



Hammersley River WA02.02.03

Regional Setting

This mixed sand and rock coast compartment extends from Mary Ann Point to Red Island.

Justification of sensitivity

Sensitivity rating is a 4 as the shoreline is currently stable but likely to start eroding.

Erosion of small bay beaches and loss of sediment into Hammersley and Culham Inlets - both barred estuaries - is likely to occur in future.

Other comments

This compartment has a SSE aspect.

The dominant regional processes are the mediterranean to humid cool-temperate climate; southern annular mode (driving dominant south-westerly swells and storms); micro-tidal; high energy south-westerly swells; westerly seas; carbonate sediments; and interrupted swell-driven longshore transport.

This coastline is susceptible to regional hazards, including mid-latitude cyclones (depressions), storm surges and shelf waves.

Geomorphological features include rocky headlands and coast, and the Culham and Hammersley Inlets.

The majority (62%) of the coastline consists of exposed, high energy shorelines with eroded igneous or metamorphic rocks associated with overlying beachrock or eolean limestone. The remainder of the coastline (32%) features variable width sandy beaches formed in areas protected by offshore reefs. These may include some beachrock as low cliffs or headlands.



Confidence in sources

Low confidence: Interpretation of landform assemblages comes from satellite imagery and aerial photography. There is limited or no information available describing landforms or coastal landform change over the historical period. Some information is available for Culham and Hammersley inlets.

Additional information

Australian Beach Safety & Management Program (ABSAMP) database of over 12,000 beaches can be accessed at http://www.ozcoasts.gov.au/coastal/beach_intro.jsp (also see Surf Life Saving site)

Australian Maritime Safety Authority (AMSA). (2006) Oil Spills Response Atlas. Australian Government Canberra. Available at <https://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/general-information/OSRA/index.asp>

Brearley A. (2005) Ernest Hodgkin's Swanland: Estuaries and Coastal Lagoons of Southwestern Australia, University of Western Australia Press, Crawley.

Eliot I, Nutt C, Gozzard B, Higgins M, Buckley E & Bowyer J. (2011). Coastal Compartments of Western Australia: A Physical Framework for Marine & Coastal Planning. Report to the Departments of Environment & Conservation, Planning and Transport. Damara WA Pty Ltd, Geological Survey of Western Australia and Department of Environment & Conservation, Western Australia.

Sharples C, Mount R, Pedersen T, Lacey M, Newton J, Jaskierniak D & Wallace L. (2009) The Australian Coastal Smartline Geomorphic and Stability Map. Version 1: Project Report. Geoscience Australia & Department of Climate Change, www.ozcoasts.gov.au/pdf/SmartlineProjectReport_2009_v1.pdf



Short AD. (2005) Beaches of the Western Australian Coast: Eucla to Roebuck Bay: A guide to their nature, characteristics, surf and safety. Australian Beach Safety and Management Program. University of Sydney Coastal Studies Unit and Surf Life Saving Australia. Sydney University Press. Sydney, New South Wales