed from Ceduna which has daily flights arriving from Adelaide, Port Lincoln, Whyalla, Mount Gambier and Kingscote (KI). Vessels accessing the Nuyts Archipelago will be departing from Port Thevenard (Ceduna).

8.7.2.2.4.3 Wildlife Reconnaissance and Wildlife Recovery

Given the high number of offshore islands in this sector supporting fauna susceptible to oiling aerial reconnaissance will be essential to further prioritise the Wildlife Recovery Operation. Within the Nuyts Archipelago alone there are:

- <1500 ASL, and
- <1000 Little Penguins.

All of the terrestrial based Coastal Area Units are readily accessible by 2WD. Rocky areas will need to be accessed by foot or ATV. The waters of the Nuyts Archipelago and the bays can only be accessed by vessel and / or helicopter. Vessels will be staged from Port Thevenard (Ceduna). Recovered wildlife within the archipelago can either be taken to On-Water Facility or directly to the Treatment Facility in Ceduna.

8.7.2.2.4.4 Logistics Options for Facility Establishment

Staging sites will be established as necessary at opportunistic locations on or close to the shoreline as well as Islands if required.

Terrestrially based staging sites could be set up in Ceduna and Smoky Bay. Recovered oiled wildlife could be transported by road to the Treatment Facility in Ceduna.

A strategically placed On Water Facility will be essential for efficient OWR given that the distance from Port Thevenard to the furthest island in the Archipelago (Hart Island) is 4 hours steaming at 10 knots. Establishment of On-Water Facilities could be at:

- St. Peter Island (due to proximity to Ceduna and abundant sea bird colonies), and/or
- St. Francis Island (due to proximity to ASL breeding colonies of Fenelon and West Island and the fact that it would provide an excellent anchorage in all but northerly winds).

Once stabilised, Oiled Wildlife could either be returned to the environment once oiling subsides to within threshold levels, or transported to the Treatment Facility in Ceduna.

Table 8.22: Staging Sites for Sector 11

Site Purpose	Location	Contact
Staging Sites	Nuyts Archipelago Islands as required	DEW - (+61 8) 8204 1910
	Smoky Bay	DEW - (+61 8) 8204 1910
Temporary Holding Facility	On Water station	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Ceduna	DEW - (+61 8) 8204 1910

8.7.2.2.4.5 Equipment

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

8.7.2.3 Sector 12: Point Brown to Cape Finniss (CC 202-200)

Figure 8.14: Map of Sector 12



8.7.2.3.1 Terrestrial overview

Sandy stretches of coast interspersed with rocky headland. As you move inland it is an arid and mostly flat landscape mostly comprised of pastoral leases and freehold land used for agriculture.

8.7.2.3.2 Marine Overview

This sector is largely comprised of the West Coast Bays Marine Park. Strongly influence by strong south-westerly winds and seas the offshore islands support a high abundance of Australian sea lions (ASL). Venus Bay and Baird Bays are both declared Wetlands of National Importance supporting a high diversity of migratory shorebirds and seabirds. Point Labatt is host to one of the few mainland ASL breeding colonies (Goldsworthy, 2009). Large stretches of high energy surf beaches host associated ecosystems.

8.7.2.3.3 Environmental Values

Table 8.23: Environmental Values for Sector 12

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Cape Bauer to Point Brown (FID 202)	Acraman Creek	RR	Birds: Coastal Wader Bird Site (1000-2000). IUCN Category V1 Protected Area. Extensive Fairy Tern sightings. Wetland: Intertidal Mangrove. Wetland of National Importance (Criteria 3,5). Acid Sulfate Soils: Thick potential acid sulfate soils, mainly in mangroves. High risk.	High	3
	Cape Bauer Sand spit	SW	Birds: A high diversity of shore birds including Lesser Sand Plover (EN), Curlew Sandpiper, Greater Sand Plover (VU), Bar-tailed Godwit, Great Knot, Far-eastern Curlew Sandpiper (VU), Red Knot.	Significant	3
	Point Gibson	RR	Wetland: Wetland of National Importance (Criteria 3, 5). Intertidal mud flats. Birds: Coastal Wader Bird Site. Frequented by Lesser Sand Plover (EN), Curlew Sandpiper, Greater Sand Plover (VU), Bar-tailed Godwit, Great Knot, Far-eastern Curlew Sandpiper (VU) and Red Knot.	High	3
	Streaky Bay	RR	Wetland: Wetland of National Importance. Intertidal mud flats supporting diverse benthic macro invertebrates and associated waders / shorebirds. Birds: Declared Coastal Wader Bird Site (<1000)	Very High	3
	Olive Island	MP	Pinnipeds: ASL breeding site (301-600 animals) with pup population of 173 in 2012 (very productive). Reported as a Long-nosed Fur Seal (LNFS) haul out site (no quantified data).	Very High	1
Cape Bauer to Cape Radstock (FID 201)	Back Beach	Private	Birds: Fairy Tern (significant sightings), Southern Giant Petrel (EN).	Medium	3
	Yanerbie Reef	MP/CP	Birds: Declared Coastal Wader Bird Site (2000 - 3000).	Significant	3
	Yanerbie Beach	MP/CP	Birds: Nationally Rated Fauna site with significant abundance of Curlew Sandpiper (CR).	High	3
	Surfers Beach	MP/CP	Birds: Coastal Wader Bird Site (<1000).	Significant	3
	Nicolas Baudin Island	MP/CP	Pinnipeds: ASL Breeding site (301-600 count, 49-98 pups, LNFS breeding site (11-50).	Very High	2
	Slade Point	MP/CP	Pinnipeds: ASL haul out site.	Significant	2

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
	Point Labatt	MP/CP	Pinnipeds: ASL breeding site (Mainland site) (51-100 animals in 2011 – (1-6 pups)).	Very High	2
Cape Radstock to Cape Finniss (FID 200)	Baird Bay	MP (SZ)/CP	Wetland: Wetland of National Importance (Criteria 3). Intertidal sand, sea/shore birds, 3x Marine Sanctuary Zones: 1) Head of Baird Bay Sanctuary Zone; 2) West Tidal Flats. Sanctuary Zone; 3) East Tidal Flats Sanctuary Zone. Birds: Declared Coastal Wader Bird Site. Frequented by Lesser Sand Plover (EN), Curlew Sandpiper, Greater Sand Plover (VU), Bar-tailed Godwit, Great Knot, Far-eastern Curlew Sandpiper (VU) and Red Knot.	Very High	3
	Jones Island	MP	Pinnipeds: ASL Breeding site (11-50 count (5-23 pups)). Birds: Sooty Oyster Catcher, Rock Parrot, Pacific Gull, Fairy Tern.	Very High	2
	Venus Bay	MP/CP	Wetland: large Intertidal wetland system with extensive marsh/mangrove habitat. Birds: Declared Coastal Wader Bird Site (<1000)	Very High	3
	Venus Bay Islands	MP/RR	Birds: Seabird Site featuring high abundance of Caspian Tern and Fairy Tern. Mammal: Brush-tailed Bettong (<i>Bettongia penicillata</i>) and bilby (<i>Macrotis lagotis</i>).	Very High	3
	Port Kenny	MP/RR	Birds: Declared Coastal Wader Bird Site (<1000)	Significant	3
	Venus Bay to Elliston	RR	Pinnipeds: Sub Antarctic Fur Seal (occasional sightings, no colonies – 2007). Birds: Coastal beaches frequented by Fairy Terns, Hooded Plover.	Significant	3
	Waldegrave Islands	RR	Pinnipeds: ASL (Breeding site on West Waddlegrove 601-1000 (79-157 pups) and haul out site on East Waddlegrove (11-50). LNFS breeding colony on West Waddlegrove (no data). Birds: Little Penguin colony (201-300). Short-tailed Shearwater colony (10,000 – 100,000).	Very High	1
	Topgallant Island	RR	Pinnipeds: ASL haul out site (1-10) Birds: White-faced Storm Petrel (2001-3000), Short-tailed Shearwater 301-600).	Significant	2 (pinnipeds) 3 (birds)
	Flinders Is.	RR/MP	Pinnipeds: ASL haul out site (1-10)	Significant	2
	Ward Islands	RR/MP	Pinnipeds: ASL breeding site (11-50 count (2-45 pups)), LNFS breeding colony (101-200). Birds: White-faced Storm Petrel (301-600), Short-tailed shearwater (1001-2000), Black-browed Albatross, Yellow-nosed Albatross.	Very High	2

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
	Pearson Island	RR/MP	Pinniped: ASL breeding site (51-100 count (1-35 pups)), LNFS breeding site (11-50). Birds: Little Penguins (> 1000. Much higher penguin count > 1000.	Very High	2
	Veteran Islands	RR/MP	Pinniped: ASL breeding site (51-100) and LNFS haul out site on the north island. Birds: Short-tailed Shearwater (301-600) on north island.	Very High	2 (pinnipeds) 3 (birds)
	Dorothee Islands	RR/MP	Pinniped: ASL breeding site (11-50) and LNFS breeding site (11-50) Birds: Little Penguins (11-50), Short-tailed Shearwaters (1001-2000), White-faced Storm Petrel (3001 to 10000).	Very High	2 (pinnipeds) 3 (birds)

8.7.2.3.4 Recommended Response Strategies

This sector will be managed by the DEW Eyre Peninsula Region.

8.7.2.3.4.1 Prevention

- Pre-emptive capture of Little Penguins.
- Various hazing techniques may also be useful for moving wildlife out of at risk areas.

8.7.2.3.4.2 Personnel Deployment

Field teams in this area will be deployed from a variety of locations depending on the nature and extent of the event. The southern portion of this sector will be staged from Elliston (168 km from Port Lincoln) which has a sealed runway, marine access, small DEW office and ample resources.

Streaky Bay (110 km from Ceduna or 293 km from Port Lincoln) would serve as an ideal location to stage from for reconnaissance and recovery operations for the central and northern portion of this sector.

8.7.2.3.4.3 Wildlife Reconnaissance and Wildlife Recovery

Aerial reconnaissance will further inform the priority Coastal Area Units. For stretches of sandy beach, reconnaissance and recovery may be conducted by 4WD and ATV while the rocky coast will need to be traversed by foot. Reconnaissance and Recovery for the offshore islands will be done by small craft. For Pearson Island, larger craft will be required due to its distance offshore. Other Islands (Dorothee, Veteran, Ward, Nic Baudin and Topgallant) are only accessible via helicopter. Vessels can be launched from the nearest boat ramp. There are several throughout the sector. Recovered wildlife can be taken to the nearest established Holding Facility or Treatment Facility.

According to latest available data these offshore islands may support the following populations:

- <2500 pinnipeds (mostly ASL),
- ~ 2000 Little Penguins, and
- <200,000 seabirds (mostly Short-tailed Shearwater depending on time of year).

8.7.2.3.4 Logistics Options for Facility Establishment

Staging sites will be established as necessary at opportunistic locations on or close to the shoreline as well as Islands if required. DEW operates facilities in Ceduna, Elliston, Streaky Bay and Port Lincoln.

Once collected wildlife may be transported from staging sites or Temporary Holding Facility and then to nearest established Treatment Facility. There is scope to set up a Wildlife Treatment Facility in Streaky Bay and/or Elliston depending on the scale of the event. The DEW Office in Elliston is close to the boat ramp and has a large recreational oval next door.

Table 8.24: Staging Sites for Sector 12

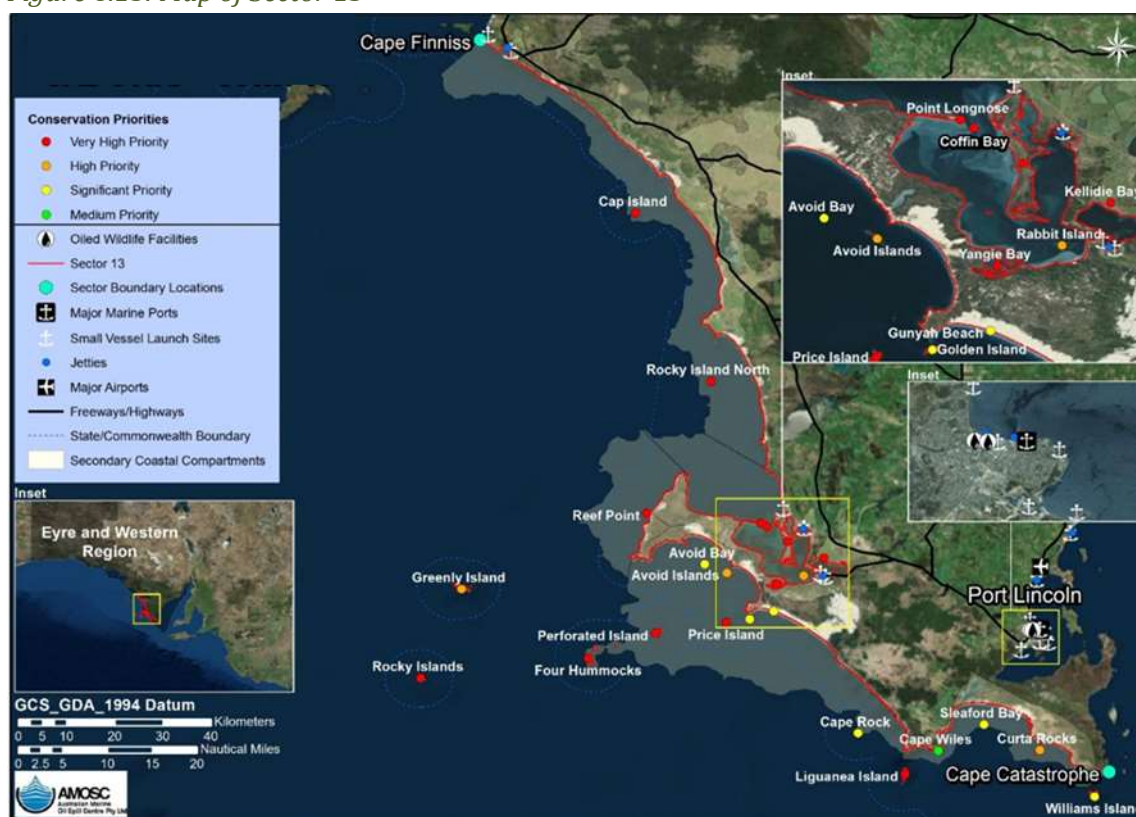
Site Purpose	Location	Contact
Staging Sites	Streaky Bay	DEW - (+61 8) 8204 1910
	Venus Bay	DEW - (+61 8) 8204 1910
	Elliston	DEW - (+61 8) 8204 1910
	Flinders Island	DEW - (+61 8) 8204 1910
Temporary Holding Facility	DEW Elliston Information Centre 6 Memorial Drive, Elliston SA 5670	DEW - (+61 8) 8204 1910
	DEW Streaky Bay 15 Bay Road, Streaky Bay SA 5680	DEW - (+61 8) 8204 1910
	On Water Facility	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Ceduna	See Oiled Wildlife Facilities in Section 5
	Port Lincoln	See Oiled Wildlife Facilities in Section 5

8.7.2.4.4.5 Equipment

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

8.7.2.5 Sector 13: Cape Finniss to Cape Catastrophe (CC 199-196)

Figure 8.15: Map of Sector 13



8.7.2.5.1 Terrestrial overview

UCL, freehold agriculture and National Parks. Rocky coastlines predominate much of this sector.

8.7.2.5.2 Marine Overview

Thorny Passage Marine Park and Investigator Marine Park comprise most of this sector. Steep cliff and high energy beaches have helped in mitigating anthropogenic pressures throughout this sector. Cold, nutrient rich upwellings and associated plumes from the south west of Eyre Peninsula combine with the Flinders Current from the south east creating a haven for marine life and may be endemic and iconic species (Baker, 2004). This is one of the most bio diverse regions across the south of Australia.

8.7.2.5.3 Environmental Values

Table 2.25: Environmental Values for Sector 13

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Cape Finniss to Frenchman Bluff (FID 199)	Cap Island	MP/CP	Pinnipeds: ASL breeding site (101-200) Birds: White-faced Storm Petrel (301-600)	Very High	2 (unpublished)
	Coffin Bay to Venus Bay	RR	Birds: Declared Coastal Wader Bird Site	Significant	3
	Rocky Island North	CP	Pinnipeds: ASL breeding site (101-200) and LNFS haul out site. Birds: Fairy Terns (no data)	Very High	2 (unpublished)
Frenchman Bluff to Point Sir Issacc (198)	Coffin Bay	MP (SZ)	Birds: Several Declared Wader Bird Sites are declared throughout Coffin Bay: <ul style="list-style-type: none"> □ NW Longnose Pt (<1000) □ Longnose Pt (1001-2000) □ Horse Peninsula (<1000) □ Kellidie Bay (<1000) □ Long Beach Bay (<1000) □ Yangie Bay (<1000) Wetland: Coffin Bay Coastal Wetland System. Wetland of National Importance. NOTE: Coffin Bay features 4 X Marine Park Sanctuary Zones (See Thorny Passage MP Management Plan)	Very High	3
	Rabbit Island (inside Coffin Bay)	MP	Birds: Little Penguin (1-10) Pinnipeds: New Zealand Furl Seal Site (no data)	High	3
Point Sir Issacc to Point Whidbey (197)	Reef Point	MP/CP	Pinnipeds: ASL haul out site (no data) Reptile: Leathery Turtle (<i>Dermochelys coriacea</i>) sighted on occasions	Very High	3
Point Whidbey to Cape Catastrophe (196)	Avoid Island	MP/CP	Wetland: Wetland of National Importance (Criteria 3, 5, 6) supporting diversity of seabirds. Birds: Little Penguin (11-50), White-faced Storm Petrel (<1000), Short-tailed Shearwater (<600).	High	3
	Avoid Bay	MP/CP	Birds: Declared Coastal Waterbird Site	Significant	3
	Rocky Islands	MP/CP	Pinnipeds: ASL breeding site (11-50), NZFS breeding site (201-300)	Very High	2 (unpublished)
	Greenly Island	MP/CP	Pinnipeds: ASL haul out site (51-100), NZFS breeding site (201-300) Birds: Short-tailed Shearwater (301-600), Little Penguin (51-100), Fairy Tern (51-100)	High	2 (unpublished)
	Four Hummocks Islands	MP/CP	Pinnipeds: ASL Sites on North, Central, NE and South Island. Central is a breeding colony of (11-50). Central is also a LNFS breeding site of (101-200). NE Island has a small breeding colony of both species. (11-50).	Very High	2

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
	Perforated Island	MP/CP	Pinniped: ASL Breeding site (no data) Bird: Short-tailed Shearwater (10,000 – 100,000).	Very High	3
	Price Island	MP/CP	Pinnipeds: ASL breeding site (51-100) Birds: White-faced Storm Petrel (30001-10,000), Short-tailed Shearwater (30001-10,000)	Very High	2
Point Whidbey to Cape Catastrophe (196)	Golden Island	MP/CP	Pinniped: ASL haul out site (1-10) Birds: Short-tailed Shearwater (30001-10,000).	Significant	2 (unpublished)
	Gunyah Beach	MP/NP	Birds: Declared Coastal Wader Bird Site (<1000).	Significant	3
	Gunyah Beach to Cape Wiles	MP/CP	Birds: Abundant seabird and shore bird stretch of rocky coastline.	Medium	3
	Cape Rocks	MP/CP	Pinnipeds: ASL haul out (1-10)	Significant	3
	Liguanea Island	MP/CP	Pinnipeds: ASL breeding site (51-100 count (1-43 pups), LNFS breeding site (1001-2000) Birds: Short-tailed Shearwater (10001 to 100,000).	Very High	2
	Sleaford Bay	MP	Birds: Declared Coastal Wader Bird Site (<1000).	Significant	3
	Curta Rocks	MP/CP	Pinnipeds: ASL breeding site (1-10) Birds: Little Penguin (11-50), Crested Tern (301-600).	High	2 (unpublished)
	Williams Island	MP/CP	Pinnipeds: ASL breeding site (< 10 pups) , LNFS haul out site (11-50). Birds: Short-tailed Shearwater (10,000 – 100,000), Hooded Plover.	Significant	2

8.7.2.5.4 Recommended Response Strategies

8.7.2.5.4.1 Prevention

- Pre-emptive capture of Little Penguin
- Various hazing techniques may also be useful for moving wildlife out of at risk areas
- Implement Tactical Response Plans for this sector.

8.7.2.5.4.2 Personnel Deployment

Field teams in this area will be deployed from Port Lincoln which has a commercially operated airport. From here field teams could be deployed to forward Staging areas in Elliston or Coffin Bay. The whole southern half of this sector can be accessed by day trips from Port Lincoln.

8.7.2.5.4.3 Wildlife Reconnaissance and Wildlife Recovery

Aerial reconnaissance will be essential to further identify priority sites, especially for the offshore islands. Almost all islands are only accessible via helicopter. Stretches of coastline between Cape Catastrophe and Coffin Bay can be accessed by 4WD and ATV. The rocky escarpment would have to be accessed by foot. Recovery Operations can return wildlife to staging areas which are opportunistically established based on the nature of the event.

The offshore islands in this sector support up to:

- <4000 pinnipeds (mostly LNFS),
- <250 Little Penguins, and
- <200,000 seabirds depending on time of year.

In addition, Coffin Bay and its island support 6 X Coastal Waderbird Sites (<7000 birds).

8.7.2.5.4.4 Logistics Options for Facility Establishment

Staging sites will be established as necessary at opportunistic locations on or close to the shoreline as well as Islands if required. It may prove advantageous to establish a barge which acts as a Holding Facility in the mouth of Coffin Bay. Wildlife from the offshore islands and that within Coffin Bay (<7000 Wading birds in Coffin Bay) could be taken to the barge and once stabilised transported by small craft/vehicle to the Treatment Facility in Port Lincoln.

Table 8.26: Staging Sites for Sector 13

Site Purpose	Location	Contact
Staging Sites	Coffin Bay	DEW - (+61 8) 8204 1910
	Port Elliston	DEW - (+61 8) 8204 1910
	Port Lincoln	DEW - (+61 8) 8204 1910
Temporary Holding Facility	On water (Coffin Bay)	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Port Lincoln	See Oiled Wildlife Facilities in Section 5
	Ceduna	See Oiled Wildlife Facilities in Section 5

8.7.2.5.4.5 Equipment

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

8.7.2.6 Sector 14: Cape Catastrophe to Shoalwater Point (CC 195)

Figure 8.16: Map of Sector 14



8.7.2.6.1 Terrestrial overview

UCL, and freehold agriculture with a significant urban footprint in Port Lincoln.

8.7.2.6.2 Marine Overview

This sector encompasses Franklin Harbor Marine Park and Sir Joseph Bank's Marine Park. Low lying island, shallow reefs, sea grass meadows and sheltered sandy bays interspersed with rocky limestone outcrops are represented throughout the sector. Tumby Bay and Franklin Harbor are both designated Wetlands of National Importance providing habitat for a variety of migratory shorebirds, many of which are protected under international treaties. Dangerous Reef support one of the largest ASL breeding colonies in the world (Goldsworthy, 2009).

8.7.2.6.3 Environmental Values

Table 8.27: Environmental Values for Sector 14

Coastal Compartment	Coastal Area Unit	Tenure	Species susceptible to oiling	Priority	ZoC
Cape Catastrophe to Shoalwater Point (FID 195)	South Neptune Island	MP/CP	Pinnipeds: ASL breeding site (11-50) and LNFS Breeding Site (101-200). Birds: Crested Tern (2001-3000), Short-tailed Shearwater (2001-3000), Caspian Tern (101-200).	Very High	2
	South Neptune Middle Island	MP/CP	Pinnipeds: ASL breeding on Middle Island and Lighthouse Island (<15 pups). LNFS breed on Lighthouse Island (51-100).	High	2
	North Neptune Island	MP/CP	Pinnipeds: ASL haul out site (1-10) and LNFS Breeding Site (2001-3000). ASL also haul out to islet to north of North Neptune Island. Birds: Short-tailed Shearwater (<100,000).	High	2
	North Neptune Island (East)	MP/CP	Pinnipeds: ASL breeding site (51-100 count (11-14 pups)	Very High	2
	Albatross Island	MP/NP	Pinnipeds: ASL breeding site (201-300 count (12-95 pups) and LNFS haul out Site (11-50). LNFS haul out (11-50). Birds: Little Penguin <10	Very High	1
	Thistle Islands	RR	Pinnipeds: ASL haul out areas (<10). Two sites on Thistle Island (<10) and one each on Black Rock (no data), Hopkins (11-50) and Smith Island (51-100).	High	2
	Lewis Island	MP	Pinnipeds: ASL breeding areas (300-600 count (78-131 pups). Birds: White-faced Storm Petrel (300-600)	Very High	2
	Owen Islands	NP/SW	Birds: White-faced Storm Petrel (600-1000), Little Penguin (51-100), Fairy Tern, Hooded Plover.	High	3
	Dangerous Reef	MP	Pinnipeds: ASL breeding areas (>2000 count (248-709 pups). Birds: Black-faced Cormorant <3000, Pacific Gull.	Very High	2
	Donnington Island	MP	Pinnipeds: ASL haul out areas (<10).	Significant	2
	Lincoln Cove Marina	SW	Wetland: Wetland featuring water birds.	Low	4
	Murrays Point Selena Wetlands	RR	Wetland: Wetland featuring estuarine shallow, seabird, shorebirds.	Medium	4
	Tod River	RR	Wetland: Wetland featuring estuarine shallow, seabird, shorebirds.	Medium	4
	Tumby Bay Marina and Creek	SW	Wetland: Wetland of National Importance (Criteria 1,3) featuring estuarine shallow, mangroves, seabirds, shorebirds. Birds: Declared Coastal Wader Bird Site. NOTE: Features Sanctuary Zone	High	3
	Arno Bay Creek Mouth	RR	Wetland: Intertidal sand, mangroves, tidal mud/marsh flats, seashore/wading birds. Birds:	High	3

Coastal Compartment	Coastal Area Unit	Tenure	Species susceptible to oiling	Priority	ZoC
			Declared Coastal Wader Bird Site.		
	Rabbit Island	RR	Pinnipeds: ASL haul out site (1-10) and haul LNFS haul out Site (11-50). Birds: Fairy Tern.	Significant	3
Cape Catastrophe to Shoalwater Point (FID 195)	Bolingbroke Point	RR	Pinnipeds: ASL haul out site (1-10)	Significant	2
	Islands triangulated by: 34°42.000' S 136°06.000' E 34°24.000' S 136°18.000' E 34°45.000' S 136°30.000' E	MP (SZ) /CP	Pinnipeds: There are 11 documented ASL haul out spots on islands and islets (<50 per site) and 1 breeding site on English Island (101-200 count (4-27 pups). Birds: Little Penguin (Blythe Island, Lusby and Roxby (51-100 each), Caspian Tern, Fairy Tern, White-faced Storm Petrel <10,000.	Very High	1
	Tumby Island	MP/CP	Pinnipeds: ASL haul out spot (no data).	Significant	3
	Lipson Island	CP	Birds: Little Penguin (11-50), Fairy Tern (1-10), Black-faced Cormorant, Crested Tern 600-1000)	High	3
	Point Gibbon	MP	Pinnipeds: ASL haul out spot (<10).	Significant	3
	Franklin Harbour	MP/RR	Wetland: Wetland of National Importance (Criteria 1, 3, 6). Intertidal Mangrove community supporting a diversity of shorebirds. Declared Wetland of National Importance. Birds: Declared Coastal Wader Bird Site at Franklin Harbour supporting Caspian Terns (<10) and Pied Cormorants (<50), Fairy Tern, Bar-tailed Godwit.	High	3
	Lucky Bay	MP/RR	Birds: Declared Coastal Waderbird Site (<1000).	Significant	3

8.7.2.6.4 Recommended Response Strategies

8.7.2.6.4.1 Prevention

- Pre-emptive capture of Little Penguins
- Implement the relevant Tactical Response Plans to prevent oiling of estuarine fauna
- Various hazing techniques may also be useful for moving wildlife out of at risk areas.

8.7.2.6.4.2 Personnel Deployment

Field teams in this area will be deployed from Port Lincoln which has an airport that is readily accessible from throughout Australia. Field team can be deployed to the north at various staging points dependent on the nature and the scale of the event. Port Lincoln is also an ideal location to access the off shore islands in this sector.

8.7.2.6.4.3 Wildlife Reconnaissance and Wildlife Recovery

Aerial Surveillance will be essential in further prioritising the Coastal Area Units in the offshore islands throughout this sector. Due to the fact that there are several offshore islands in this sector located up to 80 kilometres (44 nautical miles of 4.5 hours steaming at 10 knots) it may be necessary to establish water based Holding / Stabilisation vessels in identified locations (e.g. Gambier Islands). The offshore islands in this sector support up to:

- <7000 pinnipeds (approximately 2000 ASL on Dangerous Reef alone),
- <400 Little Penguins (likely more that are unsurveyed), and
- <200,000 sea birds (mainly Caspian Tern and Short-tailed Shearwaters – seasonally dependent).

Gambier Islands

The Gambier Islands (MP) are actually in Sector 17 (Coastal Compartment 190) however they are best accessed from Port Lincoln as there is a lack of ports and suitable boat launches on the south west of the Lower Yorke Peninsula which could support the size of vessel which would be required for reconnaissance and recovery operations in the ASL/seabird abundant Gambier Islands. The Gambier Islands support:

- <500 pinniped (mostly ASL),
- <200 Little Penguins, and
- <100,000 White-faced Storm Petrel (seasonally).

8.7.2.6.4.4 Logistics Options for Facility Establishment

Staging sites will be established as necessary at opportunistic locations on or close to the shoreline as well as Islands if required. Once collected wildlife may be transported from staging sites to the Treatment Facility in Port Lincoln or Port Augusta depending on which is closest.

Table 8.28: Staging Sites for Sector 14

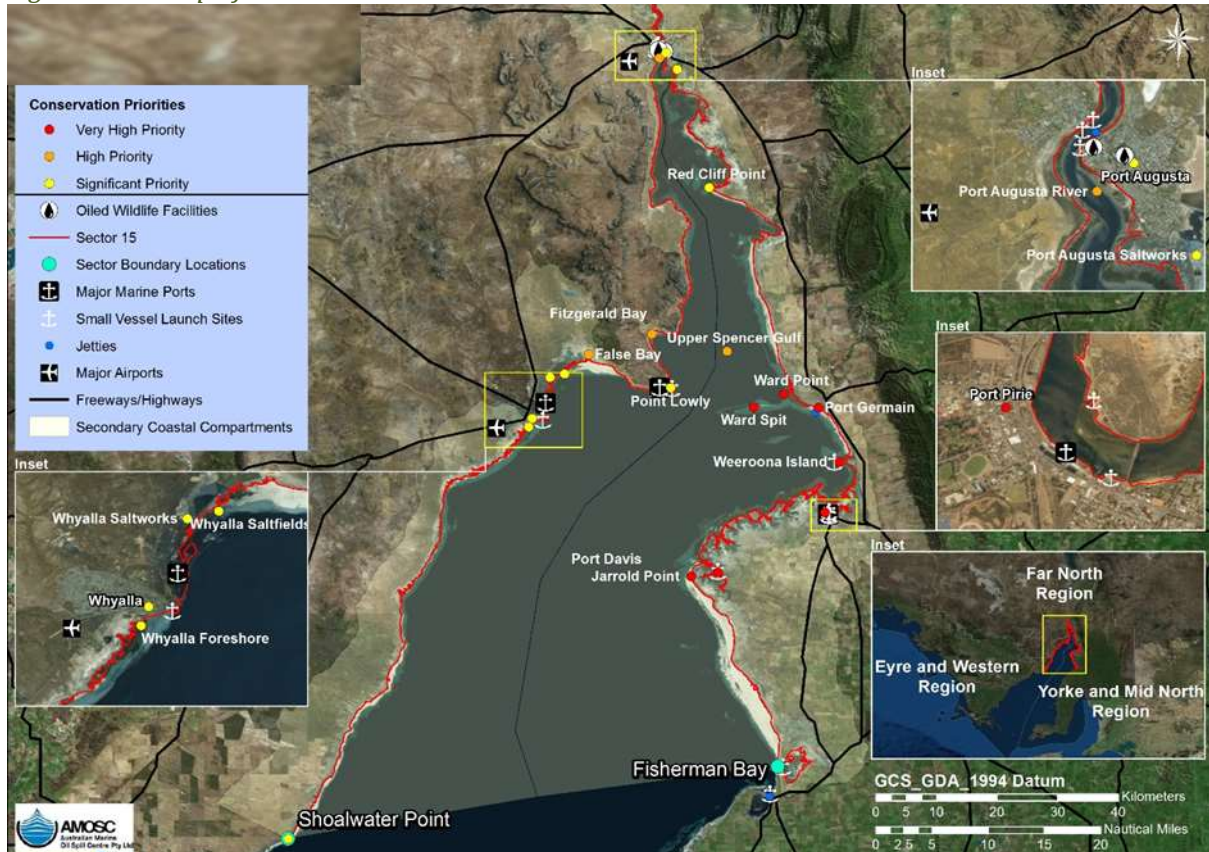
Site Purpose	Location	Contact
Staging Sites	Marine Based	DEW - (+61 8) 8204 1910
	Port Lincoln	DEW - (+61 8) 8204 1910
	Tumby Bay	DEW - (+61 8) 8204 1910
	Cowell	DEW - (+61 8) 8204 1910
Temporary Holding Facility	Marine Based	DEW - (+61 8) 8204 1910
Oiled Wildlife Facility	Port Lincoln	See Oiled Wildlife Facilities in Section 5
	Port Augusta	See Oiled Wildlife Facilities in Section 5

8.7.2.6.4.5 Equipment

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

8.7.2.7 Sector 15: Shoalwater Point to Fisherman Bay (CC 194-193)

Figure 8.17: Map of Sector 15



8.7.2.7.1 Terrestrial overview

UCL, pastoral lease station country which is semi-arid. Rocky coastline with the occasional sandy beach.

8.7.2.7.2 Marine Overview

This sector is mostly comprised of the Upper Spencer Gulf Marine Park. The Spencer Gulf is an inverse estuary with higher salinity present at the top of the gulf, which is influenced by high temperatures and a large tidal range. The Upper Spencer Gulf is a declared Wetland of National Importance containing a variety of coastal and marine habitats including saltmarsh, tidal flats and some of the largest stands of mangroves in South Australia. These habitats form important nesting and feeding sites for local and migratory shorebirds and the only known mass breeding aggregation of Giant Australian cuttlefish in the world. The region is characterised by sheltered beaches, rocky shoreline, headland reefs, near-shore patch reefs and the most extensive sea grass meadows in South Australia (Baker, 2004).

8.7.2.7.3 Environmental Values

Table 8.29: Environmental Values for Sector 15

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
Shoalwater Point to Port Augusta (194)	Shoalwater Point	MP/NR	Birds: Declared Coastal Waderbird Site (<1000)	Significant	3
	Whyalla to Shoalwater Point	RR	Birds: Declared Coastal Waderbird Site (<1000)	Significant	3
	Whyalla Foreshore	MP	Birds: Declared Coastal Waderbird Site (<1000)	Significant	3
	False Bay	MP	Wetland: Declared Wetland of National Importance (Criteria 1,3,5,6) with mangrove communities, intertidal mudflats and a diversity of wader birds. Birds: Declared Coastal Waderbird Site (<1000).	High	3
	Whyalla Saltfields	MP	Birds: Fairy Terns (11-50)	Significant	3
	Whyalla Saltworks	MP/UI	Birds: Declared Coastal Waderbird Site (1001-2000)	Significant	3
	Fitzgerald Bay Rivermouth Entrance	MP	Wetland: Wetland of National Importance (Criteria 1, 3, 5, 6). Catchment fed inlet supporting a diversity of fauna.	High	3
	Port Augusta to Point Lowly	MP	Birds: Declared Coastal Waderbird Site (<1000)	Significant	3
Port Augusta to Fishermen Bay (193)	Red Cliff Point to Port Augusta	MP	Birds: Declared Coastal Waderbird Site (<1000)	Significant	3
	Upper Spencer Gulf	MP	Wetland: Declared Wetland of National Importance (Criteria 1, 3, 5, 6) supporting a diversity of shore birds.	High	3
	Port Augusta Saltworks	MP	Birds: Declared Coastal Waderbird Site (>5000)	Significant	3
	Port Augusta River	MP	Wetland: Wetland of National Importance (Criteria 1, 3, 5, 6). Intertidal sand, mud mangroves and seashore/wading birds.	High	3
	Red Cliffe Point	MP	Birds: Declared Coastal Waderbird Site (2001-3000)	Significant	3
Port Augusta to Fishermen Bay (193)	Port Pirie	MP	<p>Birds: There are six (6) Declared Coastal Waderbird Sites within a 20 km radius of Port Pirie:</p> <ul style="list-style-type: none"> □ Port Germaine (>1000) □ Port Pirie to Ward Point (<1000) □ Weeroona Island (<1000) □ Ward Spit (3001-4000) □ Port Davis to Point Pirie (<1000) □ Point Jarrold (4001-5000) <p>Wetland: Wetland of National Importance (Criteria 1, 3, 5, 6) Port Pirie River which support intertidal mudflats and mangrove communities.</p>	Very High	3

Coastal Compartment	Coastal Area unit	Tenure	Species susceptible to oiling	Priority	ZoC
	10 km south of Port Davis	MP	Birds: Declared Coastal Waderbird Site (<1000).	Significant	3

8.7.2.7.4 Recommended Response Strategies

8.7.2.7.4.1 Prevention

- Implement the relevant Tactical Response Plans to prevent oiling of estuarine fauna
- Various hazing techniques may also be useful for moving wildlife out of at risk areas.

8.7.2.7.4.2 Personnel Deployment

Personnel in this sector would be deployed from Port Augusta and Whyalla DEW Offices. From there they can be forward deployed in Whyalla (west portion of sector) or to Port Pirie (east portion of sector).

8.7.2.7.4.3 Wildlife Reconnaissance and Wildlife Recovery

Aerial reconnaissance will help to further prioritise the response effort throughout this sector. The use of a water based facility in the Upper Spencer Gulf will save travel time and could potentially act as a Holding Facility prior to wildlife being transported to the Treatment Facility in Port Augusta.

8.7.2.7.4.4 Logistics Options for Facility Establishment

There are minimal offshore sensitivities in this sector. While most of the sensitivities prescribed in this sector can be serviced by vehicles, the nature of the Upper Spencer Gulf would necessitate excessive travel time if this sector were only being serviced vehicles. Using small vessels and possible an On-Water Holding Facility could expedite recovery operations.

Table 8.30: Staging Sites for Sector 15

Site Purpose	Location	Contact
Staging Sites	Port Augusta	DEW - (+61 8) 8204 1910
	Port Pirie	DEW - (+61 8) 8204 1910
	Whyalla	DEW - (+61 8) 8204 1910
Temporary Holding Facility	Port Pirie	DEW - (+61 8) 8204 1910
	Port Augusta	DEW - (+61 8) 8204 1910
	On water	DEW - (+61 8) 8204 1910
Oiled Wildlife Facilities	Port Augusta	See Oiled Wildlife Facilities in Section 5
	Port Lincoln	See Oiled Wildlife Facilities in Section 5
	Adelaide (233 km from Port Pirie)	See Oiled Wildlife Facilities in Section 5

8.7.2.7.4.5 Equipment

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

8.8 Alinytjara Wilurara 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 Acts and Agreements		Key to conservation status level		Key to Postcodes		
EPBC	Listed threatened fauna under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth).	CR	Critically endangered	5690	This is the only postcode in the region	
NPW	Status under the Threatened Species Schedules of the <i>National Parks and Wildlife Act 1972</i>	EN	Endangered			
JAMBA	Listed under the <i>Japan and Australia Migratory Bird Bilateral Agreement 1974</i> .	RA	Rare			
CAMBA	Listed under the <i>China and Australia Migratory Bird Bilateral Agreement 1986</i>	VU	Vulnerable			
RoKAMBA	Listed under the <i>Republic of Korea and Australia Migratory Bird Bilateral Agreement 2007</i>	NT	Not threatened			
IUCN	Listed threatened species under the IUCN (International Union for Conservation of Nature) Red List.	LC	Least concern			
		UP	Unprotected			
		MA	Marine			
		MI	Migratory			

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Emus STRUTHIONIFORMES							
Emu	<i>Dromaius novaehollandiae</i>	-	-	-	-	-	LC
Grebes PODICIPEDIFORMES							
Hoary-headed Grebe	<i>Poliocephalus</i>	-	-	-	-	-	LC
Australasian Grebe	<i>Tachybaptus novaehollandiae</i>	-	-	-	-	-	LC
Penguins SPHENISCIFORMES							
Little Penguin	<i>Eudyptula minor</i>	-	-	-	-	-	LC
Tube-Nosed Seabirds PROCELLARIIFORMES							
Black-browed Albatross	<i>Thalassarche melanophrys</i> (<i>Thalassarche melanophrys</i>) (<i>Diomedea melanophrys impavida</i>)	VUMAMI	VU	-	-	-	NT
Cormorants, Gannets and Pelicans PELECANIFORMES							
Australasian Darter	<i>Anhinga novaehollandiae</i> (<i>Anahinga melanogaster</i>)	-	RA	-	-	-	LC
Little Pied Cormorant	<i>Microcarbo melanoleucos</i>	-	-	-	-	-	LC
Australasian Gannet	<i>Morus serrator</i>	-	-	-	-	-	LC
Australian Pelican	<i>Pelecanus conspicillatus</i>	-	-	-	-	-	LC
Great Cormorant	<i>Phalacrocorax carbo</i>	-	-	-	-	-	LC
Black-faced Cormorant	<i>Phalacrocorax fuscescens</i>	-	-	-	-	-	LC
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>	-	-	-	-	-	LC
Pied Cormorant	<i>Phalacrocorax varius</i>	-	-	-	-	-	LC
Hérons, Ibises and Storks ARDEIFORMES							
Eastern Great Egret	<i>Ardea modesta</i>	-	-	-	-	-	NE
Little Egret	<i>Egretta garzetta</i>	-	RA	-	-	-	LC
White-faced Heron	<i>Egretta novaehollandiae</i> (<i>Ardea novaehollandiae</i>)	-	-	-	-	-	LC
Eastern Reef Egret	<i>Egretta sacra</i>	-	RA	-	Listed	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Royal Spoonbill	<i>Platalea regia</i>	-	-	-	-	-	LC
Swans, Geese and Ducks ANSERIFORMES							
Chestnut Teal	<i>Anas castanea</i>	-	-	-	-	-	LC
Grey Teal	<i>Anas gracilis</i>	-	-	-	-	-	LC
Australasian Shoveler	<i>Anas rhynchotis (Spatula rhynchotis)</i>	-	RA	-	-	-	LC
Pacific Black Duck	<i>Anas superciliosa</i>	-	-	-	-	-	LC
Musk Duck	<i>Biziura lobata</i>	-	RA	-	-	-	LC
Cape Barren Goose	<i>Cereopsis novaehollandiae</i>	VU	RA	-	-	-	LC
Black Swan	<i>Cygnus atratus</i>	-	-	-	-	-	LC
Pink-eared Duck	<i>Malacorhynchus membranaceus</i>	-	-	-	-	-	LC
Blue-billed Duck	<i>Oxyura australis</i>	-	RA	-	-	-	NT
Birds of Prey ACCIPITRIFORMES							
Collared Sparrowhawk	<i>Accipiter cirrocephalus</i>	-	-	-	-	-	LC
Brown Goshawk	<i>Accipiter fasciatus</i>	-	-	-	-	-	LC
Wedge-tailed Eagle	<i>Aquila audax</i>	-	-	-	-	-	LC
Swamp Harrier	<i>Circus approximans</i>	-	-	-	-	-	LC
Spotted Harrier	<i>Circus assimilis</i>	-	-	-	-	-	LC
Black-shouldered Kite	<i>Elanus axillaris</i>	-	-	-	-	-	LC
Brown Falcon	<i>Falco berigora</i>	-	-	-	-	-	LC
Nankeen Kestrel	<i>Falco cenchroides</i>	-	-	-	-	-	LC
Australian Hobby	<i>Falco longipennis</i>	-	-	-	-	-	LC
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	-	EN	-	Listed	-	LC
Little Eagle	<i>Hieraaetus morphnoides</i>	-	-	-	-	-	LC
Black Kite	<i>Milvus migrans</i>	-	-	-	-	-	LC
Eastern Osprey	<i>Pandion cristatus</i>	-	-	-	-	-	-
Megapodes and Allies GALLIFORMES							
Stubble Quail	<i>Coturnix pectoralis</i>	-	-	-	-	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Button Quails and Allies GRUIFORMES							
Australian Bustard	<i>Ardeotis australis</i>	-	VU	-	-	-	LC
Waders, Plovers, Terns and Gulls CHARADRIFORMES							
Common Sandpiper	<i>Actitis hypoleucos (Tringa hypoleucos hypoleucos)</i>	-	RA	Listed	Listed	Listed	LC
Ruddy Turnstone	<i>Arenaria interpres</i>	-	RA	Listed	Listed	Listed	LC
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	-	-	Listed	Listed	Listed	LC
Sanderling	<i>Calidris alba (Crocethia alba)</i>	MA MI	RA	Listed	Listed	Listed	LC
Red Knot	<i>Calidris canutus</i>	-	-	Listed	Listed	Listed	NT
Curlew Sandpiper	<i>Calidris ferruginea</i>	CRMA	-	Listed	Listed	Listed	NT
Little Stint	<i>Calidris minuta</i>	-	RA	-	-	Listed	LC
Red-necked Stint	<i>Calidris ruficollis</i>	-	-	Listed	Listed	Listed	NT
Great Knot	<i>Calidris tenuirostris</i>	-	RA	Listed	Listed	Listed	EN
Double-banded Plover	<i>Charadrius bicinctus</i>	-	-	-	-	-	LC
Greater Sand Plover	<i>Charadrius leschenaultii</i>	-	RA	Listed	Listed	Listed	LC
Lesser Sand Plover	<i>Charadrius mongolus</i>		RA	Listed	Listed	Listed	LC
Red-capped Plover	<i>Charadrius ruficapillus</i>	-	-	-	-	-	LC
Oriental Plover	<i>Charadrius veredus</i>	-	-	-	-	Listed	LC
Whiskered Tern	<i>Chlidonias hybrida</i>	-	-	-	-	-	LC
Silver Gull	<i>Chroicocephalus novaehollandiae (Larus novaehollandiae)</i>	-	-	-	-	-	LC
Banded Stilt	<i>Cladorhynchus leucocephalus</i>	-	VU	-	-	-	LC
Eurasian Coot	<i>Fulica atra</i>	-	-	-	-	-	LC
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>	-	RA	-	-	-	LC
Australian Pied Oystercatcher	<i>Haematopus longirostris</i>	-	RA	-	-	-	LC
Black-winged Stilt	<i>Himantopus</i>	-	-	-	-	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Caspian Tern	<i>Hydroprogne caspia</i>	-	-	-	-	-	LC
Pacific Gull	<i>Larus pacificus</i>	-	-	-	-	-	LC
Bar-tailed Godwit	<i>Limosa lapponica</i>	-	RA	Listed	Listed	Listed	NT
Eastern Curlew	<i>Numenius madagascariensis</i>	CR	VU	Listed	Listed	Listed	EN
Whimbrel	<i>Numenius phaeopus</i>	-	RA	Listed	Listed	Listed	LC
Pacific Golden Plover	<i>Pluvialis fulva</i>	-	RA	-	-	Listed	LC
Grey Plover	<i>Pluvialis squatarola</i>	-	-	Listed	Listed	Listed	LC
Red-necked Avocet	<i>Recurvirostra novaehollandiae</i>	-	-	-	-	-	LC
Fairy Tern	<i>Sternula nereis (Sterna nereis)</i>	VU	EN	-	-	-	VU
Crested Tern	<i>Thalasseus bergii (Sterna bergii)</i>	-	-	Listed	-	-	LC
Hooded Plover	<i>Thinornis rubricollis (Charadrius rubricollis)</i>	VUMA	Vul	-	-	-	VU
Grey-tailed Tattler	<i>Tringa brevipes (Heteroscelus brevipes)</i>	-	RA	Listed	Listed	Listed	NT
Wood Sandpiper	<i>Tringa glareola</i>	-	RA	Listed	Listed	Listed	LC
Common Greenshank	<i>Tringa nebularia</i>	-	-	Listed	Listed	Listed	LC
Marsh Sandpiper	<i>Tringa stagnatilis</i>	-	-	Listed	Listed	Listed	LC
Little Button-quail	<i>Turnix velox</i>	-	-	-	-	-	LC
Masked Lapwing	<i>Vanellus miles</i>	-	-	-	-	-	LC
Banded Lapwing	<i>Vanellus tricolor</i>	-	-	-	-	-	LC
Pigeons and Doves COLUMBIFORMES							
Peaceful Dove	<i>Geopelia striata</i>	-	-	-	-	-	LC
Crested Pigeon	<i>Ocyphaps lophotes</i>	-	-	-	-	-	LC
Common Bronzewing	<i>Phaps chalcoptera</i>	-	-	-	-	-	LC
Brush Bronzewing	<i>Phaps elegans</i>	-	-	-	-	-	LC
Parrots and Cockatoos							
Australian Ringneck	<i>Barnardius zonarius</i>	-	-	-	-	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Galah	<i>Eolophus roseicapillus</i> (<i>Cacatua roseicapilla</i>)	-	-	-	-	-	LC
Purple-crowned Lorikeet	<i>Glossopsitta porphyrocephala</i>	-	-	-	-	-	LC
Major Mitchell's Cockatoo	<i>Lophochroa leadbeateri</i> (<i>Cacatua leadbeateri</i>)	-	RA	-	-	-	LC
Rock Parrot	<i>Neophema petrophila</i>	-	RA	-	-	-	LC
Blue Bonnet	<i>Northiella haematogaster</i>	-	RA	-	-	-	LC
Mulga Parrot	<i>Psephotus varius</i> (<i>Psephotellus varius</i>)	-	-	-	-	-	LC
Cuckoos CUCULIFORMES							
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>	-	-	-	-	-	LC
Pallid Cuckoo	<i>Cacomantis pallidus</i> (<i>Heteroscenes pallidus</i>)	-	-	-	-	-	LC
Horsfield's Bronze-Cuckoo	<i>Chalcites basalis</i> (<i>Chrysococcyx basalis</i>)	-	-	-	-	-	LC
Black-eared Cuckoo	<i>Chalcites osculans</i> (<i>Chrysococcyx osculans</i>)	-	-	-	-	-	LC
Owls STRIGIFORMES							
Southern Boobook	<i>Ninox novaeseelandiae</i>	-	-	-	-	-	LC
Eastern Barn Owl	<i>Tyto javanica</i> (<i>Tyto alba javanica</i>)	-	-	-	-	-	-
Frogmouths and Nightjars CAPRIMULGIFORMES							
Australian Owlet-nightjar	<i>Aegotheles cristatus</i>	-	-	-	-	-	LC
Spotted Nightjar	<i>Eurostopodus argus</i>	-	-	-	-	-	LC
Tawny Frogmouth	<i>Podargus strigoides</i>	-	-	-	-	-	LC
Swifts APODIFORMES							
Fork-tailed Swift	<i>Apus pacificus</i>	-	-	Listed	Listed	Listed	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Kingfishers and allies CORACIFORMES							
Rainbow Bee-eater	<i>Merops ornatus</i>	-	-	-	-	-	LC
Red-backed Kingfisher	<i>Todiramphus pyrrhopygius</i> (<i>Todiramphus pyrrhopygia</i>) (<i>Todirhamphus pyrrhopygia</i>)	-	-	-	-	-	LC
Sacred Kingfisher	<i>Todiramphus sanctus</i>	-	-	-	-	-	LC
Perching Birds PASSERIFORMES							
Spiny-cheeked Honeyeater	<i>Acanthagenys rufogularis</i>	-	-	-	-	-	LC
Inland Thornbill	<i>Acanthiza apicalis</i>	-	-	-	-	-	LC
Yellow-rumped Thornbill	<i>Acanthiza chrysorrhoa</i>	-	-	-	-	-	LC
Slender-billed Thornbill	<i>Acanthiza iredalei</i>	VU	VU	-	-	-	LC
Brown Thornbill	<i>Acanthiza pusilla</i>	-	-	-	-	-	LC
Chestnut-rumped Thornbill	<i>Acanthiza uropygialis</i>	-	-	-	-	-	LC
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>	-	-	-	-	-	LC
Red Wattlebird	<i>Anthochaera carunculata</i>	-	UP	-	-	-	LC
Australasian Pipit	<i>Anthus novaeseelandiae</i>	-	-	-	-	-	LC
Southern Whiteface	<i>Aphelocephala leucopsis</i>	-	-	-	-	-	LC
Black-faced Woodswallow	<i>Artamus cinereus</i>	-	-	-	-	-	LC
Dusky Woodswallow	<i>Artamus cyanopterus</i>	-	-	-	-	-	LC
Masked Woodswallow	<i>Artamus personatus</i>	-	-	-	-	-	LC
White-browed Woodswallow	<i>Artamus superciliosus</i>	-	-	-	-	-	LC
Rufous Fieldwren	<i>Calamanthus campestris</i>	-	-	-	-	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Shy Heathwren	<i>Calamanthus cautus (Hylacola cauta)</i>	-	RA	-	-	-	LC
Pied Honeyeater	<i>Certhionyx variegatus</i>	-	-	-	-	-	LC
White-backed Swallow	<i>Cheramoeca leucosterna</i>	-	-	-	-	-	LC
Brown Songlark	<i>Cincloramphus cruralis</i>	-	-	-	-	-	LC
Rufous Songlark	<i>Cincloramphus mathewsi</i>	-	-	-	-	-	LC
Chestnut Quail-thrush	<i>Cinclosoma castanotum (Cinclosoma castanotus castanotus)</i>	-	RA	-	-	-	LC
Cinnamon Quail-thrush	<i>Cinclosoma cinnamomeum</i>	-	-	-	-	-	LC
Rufous Treecreeper	<i>Climacteris rufa (Climacteris rufa)</i>	-	-	-	-	-	LC
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	-	-	-	-	-	LC
Ground Cuckoo-shrike	<i>Coracina maxima</i>	-	-	-	-	-	LC
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	-	-	-	-	-	LC
White-winged Chough	<i>Corcorax melanorhamphos</i>	-	RA	-	-	-	LC
White-throated Treecreeper	<i>Cormobates leucophaea (Cormobates leucophaeus leucophaeus)</i>	-	-	-	-	-	LC
Little Crow	<i>Corvus bennetti</i>	-	UP	-	-	-	LC
Australian Raven	<i>Corvus coronoides</i>	-	UP	-	-	-	LC
Little Raven	<i>Corvus mellori</i>	-	UP	-	-	-	LC
Australian Magpie	<i>Cracticus tibicen (Gymnorhina tibicen)</i>	-	-	-	-	-	LC
Grey Butcherbird	<i>Cracticus torquatus</i>	-	-	-	-	-	LC
Varied Sittella	<i>Daphoenositta chrysoptera</i>	-	-	-	-	-	LC
Southern Scrub-robin	<i>Drymodes brunneopygia</i>	-	-	-	-	-	LC
Western Yellow Robin	<i>Eopsaltria griseogularis</i>	-	-	-	-	-	LC
White-fronted Chat	<i>Epthianura albifrons</i>	-	-	-	-	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Orange Chat	<i>Epthianura aurifrons</i>	-	-	-	-	-	LC
Crimson Chat	<i>Epthianura tricolor</i>	-	-	-	-	-	LC
Magpie-lark	<i>Grallina cyanoleuca</i>	-	-	-	-	-	LC
Welcome Swallow	<i>Hirundo neoxena</i>	-	-	-	-	-	LC
White-winged Triller	<i>Lalage sueurii</i>	-	-	-	-	-	LC
Purple-gaped Honeyeater	<i>Lichenostomus cratitius</i>	-	RA	-	-	-	LC
White-eared Honeyeater	<i>Lichenostomus leucotis</i>	-	-	-	-	-	LC
Yellow-plumed Honeyeater	<i>Lichenostomus ornatus</i>	-	-	-	-	-	LC
Singing Honeyeater	<i>Lichenostomus virescens</i>	-	-	-	-	-	LC
Superb Fairy-wren	<i>Malurus cyaneus</i>	-	-	-	-	-	LC
Variegated Fairy-wren	<i>Malurus lamberti</i>	-	-	-	-	-	LC
White-winged Fairy-wren	<i>Malurus leucopterus</i>	-	-	-	-	-	LC
Blue-breasted Fairy-wren	<i>Malurus pulcherrimus</i>	-	-	-	-	-	LC
Yellow-throated Miner	<i>Manorina flavigula</i>	-	EN	-	-	-	LC
Little Grassbird	<i>Megalurus gramineus</i>	-	-	-	-	-	LC
Hooded Robin	<i>Melanodryas cucullata</i>	-	RA	-	-	-	LC
Brown-headed Honeyeater	<i>Melithreptus brevirostris</i>	-	-	-	-	-	LC
Jacky Winter	<i>Microeca fascians</i>	-	RA	-	-	-	LC
Black-faced Monarch	<i>Monarcha melanopsis</i>	-	-	-	-	-	LC
Restless Flycatcher	<i>Myiagra inquieta</i>	-	RA	-	-	-	LC
Crested Bellbird	<i>Oreoica gutturalis</i>	-	-	-	-	-	LC
Gilbert's Whistler	<i>Pachycephala inornata</i>	-	RA	-	-	-	LC
Golden Whistler	<i>Pachycephala pectoralis</i>	-	-	-	-	-	LC
Rufous Whistler	<i>Pachycephala rufiventris</i>	-	-	-	-	-	LC
Spotted Pardalote	<i>Pardalotus punctatus</i>	-	-	-	-	-	LC
Striated Pardalote	<i>Pardalotus striatus</i>	-	-	-	-	-	LC

Common Name	Scientific Name	EPBC	NPW	JAMBA	CAMBA	RoKAMBA	IUCN
Tree Martin	<i>Petrochelidon nigricans</i> (<i>Hirundo nigricans</i>)	-	-	-	-	-	LC
Red-capped Robin	<i>Petroica goodenovii</i>	-	-	-	-	-	LC
White-browed Babbler	<i>Pomatostomus superciliosus</i>	-	-	-	-	-	LC
White-fronted Honeyeater	<i>Purnella albifrons</i> (<i>Phylidonyris albifrons</i>)	-	-	-	-	-	LC
Grey Fantail	<i>Rhipidura albiscapa</i> (<i>Rhipidura fuliginosa</i>)	-	-	-	-	-	LC
Willie Wagtail	<i>Rhipidura leucophrys</i>	-	-	-	-	-	LC
White-browed Scrubwren	<i>Sericornis frontalis</i>	-	-	-	-	-	LC
Weebill	<i>Smicrornis brevirostris</i>	-	-	-	-	-	LC
Grey Currawong	<i>Strepera versicolor</i>	-	EN	-	-	-	LC
Zebra Finch	<i>Taeniopygia guttata</i>	-	-	-	-	-	LC
Silvereeye	<i>Zosterops lateralis</i>	-	UP	-	-	-	LC