



Sydney Northern NSW02.03.03

Regional Setting

The dominant regional processes influencing coastal geomorphology in this region are the humid warm to cool temperate climate, micro-tides, south-easterly Tasman Sea swells, easterly seas, dominantly quartz (terrigenous) sediments with northerly longshore transport in the northern part, and the El Nino Southern Oscillation (driving beach erosion/accretion cycles, cyclone frequency).

Regional hazards or processes driving large scale rapid coastal changes include: East Coast Lows (extra-tropical cyclones), mid-latitude cyclones (depressions), and storm surges (<1m).

This compartment extends from North Head to South Head.

Justification of sensitivity

Sensitivity rating is a 4 for beaches inside the entrance subject to erosion during storms.

Other comments

This is a sandstone rocky shoreline, interspersed with low-energy beaches. Foster and Brown (xxxx) have reported on beach and sea wall conditions at Balmoral. Impacts of the 1974 storm events are discussed by Foster et al. (1975), including inside the entrance to the Harbour. These beaches may need nourishment in the future. Sand will continue to be lost to the flood tide delta, especially in Middle Harbour.



Confidence in sources

Medium confidence.

Additional information (links and references)

Foster, D.N., 1968. Beach nourishment of Balmoral Beach, University of New South Wales, Water Research Laboratory, Technical Report No 68/11.

Foster, D.N., Brown, C.T., 1977. Balmoral Beach Seawall. Proceedings of the 3rd Australian Conference on Coastal and Ocean Engineering.