



Newcastle Coast NSW02.02.01

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 Nobbys Head to Norah Head.

Justification of sensitivity

Sensitivity rating is a 4. Although much of this coastline appears stable, erosion and inundation are likely around lake shores and entrance.

Other comments

The northern section of this compartment is rocky, with several rock-bounded beaches for which erosion is inferred due to inadequate supplies of sand from offshore or longshore sources (Chapman et al., 1982).

Nine Mile Beach, spanning from the south of Redhead Point to the northern training wall at the entrance to Lake Macquarie, comprises more than 1.5km of transgressive dunes to the north, part of which has been mined. Wide backbarrier swamps are closer to the shore in the south. Blacksmiths Beach is a managed foredune; it appears stable.



The channel into Lake Macquarie is managed, and low-lying area may be subject to further inundation as sea level rises; the channel draining into Lake Macquarie is subject to periodic dredging and bank instability; sand continues to accumulate at the western end of the channel as a flood tide delta. This is an area subject to considerable investigation by council and various government agencies. Shoreline recession and inundation into wetlands is likely to continue near Swansea.

South of the entrance to the lake, the coast is rocky, with pocket beaches such as Catherine Hill Bay. At the southern end of the compartment and north of Norah Head are the Birdie and Budgewoi beaches, which are narrow stationary barriers that separate the northern Tuggerah Lakes from the sea. They appear to be relatively stable at present, although subject to periodic storm erosion and post-storm recovery.

Confidence in sources

Medium confidence: Detailed studies by council and government agencies on entrance conditions, adjoining beaches and tidal delta, including recent CZMP.

Additional information (links and references)

Chapman, D.M., Geary, M., Roy, P.S., Thom, B.G., 1982. Coastal Evolution and Coastal Erosion in New South Wales. Coastal Council of New South Wales, Sydney.