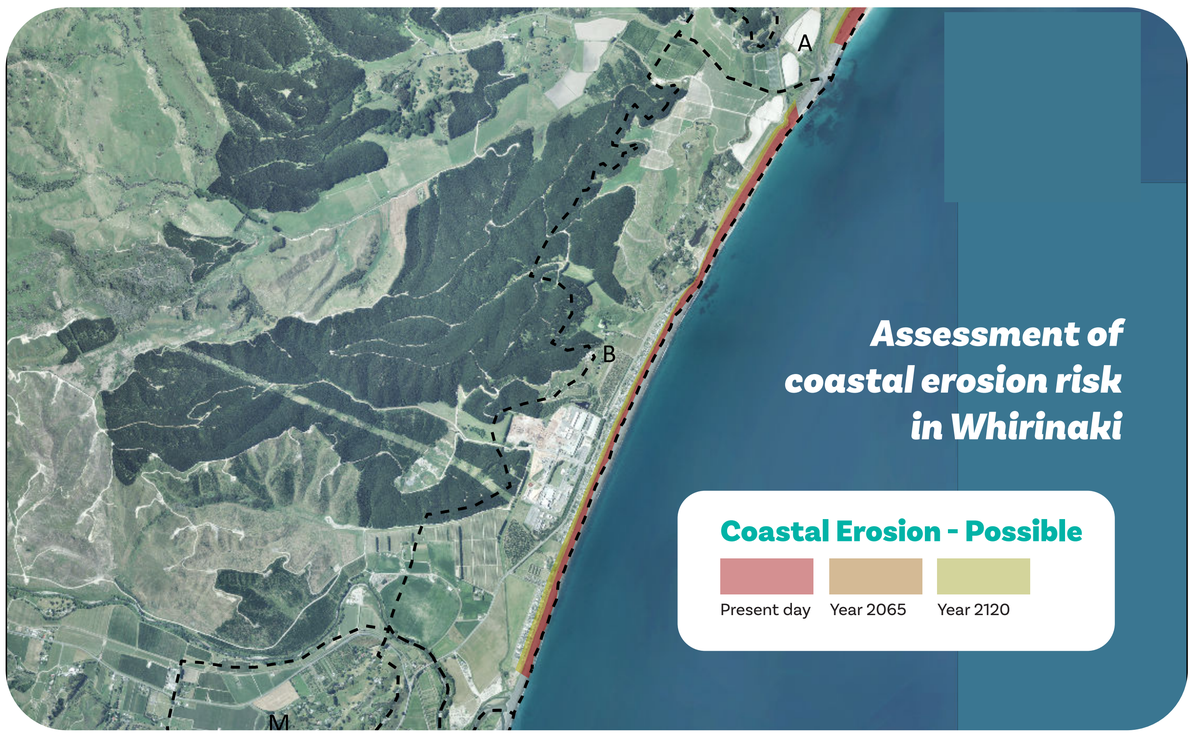
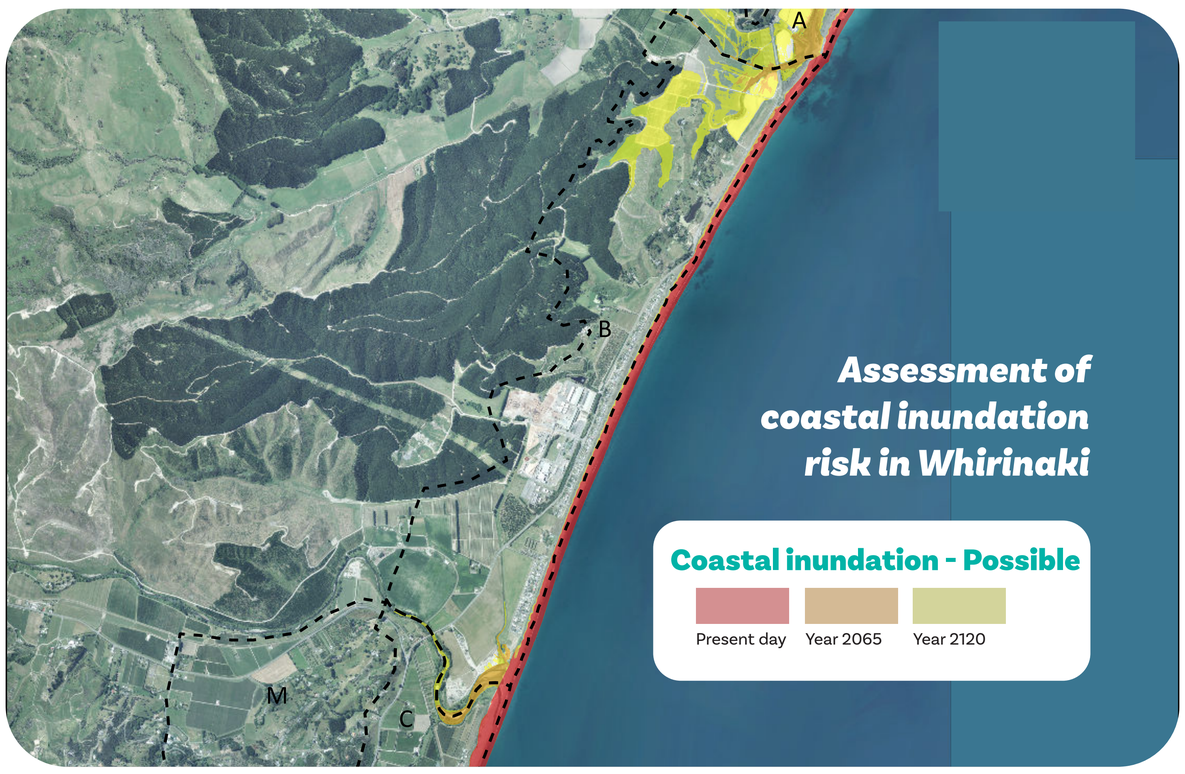
Whirinaki

Unit B

What is the problem?





Current situation

- **Whirinaki has erosion risks for North Shore Road and Whirinaki Road.**
- **Alternative access is likely to be needed to about 60 properties by 2065.**
- **Up to 40 properties could possibly be directly affected by erosion by 2065.**
- **State Highway 2 is also likely to be affected by 2065.**
- **80 properties are likely to be directly affected by 2120.**
- **There are no significant inundation risk over the entire period.**
- **The archaeological site identified at Esk River mouth is believed to be no longer intact due to natural erosion and land-filling activity.**

Considerations for Whirinaki

- Biggest risk is the impacts on reefs from sediment / turbidity caused by beach renourishment.
- Controls will need to be in place to ensure that only appropriate material is used for beach renourishment.
- Consent conditions will need to be imposed requiring appropriate monitoring of any effects of renourishment on reefs and that appropriate actions would be required in the event that an adverse effect is identified.

When will we act?

Thresholds

Whirinaki 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.
Coastal erosion in Whirinaki affecting Whirinaki Road and/or North Shore Road, causing loss of road access for the majority of the community.
Buildings in Whirinaki are deemed uninhabitable as a result of coastal hazards (e.g. loss of septic tanks, building structural integrity etc).

What will we do?

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 Whirinaki include:

- Gravel renourishment in the short term.
- Control structures may be groynes or offshore breakwater, introduced in a staged manner in the medium term. Gravel renourishment continues.
- Introduction of large seawall (rock revetment) in the long term, which removes the requirement to renourish the beach.
- State Highway 2 would need to be setback at Whirinaki Bluff, or defended with a seawall.

Rationale behind recommendation:

- Highest score under Multi-Criteria Decision Analysis ("MCDA") undertaken by the Panel.
- Ranked 3rd under economic analysis undertaken by an independent economist.
- Considered to be the preferred pathway overall, taking into account the MCDA score and economic analysis.
- The Panel noted the presence of urupā, State Highway and marae near the coast which require protection as well as beneficial effects from preferred pathways at Westshore and Bay View.
- Retains flexibility and ability to adapt when triggers are reached.
- The vote in favour of Pathway 4: 9 members in favour (full support).

UNIT B: WHIRINAKI PATHWAY 4

Short Term (0-20 years)	→	Medium (20-50 years)	→	Long term (50-100 years)
Status Quo / Renourishment	→	Renourishment + Control structures	→	Seawall