OTWAY BIOREGION HIGH PRIORITY MARINE PARKS



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Otway BioregionPlan

What is the Otway Bioregion

The Otway Bioregion encompasses the entire King and Hunter Groups in north west Tasmania.



Special natural features of the Otway Bioregion

Tasmania's oceans are all special, but why is Otway Bioregion different from other parts of Tasmania? Some of its key features are:

What Scientists have said about the natural values of the bioregion

- located in the path of the infamous Roaring 40's gales and therefore frequently experiencing winds exceeding 100 km/hour.
- a structurally complex seafloor and a range of spectacular coastal formations such as sea-caves, sheer cliffs and outstanding beaches.
- contain reef fish, invertebrate and algal communities distinct from other areas of the state.
- high conservation value for resident and migratory shorebirds, being recognised as internationally significant for resident seabirds including the Pied Oystercatcher, Sooty Oystercatcher and Near Threatened Hooded Plover, as well as the migratory Ruddy Turnstone.
- King Island supports large colonies of Little Penguins and Short-tailed Shearwaters,
- recent surveys found that its the most important Tasmanian locality for the Vulnerable Fairy Tern and Endangered Little Tern.
- Diverse migratory shorebird species
- Important saltmarshes within the Sea Elephant estuary of the Lavinia Nature Reserve

Summary of Bioregion Natural values

Dr Karen Parsons -

"While King Island covers a broad area, sites of high value for different types of marine communities are widely distributed on this remote and unique slice of Tasmania and more detailed studies are required to identify the areas that best represent its outstanding conservation values. The coastal environment of this island has a character all its own, located in the path of the infamous Roaring 40's gales and therefore frequently experiencing winds exceeding 100 km/hour. The geological diversity of King Island is renowned and reflected by a structurally complex seafloor and a range of spectacular coastal formations such as sea-caves, sheer cliffs and outstanding beaches1. The coastal waters are important for commercial species such as crayfish, abalone and Bull Kelp, and contain reef fish, invertebrate and algal communities distinct from other areas of the state. The Christmas and New Year Islands off the northwestern coast of King Island have particularly diverse marine habitats and have been recognised as a conservation hotspot for marine life. These islands contain the greatest range of marine habitats and highest biodiversity in the vicinity of King Island, including extensive seagrass beds and abundant populations of species rarely found elsewhere in Tasmania, such as Troughton's Seastar and the red alga Plocamium preissianum. King Island also has high conservation value for resident and migratory shorebirds, being recognised as internationally significant for resident seabirds including the Pied Oystercatcher, Sooty Oystercatcher and Near Threatened Hooded Plover, as well as the migratory Ruddy Turnstone. King Island supports large colonies of Little Penguins and Short-tailed Shearwaters, while recent surveys found that it holds two thirds of the breeding population of the Vulnerable Fairy Tern and more than half of the Endangered Little Tern, making it the most important Tasmanian locality for these Threatened species. Almost 20 migratory shorebird species have been recorded98, with

similar diversities and species composition to the important Boullanger/Robbins Passage site in the Boags Bioregion, suggesting an interchange of shorebirds and potentially critical reliance between these two areas. King Island's saltmarshes within the Sea Elephant estuary of the Lavinia Nature Reserve are of high significance as foraging habitat for the Critically Endangered Orange bellied Parrot. This internationally significant 'Ramsar' wetland represents 10% of the saltmarsh habitat that is classified as having a high conservation value statewide".

Bioregion Social and economic factors

King Island Council¹ - "Economically, King Island is driven by beef, dairy and fishing industries, with significant growth in tourism over recent years largely thanks to the development of two world class golf courses. Food manufacturing, adding value to the produce of the beef, dairy and fishing activities, provides another strong base for our Island's economy".

"The coastal waters are important for commercial species such as crayfish, abalone and Bull Kelp"

"While the Island has only 1.7% unemployment in its workforce of just over 800, over a third of these workers are in part-time employment. Investment into the Island and growth in the industries which underpin our economy created an additional 42 FTE in the FY2016-17, with every indication that a similar growth was enjoyed in FY2017-18. Further development planned on the Island is estimated to create an additional 129 FTE in the coming 2 years".

" As an island off mainland Tasmania and mainland Australia, King Island is very small with a total area of 1,098 square kilometres and a population of 1,600 permanent residents. Approximately 70% of our island has been converted to lush pasture for agriculture, firstly by free settlers in the late 1800s and then through government soldier settler schemes after World War 1 and World War 2. The remaining 30% retains its natural vegetation, which is recognised for its ecological values and as habitat for our island's unique and, in some cases, endangered wildlife. The vision, enterprise and hard work of past and current generations have built a diversified economy and brand renown for premium beef, cheese, crayfish, king crab, scheelite and sand mineral deposits, harvested kelp, and as a destination for world class golf, surfing and a unique island holiday escape. This success continues to require the community to deal with the practical realities and high costs of working and living on a remote Bass Strait Island. The principal challenge is the critical reliance on air and sea transport to access services, goods, and markets. Whereas other Tasmanians rely on road transport, the logistics of air and sea transport adds some 20% to 30% or higher to the cost of living and doing business."

"The King Island economy is built on its natural, marine, and mineral resources, is highly productive, diversified and a significant contributor to the Tasmanian economy. The most

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¹ Draft-Version-Strategic-Plan-080222-reduced.pdf (kingisland.tas.gov.au)

significant indicator is that more than 20% of Tasmania's premium beef is produced here and exported to mainland Tasmania and Victoria for processing and distribution. The economy is not static and has shown remarkable resilience to adapt and recover from major economic shocks and job losses such as when the Grassy scheelite mine and then the beef abattoir closed. The COVID19 pandemic and changing trade relationships with China have provided the latest challenges, especially for tourism and fishing industry and businesses, however, it is the diversity of the Island's economy which continues to be the strength sustaining the community. There are also long-term and ongoing challenges that continue to impact businesses, create potential risks, and constrain investment. These include air and sea transport costs and logistics, poor telecommunications, difficulties accessing bank loans, a tight labour market with unemployment levels consistently less than 2% and a shortage of worker accommodation."

The majority of the fishing fleet depart and return from Currie and Grassy harbours where wharf facilities and protected, sheltered anchorages are on offer. The biggest proportion of the fishing fleet operates from the Currie Harbour, with a lesser number operating from the Grassy Harbour.

The wharf at Currie is stated to be the busiest in Tasmania for lobster fishing.²

ABS figures don't refer explicitly to fishing employment but it would appear to be statistically low. The ABS states that 180 people are employed in aggregated forestry, fishing and agriculture. That would suggest about 40 people are employed in fishing.³

The catches for King Is (also includes the NW Coast) have been consistently high at 294 tonnes in 2020.

Block 5 [far NW tip of West Coast]two blocks, Block 49 [Flerieu Group], along with block 3 on King Island [SW King Island] produce the majority of blacklip abalone for the Northern Zone4 The Northern Zone [Otway and Franklin Bioregion] TACC peaked at 402.5 t.

Other industries employ the following,

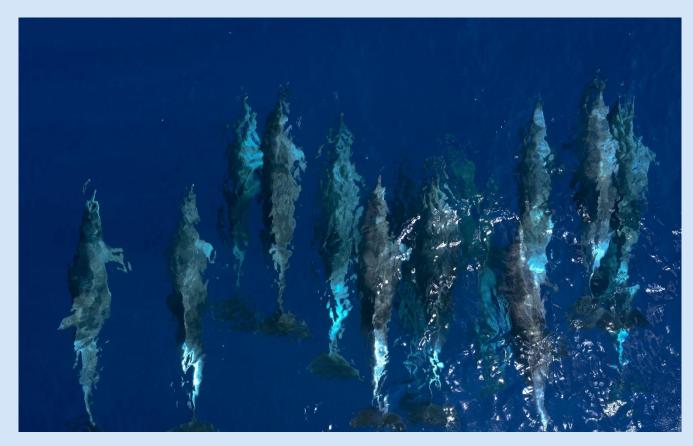
- Beef Cattle Farming (Specialised)136
- Cheese and Other Dairy Product Manufacturing69
- Supermarket and Grocery Stores36
- Local Government Administration32
- Secondary Education 32⁵

² Rock lobster prices are rising and there's talk of money at Tasmania's busiest crayfishing port - ABC News

³ King Island | Region summary | Data by region | Australian Bureau of Statistics (abs.gov.au)

⁴ <u>Tasmanian-Abalone-Assessment-2022-compressed-1.pdf (utas.edu.au)</u>

⁵ 2021 King Island, Census All persons QuickStats | Australian Bureau of Statistics (abs.gov.au)



Dolphins, Photo: Dr Eric Woehler

Recreational Fishing

This is limited to a few spots favoured by the local community as well as some tourist fishing. Two liveaboard charter operator travels to the island for charters from Victoria, King Island Fishing Adventure⁶

Marine farming

Exploratory leases are held off Martha Lavinia Beach

<u>Tourism</u>

A 2007 visitor survey provided annual visitation numbers around 6700⁷. They were about 1/3rd from Tasmania and about half from Victoria. However, the majority of Tasmanians were travelling for business, the reverse for Victorian travelers. The stay averaged 5 nights.

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⁶ (southerncoastcharters.com.au)

⁷ kingislandreport.pdf (tourismtasmania.com.au)

The townships of Grassy and Narracoopa received strong visitation from respondents across the Survey period. So too did Cape Wickham, which is promoted strongly in local tourism marketing and reading material. Martha Lavinia Reserve/Penny's Lagoon and Calcified Forest/Seal Rocks Reserve, which are managed by Parks and Wildlife Service of Tasmania, received average visitation from respondents. In the Comments section of the Survey, respondents noted poor directional signage around the Island during the survey period, as well as poor roads leading to some natural attractions. These factors may have contributed to fewer visitations at these sites compared to Cape Wickham.

The most popular activities were:

- Visiting Beaches 505
- Recreational Walks 385
- Ship Wreck Trails/ Sites 295
- Arts/ Craft Shops 286
- Penguins 204 [at Grassy Harbour]
- Sea fishing 157
- Bird watching 126
- Diving/ Snorkeling 114
- Golf 63 [likely to have increased due to new infrastructure]
- Game bird hunting 60

Threats

The general threats of significance to low lying or soft coastlines like estuaries and beaches are: ⁸

- increased siltation resulting from land clearance and urban and rural runoff,
- increased nutrient loads resulting from marine farms, sewerage and agricultural use of fertilisers,
- foreshore development, dredging, habitats clearing and reclamation
- modification to water flow through dams and weirs,
- acidification of rivers and heavy metal pollution from mines,
- the spread of introduced pest species, and
- sea level rise and coastal erosion.
- Wildlife displacement, disruption of social and feeding behaviour e.g. Beach crowding, Pet impacts⁹.
- Microplastics and litter (particularly damaging to seabirds).

On Harder coastlines like reef, or in the open sea,¹⁰

⁸ Based upon, A Classification of Tasmanian Estuaries and Assessment of their Conservation Significance using Ecological and Physical Attributes, Population and Land UseG.J. Edgar1, N.S. Barrett2 and D.J. Graddon3, Ocean Rescue 2000

 ⁹ Dr Eric Woehler, pers comms
 ¹⁰ Based on media monitoring by Marine Life Magazine 2010 - 2020

- climate change effects, ocean acidification, changes food supply, damage/changes to food availability e.g. plankton communities change, changing diseases, range extension, weather changes, extreme events,
- overfishing,
- invasive (feral) species.
- Microplastics and litter (particularly damaging to seabirds).
- Wildlife interactions eg. Boat strike on sea mammals.
- Disruption of behaviour e.g. seismic testing.
- pollutants., Excessive nutrients e.g. salmon farms, sewerage, stormwater.
- Silt from erosion,
- Habitat damage- dredging and bottom trawling.

Current Protections for habitat in the Bioregion

There is a large coastal reserve in the NE Lavinia State Reserve, which covers an important Ramsar site and its adjacent dunes. This should be considered for a land-based national park. Christmas Island is a nature reserve, while New Year Island is a game reserve.

The land is heavily modified by agriculture with only narrow coastal reserves in some areas.

Near Currie there is a small abalone research area offshore. Netting is prohibited in Currie Harbour and Grassy Harbour.

There is no netting on the Blowhole, a small feature offshore from Sea Elephant Bay. The reasons for this are unknown and may relate to a past dive tourism business that used the site.

The calamari and squid fisheries are closed in Bass Strait during peak calamari spawning periods.

Why have marine parks

Marine Parks protect depleted, threatened, rare, endangered or endemic species and ecological communities and in particular to preserve habitats considered critical for the survival of such species. Some species are sensitive, with complex habitat requirements, or are vulnerable to disturbance.

They can slow down the decline of degraded ecosystems and be a focus for efforts to restore habitats. A healthier more resilient habitat is more likely to survive new threats like invasive species and climate change.

They can protect economically significant habitats like fish nursery sites, as well as habitats, species and seascapes of importance to recreation and tourism.

They can protect geological, archaeological, historical sites, seascapes, cultural sites and cultural practices and manage these significant sites for future generations.

They can aid in the interpretation of marine and estuarine systems for the purposes of conservation, recreation and public education.

They provide places for research and provide reference sites for scientific studies, including sites for baseline fisheries monitoring and long-term environmental monitoring.

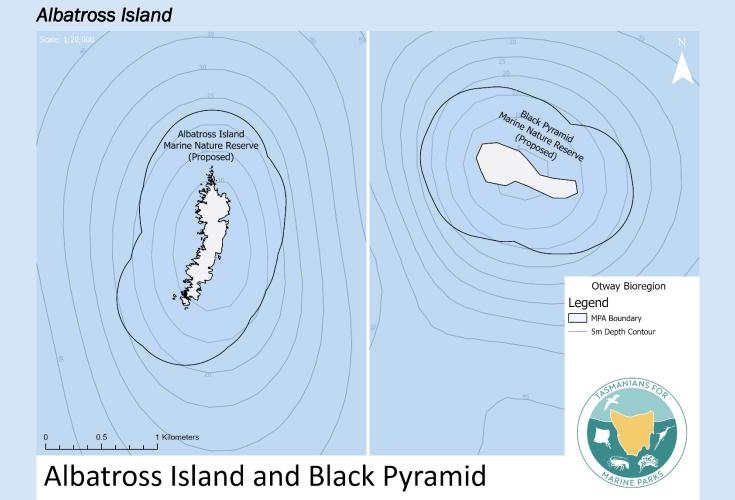
So where would we put any new marine parks?

Scientists have been talking about more marine parks for Tasmania for a long time. The areas previously talked about were,

Location	Source/Notes
Christmas and New Year Islands (northwest King Island)	Prof Edgar, Dr Parsons
Sea Elephant estuary/Martha Lavinia	Bronte recommendation, Dr Parsons
Phoques Bay (see New Year Is)	Bronte recommendation
Albatross Island	
Black Pyramid	
Reid Rocks	

Not all of these areas are high priority sites for protection in a marine park.

Here are the details about those proposals:



Albatross Island, is part of the Hunter Group and is home to an 18Ha nature reserve. The island is part of the Albatross Island and Black Pyramid Rock Important Bird Area.

"Albatross Island Nature Reserve is important as one of only three shy albatross (T *halassarche cauta*) breeding sites, worldwide. The shy albatross is listed as vulnerable globally under IUCN category D2 because its population is restricted in area of occupancy to less than 5 sites. Albatross Island is also significant because it is the most northerly shy albatross breeding colony and as such, differs in various ways from the other colonies on Pedra Branca and Mewstone off southern Tasmania (Gales, 1993)". Small Bass Strait Island Reserves Draft Management Plan October 2000

"The first recorded landing on Albatross Island was by George Bass and Matthew Flinders in 1798, who recorded that "the island seemed to be almost covered with birds, for there were white patches which we took to be of them some acres in extent". There were an estimated 20,000 birds then inhabiting the island. In the ensuing 50 years, sealers were responsible for exterminating the island's large population of Australian fur seals and severely depleting the albatross colony. Records from George Robinson's visit in October 1832 indicate that at that

MARINE LIFE NETWORK Website: http://marinelife.org.au, moremarineparks@gmail.com

stage very few seals remained and the "destruction of albatrosses has been very great." Between 1832 and 1973 there were 4 recorded visits to the island by naturalists who recorded the numbers of albatross nests they sighted. In 1894 some 400 nests were recorded". In 1909 between 250 and 300 nests, in 1960, between 680 and 700 and in 1973, 1460 nestlings were counted (Johnstone et. al., 1975). It became a Nature Reserve on 24 June, 1981".

"With approximately 5000 pairs, it is the second largest colony after Mewstone, (~7,000 pairs) but still only about a quarter of the size of the original colony in the early 19th century". Bass Strait Island Nature Reserves - Draft Management Plan, October 2000 10

" Albatross Island is also a breeding site for short-tailed shearwaters, (~2000 pairs), little penguins, (~350 pairs), fairy prions, (~20,000 pairs), silver gulls, Pacific gulls and white breasted sea-eagles". Bass Strait Island Nature Reserves - Draft Management Plan, October 2000 10

A pair of white-bellied sea eagles usually nests there annually. The island is visited regularly by Australian fur seals and New Zealand fur seals.



Shy Albatross, Dr Eric Woehler

Special features of the Otway Bioregion contained in the site

located in the path of the infamous Roaring 40's gales	\checkmark
structurally complex seafloor and a range of spectacular coastal formations such as sea-caves, sheer cliffs and outstanding beaches.	~
contain reef fish, invertebrate and algal communities distinct from other areas of the state.	~
high conservation value for resident birds and migratory shorebirds ,	\checkmark
breeding habitat for large numbers of seabirds, important Tasmanian for Endangered species	~
high tidal range, strong currents	\checkmark
saltmarshes	

Known Threats

"The potential of Albatross Island for wildlife tourism ventures, its popularity as a destination for fishers, recreational boat users and sea kayakers and its attraction for researchers makes it particularly vulnerable. Human visitation not only increases the risk of disturbance to the shy albatross and other resident seabirds, it also greatly enhances the risk of fire, weeds and feral pests, which could destroy the values of the reserve. An escaped camping fire, for example, burnt 20ha in the north of the island in February 1982, killing hundreds of seabirds.

Because there is currently no monitoring in place, it is difficult to gauge the number of visitors to this and other islands. A permit system is a mechanism to provide this information, which in time, may contribute to the determination of sustainable visitor levels.

• An avian pox virus transmitted by fleas (*Parapsyllus australiacus*) is a major cause of chick mortality and decline (N. Brothers pers comm). Tick infestation of albatross chicks also causes weakness and possible death.

• Noise from fishing activity close to Albatross Island has the potential to disrupt the breeding patterns of the shy albatross and other breeding seabirds such as little penguins and fairy prions (Giese, 1997).

• Air traffic noise could affect the breeding patterns of the shy albatross."11

Current protection

The island itself is a nature reserve. It is remote and difficult to visit with few landing places.

Pursuant to Section 25 of the National Parks and Wildlife Act 1970, the land, to low water mark, was declared restricted areas to which the public has no general right of access.

No netting bans within 500 metres of the island was recommended by the management plan for the reserve but not enacted.

Current human uses

It may be periodically visited by commercial cray fishing vessels but is very remote.

Economic Interests	-Existing or potential contribution to economic value by virtue of its protection, eg. for recreation or tourism, or as a refuge or nursery area, or source of supply for economically important species.	An area of low impact on current users even if highly protected.
	- Current or potential use for the extraction of, or exploration for resources	
	- Current or potential use for the extraction of, or exploration for resources	
	- Importance for shipping and/or trade.	
	- Value due to its contribution to local or regional employment and economic development.	
Indigenous Interests	-Traditional usage and/or current economic value. Contains indigenous cultural values. Native title considerations	No significant adverse impact, subject to further consultation.
Social Interests	Existing or potential value to the local, national or international communities because of its heritage, cultural, traditional, aesthetic, educational, recreational, or economic values	Presently little used or recognised. Mainly important

¹¹ Bass Strait Island Nature Reserves - Draft Management Plan, October 2000

		as a nature reserve.
Scientific Interests	Existing or potential value for research and monitoring.	High
Practicality/Feasibility	Degree of insulation from external destructive influences Social and political acceptability, and a degree of community support Access for recreation, tourism, and education Lends itself to practical management (cost effectiveness, compliance etc.).	Remote, protects an iconic species.
Vulnerability Assessment	Extent to which the site is vulnerable and susceptible to human induced changes and threatening processes.	Vulnerable, bird populations are declining
Replication	Provides a replication of ecosystems within a Marine Protected Area within the bioregion.	Bird values are unique, no other MPAs in the bioregion.

Design Comments

A buffer zone is effectively provided around the island.

Recommended Protection

IUCN II national park

Black Pyramid

Special Features of the Site

Black Pyramid Rock Nature Reserve is the only breeding site for the Australasian gannet in Bass Strait and one of three Tasmanian, and eight national breeding sites for this species. The major breeding sites globally are off the north island of New Zealand. Black Pyramid Rock is the largest breeding colony nationally with approximately 12,500 birds.



Wikipedia

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Special features of the Otway Bioregion contained in the site

located in the path of the infamous Roaring 40's gales	\checkmark
structurally complex seafloor and a range of spectacular coastal formations such as sea-caves, sheer cliffs and outstanding beaches.	~
contain reef fish, invertebrate and algal communities distinct from other areas of the state.	~
high conservation value for resident birds and migratory shorebirds ,	\checkmark
breeding habitat for large numbers of seabirds, important Tasmanian for Endangered species	\checkmark
high tidal range, strong currents	\checkmark
saltmarshes	

Known Threats

Because there is currently no monitoring in place, it is difficult to gauge the number of visitors to this and other islands. A permit system is a mechanism to provide this information, which in time, may contribute to the determination of sustainable visitor levels.

• An avian pox virus transmitted by fleas (Parapsyllus australiacus) is a major cause of chick mortality and decline (N. Brothers pers comm). Tick infestation of chicks also causes weakness and possible death.

• Noise from fishing activity close to the island has the potential to disrupt the breeding patterns of breeding seabirds (Giese, 1997).

• Air traffic noise could affect the breeding patterns.¹²

¹² Bass Strait Island Nature Reserves - Draft Management Plan, October 2000

Current protection

Pursuant to Section 25 of the National Parks and Wildlife Act 1970, the land, to low water mark, was declared restricted areas to which the public has no general right of access.

The island itself is a nature reserve. It is remote and difficult to visit with few landing places.

No netting within 500 metres of the island was recommended by the management plan for the reserve but not enacted.

Current human uses

It may be periodically visited by commercial cray fishing vessels but is very remote.

Economic Interests	-Existing or potential contribution to economic value by virtue of its protection, eg. for recreation or tourism, or as a refuge or nursery area, or source of supply for economically important species.	An area of low impact on current users even if highly protected.
	- Current or potential use for the extraction of, or exploration for resources	
	- Current or potential use for the extraction of, or exploration for resources	
	- Importance for shipping and/or trade.	
	- Value due to its contribution to local or regional employment and economic development.	
Indigenous Interests	-Traditional usage and/or current economic value. Contains indigenous cultural values. Native title considerations	No significant adverse impact, subject to further consultation.
Social Interests	Existing or potential value to the local, national or international communities because of its heritage, cultural, traditional, aesthetic, educational, recreational, or economic values	Presently little used or recognised. Main value is as a nature reserve.
Scientific Interests	Existing or potential value for research and monitoring.	High
Practicality/Feasibility	Degree of insulation from external destructive influences	Remote
	Social and political acceptability, and a degree of community support	

	Access for recreation, tourism, and education Lends itself to practical management (cost effectiveness, compliance etc.).	
Vulnerability Assessment	Extent to which the site is vulnerable and susceptible to human induced changes and threatening processes.	Vulnerable
Replication	Provides a replication of ecosystems within a Marine Protected Area within the bioregion.	Bird values are unique, no other MPAs in the bioregion.

Design Comments

A buffer zone is effectively provided around the island.

Recommended Protection

IUCN II national park.



Flying fish, Dr Eric Woehler

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Reid Rocks

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Special Features of the Site

"Reid Rocks are situated approximately 21.5 kilometres east-south-east of Stokes Point at the southern extremity of King Island in western Bass Strait. The main islet is approximately 500 metres long and rises to 13 metres above sea level. Reservation History Reid Rocks became a Nature Reserve on 5 April 1978 due to their importance as an Australian fur seal breeding colony. Geology Reid Rocks are composed of Tertiary basalt with well developed columnar jointing (Dixon, 1996). Significant Values Reid Rocks Nature Reserve is the only breeding site for Australian fur seals in western Bass Strait. Access Reid Rocks can be accessed by boat from King Island". Bass Strait Island Nature Reserves - Draft Management Plan, October 2000

Reid Rocks, South Reid Rock and Bell Reef lie sin a cluster. It is also nearby South Brig Rock and Stanley Rocks. The latitude of Reid Rocks Nature Reserve is -40.25477, and the longitude is 144.16225 with the gps coordinates of 40° 15′ 17.17″ S and 144° 09′ 44.10″ E.

Special features of the Otway Bioregion contained in the site

located in the path of the infamous Roaring 40's gales	>
structurally complex seafloor and a range of spectacular coastal formations such as sea-caves, sheer cliffs and outstanding beaches.	~
contain reef fish, invertebrate and algal communities distinct from other areas of the state.	>

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saltmarshes



Australian fur seals, photo: Dr Eric Woehler

Threats

• Over the past four years there has been a marked decline in the number of seal pups recorded on Reid Rocks from 2891 in 1995 to only 244 in 1998. This is possibly attributable to the intense storms in western Bass Strait during the breeding season, causing the pups to be washed from the rocks. The annual mean seal pup production over the past ten years is 1501 with a range of 207 to 2891 (Hume and Gales, 1999). The lack of success in breeding has serious implications given that Reid Rocks is the only Australian fur seal breeding colony in western Bass Strait.

• Reid Rocks Nature Reserve was identified by consultants as being a potential site for ecotourist operations from King Island. The current lack of control over ecotourism is a cause of concern in ensuring the protection of the colony from disturbance.

• Fishing activities which take place close to the shore at Reid Rocks could adversely impact on the seals' breeding success (Shaughnessy et. al., 1999). 13

Current protection

The rocks are closed to visitors except between 1 September and 30 April (during which time entry to the reserves is permitted) to protect current and potential rare breeding environments of the Australasian gannets.

The island itself is a nature reserve. It is remote and difficult to visit with few landing places.

"To ensure an undisturbed breeding environment for the Australian fur seals. Seal watching in close offshore waters may occur outside of October 1 to January 31, the breeding season". Bass Strait Island Nature Reserves - Draft Management Plan, October 2000

Current human uses

It may be periodically visited by commercial cray fishing vessels but is very remote.

Economic Interests	 Existing or potential contribution to economic value by virtue of its protection, eg. for recreation or tourism, or as a refuge or nursery area, or source of supply for economically important species. Current or potential use for the extraction of, or exploration for resources Current or potential use for the extraction of, or exploration for resources Importance for shipping and/or trade. Value due to its contribution to local or regional employment and economic development. 	An area of low impact on current users even if highly protected.
Indigenous Interests	-Traditional usage and/or current economic value. Contains indigenous cultural values. Native title considerations	No significant adverse impact, subject to further consultation.

¹³ Bass Strait Island Nature Reserves - Draft Management Plan, October 2000

Social Interests	Existing or potential value to the local, national or international communities because of its heritage, cultural, traditional, aesthetic, educational, recreational, or economic values	Presently little used or recognised.
Scientific Interests	Existing or potential value for research and monitoring.	High
Practicality/Feasibility	Degree of insulation from external destructive influences Social and political acceptability, and a degree of community support Access for recreation, tourism, and education Lends itself to practical management (cost effectiveness, compliance etc.).	Remote, main value is as a nature reserve.
Vulnerability Assessment	Extent to which the site is vulnerable and susceptible to human induced changes and threatening processes.	Vulnerable
Replication	Provides a replication of ecosystems within a Marine Protected Area within the bioregion.	Bird values are unique, no other MPAs in the bioregion.

Design Comments

No netting within 500 metres of the island was recommended by the management plan for the reserve but not enacted.

Recommended Protection

IUCN II national park or IUCN IV marine conservation area.

Identification Criteria (from Tasmania's MPA Strategy)

All of the above sites met the identification criteria except one.

Criteria	Description of criteria
Comprehensiveness	-Adds to the coverage of the full range of ecosystems recognised at an appropriate scale within and across each bioregion.

	-Enhances the comprehensive nature of the Representative System of Marine Protected Areas in Tasmania.		
Adequacy	The size of the area, its boundaries and location are adequate to ensure that its biological and ecological values can be protected an managed and the impact of activities can be minimised.		
Representativeness	-Represents one or more ecosystems within an Interim Marine and Coastal Regionalisation of Australia bioregion.		
	-Enhances the representative nature of the Representative System of Marine Protected Areas in Tasmania.		
Ecological Importance	-Contributes to maintenance of essential ecological processes or life- support systems.		
	-Contains habitat for rare or endangered species.		
	- Preserves genetic diversity, ie. is diverse or abundant in species.		
	-Contains areas on which other species or other systems are dependent, eg. contain nursery or juvenile areas or feeding, breeding or rest areas for migratory species.		
	-Contains one or more areas which are a biologically functional, self- sustaining ecological unit. International or National Significance.		
	-Is listed, or has the potential to be listed, on the World or National Heritage List or declared as Biosphere Reserve or subject to an international or national conservation agreement		
Uniqueness	-Contains unique species, populations, communities or ecosystems.		
	- Contains unique or unusual geographic features		
Productivity	Do the species, populations, or communities of the area have a high natural productivity		
Vulnerability Assessment	Contains ecosystems and/or communities vulnerable to natural processes.		
Biogeographic Importance	Captures important biogeographical qualities.		
Naturalness	Extent to which the area has been protected from, or not been subject to, human-induced change		

Areas for reconsideration

The following site, although worthwhile and with important ocean linkages, did not qualify as a marine site.

Sea Elephant estuary/ Martha Lavinia



Special Features of the Site

Special features of the Otway Bioregion contained in the site

located in the path of the infamous Roaring 40's gales	\checkmark
structurally complex seafloor and a range of spectacular coastal formations such as sea-caves, sheer cliffs and outstanding beaches.	>

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contain reef fish, invertebrate and algal communities distinct from other areas of the state.	~
high conservation value for resident birds and migratory shorebirds ,	\checkmark
breeding habitat for large numbers of seabirds, important Tasmanian for Endangered species	~
high tidal range, strong currents	\checkmark
saltmarshes	\checkmark

Known Threats

The general threats of significance to low lying or soft coastlines like estuaries and beaches are: ¹⁴

- increased siltation resulting from land clearance and urban and rural runoff,
- increased nutrient loads resulting from marine farms, sewerage and agricultural use of fertilisers,
- foreshore development, dredging, habitats clearing and reclamation
- modification to water flow through dams and weirs,
- acidification of rivers and heavy metal pollution from mines,
- the spread of introduced pest species, and
- sea level rise and coastal erosion.
- Wildlife displacement, disruption of social and feeding behaviour e.g. Beach crowding, Pet impacts¹⁵.
- Microplastics and litter (particularly damaging to seabirds).

The surrounding area is heavily altered for agriculture, making this rare and relatively pristine area on King Island, particularly special.

Current protection

Protected in a land-based reserve

¹⁴ Based upon, A Classification of Tasmanian Estuaries and Assessment of their Conservation Significance using Ecological and Physical Attributes, Population and Land UseG.J. Edgar1, N.S. Barrett2 and D.J. Graddon3, Ocean Rescue 2000

¹⁵ Dr Eric Woehler, pers comms

Current human uses

Economic Interests	-Existing or potential contribution to economic value by virtue of its protection, eg. for recreation or tourism, or as a refuge or nursery area, or source of supply for economically important species.	An area of low impact.
	- Current or potential use for the extraction of, or exploration for resources	
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	- Importance for shipping and/or trade.	
	- Value due to its contribution to local or regional employment and economic development.	
Indigenous Interests	-Traditional usage and/or current economic value. Contains indigenous cultural values. Native title considerations	No significant adverse impact, subject to further consultation.
Social Interests	Existing or potential value to the local, national or international communities because of its heritage, cultural, traditional, aesthetic, educational, recreational, or economic values	Presently little used or recognised.
Scientific Interests	Existing or potential value for research and monitoring.	High
Practicality/Feasibility	Degree of insulation from external destructive influences	Remote
	Social and political acceptability, and a degree of community support	
	Access for recreation, tourism, and education	
	Lends itself to practical management (cost effectiveness, compliance etc.).	
Vulnerability Assessment	Extent to which the site is vulnerable and susceptible to human induced changes and threatening processes.	Vulnerable
Replication	Provides a replication of ecosystems within a Marine Protected Area within the bioregion.	Bird and saltmarsh values are unique, no other MPAs in the bioregion.

MARINE LIFE NETWORK Website: <u>http://marinelife.org.au</u>, moremarineparks@gmail.com

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Design Comments

Key natural values are in an existing land-based reserve.

Recommended Protection

Not Strictly speaking a marine site, but should be considered for a land based national park.

Who are We?

Marine Life Network (MLN) are ordinary people who volunteer their time to help protect and promote the wonders of Tasmania's ocean environment. The aims of Marine Life Network are to educate and advocate.

We do anything useful for the marine environment, but our main campaign at present is a campaign called "Tasmanians for Marine Parks". This campaign is trying to create a system of comprehensive, adequate and representative marine parks for Tasmania.

An effort has been made to recruit a broad a cross-section of the community from along the political spectrum. MLN is non-partisan, welcoming to everyone, and is not an affiliate of existing political parties.