

Coastal Management Practices on a Southern Gold Coast Beach

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Kirra beach is located on the southern Gold Coast, bounded by Kirra Point to the south and Bilinga immediately to the north. In the 1960s the Tweed River entrance training walls were extended to improve navigation of the Tweed River entrance. This reduced the net northerly transport of sand to Queensland resulting in substantial erosion of the southern Gold Coast beaches, with the most notable effect being at Kirra.

Over the past four decades, a number of coastal management practices were adopted at Kirra to prevent further recession and provide a usable beach. Different options ranged from hard engineering structures to sand nourishment campaigns, and were found to provide only short term relief and not a long term solution to the problem. In 1994 the Queensland and NSW Governments jointly implemented the Tweed River Entrance Sand Bypassing Project with the joint objectives of establishing and maintaining a safe navigable entrance to the Tweed River, and achieving a continuing natural supply rate of sand to restore and maintain the amenity of the southern Gold Coast beaches.

This paper examines the various coastal management options that have been implemented at Kirra and their relative performance based on the extensive monitoring data available. Of the coastal protection options implemented, the sand bypassing system has proved to be the most effective long term solution. However, due to the highly dynamic nature of the coastal system there is a constant requirement for ongoing refinement.