



Anna Bay NSW02.01.04

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 Tomaree Head to Birubi Point.

Justification of sensitivity

Sensitivity rating is a 4 with parts of Fingal Bay already a 5

Other comments

This is a predominantly rocky compartment with small pocket beaches. South of Tomaree Head, there are five headland-bounded beaches. Fingal Bay is sensitive to erosion; it is occasionally breached on the northern Fly Roads tombolo. The beach consists of a receded barrier on which tree stumps have been exposed on the beach following erosion at the western end (Thom et al., 1992).

The two small beaches at Anna Bay contain transgressive dunes; they are relatively stable but have experienced periods of extreme event erosion.



Boat Harbour is a discrete pocket beach that was severely eroded in 1950 storms. It is flanked by rounded toscanite boulders that have been reworked in late Pleistocene and Holocene high sea level periods (Thom et al., 1992 and references).

Confidence in sources

Medium confidence: Quaternary history is well-documented. Future response is less certain, although there is little evidence of offshore or longshore sand supplies into the compartment.

Additional information (links and references)

Thom, B.G., Shepherd, M., Ly, C.K., Roy, P.S., Bowman, G.M., Hesp, P.A., 1992. Coastal Geomorphology and Quaternary Geology of the Port Stephens-Myall Lakes Area. Australian National University, Canberra.