

Marine Park 16

Western Kangaroo Island Marine Park

Park at a glance

Located on the western side of Kangaroo Island, between Cape Forbin and Sanderson Bay, the park includes the Casuarina Islets and Lipson Reef.

At 1,020 km², it represents 4% of South Australia's marine parks network.

Community and industry

- It is understood both Ngarrindjeri and Kaurna Aboriginal people may have had traditional associations with the region.
- Commercial fishing is a major industry, mainly targeting abalone, rock lobster and pilchards.
- The spectacular national parks and wilderness areas adjacent to this park attract thousands of visitors each year.
- Recreational activities such as bushwalking, viewing seals and fishing are all popular.
- The region features several historically significant sites such as the lighthouses and associated complexes at Cape Borda and Cape du Couedic.

Fauna and flora

- Colonies of Australian sea lions and New Zealand fur seals.
- Many protected seabird species such as the rare osprey.
- Migratory and other widely travelled species, including cetaceans and seabirds, link this marine park with more distant ecosystems.

Habitat

- Western Kangaroo Island Marine Park is within the Eyre Bioregion.
- The park's habitats include:
 - exposed cliffs and headlands, small pocket beaches,
 - a variety of reef types and sandy seafloor habitat, and
 - natural processes such as cold water upwellings.
- The habitats inside Western Kangaroo Island Marine Park provide critical baselines to measure any changes to the State's marine ecosystems that may arise over time from, for example, pollution or climate change.

- Land and sea are linked at important sites adjacent to Flinders Chase National Park, Ravine des Casoars Wilderness Protection Area and Cape Torrens Wilderness Protection Area.

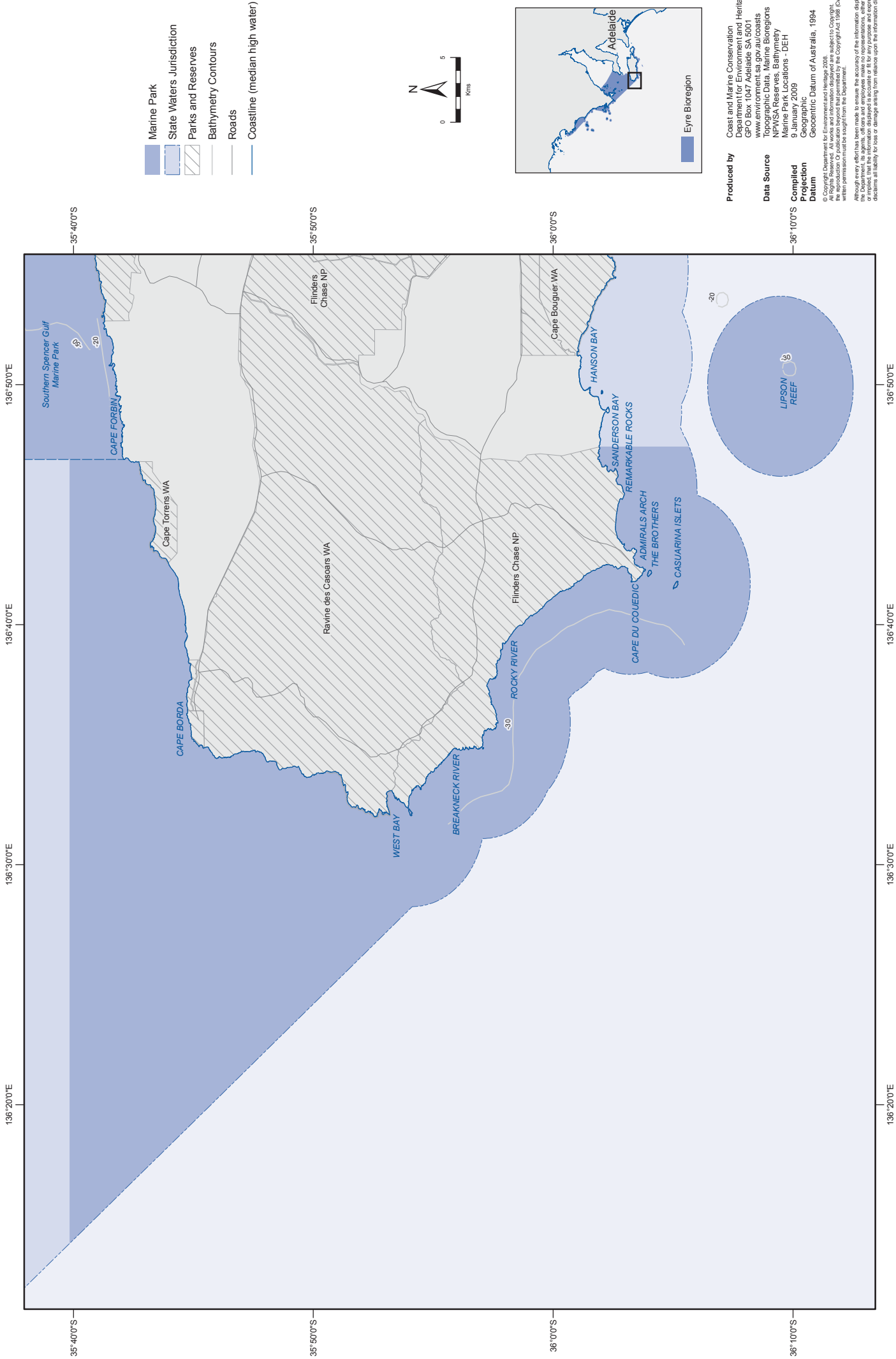
Boundary description

The Western Kangaroo Island Marine Park comprises the two areas set out below.

- The area bounded by a line commencing on the coastline of Kangaroo Island at median high water at a point 136°47'25.3"E, 36°1'54.63"S (at or about the south-eastern boundary of Flinders Chase National Park), then running progressively:
 - southerly along the geodesic to its intersection with the seaward limit of the coastal waters of the State at a point 136°47'25.3"E, 36°5'40.29"S;
 - north-easterly along the seaward limit of the coastal waters of the State to a point 136°14'12.39"E, 35°39'50.15"S;
 - easterly along the geodesic to a point 136°46'52.75"E, 35°39'50.15"S;
 - southerly along the geodesic to its intersection with the coastline of Kangaroo Island at median high water at a point 136°46'52.75"E, 35°42' 6.8"S (at or about Cape Forbin); and
 - generally westerly, southerly and south-easterly along the coastline of Kangaroo Island at median high water (inclusive of all bays, lagoons and headlands) to the point of commencement.
- The area bounded by a line following the seaward limit of the coastal waters of the State surrounding Lipson Reef.

NOTE: This boundary description is indicative only. It does not describe inclusions and exclusions of specific land parcels. For this detailed information, please refer to the DEH website: www.marineparks.sa.gov.au or Surveyor-General's office for the relevant marine park plan (known as a Rack Plan).

Western Kangaroo Island Marine Park



Bioregions and South Australia's marine parks network

Eight biologically distinct regions have been identified off South Australia's coastline. The State's marine parks have been carefully designed to include parts of each bioregion and the various habitats within them.

By including some examples of the marine biodiversity typical of the Eyre Bioregion and Gulf St Vincent Bioregion, Western Kangaroo Island Marine Park contributes to the marine parks network's goal of representing and protecting examples of the full diversity of South Australia's marine life.

The marine life, habitats and natural processes typical of this region include the deep oceanic waters west of Kangaroo Island, which are subject to seasonal, nutrient rich, cold water upwellings, and the marine life adjacent to the magnificent coastal wilderness of Flinders Chase National Park.

The 14 marine park Design Principles

To guide the initial identification and final selection of South Australia's multiple-use marine parks, 14 Design Principles – including seven Biophysical Principles and seven Community Principles – were defined and adopted by the Government. These Principles help ensure the marine parks network meets the objects of the *Marine Parks Act 2007*, as well as South Australia's national and international obligations for marine protection.

The Biophysical Design Principles guided the identification of proposed marine park sites. The Community Design Principles were then applied to fine-tune site selection of the 19 multiple-use parks in the network.

Biophysical Design Principles

The seven Biophysical Principles address environmental conservation.

In the first instance, all parks were designed to meet the Precautionary Principle. Rigorous application of the Adequacy, Comprehensiveness and Representativeness Principles ensure the marine parks network meets South Australia's national and international marine protection obligations.

The remaining three Biophysical Principles helped prioritise important local sites, to ensure the marine parks network maximises ecological outcomes (South Australia's Strategic Plan Target 3.4).

The Precautionary Principle

The Precautionary Principle is a risk-management tool which requires action to be taken now in areas where scientific knowledge is not yet complete. One of the ways the Precautionary Principle has been applied in developing marine parks is to include areas of unsurveyed seabed habitats.

In the Eyre and Gulf St Vincent Bioregions, 14,973 km² (80%) and 9,362 km² (71%) of seabed habitats, respectively, are yet to be surveyed.

As a precautionary measure, 847 km² (comprising 6% of Eyre Bioregion and almost 1% of Gulf St Vincent Bioregion) of unsurveyed habitats are included within Western Kangaroo Island Marine Park. Including unsurveyed habitats increases the likelihood that all habitats that exist in a region are included within a marine park.

The Adequacy Principle

Adequacy is achieved if the marine park provides for both ecosystem integrity and the viability of whole populations of species.

A marine park is considered to have achieved Adequacy if both it and the network it contributes to are large enough to protect the species and habitats found there, and close enough to connect populations.

Western Kangaroo Island Marine Park covers 1,020km² (4% of the whole network). It has been designed to include multiple examples of each habitat type where possible, at sizes sufficient to contain viable populations of marine species. Significantly, the marine park includes waters with southern, western and northern aspects, and therefore includes a greater diversity of habitats and species.

The Principles of Connectivity and Linkages, Resilience and Vulnerability and Ecological Importance also contribute to the Adequacy of a marine park. Ultimately, Adequacy is closely linked to the success of marine park management plans with zoning.

Comprehensiveness and Representativeness Principles

To meet the Principle of Comprehensiveness, examples of all habitats that occur in a bioregion need to be included within each marine park in that bioregion.

To be Representative, all habitats in a region (e.g. reefs, beaches, seagrass, mangroves) need to be included across the full variety of physical situations in which they occur (e.g. shallow and deep water reefs, low and high energy beaches). This variety must be represented within the combination of parks created in a bioregion.

Habitats of Western Kangaroo Island Marine Park include the rugged, exposed cliffs and headlands and the small pocket beaches surrounding the western end of the island beginning at Cape Forbin in the northwest around to Sanderson Bay in the southwest. The reefs extend from intertidal wave-cut shore platforms to depths of up to 50 metres, with sandy seafloor habitat occurring across all depth ranges. The Casuarina Islets, just off the southwest coast, are included in the park, as are the waters surrounding Lipson Reef.

Connectivity and Linkages Principle

Connectivity describes how plants and animals move between different places. Linkages refer to the transfer of materials (e.g. organic matter) and energy flows. Connectivity and Linkages both depend on the way currents, tides and waves move water and on the abilities of marine life to move between different areas.

Western Kangaroo Island Marine Park creates continuous Connectivity and Linkages along-shore from Cape Forbin in the park's north to Sanderson Bay in the south. Offshore, Connectivity and Linkages occur through the depths at the limit of State waters. This helps protect species whose life cycles depend on access to different feeding, spawning, breeding and nursery habitats in small areas, as well as species dependent on areas separated by anything from tens of kilometres to hundreds of kilometres.

This marine park adjoins the Southern Spencer Gulf Marine Park, creating further Connectivity and Linkages spanning across Investigator Strait to the foot of Yorke Peninsula. Ecological linkages in the region are also influenced by the upwelling of cold, nutrient-rich water originating in the depths beyond the continental shelf.

The close proximity of this region to the continental shelf break and the deep water Murray Canyons means that this area is more strongly influenced by major ocean currents than most other places within South Australia's waters.

Resilience and Vulnerability Principle

The combined Principle of Resilience and Vulnerability encourages the inclusion of places, plants and animals that are more susceptible to degradation or decline and/or less able to recover from damaging impacts.

Less resilient habitats, plants and animals are less able to resist the pressure to change in response to disturbances or pressures. More vulnerable habitats, plants and animals have less capacity to recover once pressures are removed. For example, some seagrasses may take decades or more to recover from disturbance.

Examples of less resilient and more vulnerable habitats, plants and animals in Western Kangaroo Island Marine Park include the Australian sea lion and New Zealand fur seal, which have very specific habitat requirements and are vulnerable to disturbance. Similarly, birds such as the rare osprey and vulnerable white-bellied sea eagle are very selective about where they will nest and raise their young.

In the event of climate change, the cold-water upwellings are likely to maintain lower water temperatures in this region, which may see Western Kangaroo Island Marine Park become a haven for species which prefer cooler conditions.

Ecological Importance Principle

The biological productivity of the west coast of Kangaroo Island is strongly influenced by seasonal upwellings of cold and nutrient-rich waters rising from the depths beyond the continental shelf. The additional nutrients stimulate the whole food web of the region and decrease coastal water temperatures to as low as 11°C during the summer months, some of the coldest waters in the Eyre Bioregion.

Regionally significant breeding colonies of New Zealand fur seals are located at Cape du Couedic and Casuarina Islets.

Estuaries and coastal wetlands of national importance, including Rocky River and Breakneck River, are linked to the marine park and provide habitat for local and migratory shorebird species. They are protected under international treaties. Beaches in the area provide important nesting habitat for the vulnerable hooded plover, while the cliffs and headlands offer nesting sites for raptors such as the rare osprey and vulnerable white-bellied sea eagle.

Part of West Bay reef is dominated by mixed green *Caulerpa* species and large red macroalgae (mainly species of *Plocamium*, *Melanthalia* and *Phacelocarpus*), which is unusual compared with the brown algal-dominated reefs elsewhere in South Australia.

The area's deeper waters are thought to be important feeding grounds for migratory cetaceans including many of conservation concern, such as sperm whales, pygmy sperm whales, dwarf sperm whales, pygmy right whales, short-finned pilot whales and false killer whales, some species of beaked whales and Risso's dolphin.

Community Design Principles

Synergies with Existing Protected Areas Principle

By aligning with existing protected areas, marine areas can contribute to the establishment of protected corridors across the land-sea interface. The majority of Western Kangaroo Island Marine Park borders terrestrial protected areas, including Flinders Chase National Park, Ravine des Casoars Wilderness Protection Area and Cape Torrens Wilderness Protection Area, providing the opportunity to protect important ecological connections between land and sea.

Complementing Existing Management Principle

Management of South Australia's marine parks will complement, but not replace, current management arrangements. By providing a more inclusive management framework, South Australia's marine parks network is designed to help existing environmental management practices.

The District Council of Kangaroo Island plays an important role in managing coastal Crown lands which abut and in some cases are included within the marine park. Western Kangaroo Island Marine Park management will seek to integrate with existing local government management practices for the continued care of coastal Crown land community assets.

The Kangaroo Island Natural Resources Management (NRM) Board is responsible for mitigating impacts on the marine environment from land-based activities. Ongoing monitoring of ecosystem health in Western Kangaroo Island Marine Park will help the NRM Board prevent land-based pollution from reaching the sea.

Most of the land adjacent to the marine park are designated protected areas and already managed by the Department for Environment and Heritage, providing opportunities for seamless management of protected areas across the land/sea boundary.

Wherever possible, provision will be made in the Western Kangaroo Island Marine Park management plan with zoning to accommodate current and future economic, social and infrastructure requirements. Administrative agreements between agencies will support streamlined assessment so that marine parks do not create an extra approval process.

Give Consideration to the Full Diversity of Marine Uses Principle

The Government is committed to designing marine parks for conservation and for sustainable use, in close consultation with local communities and with minimal impact on existing activities.

The proclamation of the Western Kangaroo Island Marine Park does not change the way people use the marine environment, or change any existing land or sea-bed tenure.

Wildcatch fisheries in the region target abalone, rock lobster and pilchards. Proclamation of the Western Kangaroo Island Marine Park does not displace any existing commercial fishing activity. The Government recognises that high-value catch areas occur within the marine park and will work with stakeholders during the development of the park management plan with zoning to avoid effort displacement from those areas wherever possible and ensure a sustainable future for these industries.

Tourism is one of Kangaroo Island's most important industries, with the natural environment being one of the major drawcards. Visitors are attracted to the beautiful and wild coasts and marine wildlife of western Kangaroo Island, particularly at iconic sites such as Remarkable Rocks, Cape Borda and the fur seal colony at Admirals Arch.

Recreational surf and rock fishing occurs at several locations around the coast and charter vessels provide further opportunities for recreational fishing offshore. The north coast of Kangaroo Island also provides some spectacular opportunities for diving with leafy seadragons and sea lions, and around historic shipwrecks.

The outer boundary of the Western Kangaroo Island Marine Park does not change existing recreational fishing and boating activities and does not affect access to, or use of, jetties, breakwalls or boat ramps. Existing access for recreational beach fishing will be maintained throughout Western Kangaroo Island Marine Park, except in small areas designated as "sanctuary" or "restricted access" zones in the marine park management plan with zoning. This will be developed over the next couple of years with extensive community input.

With input from a Marine Park Local Advisory Group, industry and the community, a management plan with zoning will be developed for Western Kangaroo Island Marine Park which will cater for ongoing community use of the area. The management plan will be subject to community consultation and every effort will be made to minimise impacts on people and businesses.

Respect Indigenous Interests and Culture Principle

The Government is aware that there may be confidential Aboriginal heritage sites in South Australia's coastal areas. Where possible, these sites have been considered in the planning process. Future management plans will ensure these heritage sites are appropriately respected.

The Ngarrindjeri and Kurna Aboriginal people may have had traditional associations with Kangaroo Island, including the marine environment and associated marine life.

Aboriginal aspirations for this area are not known by the Department for Environment and Heritage.

Give Consideration to Cultural Heritage Principle

The lighthouses and associated complexes at Cape Borda and Cape du Couedic are listed on the Register of the National Estate. Numerous historic shipwrecks are also located in the marine park.

Ensure Ease of Identification, Compliance and Enforcement Principle

Western Kangaroo Island Marine Park was designed to ensure ease of identification, compliance and enforcement where possible.

The marine park boundary aligns with Cape Forbin on the north coast of Kangaroo Island and with the boundary of Flinders Chase National Park in Sanderson Bay. Along the coastline, the marine park boundary lies at the median high water mark unless otherwise specified. Offshore, the marine park boundary follows a straight east-west line, then aligns with the limit of State waters.

Provide for Education, Appreciation and Recreation Principle

Western Kangaroo Island Marine Park was designed to ensure the things we enjoy in this environment continue, by helping to maintain a healthy marine environment and our uses of it.

Further opportunities for education, appreciation and recreation will be achieved through the zoning and management planning process.

Need more information?

For further information, please see: *Design Principles Guiding the Development of South Australia's Marine Park Boundaries* and *Technical Report on the Outer Boundaries of South Australia's Marine Parks Network*. Both are available on the marine parks website: www.marineparks.sa.gov.au or by calling 1800 006 120.