Cheyne Bay WA03.01.04

Regional Setting

This mixed sand and rock coast compartment extends from Groper Bluff to Bald Island.

Justification of sensitivity

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

Much of the shore is rocky, with steep limestone bluffs and cliffs or granitic outcrops forming headlands. These areas are considered to be stable. Elsewhere and particularly along the west of Cheynes Beach, frontal dunes have been eroded. Further east, large mobile sand sheets are active.

Other comments

This compartment has a SE 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 arcuate beaches and dunes, rocky headlands and coast.

The coastline of this compartment features four distinct landform environments.

[1] Exposed high energy shorelines with eroded igneous or metamorphic rocks associated with overlying beachrock or eolean limestone (32%).

[2] Narrow to wide sandy beach seaward of low bluffs (< 50m), in sedimentary rock including limestone (27%).

[3] Broad gently-sloping coarse grained sandy beach with some active dunes and unstable blowout areas (22%).

[4] Broad arcuate sandy beach, which may be cuspate or crenulate, formed between or in association with resistant headlands (19%)

Confidence in sources

Low confidence. Interpretation of landform assemblages comes from a site visit, satellite imagery and aerial photography. There is limited or no information available describing landforms or coastal landform change over the historical period.

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)

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