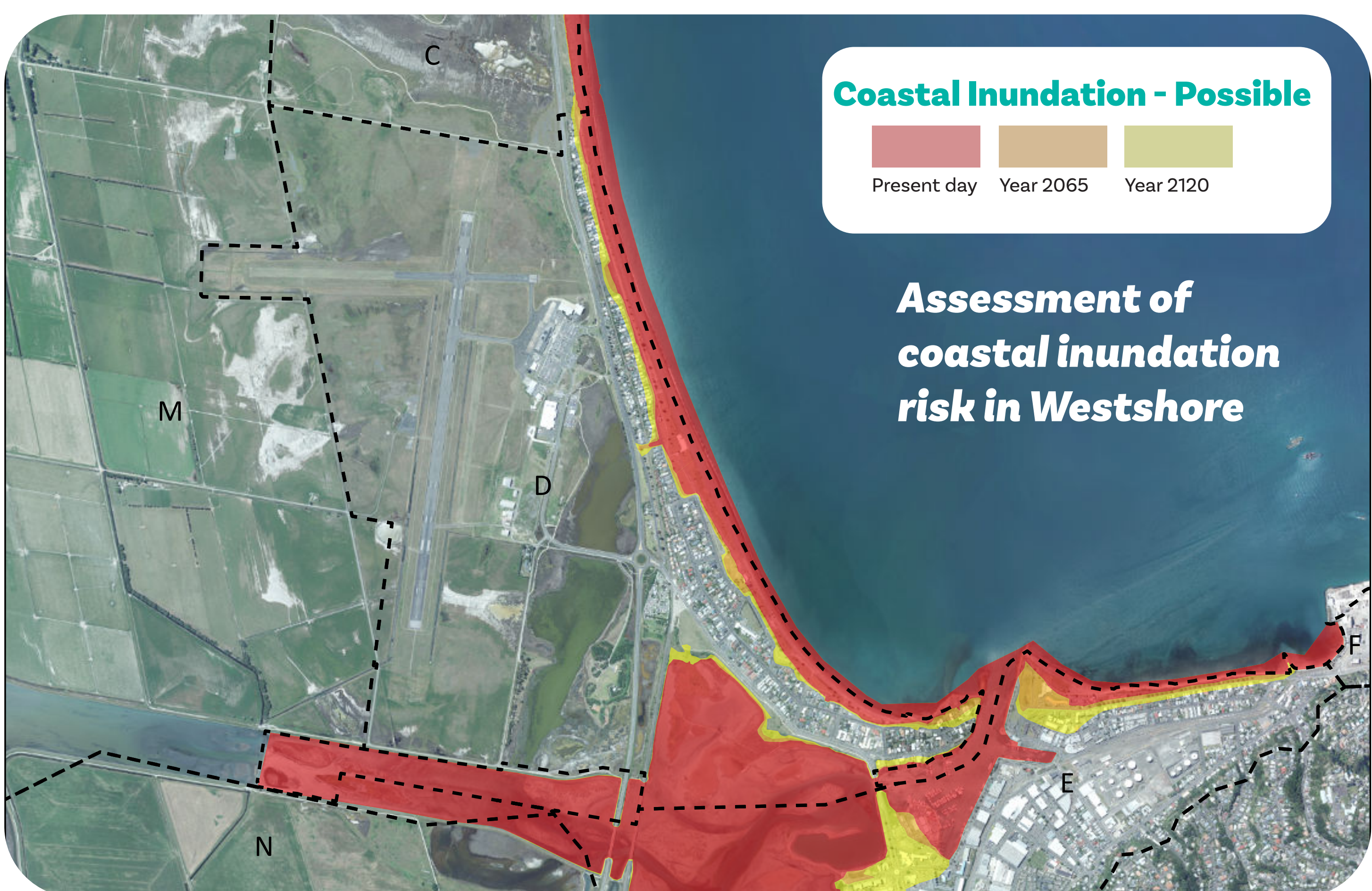
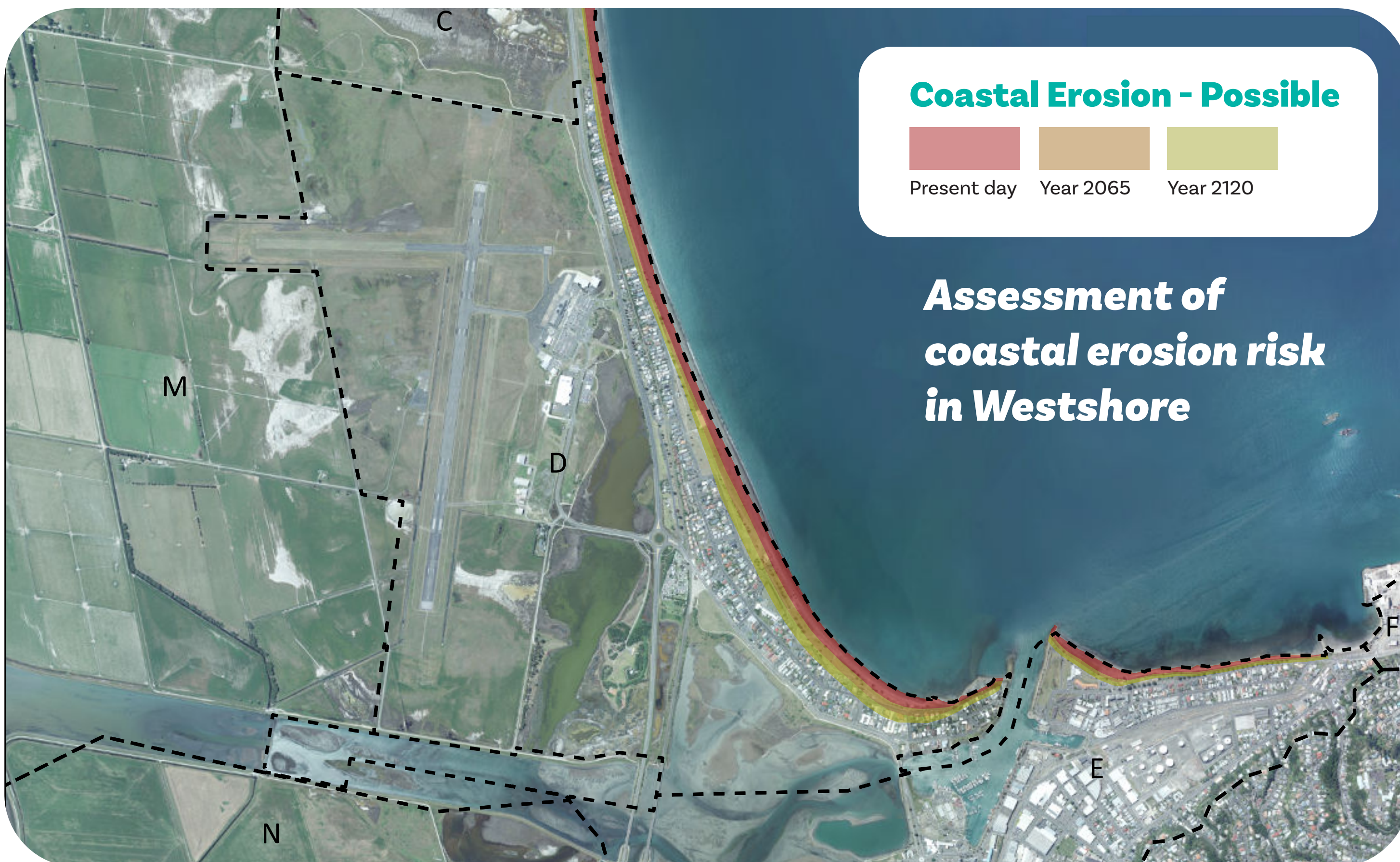


What is the problem?



Current situation

- By 2065 The Esplanade, parts of Charles Street, and up to 20 properties are likely to be at risk from erosion.
- 12 properties are likely to lose existing street access.
- By 2120, access to approximately 50 homes on The Esplanade and Charles Street is likely to be lost and up to 120 homes are likely to be directly affected by erosion.
- By 2120, about 90 houses are at risk from storm inundation.
- The Ahuriri Estuary is subject to inundation.

Considerations for Westshore

- Lifeline assets in Westshore such as the State Highway, railway, gas pipeline, fibre optic and other utilities are vulnerable to erosion
- There is a desire to rebuild the beach and nearshore area with sand which has been eroded over the past 20-30 years. There may be an opportunity to make use of the sand available through the port maintenance dredging and the proposed new port berth project
- Be renourishment may impact Te Pania and other reefs. Only appropriate material will be used i.e. fine to coarse sand, not silt.
- Monitoring of any effects of renourishment on Pania / Rangatira Reefs and reefs to the north will be required.

Thresholds

Westshore Proposed Thresholds	
ADAPTATION THRESHOLD	
Coastal inundation causing the loss of one or more essential services affecting the majority of the community.	How long: At least 48 hours How often: More often than once every 5 years.
Community-wide coastal inundation causing damage to multiple buildings/service.	How long: Any duration How often: More often than once every 5 years.
Any serious injuries and/or fatalities that occur as a result of a coastal erosion or coastal inundation event.	
Civil Defence emergency is declared in response to coastal inundation or coastal erosion.	How often: More often than once every 10 years.
50% of an affected coastal community consider that a permanent loss of amenity has occurred as a result of coastal erosion or coastal inundation impacts	
50% of the community report actual or perceived property purgatory effects i.e. actual or foreseeable damage to their properties from coastal erosion or coastal inundation and uncertainty about being able to recover their losses	
50% of properties are unable to secure building insurance for losses from coastal hazards.	
Access to and use of the beach, coastal reserves and/or recreational facilities is prevented as a result of coastal inundation.	
How long: At least 7 days How often: More often than once every 5 years.	

When will we act?

Pathways

The pathways assessed for each unit were confirmed following an extensive options development/ assessment process and used the principles of Dynamic Adaptive Planning Pathways (“DAPP”).

The preferred pathway was selected following assessment of technical criteria including the management of hazard, risks and the impact of the option on the community: cultural, social and economic and impact on the natural environment.

The pathways for Westshore include:

- A combination of gravel renourishment and offshore sand bar in the short term. Gravel will be replenished on land at key areas. Sand will be placed offshore, using a marine plant, and allowed to naturally migrate northwards and towards the beach which will result in raising foreshore levels.
- Control structures may be groynes or offshore breakwater and will be required in the medium term. Gravel nourishment (no sand) will occur at this time.
- Consideration will be given to a retreating defence line to raised a gravel bank behind a gravel barrier.
- A seawall may be required to protect exposed assets at the Eastern end.
- Structures will be raised and lengthened over the long term, with additional beach renourishment, in order to offset the effects of sea level rise.

Rationale behind recommendation:

- 4th equal score under Multi-Criteria Decision Analysis (“MCDA”) undertaken by the Panel.
- Preferred pathway under economic analysis undertaken by an independent economist.
- Considered to be the preferred pathway overall, taking into account the MCDA score and economic analysis
- Retains flexibility and ability to adapt when triggers are reached.
- The vote in favour of Pathway 3: 9 members in favour (full support).

What will we do?

WESTSHORE – PREFERRED PATHWAY

Short Term (0-20 years) → Medium (20-50 years) → Long term (50-100 years)

Renourishment → Renourishment + Control Structures → Renourishment + Control Structures

