Southend Coastal Adaptation Strategy - Inundation mapping (Information Sheet #4)

Background

Recognising the value of the Southend coastline to the community, the Wattle Range Council has initiated a project to develop a robust plan to determine specific priority pathways for action. A range of tasks will be undertaken as part of the project, including:

- assessing the location, extent and condition of assets and infrastructure;
- developing inundation and erosion maps;
- reviewing the historical performance of protective works;

The purpose of this Information Sheet is to summarise coastal inundation mapping for Southend.

Key issues

The "bathtub model" approach was used to provide a first pass assessment of areas at risk from coastal inundation (Figure 1). Bathtub models are elevation based, using digital elevation models, to identify areas below a given inundation scenario.

The coastal inundation maps generated for this project account for the 100yr ARI (average return interval) storm water level, waves setup, wave runup and sea level rise. As for the erosion maps, sea level rise of 0.3m is assumed for 2050 and up to 1.0 m for 2100.

It is noted that the magnitude of sea level rise projected this century is likely to cause significant shoreline erosion which may result in more significant inundation hazards. Nevertheless, the inundation extents displayed in Figure 1 are considered to provide a reasonable indication of the broad extent of the potential coastal inundation hazards along the Southend coastline due to sea level rise.

How was this information used?

The inundation maps were used in the development of the Southend Adaptation Strategy. The Strategy is available on Council's website:

www.wattlerange.sa.gov.au/coastalmanagement

Further information?

For further information on this project contact Lauren Oxlade at Wattle Range Council on (08) 8733 0901.

Figure 1. Coastal inundation mapping for 2017, 2050 and 2100 scenarios.