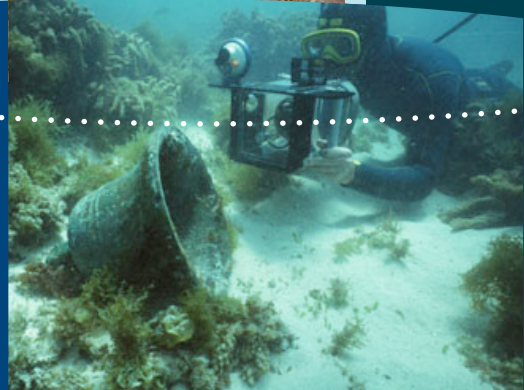




Australian Government

**Department of Sustainability, Environment,
Water, Population and Communities**



Protected places report card

Supporting the marine bioregional plan
for the South-west Marine Region

prepared under the *Environment Protection and Biodiversity Conservation Act 1999*

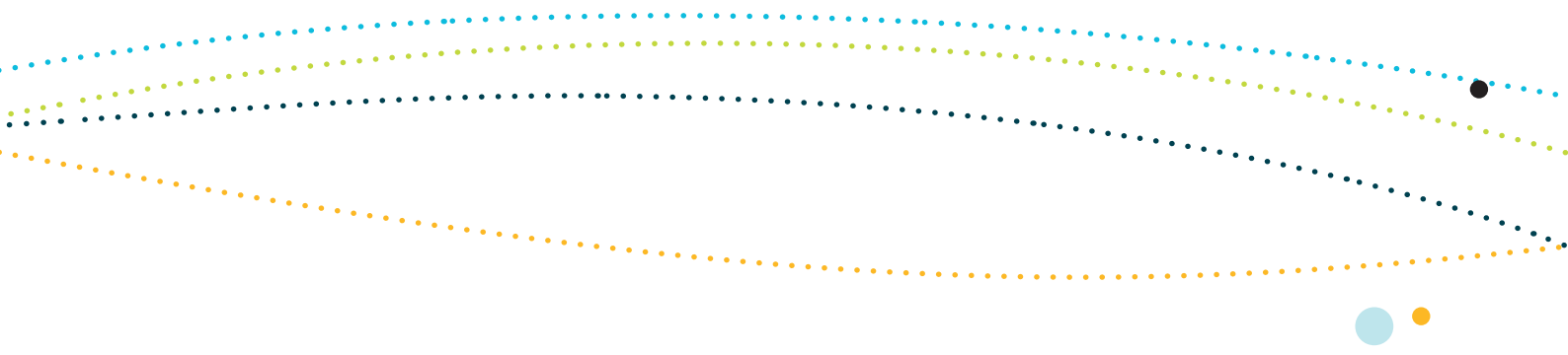
Disclaimer

© Commonwealth of Australia 2012

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from the Commonwealth. Requests and enquiries concerning reproduction and rights should be addressed to Department of Sustainability, Environment, Water, Population and Communities, Public Affairs, GPO Box 787 Canberra ACT 2601 or email public.affairs@environment.gov.au

Images:

Historic shipwreck SS Xanthos – Western Australian Museum, Breaksea Island Lighthouse – DSEWPaC,
Historic Shipwreck of the Cutter Rapid – Western Australian Museum, Swallow Tail Reef – Glen Cowan,
Southern calamari squid – Anthony King, Blue whale – DSEWPaC, Sea lion – Glen Cowan,
Tern common – Richard Freeman



CONTENTS

Protected places report card	1
1. Protected places of the South-west Marine Region	2
2. Vulnerabilities and pressures	8
3. Relevant protection measures	10
References	11
Map data sources	12



PROTECTED PLACES REPORT CARD

Supporting the marine bioregional plan for the South-west Marine Region
prepared under the *Environment Protection and Biodiversity Conservation Act 1999*

Report cards

The primary objective of the report cards is to provide accessible information on the conservation values found in Commonwealth marine regions. This information is maintained by the Department of Sustainability, Environment, Water, Population and Communities and is available online through the department's website (www.environment.gov.au). A glossary of terms relevant to marine bioregional planning is located at www.environment.gov.au/marineplans.

Reflecting the categories of conservation values, there are three types of report cards:

- species group report cards
- marine environment report cards
- Protected places report cards.

The protected places report card provides spatial and contextual information in regard to matters protected for their natural, cultural, historical and Indigenous heritage values. In the marine environment these matters include those places protected under the EPBC Act as matters of national environmental significance (places listed as world heritage properties, national heritage places or wetlands of international importance), Commonwealth marine reserves and places deemed to have heritage values in the Commonwealth marine environment (such as places on the Commonwealth Heritage List or shipwrecks under the *Historic Shipwrecks Act 1976*). The report card also provides information on the potential vulnerabilities and pressures on protected places and outlines existing protection measures.



1. Protected places of the South-west Marine Region

This report card focuses on features and places of the South-west Marine Region that are recognised and protected for their heritage values. Protected places include marine reserves and heritage places. At present, there is one National Heritage place (HMAS *Sydney II* and HSK *Kormoran* shipwreck sites), one Commonwealth Heritage place (HMAS *Sydney II* and HSK *Kormoran* shipwreck sites), one Commonwealth marine reserve, six historic shipwrecks and no World Heritage places in the South-west Marine Region.

Further information on heritage places is available at www.environment.gov.au/heritage/index.html.

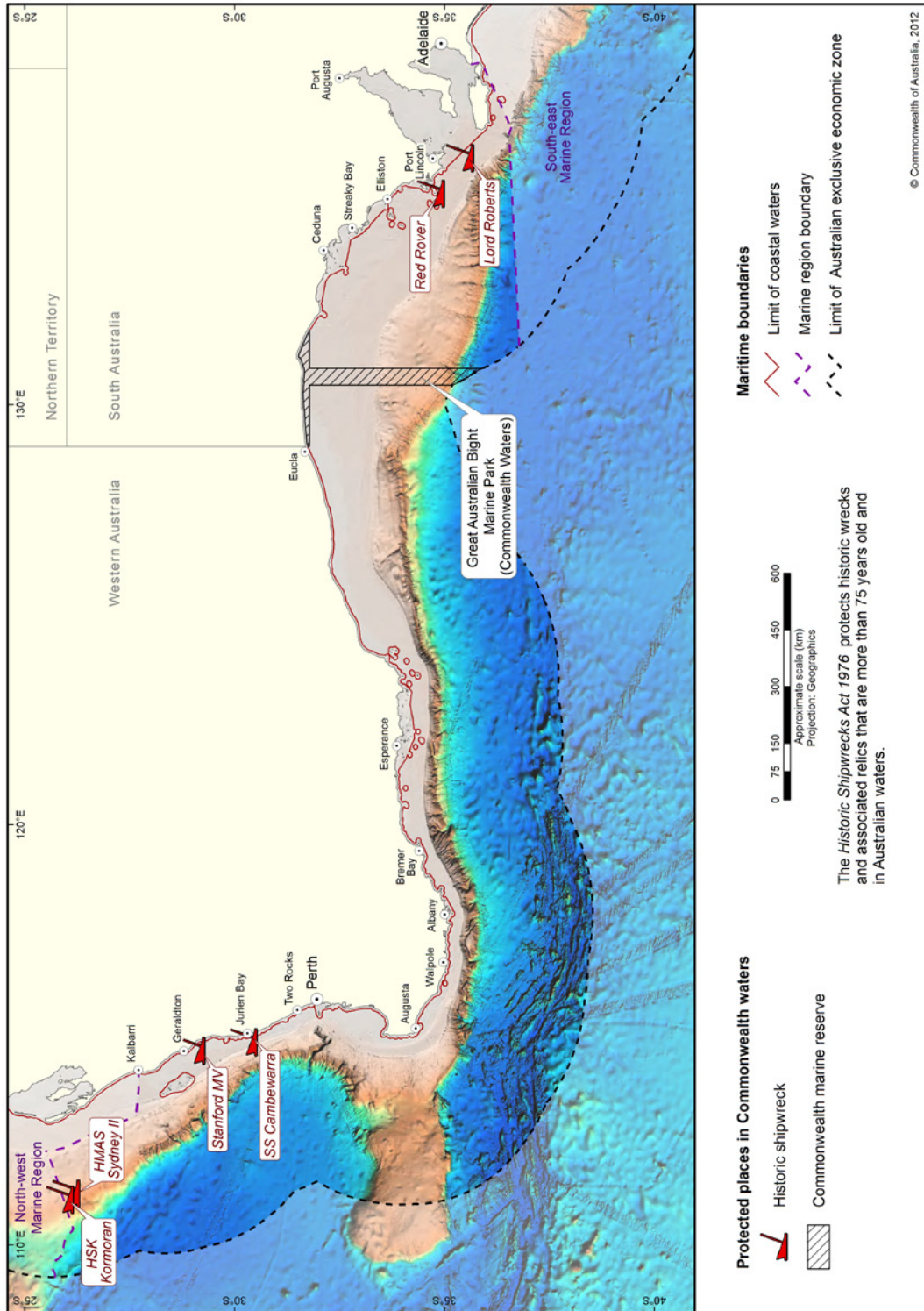


Figure 1: Protected places in the South-west Marine Region as of May 2012



Marine protected areas

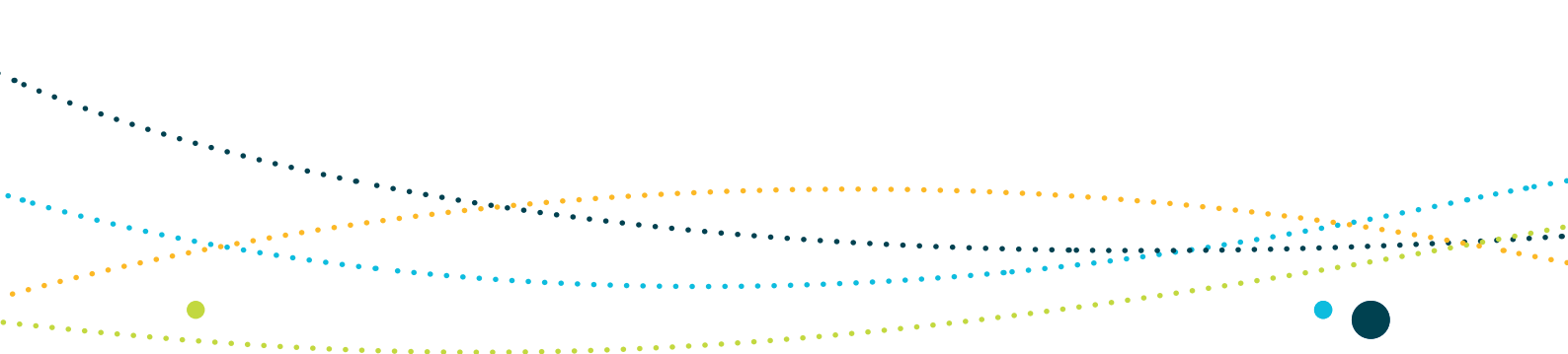
Within the South-west Marine Region there is currently one Commonwealth marine reserve—the Great Australian Bight Marine Park. For the current list and location of Commonwealth marine reserves in the South-west Marine Region, visit: www.environment.gov.au/marinereserves.

The Great Australian Bight Marine Park

The Great Australian Bight Marine Park stretches from 200 km west of Ceduna in South Australia and follows the coast to the Western Australian border. The park includes a strip 20 nautical miles wide extending 200 nautical miles offshore to the Exclusive Economic Zone boundary (Figure 1). The park comprises the adjoining protected areas in South Australian and Commonwealth waters. The Yalata Indigenous Protected Area also lies adjacent, creating one of the world's largest contiguous areas of land and sea managed for biodiversity conservation.

The Great Australian Bight Marine Park (Commonwealth Waters) is a Commonwealth reserve under the EPBC Act. The Australian and South Australian governments manage the park cooperatively to protect conservation values (specifically, the southern right whale; the Australian sea lion; other species of conservation significance and a transect representative of the seabed on the continental shelf and slope of the Great Australian Bight). The Great Australian Bight Marine Park (Commonwealth Waters), declared in 1998, covers around 19 700 square kilometres and extends to 1000 metres below the seabed. Management plans regulate recreational, scientific and commercial uses of the park within four distinct management areas or zones: a Whale Sanctuary Zone and Conservation Zone in the South Australian Marine Park (in the state coastal waters of the Bight) and, in Commonwealth waters, a Marine Mammal Protection Zone (which abuts and complements the two zones of the South Australian Marine Park) and a Benthic Protection Zone. Each zone is assigned to IUCN category VI—managed resource protected area.

Several unique factors combine to contribute to the high level of biodiversity and endemism in the general Great Australian Bight area. These include a long period of geological isolation, a persistent high wind and wave energy environment, warm-water intrusion via the Leeuwin Current from Western Australia, and cold-water, nutrient-rich upwellings in the east (James et al. 2001; Richardson et al. 2005). Taxonomic groups with exceptional diversity in this area include red algae (seaweed), ascidians (sea squirts), bryozoans (lace corals), molluscs (shellfish) and echinoderms (sea urchins and sea stars). The Benthic Protection Zone is within the region of the Great Australian Bight identified by James et al. (2001) as year-round downwelling and arrested carbonate production. Ward et al. (2006) and Currie et al. (2008 & 2009) assessed the effectiveness of this zone in representing regional biodiversity and found that it appears to effectively represent the epifaunal assemblages of the eastern Great Australian Bight (Currie et al. 2008 & 2009; Dambacher et al. 2009).



Although the Commonwealth and South Australian governments manage the Great Australian Bight Marine Park cooperatively, each jurisdiction has its own management plan to manage the day-to-day uses of its respective components of the park. The EPBC Act (section 354) prohibits actions affecting native species inside the park unless authorised under the Great Australian Bight Marine Park (Commonwealth Waters) Management Plan 2005–2012. The plan currently allows a range of activities, including fishing and scientific research, to be carried out under permit from the Director of National Parks. Other provisions of the EPBC Act prevent activities that affect species of particular conservation interest (in the park or in other Commonwealth waters), and control actions that could have a significant impact on the Commonwealth marine environment, including the park’s seabed. The park’s management plan supplements this protection by minimising disturbances to areas of habitat important to these species, and prohibiting disturbances to the seabed by benthic trawling, while allowing for other ecologically sustainable activities in the park.

There are few pressures on the Commonwealth marine environment within the Great Australian Bight Marine Park. Pressures on the species for which the marine park is important are assessed in species report cards. The impact of fisheries on Australian sea lions has recently been assessed (Hamer et al. 2009). There are oil and gas exploration activities next to and in areas overlapping deeper waters of the marine park. All activities within the boundaries of the Commonwealth waters of the park must comply with the Great Australian Bight Marine Park (Commonwealth Waters) Management Plan 2005–2012. Further information on the Great Australian Bight Marine Park is available at www.environment.gov.au/coasts/mpa/gab.

Certain activities are prohibited within the park (Commonwealth waters). Some activities might be allowed subject to permit approval issued by the Director of National Parks. Mining operations—including exploration activities such as seismic testing—are prohibited in the park (Commonwealth waters) except with the approval of the Australian Governor General and carried out in accordance with the management plan. Alongside the requirements outlined above for undertaking activities in the Great Australian Bight Marine Park (Commonwealth waters), certain activities also require additional environmental approvals; for example, actions that will or are likely to have a significant impact on matters of national environmental significance will be subject to the assessment and approval provisions of chapters two to four of the EPBC Act.





Listed heritage places

The HMAS *Sydney II* and the HSK *Kormoran* battle site and wrecks were added to the Commonwealth and National Heritage lists on 14 March 2011 (Figure 1). By virtue of their listing on the National Heritage List, these two shipwrecks are also matters of national environmental significance. The site lies about 290 kilometres west-south-west of Carnarvon, just inside the northern boundary of the South-west Marine Region. The wrecks are located at a depth of about 2450 metres and the site extends over an area of approximately 460 square kilometres. The site is included on the Commonwealth and National Heritage lists for its historic heritage values. The shipwrecks have significant heritage value because of their:

- importance in a defining event in Australia's cultural history and for their part in the development of the defence of Australia
- potential to yield information that would contribute to a greater understanding of Australia's involvement in World War II
- strong and special association with particular communities and the Australian community as a whole.

The shipwreck site of HSK *Kormoran* also has significant heritage value because of its importance in demonstrating a high degree of creative and technical achievement during World War II.

Historic shipwrecks

The *Historic Shipwrecks Act 1976* states that a historic shipwreck is a shipwreck that is:

- more than 75 years old
- located in Australian waters and waters above the continental shelf of Australia.

A shipwreck that is less than 75 years old may be declared a historic shipwreck by the minister if it is deemed to possess historical significance. Six historic shipwrecks have been declared or located within the region (Table 1). The vast majority of shipwrecks are already declared under the 75 year blanket protection provided by the Historic Shipwrecks Act. Protected or no-entry zones may also be declared to provide further protection to particularly vulnerable or important sites.

Table 1: Historic shipwrecks in the South-west Marine Region as of May 2012

Shipwreck name	Year	Description	Depth	Protection zone
HMAS Sydney II	1941	Light cruiser sunk following a battle engagement with HSK <i>Kormoran</i> , approximately 290 km off the central coast of Western Australia	–2420 m	A no entry protection zone has been declared around HMAS <i>Sydney II</i> . Permits are required under the <i>Historic Shipwrecks Act 1976</i> (s. 15) to enter this protection zone
HSK Kormoran	1941	Auxiliary cruiser sunk following a battle engagement with HMAS <i>Sydney II</i> , approximately 290 km off the central coast of Western Australia	–2513 m	A no entry protection zone has been established around HSK <i>Kormoran</i> . Permits are required under the <i>Historic Shipwrecks Act 1976</i> (s. 15) to enter this protection zone
MV Stanford	1936	On 24 June 1936, <i>Stanford</i> MV (with 2 passengers) was lost off African Reef south of Geraldton.	–20 – 30 m	na
SS Cambewarra	1914	A steam-powered transport vessel that was wrecked near Fisherman’s Island, 80 km south of Dongara, Western Australia	–48 m	na
Lord Roberts	1902	A cutter wrecked in the Gulf of St Vincent, South Australia	–106 m	na
Red Rover	1887	A fishing boat wrecked near Coffin Bay, South Australia	–72 m	na

na = not applicable



2. Vulnerabilities and pressures

Vulnerabilities

Most materials used to construct vessels are vulnerable to various forms and degrees of deterioration in the marine environment. The rate and scale of vessel deterioration depends on the strength of the materials used in construction and the duration and force of disturbance.

Disturbance, which encompasses both environmental and anthropogenic threats, causes physical deterioration to vessels. Physical scouring or smothering (from sediment dispersal) may progressively deteriorate a shipwreck. Unimpeded south-westerly waves and swells create a high-energy environment that can produce wave abrasion at depths down to 60 metres. In deeper environments, sediments are moved intermittently during winter storms, with fine-grained sediments transported off-shelf to an approximate depth of 120 metres (James et al. 2001). Direct impacts (such as anchorage or vessel strike) could cause immediate damage to a shipwreck.

Analysis of pressures

On the basis of current information, pressures have been assessed for historic shipwrecks in the South-west Marine Region. A summary of the pressure analysis for historic shipwrecks is provided in Table 2. Only pressures identified as *of concern* or *of potential concern* are discussed in further detail below. A description of the pressure analysis process, including the definition of substantial impact used in this analysis, is provided Part 3 and Section 1.1 of Schedule 1 of the Plan.

There are no pressures *of concern* or *of potential concern* on historic shipwrecks in the region.

Table 2: Outputs of the historic shipwreck pressure analysis for the South-west Marine Region

Pressures	Source	On-shelf shipwrecks ¹	Off-shelf shipwrecks ²
		<ul style="list-style-type: none"> SS Cambewarra Lord Roberts Red Rover 	<ul style="list-style-type: none"> HMAS Sydney II HSK Kormoran MV Stanford
Changes in sea temperature	Climate change		
Changes in oceanography	Climate change		na
Chemical pollution			
Physical habitat modification	Dredging/ dredge spoil		na
Physical habitat modification	Offshore mining operations		
Human presence at sensitive sites			
Collision with vessels			na
Changes in hydrological regimes	Land-based activities		

Legend of concern of potential concern of less or no concern

na = not applicable

1 On-shelf shipwrecks are shipwrecks located upon the continental shelf

2 Off-shelf shipwrecks are shipwrecks located beyond the continental shelf



3. Relevant protection measures

Environment Protection and Biodiversity Conservation Act

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides protection to world heritage places, national heritage places and historic shipwrecks through its environmental impact assessment process. Any action that is likely to have a significant impact on a matter of national environmental significance will require approval under the EPBC Act.

Historic Shipwrecks Act

The *Historic Shipwrecks Act 1976* aims to protect historic shipwrecks for their heritage values, maintain them for educational and recreational purposes, and regulate activities that may result in their damage, interference, removal or destruction. The Historic Shipwrecks Act contains six principal protection measures to meet its management objectives:

- *Protection zones*
Protection zones are declared by the minister and prohibit entry into a declared zone. A protection zone may extend up to 200 hectares and includes the airspace above, the waters or land beneath, the seabed and seabed subsoil. (For more information see www.environment.gov.au/heritage/shipwrecks/protected-zones.html)
- *Prohibitions against certain actions*
A person must not unlawfully engage in conduct that destroys, damages, interferes, disposes or removes an historic shipwreck or relic. Upon conviction under this section, a person is punishable by a fine not exceeding \$10 000 or imprisonment for a period not exceeding five years, or both. A body corporate is punishable by a fine not exceeding \$50 000.
- *Permits*
If an action will damage, destroy or interfere with an historic shipwreck or relic, a permit must be obtained from the minister before commencement of the action. (For more information see www.environment.gov.au/heritage/publications/shipwreck-forms-permits.html)
- *Ministerial directions regarding possession, custody or control*
The minister may require a person in possession, custody or control of a shipwreck, article or relic to undertake an action to ensure its preservation.
- *Maintenance of an historic shipwreck register*
The minister shall operate a Register of Historic Shipwrecks. A new Australian National Shipwrecks Database was launched in 2009 and includes all known shipwrecks in Australian waters (see www.environment.gov.au/heritage/shipwrecks/database.html)
- *Duty to notify of a shipwreck discovery*
A person who finds the remains of a vessel or any associated article must inform the minister as soon as practicable. Notification can be made via apps5a.ris.environment.gov.au/shipwreck/public/forms/notification.do?mode=add.



REFERENCES

Currie, DR, Sorokin, SJ & Ward, TM 2008, *Performance assessment of the benthic protection zone of the Great Australian Bight Marine Park: epifauna*, final report to the South Australian Department of the Environment, Water and Heritage, SARDI Aquatic Sciences, Adelaide, Publication No. F2008/000647-1, SARDI Research Report Series No. 299. 120pp.

Currie, DR, Sorokin, SJ & Ward, TM 2009, 'Infaunal macroinvertebrate assemblages of the eastern Great Australian Bight: effectiveness of a marine protected area in representing the region's benthic biodiversity', *Marine and Freshwater Research*, vol. 60, pp. 459–74.

Dambacher, JM, Rochester, W & Dutra, L 2009, *Addendum to ecological indicators for the exclusive economic zone waters of the South-west Marine Region*, report for the Australian Government Department of the Environment, Water, Heritage and the Arts, Canberra.

DEH (Department of the Environment and Heritage) 2005, *Great Australian Bight Marine Park (Commonwealth Waters) management plan 2005–2012*, Department of the Environment and Heritage, Canberra.

Hamer, DJ, Ward, TM, Goldsworthy, SD & Shaughnessy, PD 2009, *Effectiveness of the Great Australian Bight Marine Park in protecting the Australian sea lion (Neophoca cinerea) from bycatch mortality in shark gill-nets*, report to the Great Australian Bight Marine Park Steering Committee, South Australian Research and Development Institute (Aquatic Sciences) research report series no. 357.

James, NP, Bone, Y, Collins, LB & Kyser, TK 2001, 'Surficial sediments of the Great Australian Bight: facies dynamics and oceanography on a vast cool water carbonate shelf', *Journal of Sedimentary Research, Section B: Stratigraphy and Global Studies*, vol. 71, no. 4, pp. 549–67.

Richardson, L, Mathews, E & Heap, A 2005, *Geomorphology and sedimentology of the south western planning area of Australia: review and synthesis of relevant literature in support of regional marine planning*, record 2005/17, Geoscience Australia, Canberra.

Ward, TM, Sorokin, SJ, Currie, DR, Rogers, PJ & McLeay, LJ 2006, 'Epifaunal assemblages of the eastern Great Australian Bight: effectiveness of a benthic protection zone in representing regional biodiversity', *Continental Shelf Research*, vol. 26, pp. 25–40.



MAP DATA SOURCES

DSEWPaC (2010): Historic Shipwrecks Register

DSEWPaC (2007): Commonwealth Marine Protected Areas Managed by DSEWPaC.

DSEWPaC (2006): Commonwealth Marine Planning Regions.

Geoscience Australia (2006): Australian Maritime Boundaries (AMB) v2.0.

Geoscience Australia (2005): Australian Bathymetry and Topography.

Geoscience Australia (2004): Gazetteer of Australia.

Geoscience Australia (2003): Australia, TOPO-2.5M Topographic Data

