



# COASTAL HAZARD INUNDATION MAPPING

## Interpreting Coastal Hazard Inundation Mapping

The City has produced Coastal Hazard Inundation 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 Inundation maps show the areas in which coastal inundation incorporating 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. The work has been prepared by qualified Coastal Specialists and reviewed by State government.

The inundation lines include the following allowance:

- **S4 – Allowance for inundation (Coastal Flooding)** – models a 1 in 500 year storm event for inundation. These figures include a combination of storm surge, tide and wave set up in conjunction with future predicted sea level rise.

### COASTAL HAZARD INUNDATION MAPS

These maps define the areas of temporary coastal inundation hazard (S4) for current (2017), 2030, 2050, 2070, 2090 and 2120. The Inundation maps have many lines which vary based on inclusion/exclusion of factors including sea level rise, wave set up, exposure to swell and effectiveness of coastal barriers. The below legend aims to provide a simplified interpretation of the Coastal Hazard Inundation Maps.

The **red 2017** line is the most inland of the lines because it is the only one which includes both Peak Steady Water Level and Wave Run Up.

### MAPS 6 – 12 – COASTAL HAZARD INUNDATION MAPS LEGEND

Legend	Description
<b>RED</b> 2017 Estimated Wave Runup Extent	This is the maximum expected level of inundation expected in a 1 in 500 year storm event including wave set and wave run up in the present day.
<b>ORANGE/YELLOW</b> 2050 - 2120 PSWL	This is the maximum expected level of inundation expected in a 1 in 500 year storm event excluding wave run up for 2050 - 2120.
<b>GREEN</b> 2017 - 2070 PSWL	This is the maximum expected level of inundation expected in a 1 in 500 year storm event excluding wave run up for 2017 - 2070.
<b>BLUE</b> 2017 Peak Steady Water Level	This is the maximum expected level of inundation expected in a 1 in 500 year storm event excluding wave run up in the present day.

#### DEFINITIONS

**Inundation** – means the temporary occurrence of water onto previously dry land during a storm event.

**Peak (Steady) Water Level (PSWL)** – means the highest average elevation of the sea surface caused by the combined effect of storm surge, tide and wave set up resulting from the storm event.

**Wave Run Up** – means the rush of water up a shoreline or structure on the breaking of a wave.