

Resilient Coast Strategic Plan – Supplement C

Erosion Prone Area mapping

This document is part of Supplement C to the Douglas Shire Council Resilient Coast Strategic Plan (2019 – 2029)¹.

Erosion Prone Areas are mapped by the Queensland Government, and available online at:

<https://www.qld.gov.au/environment/coasts-waterways/plans/hazards/erosion-prone-areas>

The definition of coastal hazard areas identified for the Resilient Coast Strategic Plan has included an update to some components of the Erosion Prone Area. Updates are based on outcomes of the technical investigations and new erosion modelling completed in 2018 to inform the Resilient Coast Strategic Plan².

The maps provided in Supplement C include the Erosion Prone Area for present day, 2060, and 2100. Guidance on how to interpret the maps is provided below.

Open coast erosion

Mapped open coast erosion bands represent areas that may be prone to short and/or longer-term coastal erosion processes. The bands provide an indication of areas that may be impacted by erosion (in the absence of intervention) and assist to identify focus areas for adaptation actions. Bands are indicative only, and do not represent a predicted loss of coastal land.

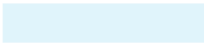
The open coast erosion bands have been updated for present day, 2060 and 2100 time periods, based on new erosion modelling for the Douglas Shire coastline. The approach to the erosion modelling has followed the coastal hazard technical guideline for determining coastal hazard areas (DEHP 2013), and leading practice techniques as defined in the coastal hazard adaptation strategy minimum standards and guideline (LGAQ and DEHP 2016).

Open coast erosion likelihood of impact - bands		Modelled storm events*
	Likely	10% AEP
	Possible	1% AEP
	Rare	0.2% AEP

*AEP is the Annual Exceedance Probability – on average, the probability of an event occurring in any given year. The 10%, 1% and 0.2% AEPs have been modelled for each time period: present day, 2060 and 2100.

Tidal areas

Mapped tidal areas represent areas that are likely to be prone to regular inundation by tidal patterns. This is based on the Highest Astronomical Tide (HAT) mapping, incorporates a buffer to account for wind and wave processes, and also incorporates 0.8 m sea level rise by 2100³.

Tidal areas (likely)	Present day	2060	2100
	HAT + 10m	HAT + 20m (horizontal) And HAT + 0.4 m (vertical)	HAT + 40 m (horizontal) And HAT + 0.8 m (vertical)

Rocky coast

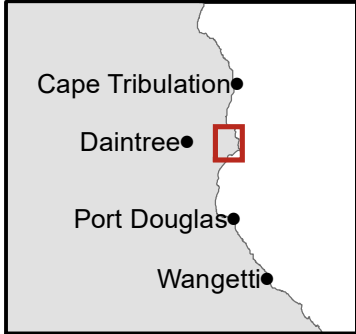
Mapped rocky coast areas represent sections of the coastline that may be subject to rocky coast erosion processes, including weathering and landslips. These zones have been identified as a possible zone of impact within a 30 m buffer from HAT (for rocky coast areas).

Rocky coast erosion	Present day to 2100
	30 m buffer

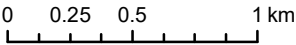
¹ Douglas Shire Council (2019b). Resilient Coast Strategic Plan.

² Detailed in the Phase 3 summary report (DSC 2018a)

³ As per the minimum standard and guideline requirements (LGAQ and DEHP 2016)

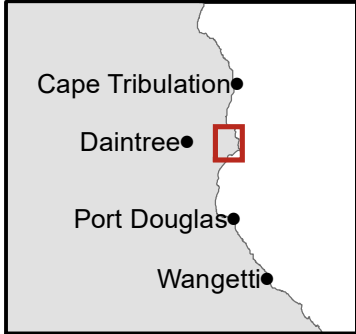


- 5. Cow Bay - Cape Kimberley**
Areas prone to coastal erosion processes:
- Present day - Likely
 - Present day - Possible
 - Present day - Rare
 - Present day - Tidal area (likely)
 - Rocky coast zone (possible)



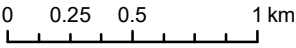
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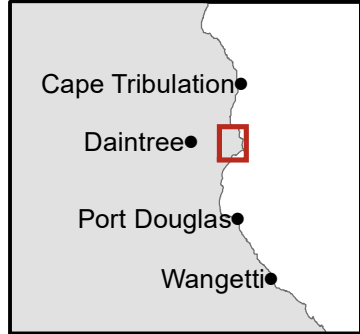
5. Cow Bay - Cape Kimberley
Areas prone to coastal erosion processes:

- 2060 - Likely
- 2060 - Possible
- 2060 - Rare
- 2060 - Tidal area (likely)
- Rocky coast zone (possible)



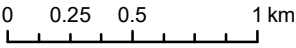
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5. Cow Bay - Cape Kimberley
Areas prone to coastal erosion processes:

- 2100 - Likely
- 2100 - Possible
- 2100 - Rare
- 2100 - Tidal area (likely)
- Rocky coast zone (possible)



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