

Seashore Engineering



WA COASTAL EROSION HOTSPOTS ASSESSMENT

Scope

A state-wide evaluation was undertaken, identifying priority sites likely to require substantial coastal erosion management in the next 25 years. Fifty-five hotspots were identified as most susceptible due to either the assets at risk or severity of erosion pressure. In many cases these sites have a long history of repeated coastal management expense.

Desktop assessment was combined with interviews of local coastal managers to determine site issues and characterise coastal dynamics. For each site, preliminary adaptation strategies were identified, with low-cost monitoring and associated triggers for management responses.

Outcomes:

This study provided a cost-effective first-pass evaluation of potential coastal adaptation pathways and constraints of 55 sites. The systematic nature of the assessment supported state-wide consideration of the effectiveness of existing coastal management strategies. This included improved recognition of the challenges presented by complex land ownership and diverse stakeholder values.

The experience of Seashore staff to assess coastal vulnerability and determine viable responses enabled efficient identification of preliminary management options for all 55 sites. Application of the Avoid-Retreat-Accommodate-Protect adaptation hierarchy was used to identify possible management pathways. Directions for further refinement of coastal dynamics assessment on 'brownfield' sites were identified. In particular, erosion assessments need to better incorporate transfer of erosion pressure by structures; and better recognise cyclic erosion pressure.

Challenges: This project involved facilitation of communication between a wide range of clients (DoT and DPLH) and stakeholders (LGA officers for each hotspot site), with differing views on various components of the project, requiring careful liaison and discussion. This issue was compounded by the project duration, which resulted in changes in scope as the project progressed. This was professionally managed by Seashore, through careful identification of the inter-dependencies between key deliverables, allowing efficient revision management.



CASE STUDY

Disciplines: Geomorphology,
Planning and Coastal
Engineering

CLIENT

Departments of Planning & Transport