

Southend Coastal Adaptation Strategy - Erosion mapping (Information Sheet #3)



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 the outputs of erosion mapping for Southend.

Key issues

Models and observations were used to forecast the future extent of erosion for sections of the Southend coastline.

The erosion maps are based on modelling for storms (S1), long term shoreline recession observations (S2), and profile modelling that considers erosion based on an amount of sea level rise (S3). Profile modelling uses the Bruun rule which is the most widely used method for estimating recession as a result of sea level rise. It assumes that coastal recession will be 50 to 100 times that extent of sea level rise.

A key factor influencing the erosion maps is that the state planning policy recommends an

allowance of 0.3 m for sea level rise to the year 2050, and 1 m by 2100, when considering coastal inundation and long term recession effects and planning for coastal development.

Coastal hazard lines were mapped for present day conditions, 2050 and 2100 as shown in Figures 1 to 3:

- Immediate zone of wave impact (ZWI) (S1);
- Almost certain zone of recession (ZR) (S1+S2);
- Likely zone of recession (ZR) (S1+S2+S3 (BR50));
- Possible zone of recession (ZR) (S1+S2+S3 (BR100));

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 erosion hazard lines: Western beach (Note: Coastal hazard Lines Immediate ZWI, 2050 Almost Certain ZR and 2100 Almost Certain are located in the same position).



Figure 2. Coastal erosion hazard lines: Outlet groynes to Leake St.



Figure 3. Coastal erosion hazard lines: North of Leake St.

