



COASTAL EROSION HAZARD MAPPING

Interpreting Coastal Erosion Hazard Mapping

The City has produced Coastal Hazard maps for the area of coast from Ellen Cove to the Emu Point Boats Pens. This is the first stage of the Coastal Hazard, Risk, Management and Adaptation Plan (CHRMAP) being developed for this area of coast.

Coastal Hazard maps show the areas in which coastal processes such as severe storm erosion, inundation and future potential sea level rise MAY occur or impact. These areas were calculated using the methodology prescribed in State Planning Policy 2.6 and have been identified for a 100 year planning timeframe. This work has been prepared by qualified Coastal Specialists and reviewed by State Government.

The hazard lines include the following allowances:

- **S1 - Allowance for severe storm erosion** – this uses a computer simulated model to replicate a historical 1 in 100 year storm event. The event is run three times. For this study the August 1984 storm was modelled for a duration of 327 hours.

- **S2 – Allowance for historical shoreline movement** – this allowance is calculated as 100 times the historic annual rate of erosion. For this study long term historical shoreline movement trends were examined and likely future shoreline movements predicted.

- **S3 – Allowance for erosion caused by future sea level rise** – this allows for a vertical sea level rise of 0.9m over 100 years.

A coastal hazard area identified for a 100 year planning timeframe means that in 100 years, coastal processes (eg erosion) MAY occur in that area in the event of a severe storm and given a certain amount of sea level rise. It does not mean that water levels or the shoreline will be permanently located at this line.

The methodology for calculating coastal hazard areas does not take into account future action the City may take to adapt to potential future impacts. The risk of the modelled erosion occurring is considered relatively low and the majority of potential impacts are long term.

MAPS 1 – 6 - COASTAL EROSION HAZARD MAPS LEGEND

Legend	Description
Current Horizontal Shoreline Datum (HSD)	The physical line of the coast from which a setback is applied
Present Day (2017)	Provides an indication of the possible extent of severe storm erosion in the present day.
2030	Provides an indication of the possible extent of severe storm erosion by 2030.
2050	Provides an indication of the possible extent of severe storm erosion by 2050.
2070	Provides an indication of the possible extent of severe storm erosion by 2070.
2090	Provides an indication of the possible extent of severe storm erosion by 2090.
2120	Provides an indication of the possible extent of severe storm erosion by 2120.

The lines on these maps are a combination of S1, S2 and S3. As required by SPP2.6 a 0.2 m/yr allowance for uncertainty is also included. Maps 5A and 6A present the ‘with coastal protection structures’ scenario and maps 5B and 6B present the ‘without coastal protection structures’ scenario.

To assist in interpreting the coastal hazard mapping the above legend is provided. Note coastal hazard areas have been identified for present day (2017), 2030, 2050, 2070, 2090 and 2120 year timeframes.