

# Clifton to Tangoio Coastal Hazard Strategy 2120

We're developing a strategy to understand coastal hazard risks in Hawke's Bay and how we can manage them between Clifton to Tangoio.

We want to show the community what we've come up with, get feedback from you, and incorporate it into the strategy when we come back for formal consultation.

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## Coastal risks

**Coastal communities around New Zealand are becoming increasingly affected by coastal hazards, such as coastal inundation (flooding by the sea) and coastal erosion.**

Clifton to Tangoio is the most developed and populated part of the Hawke's Bay coastline. Hundreds of people's homes are located along this coast, as well as businesses and industry, roads, bridges, electrical/gas/water/sewage services, Napier Port and Hawke's Bay airport.

In Hawke's Bay we have faced these hazards in the past and we already understand some of the challenges. We can use this knowledge to look ahead so we are prepared for coastal hazards

in the future, and adapt to these as resilient communities.

Climate change is accelerating the pace of change and presenting new challenges to coastal communities through sea level rise and the increased frequency and severity of storm events. Sea level may rise by over 1 metre in Hawke's Bay by 2120, increasing the impact of erosion and inundation.

**Coastal erosion is when waves and storms wear down or carry away rock and sand along the coast, eroding the beach.**



**Coastal inundation is when low-lying land and near the coast is flooded from the sea during high tides or storms and floods that over-tops the beach.**



## What we're doing about it

**We're developing a strategy called Clifton to Tangoio Coastal Hazards Strategy 2120 to understand coastal hazard risks and manage them.**

The Strategy identifies the areas that may be affected by coastal hazards over the short to long term and the risks to public and private property, cultural sites and areas, recreational use and infrastructure services (see below in Cells).

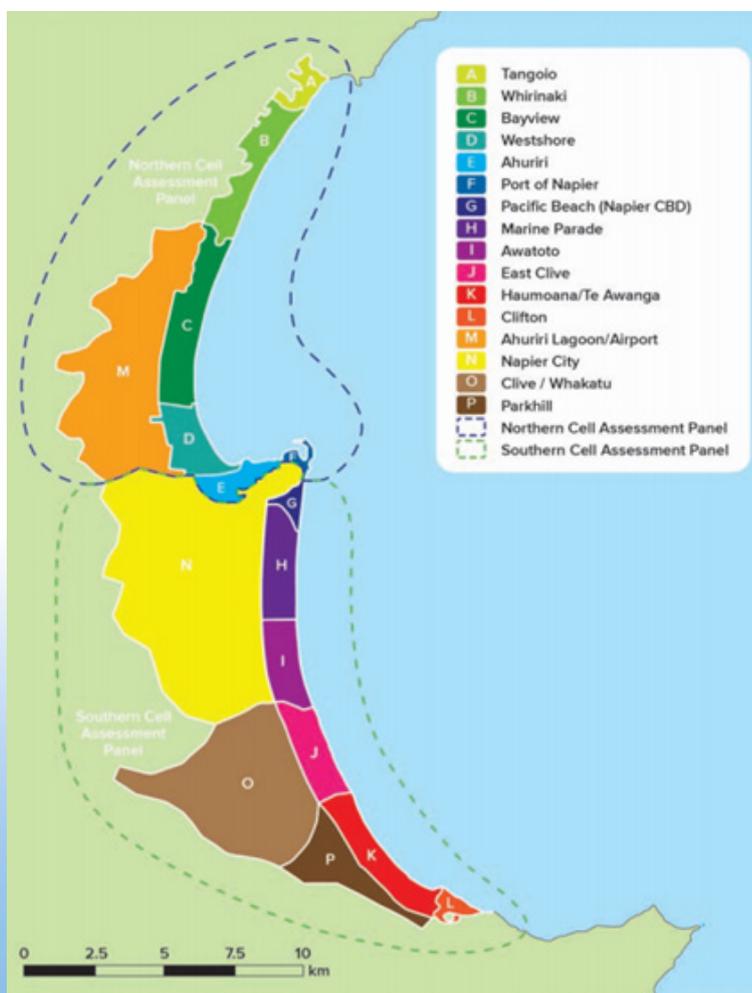
This strategy has been developed in partnership with groups representing mana whenua and tangata whenua, Hastings District Council, Napier City Council, and Hawke's Bay Regional Council. We have worked closely with community members from along each area of the coast to incorporate local feedback into the Strategy.





# Cells

**The area between Clifton and Tongoio was split into two 'cells' - northern and southern - so that each area could be considered for its specific needs and response pathways developed.**



This process took over a year and was led by community-based panels with support from independent, technical and academic experts, and council staff.

The panels developed 100-year pathways for nine priority units along the coast. Each pathway was built from a combination of short term (0 - 20 years), medium term (20 - 50 years) and long term (50 - 100 years) hazard response actions.

Six potential pathways were developed for each unit, representing the spectrum of possible responses from no or low intervention to soft engineering (e.g. beach renourishment), hard engineering (e.g. sea walls), and managed retreat. Part of this work looked at construction and maintenance costs for each pathway. The panel went through an intensive process that carefully considered a wide range of options carefully looking at the uniqueness of Hawke's Bay's coast, what had been done around the world, while being supported by independent experts before confirming a recommended pathway for each unit (see back page).





Pathway	Short Term (0-20 years)	→	Medium Term (20-50 years)	→	Long Term (50-100 years)
UNIT E1: AHURIRI PATHWAY 6	Status quo	→	Sea wall	→	Sea wall
UNIT E2: PANDORA PATHWAY 3	Status quo	→	Storm surge barrier	→	Storm surge barrier
UNIT D: WESTSHORE PATHWAY 3	Renourishment	→	Renourishment + Control Structures	→	Renourishment + Control Structures
UNIT C: BAY VIEW PATHWAY 3	Status Quo / Renourishment	→	Renourishment + Control Structures	→	Renourishment + Control Structures
UNIT B: WHIRINAKI PATHWAY 4	Status Quo / Renourishment	→	Renourishment + Control Structures	→	Sea wall
UNIT L: CLIFTON PATHWAY 5	Status quo	→	Sea wall	→	Managed Retreat
UNIT K2: TE AWANGA PATHWAY 3	Renourishment Groynes	→	Renourishment + Groynes	→	Renourishment + Groynes
UNIT K1: HAUMOANA PATHWAY 2	Renourishment + Groynes	→	Renourishment + Groynes	→	Managed Retreat
UNIT J: CLIVE/EAST CLIVE PATHWAY 1	Status Quo	→	Renourishment + Groynes	→	Retreat the Line/ Managed Retreat

#### Arrow = a trigger point →

This will be an agreed set of circumstances that will tell us that change is happening, and we need to consider shifting to the next step in the pathway. An example trigger might be that we have lost a certain amount of beach to erosion, or we have had increasing impacts from waves overtopping the beach.

**Renourishment** – when sand or gravel lost through erosion is replaced from other sources.

**Groyne** – is a shore protection structure built from the beach out into the sea to reduce sediment losses from erosion.

**Inundation protection** – similar to a stopbank on a river, designed to reduce risks to low lying areas from being flooded by sea water during high tides and storms.

**Control structures** – A physical structure that attempts to retain and/or grow the beach by protecting it from erosion – includes groynes, but could also be an offshore structure like artificial reefs.

## What's next

Since developing these pathways with the Panels, we've been working on design concepts and costs for the pathways, looking into aspects of implementing the strategy including funding, regulations and consenting.

As we put together the detail on implementing the Strategy, we want to hear from the community and get feedback on the pathways for each unit, and about the community's vision for the coast.

Head to [hbcoast.co.nz](https://hbcoast.co.nz) to answer a few questions now about the Strategy – your feedback will be key to help us shape up a Strategy for the long-term future of our coastline.

To find out more about the work we've done, see the full Strategy, and to keep up with what we're doing head to [hbcoast.co.nz](https://hbcoast.co.nz)

