

# Sir Joseph Banks Group Marine Park

## Preliminary sanctuary zone scenario

### Starting point for Marine Park Local Advisory Group discussion

South Australians enjoy the benefits of a healthy marine environment. However, the marine environment is under increasing pressure from a range of sources, including climate change, run-off and competition for resources, which could affect how we use and enjoy it in the future.

Marine parks are currently being set up around Australia as part of a national and international response to these increasing pressures.

In 2009, the South Australian Government declared a network of 19 marine parks to help protect and conserve areas of natural value within our State's waters for generations to come.

Your assistance is now needed to help develop the zoning and management plans for these marine parks.

At this meeting, you will begin the process of developing a proposed zoning scenario for your local marine park(s). You will be provided a range of information about zoning, including a preliminary sanctuary zone scenario developed by DENR, and other government agencies to provide a starting point for discussions by your MPLAG about how marine parks might be zoned for conservation, commerce and community use.

The preliminary sanctuary zone scenario is only a starting point and does not represent a Government proposal or preference. There may be better ways to design a marine park zoning scheme to achieve the desired outcomes. Your MPLAG's advice on its preferred zoning scenario(s) is sought.

The preliminary sanctuary zone scenarios have been developed using the environmental, social and economic information currently available to Government, including the information provided through SAMPIT (the South Australian Marine Parks Information Tool).

The next step is for the scenarios to be worked on over the next six months by the MPLAGs and key stakeholders, such as the seafood industry, tourism operators, local government and conservation interests, who all have important information to bring to the table.

It is expected that this work will result in changes to what is initially provided. Indeed, this is the purpose of MPLAGs and key stakeholder engagement - to better inform and assist the Government in this process - so we can help ensure that the needs of local communities and industries are met.

The State Government has not adopted an arbitrary percentage target for the size of sanctuary zones. Instead, it remains open to the advice of the community as to how to best design the marine parks network to protect and conserve marine biodiversity and marine habitats in a manner that accords with the objects of the *Marine Parks Act 2007*.

To assist MPLAGs, key stakeholders and other community members to develop their preferred zoning scenario(s), you will be provided with some indicative zoning guidelines.

These guidelines have been developed with due regard to advice from the Marine Parks Scientific Working Group and Marine Parks Council of South Australia, which provide independent advice on marine park matters.

One of these zoning guidelines is that sanctuary zones should cover about 20-25% of each marine park - this would translate to about 10% of our State's waters.

However, this is a guideline only and may not be achievable in some marine parks, particularly where there are significant policy commitments in place to provide for various current and future activities.

Your attention is drawn to the marine park policy commitments made by the Government in 2009, in particular the assurance given to the commercial fishing industry that the outcome of marine parks zoning will have no more than a 5% economic impact (as per the 2007 EconSearch report).

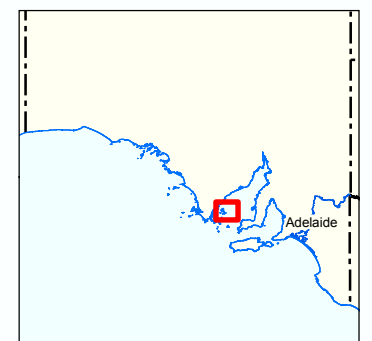
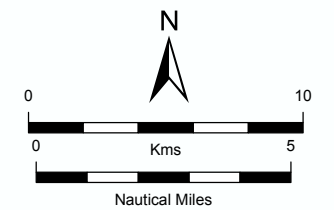
In developing your preferred zoning scenarios it will be important that you apply the full zoning checklists and policy commitments, to help ensure your suggestions meet the marine park design requirements. Doing this will help you develop a proposal for your park(s) that is good for conservation and good for commercial and community interests.

**For more information**, please contact your MPLAG Executive Officer via email at [DENRmarine@sa.gov.au](mailto:DENRmarine@sa.gov.au), or phone the Coast and Marine Conservation Branch, Department of Environment and Natural Resources, on Freecall 1800 006 120.

# Marine Park 6 Sir Joseph Banks Group Marine Park

## Preliminary Sanctuary Zone Scenario Starting Point Version 1

- Possible Sanctuary Zones
- Marine Parks
- Lake - Intermittent
- Land Subject to Inundation (STI)
- Parks and Reserves
- Bathymetry
- Coastline (median high water)
- Major Road
- Minor Road

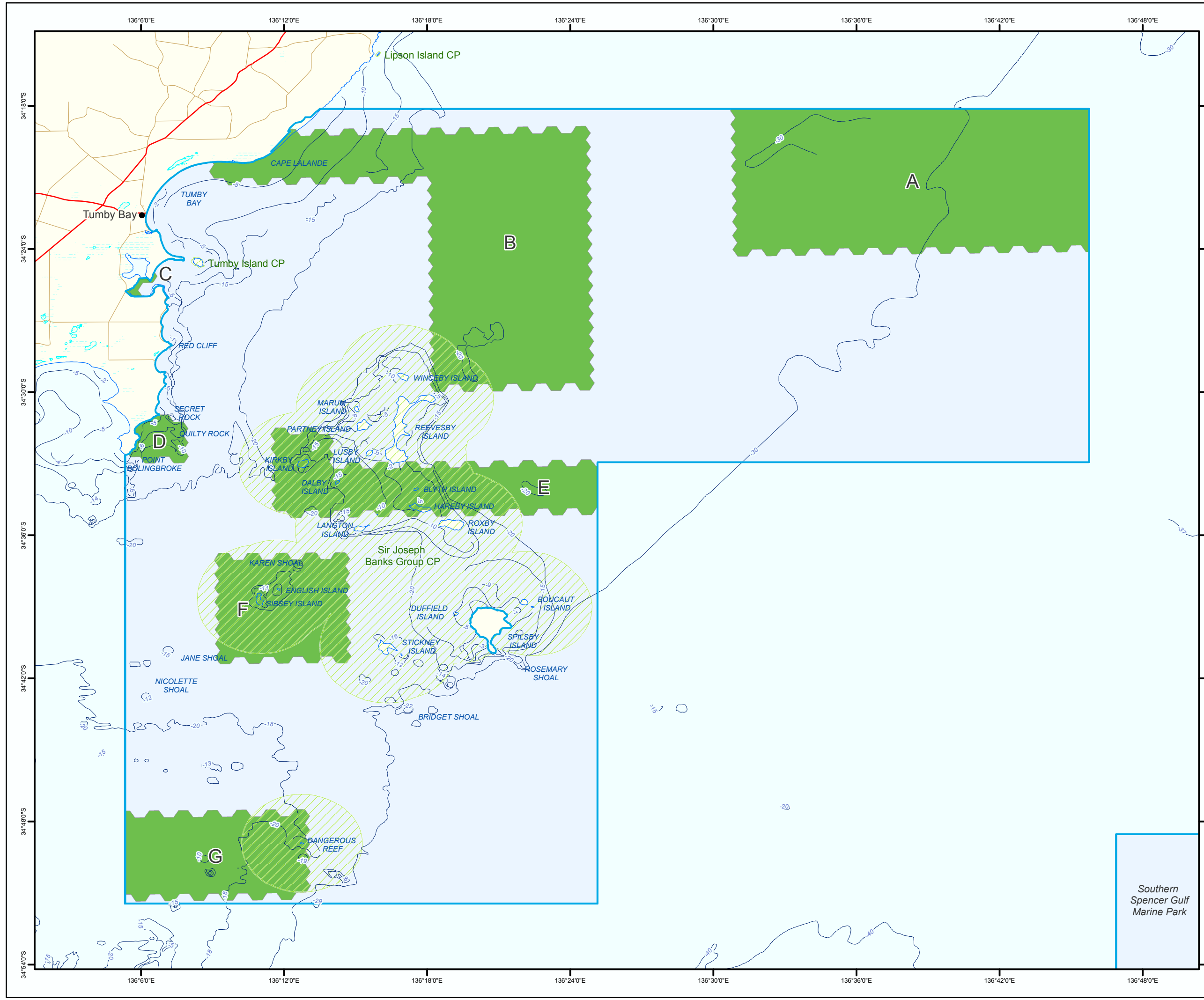


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**Data Source** Marine Parks, Parks and Reserves,  
Topographic Data, Bathymetry - DENR  
8 November 2010

**Compiled Projection Datum** Geographic  
Geocentric Datum of Australia, 1994

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Southern  
Spencer Gulf  
Marine Park

Basis for 'Starting Point' Preliminary Sanctuary Zone Scenario – Sir Joseph Banks Group Marine Park (Park 6)		
Location of possible Sanctuary Zone	Area	Rationale for possible Sanctuary Zone
<b>Zone A:</b> Deep water in NE corner of park (running along the N and E boundary of the park)	250 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>The possible Sanctuary Zone contains deep water habitats representative of lower Spencer Gulf in depth ranges from 10-50m.</li> <li>Habitats in the Zone are as yet unmapped.</li> </ul> <p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>The possible Sanctuary Zone is in a transition area between the Eyre and Spencer Gulf bioregions, with physical, biological and ecological characteristics of each.</li> <li>This Zone is located in the transition zone between the Spencer Gulf and the open ocean where strong temperature and salinity differentials have a large impact on the ecology of the area.</li> </ul> <p><b>Social and economic considerations:</b></p> <ul style="list-style-type: none"> <li>There are no areas of high recreational fishing effort known within this possible Sanctuary Zone.</li> <li>It is recognised that this Zone is in an area for the scale and sardine industry. Based on publicly available information every effort has been made to minimise the impact of this Zone.</li> <li>According to publicly available data this Zone is not in a high catch area of the abalone, prawn or rock lobster industries.</li> </ul>
<b>Zone B:</b> Salt Creek and Cape Lalande extending seawards and then south to just E of Winceby Island and N of Reevesby Island.	247 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>This possible Sanctuary Zone predominantly represents a transition of habitats from dense to sparse sea grass through different depth classes.</li> <li>It is adjacent to a sheltered to moderate coarse sandy beach.</li> <li>It includes a tidal creek habitat with a wide sand delta at the mouth of the creek surrounded by dense seagrass.</li> <li>Salt Creek is a main estuary in the Tumby Bay area (extending 2km inland).</li> <li>It is representative of waters in the northern part of the Group that are sheltered from southerly winds, but exposed to northerly breezes.</li> </ul> <p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>The Zone is located in a transition area between the Spencer and Eyre Bioregions.</li> <li>The sea surface temperatures in this Zone are typically in the mid 20°Cs for summer and low 10°Cs in winter, representing a large fluctuation in sea surface temperature.</li> <li>At least 5 migratory coastal bird species listed under international migratory treaties and other resident coastal waders use the Tumby Bay area (including Salt Creek) for roosting and feeding (e.g. Pacific golden plover, grey plover, eastern curlew, sharp-tailed sandpiper and ruddy turnstone).</li> <li>The possible Sanctuary Zone contains habitat for reef fish.</li> <li>Salt Creek supports many fish species such as King George whiting and black bream and invertebrates such as blue swimmer crab and scallops.</li> </ul> <p><b>Social and economic considerations</b></p> <ul style="list-style-type: none"> <li>Part of this possible Sanctuary Zone is complemented by a netting closure.</li> <li>This Zone avoids areas of medium to high recreational fishing effort closer to the township of Tumby Bay.</li> <li>According to publicly available historic catch data this Zone is not in a high catch area of the abalone or rock lobster industry.</li> <li>It is recognised that this Zone is in an area used by the scale fish and sardine industry. Based on publicly available information every effort has been made to minimise the impact of this zone.</li> </ul>
<b>Zone C:</b> Second Creek	1 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>Shallow depth class with a mix soft bottom habitat and dense seagrass.</li> <li>Sheltered sandy beach.</li> <li>An area of shallow water and low wave energy, with prevailing offshore winds and low exposure to swell.</li> <li>Supratidal and intertidal sediment beds, organic mud, sand and shelly deposits.</li> <li>Tidal creeks and channels with sandy flats adjacent to an extensive mangrove system, with a transition to the Group.</li> <li>This Zone links areas of intertidal saltmarsh and mangrove forest with seagrass meadows and bare sand.</li> </ul>

		<p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>• The possible Sanctuary Zone is an important nursery area for species such as King George whiting, Western Australian salmon, southern sea garfish, Australian herring (tommy ruff), yellow eye mullet, blue swimmer crab and western king prawn.</li> <li>• It contains an important area for resident coastal wader birds.</li> <li>• The Zone is ecologically linked to other possible Sanctuary Zones within this Marine Park.</li> </ul> <p><b>Social and economic considerations</b></p> <ul style="list-style-type: none"> <li>• Tumby Bay (including Second Creek) is listed as a Wetland of National Importance.</li> <li>• This possible Sanctuary Zone is positioned to provide for areas of medium recreational fishing effort within Second Creek (such as the creek mouth).</li> <li>• The area is complemented by a netting closure.</li> </ul>
<b>Zone D:</b> Secret Rock to Point Bolingbroke	10 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>• Soft-bottom, granite reef and dense seagrass in shallow water transitioning to deeper habitats including seagrass.</li> <li>• Coastline with differing areas of exposure (exposed, moderate and sheltered) and shore type (sandy beach and shoreline rock platform).</li> <li>• This Zone links sandy and rocky shores with reef, seagrass and bare sand of various depths.</li> </ul> <p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>• An important area for resident coastal wader birds.</li> </ul> <p><b>Social and economic considerations</b></p> <ul style="list-style-type: none"> <li>• This possible Sanctuary Zone provides for areas of medium to high recreational fishing effort further north along the coast near Tumby Bay (according to current SAMPIT data).</li> <li>• According to available fisheries data this Zone is not in a high catch area of the abalone or rock lobster industry.</li> <li>• There is an unknown quantity of scale fishing, including shell collecting that occurs in this area.</li> <li>• Although the Zone is in a high catch area for the sardine industry (40-100% of total catch), every effort has been made to minimise the impact of this Zone.</li> <li>• For ease of identification, compliance and enforcement the zone uses north, south east and west lines.</li> </ul>
<b>Zone E:</b> Kirkby, Dalby, Blyth and Hareby Islands and surrounding waters, extending E to park boundary	88 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>• This possible Sanctuary Zone represents offshore islands in the eastern part of the Sir Joseph Banks Group. It includes granite reefs at different depth classes and coarse sandy beaches in addition to a large area of unmapped habitat.</li> <li>• These islands have sheltered and moderate coarse sandy beaches combined with granite rocky shorelines.</li> <li>• Reefs in the area are mainly covered with brown canopy macroalgae (seaweed) with a high abundance of red macroalgae on shallow reefs in the area.</li> <li>• Hareby, Blyth, Smith, Roxby and Langton Islands are all related by a broad connecting submarine rise.</li> <li>• Kirkby Island is a domed granite island (with a calcarenite and calcrete layer) with no points or bays. There are shoals close to the NW and NE sides.</li> <li>• There is a sandbar extending north from Blyth Island to Reevesby Island, separated by a small channel called McCoy Passage.</li> <li>• Hareby Island is a flat, elongated island with a granite base and calcarenite cap. The island is surrounded by low cliffs with a sandy beach along the north edge, which is part of the sandbar connecting Hareby to Blyth Island.</li> <li>• Blyth Island is a low ring of sandhills (with a central depression) and sandy beach deposited on granite.</li> <li>• Dalby Island is a low, flat, hemispherical island (granite base with calcrete layer) with low calcrete cliffs on the exposed side and a small sandy beach backed by dunes on the more sheltered NW side.</li> <li>• Sheltered beach habitat at Blyth Island provides habitat for sand crabs and baitworms.</li> </ul> <p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>• There is a moderate sea surface temperature change between winter and summer of approximately 5°C.</li> <li>• The Zone contains important nesting and roosting habitat for seabirds and resident and migratory coastal waders including some listed under international treaties.</li> <li>• An Australian sea lion haul-out is located within the Zone.</li> <li>• Endemic or rare invertebrates (bivalves, octopus, ascidians) occur in the area.</li> </ul>

		<p><b>Social and economic considerations</b></p> <ul style="list-style-type: none"> <li>• The Sir Joseph Banks Group (SJBG) of islands is on the <i>Register of the National Estate</i> in recognition of the geological formation known as the Spilsby Suite of the Lincoln geological complex, the importance of the island group for the breeding population of rare Cape Barren geese (SJBG is the most important winter breeding area in SA), the provision of breeding and haul-out areas for the vulnerable Australian sea lion and the rich marine communities (including some rare and uncommon species).</li> <li>• The possible Sanctuary Zone is complemented by the inclusion of areas of the Sir Joseph Banks Group Conservation Park.</li> <li>• This Zone avoids areas of high recreational fishing effort around Marum, Partney, Lusby and Reevesby Islands.</li> <li>• According to publicly available historic catch data this zone is not in a high catch area of the abalone or rock lobster industry.</li> <li>• It is recognised that this Zone is in an area for the scale and sardine industry. Based on publicly available information every effort has been made to minimise the impact of this Zone on those activities.</li> </ul>
<p><b>Zone F:</b> Sibsey and English Islands and surrounding waters</p>	68 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>• This possible Sanctuary Zone represents the southern and inshore islands of the Sir Joseph Banks group with a mix of depth classes, soft-bottom, macroalgae, granite reef and unmapped habitat.</li> <li>• A high abundance of red macroalgae on shallow reefs exists in the area.</li> <li>• Sibsey Island is a large bulk of exposed granite, outlined by small, beachless bays, surrounded by relatively deep water, and unlike other islands in the group, it has little covering of calcarenite or soil.</li> <li>• English Island is a small hump of exposed granite with a rounded coastline that diffracts swell along the entire perimeter. It has a calcarenite and guano covering.</li> </ul> <p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>• Endemic or rare invertebrates (bivalves, octopus, ascidians) occur in the area.</li> <li>• Both islands are roosting and nesting sites for seabird and resident and migratory coastal waders, including the white-bellied sea eagle and greenshank.</li> <li>• The possible Sanctuary Zone is ecologically linked to other possible Zones within this Marine Park. For example, King George whiting use several of these Zones during different life stages.</li> <li>• English Island is a breeding site for the vulnerable Australian sea lion and Sibsey Island is a haulout site for the vulnerable Australian sea lion and New Zealand fur seals.</li> </ul> <p><b>Social and economic considerations:</b></p> <ul style="list-style-type: none"> <li>• The Sir Joseph Banks Group of islands is on the <i>Register of the National Estate</i> in recognition of the geological formation known as the Spilsby Suite of the Lincoln geological complex, the importance of the island group for the breeding population of rare Cape Barren geese (SJBG is the most important winter breeding area in SA), the provision of breeding and haul-out areas for the vulnerable Australian sea lion and the rich marine communities (including some rare and uncommon species).</li> <li>• The possible Sanctuary Zone is complemented by the inclusion of areas of the Sir Joseph Banks Group Conservation Park.</li> <li>• This Zone avoids areas of known high recreational fishing effort around Spilsby Island.</li> <li>• It is recognised that this Zone is in an area for the scale and sardine industry. Based on publicly available information every effort has been made to minimise the impact of this Zone on these activities.</li> <li>• To ensure ease of identification and enforcement, the Zone uses straight north, south, west and east lines.</li> </ul>
<p><b>Zone G:</b> Dangerous Reef, extending W to park boundary</p>	75 km <sup>2</sup>	<p><b>This possible Sanctuary Zone represents the following habitats</b></p> <ul style="list-style-type: none"> <li>• This possible Sanctuary Zone contains significant deep water, low profile platform reef surrounded by soft-bottom and dense sea grass habitat incorporating a component of offshore island habitat.</li> <li>• Dangerous Reef is a chain of four large rocks (composed of granite and pegmatite), as surface exposures of an isolated inselberg ridge. The rocks are whitewashed with guano.</li> </ul> <p><b>Other important features and natural processes</b></p> <ul style="list-style-type: none"> <li>• Dangerous Reef supports one of the three largest breeding colonies of the vulnerable Australian sea lion in the world and is ranked 2<sup>nd</sup> in SA for pup production.</li> <li>• This Zone is an important feeding area for the vulnerable white shark, in particular breeding females.</li> </ul>

		<ul style="list-style-type: none"> <li>• This Zone is located in the transition zone between the Spencer Gulf and the open ocean creating strong seasonal temperature and salinity differentials which have a large impact on the ecology of the area.</li> <li>• The Zone is an important seabird breeding site and habitat for resident and migratory coastal shorebirds such as ruddy turnstone, red-necked stint and sooty oystercatchers. Migratory shorebird habitat is required to be protected under international treaties.</li> <li>• The reef in this area is dominated by brown macroalgae (seaweed – such as <i>Sargassum</i> spp. and <i>Scaberia agardhi</i>).</li> </ul> <p><b>Social and economic considerations</b></p> <ul style="list-style-type: none"> <li>• The possible Sanctuary Zone is complemented by the inclusion of areas of the Sir Joseph Banks Group Conservation Park.</li> <li>• The Zone has been designed to provide for known recreational fishing.</li> <li>• There is no catch data for abalone within this Zone and is considered low for the rock lobster and prawn industry.</li> <li>• Marine scale and sardine fishing occurs in the area. Based on currently available public information every effort has been made to minimise the impact on these industries.</li> <li>• To ensure ease of identification and enforcement, the Zone uses straight north, south, west and east lines.</li> </ul>
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This table shows the environmental values represented in each possible Sanctuary Zone within the Sir Joseph Banks Group Marine Park

Environmental Values	Units	Possible Sanctuary Zones							Total in all Zones	Total in Marine Park
		A	B	C	D	E	F	G		
<b>Ecologically Important Species</b>										
Australian Sealions (breeding sites)	Count						1		1	4
Australian Sealions (haulout sites)	Count					2			2	5
Coastal Shorebird Sites	Count		1			54	36	10	101	424
Reef Fish Sites	Count					3			3	11
Sea Bird Breeding and Nesting Sites	Count					13	7	3	23	52
<b>Underwater Habitats</b>										
Rocky Reef (0 to -10m)	Km <sup>2</sup>		1		1	11	<1	<1	13	48
Rocky Reef (-10 to -30m)	Km <sup>2</sup>					2	<1	12	14	35
Seagrass (0 to -10m)	Km <sup>2</sup>		12	1	5	<1		<1	17	79
Seagrass (-10 to -30m)	Km <sup>2</sup>		30		2	<1		29	61	332
Soft-bottom Habitat (0 to -10m)	Km <sup>2</sup>		<1	<1	<1	<1			2	14
Soft-bottom Habitat (-10m to -30m)	Km <sup>2</sup>		1					34	34	130
Unmapped (0 to -10m)	Km <sup>2</sup>		15		<1	36	1		53	173
Unmapped (-10 to -30m)	Km <sup>2</sup>	125	188		3	38	66	<1	419	1145
Unmapped (-30 to -50m)	Km <sup>2</sup>	125							125	661
<b>Shore Habitats</b>										
Bedrock Platform (Exposed)	Km				1				1	1
Bedrock Platform (Moderate)	Km				1				1	2
Bedrock Platform (Sheltered)	Km				1				1	2
Coarse Sand Beach (Moderate)	Km		5		2				7	13
Coarse Sand Beach (Sheltered)	Km		1	1					2	23
Emergent Land	Count					1			1	3
Estuary	Km <sup>2</sup>		1	1					2	9
Mangrove	Km <sup>2</sup>			<1					<1	<1
Offshore Islands	Count					4	2	1	7	18
Saltmarsh	Km <sup>2</sup>			<1					<1	<1

\* note that numbers have been rounded to the nearest whole number.