Auckland Council Shoreline Adaptation Plans (SAP)

Kaipara Harbour & **Pākiri to Mathesons Bay**, **Ti Point to Sandspit** and Snells Beach to Ōrewa

30 November 2024

Presentation to you

Discussion & feedback (please)

Recap on the shoreline adaptation plan process, scope and purpose

What matters most?

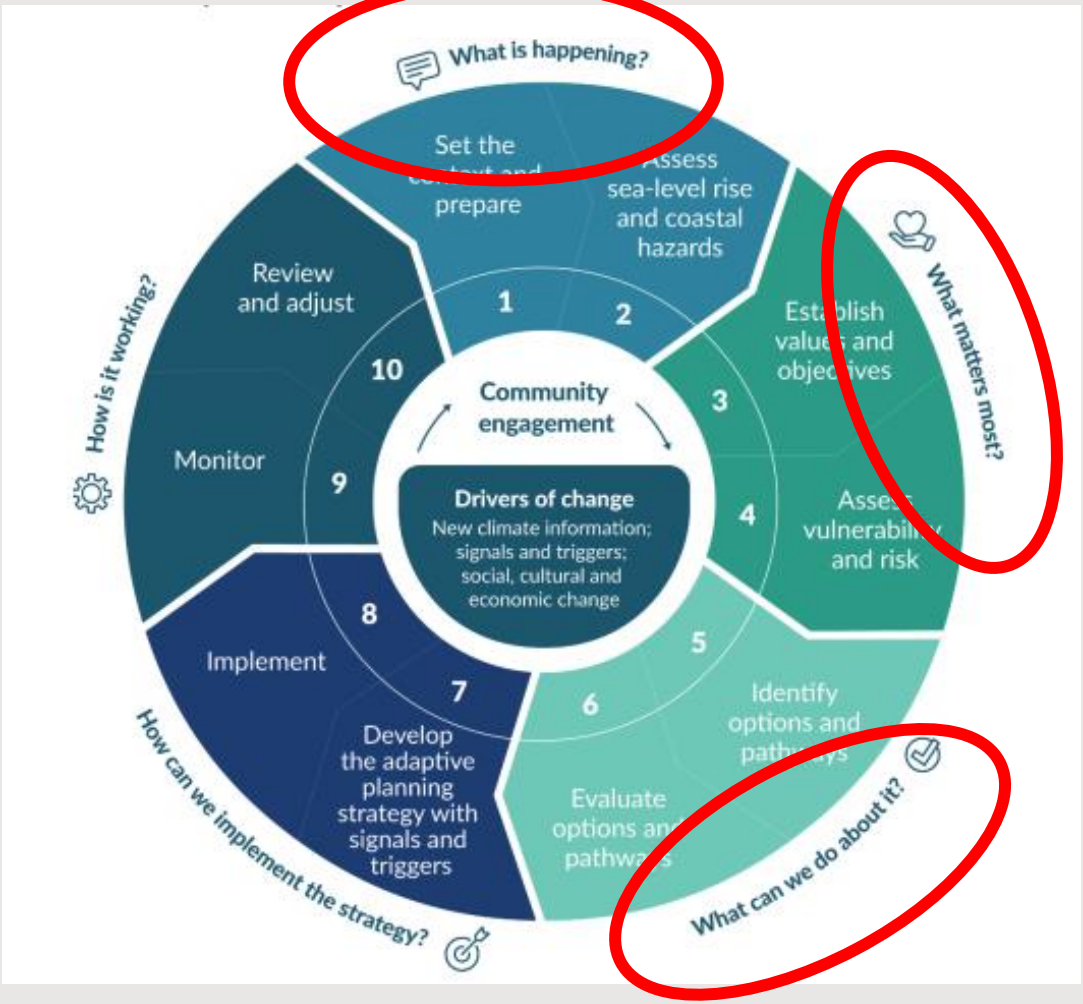
What we heard from you

Draft strategies & your feedback

A recap: Shoreline adaptation plans

Piloting an adaptive planning approach

- NZ coastal policy statement (2010) ‘at least 100 years’ when considering coastal hazards and climate change
- Adaptation planning (Ministry for the Environment Coastal Hazards and Climate Change Guidance)
  - **What is happening?**
  - **What matters most?**
  - **What can we do about it?**



SOURCE: Ministry for the Environment (Adapted from Max Oulton (University of Waikato) and UN-Habitat (2014))

Sustainable coastal management

NZ Coastal Policy Statement

Auckland Council Coastal Management framework 2017

Water strategy

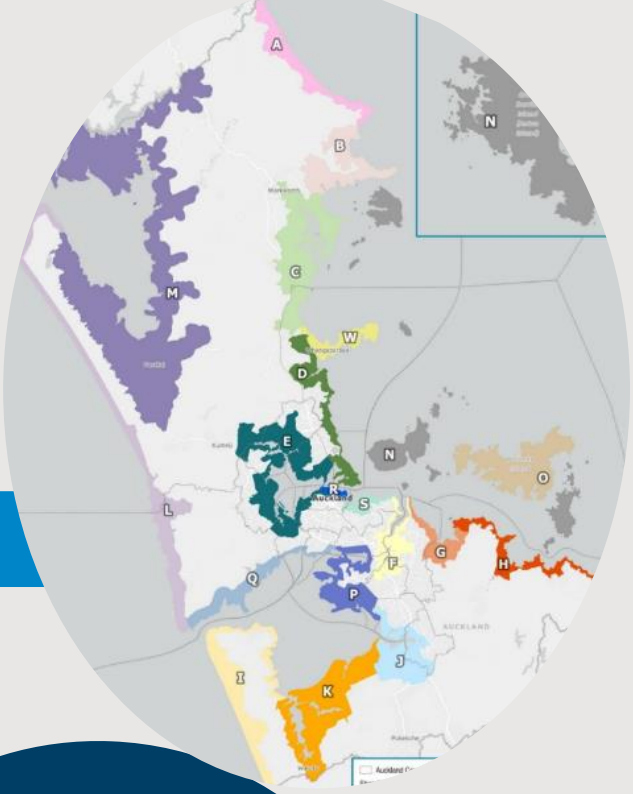
Strategic & holistic decision making for council owned land & assets

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan

Asset management plans

- Shoreline Adaptation Plan programme commenced in 2021
- Regional programme: focus on council land and assets only
- Non-statutory plans, remain living documents, dynamic and updates (adaptive planning)

First step in adaptation planning



Council land and assets ONLY

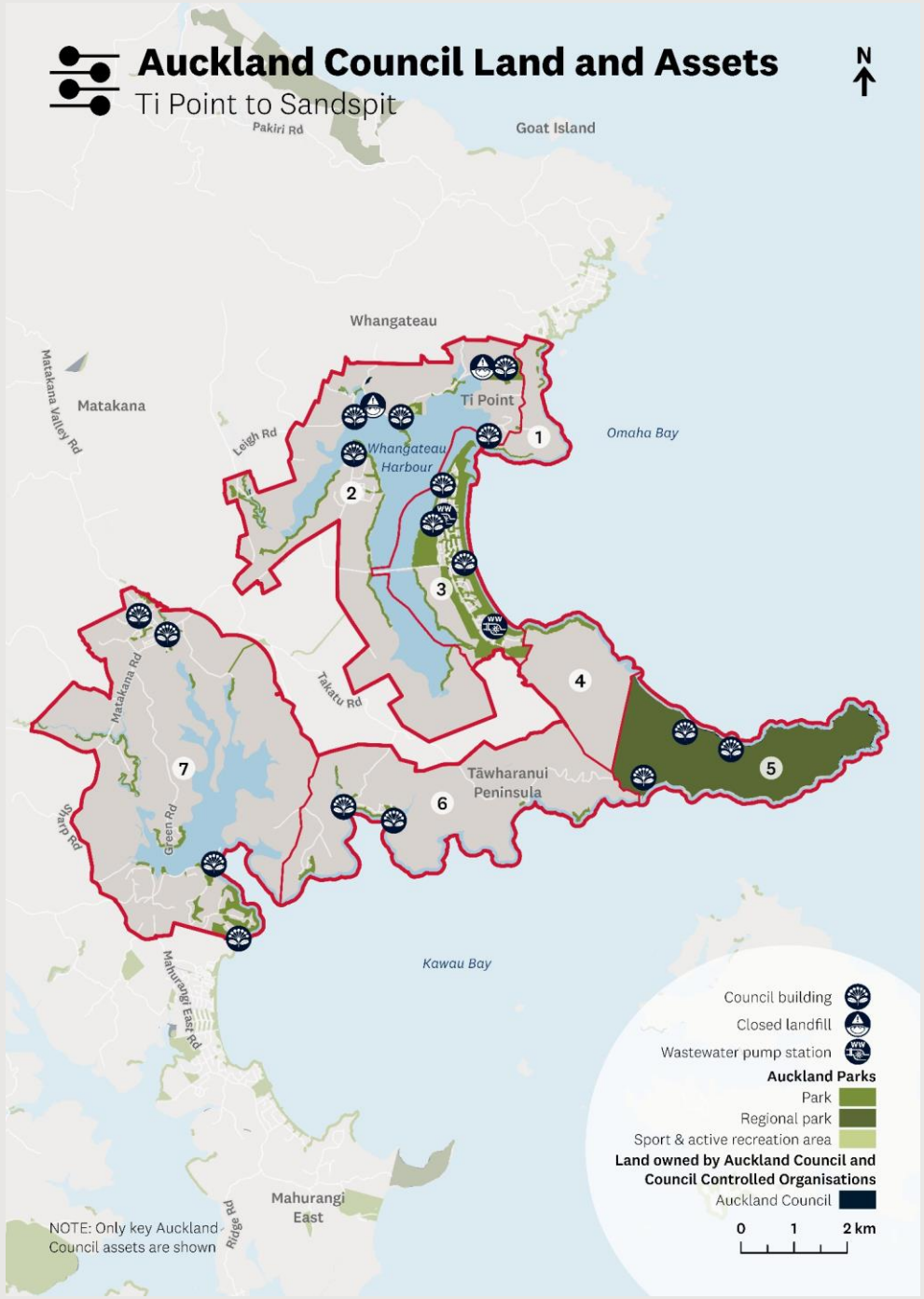
Council owned land & assets at the coast

Stormwater, drinking water & waste water infrastructure

Roads

Council owned land & Public facilities (playgrounds, walkways, halls)

Closed landfills



Statutory processes continue to apply

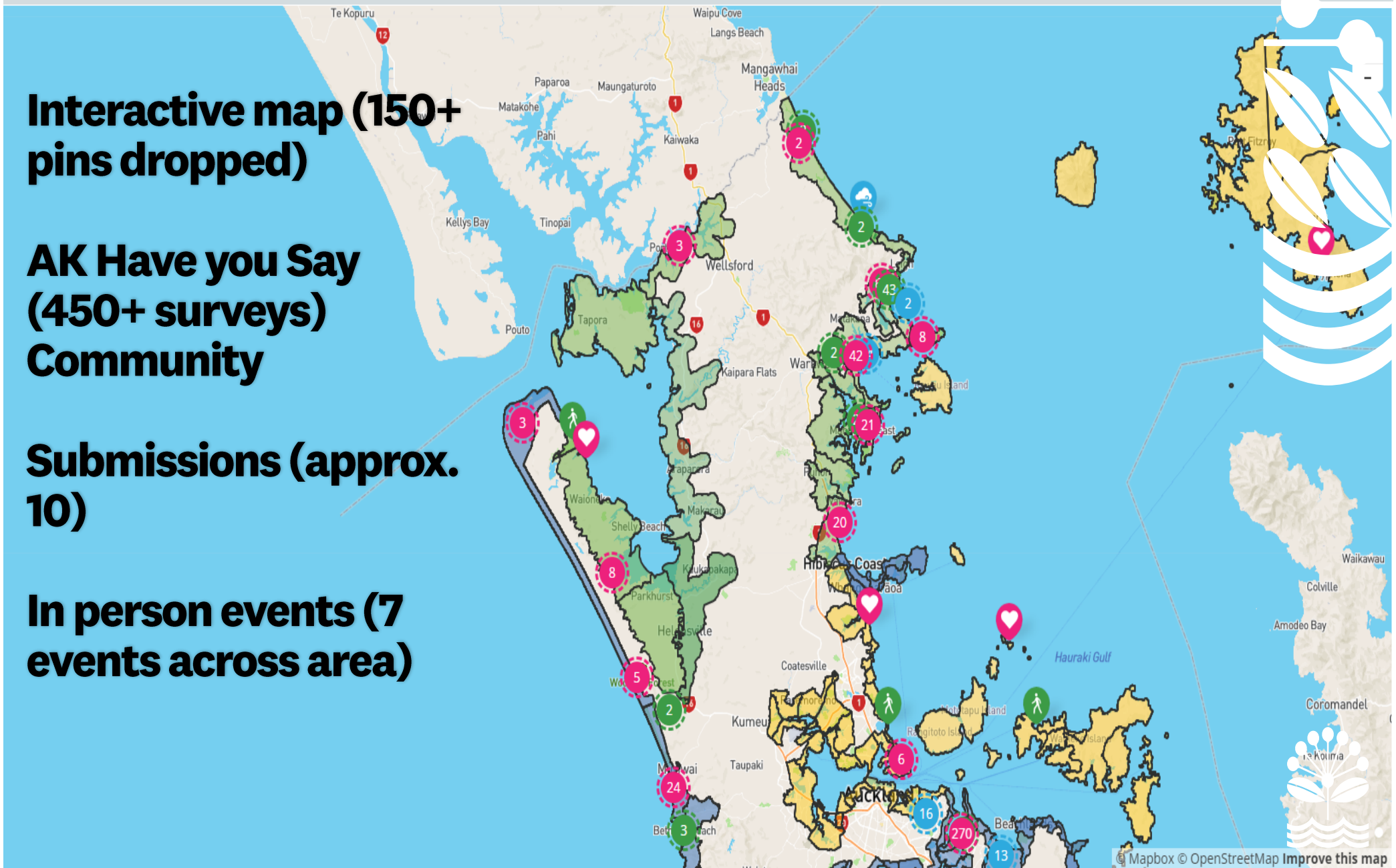
NOW Better decision making

From 2025 proactive implementation

Following completion of all area plans

How will we use them? Implementation

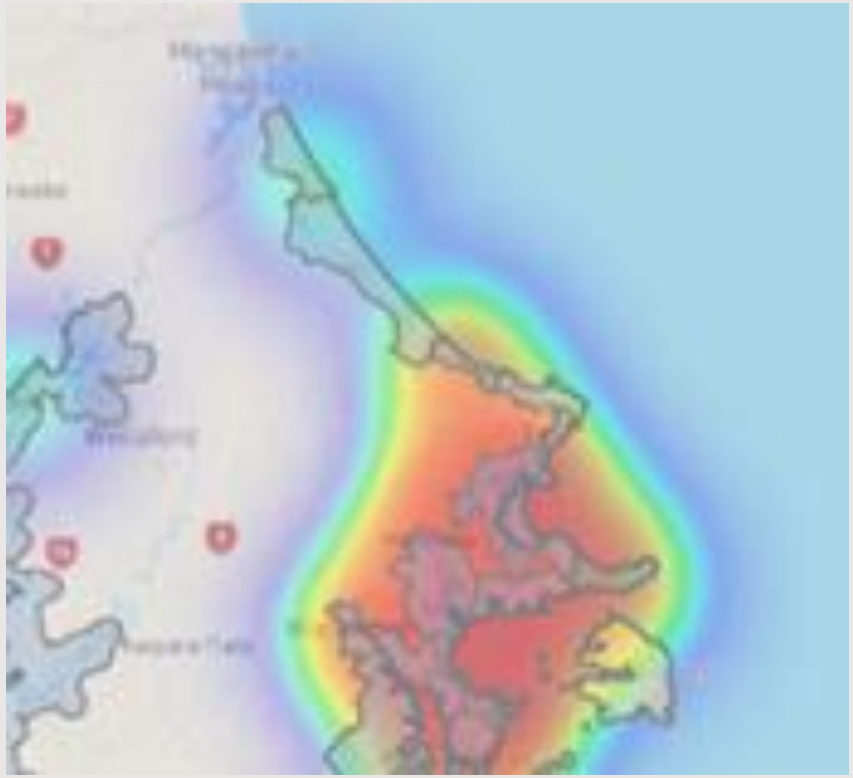
What matters most


Drag to comment
I value this...
I remember..
I exercise here...
Interactive map (150+ pins dropped)
AK Have you Say (450+ surveys) Community
Submissions (approx. 10)
In person events (7 events across area)
Te Kopuru
Waipu Cove
Langs Beach
Mangawhai Heads
Paparoa
Maungaturoto
Matakohe
Pahi
Kaiwaka
Kellys Bay
Tinopai
Wellsford
Pouto
Tapora
Kaipara Flats
Shelly Beach
Parkhurst
Coatesville
Kumeu
Taupaki
Hauraki Gulf
Waikawau
Colville
Amodeo Bay
Coromandel
Mapbox © OpenStreetMap Improve this map

Community response (May 2024)

8 April 2024 to 31 May 2024

- AK Have your say (100+ submissions)
- Social pinpoint (30+ pin drops)
- Events (including Leigh 18/05)



Pākiri to Mathesons Bay

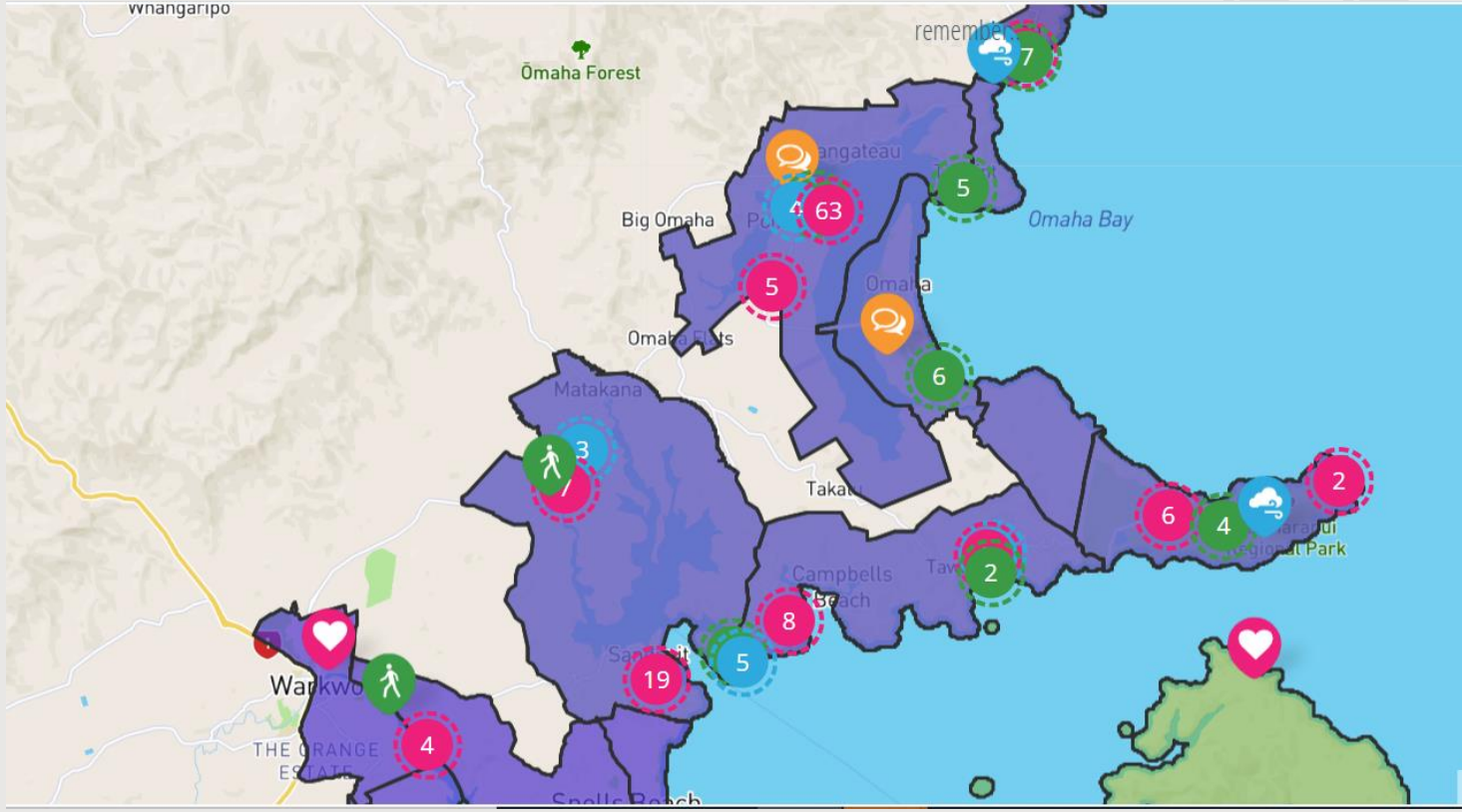
- Water based recreation (swimming, surfing)
- Health of the moana (how we manage our land, access and management)
- Value of coastal walkways (impact of loss, value to local community)
- Changes in natural environment (loss of dunes, abundance of wildlife, coastal erosion)



Community response (May 2024)

8 April 2024 to 31 May 2024

- AK Have your say (250+)
- Social pinpoint (170+)
- Events (library drop ins, Matakana Market & Warkworth event)



Ti Point to Sandspit

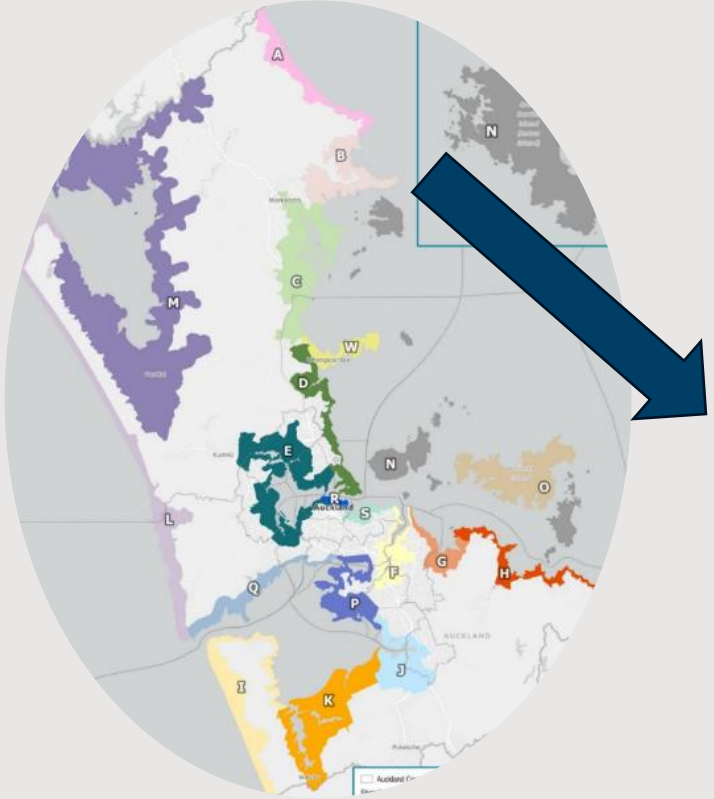
- Recreation at the coast for families, dogs, safe, friendly
- Awareness of the challenges from inundation with low lying areas
- Access to the coast & harbour(s)
- Boat access to the harbour & to islands (Kawau)
- Ecology and need to provide for habitat



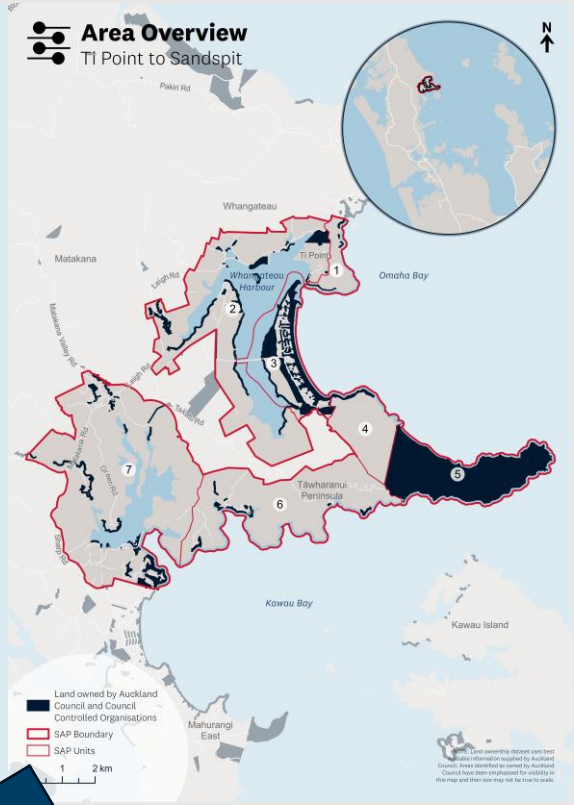
What can we do about it?

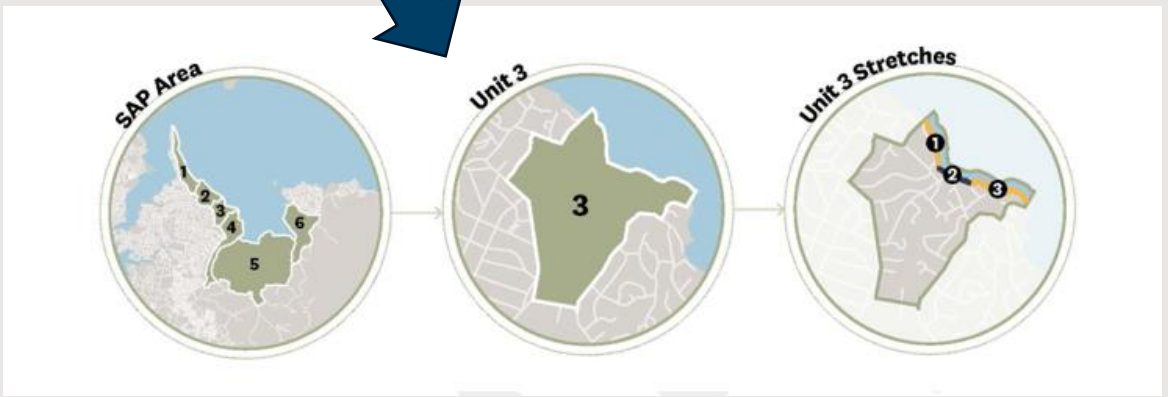
Developing plans for Pākiri to Mathesons Bay, Ti Point to Sandspit (and Kaipara & Snells to Orewa)




A
B
N
G
M
W
D
E
N
O
R
S
L
Q
P
F
G
H
J
I
K


Area Overview
Pākiri to Mathesons Bay / Te Kohuroa
N
1
2
3
4
5
Tomarata
Goat Island
Pākiri Rd
Matakana
Ti Point
Omaha Bay
Whangateau Harbour
Land owned by Auckland Council and Council Controlled Organisations
SAP Boundary
SAP Units
0 1 2 km


Area Overview
Tī Point to Sandspit
N
Whangateau
Matakana
Ti Point
Omaha Bay
Whangateau Harbour
1
2
3
4
5
6
7
Tāwharanui Peninsula
Kawau Bay
Kawau Island
Mahurangi East
Land owned by Auckland Council and Council Controlled Organisations
SAP Boundary
SAP Units
1 2 km


SAP Area
1
2
3
4
5
6
Unit 3
3
Unit 3 Stretches
1
2
3

Uncertainty (Natural Hazards & Climate change AND social & economic factors)

Short
Next 20 years

Medium
20-60 years

Long
60-100+ years



Allow natural processes to continue



Support existing



Defend the current coastline



Move assets and infrastructure back

Time based/ assumptions for environmental change (sea level rise)

Assumptions/ perception of fixed actions

Signals, Triggers & Thresholds

Sea level rise

Changing risk tolerance

Changing economic or social factors

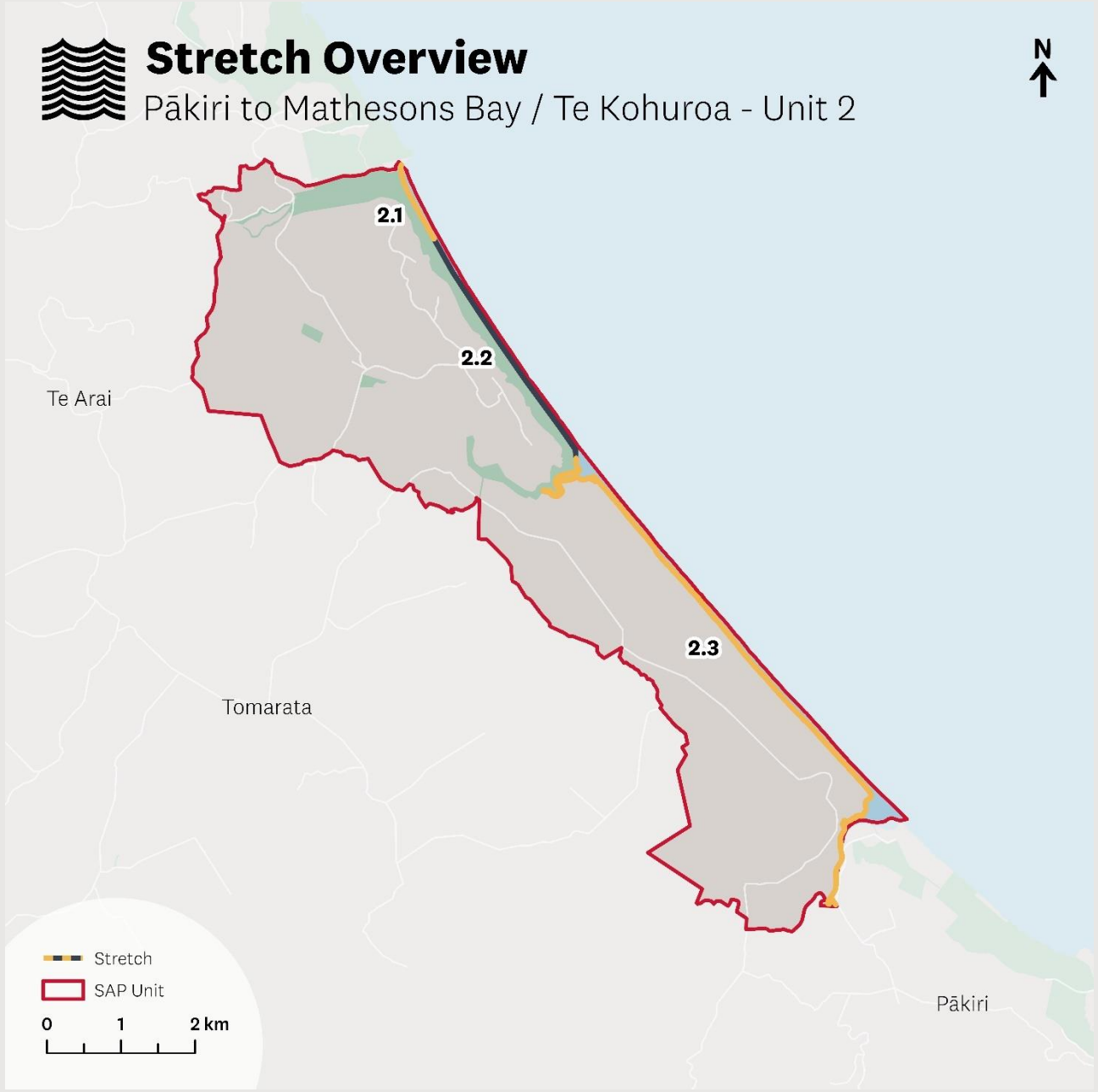


Unit 1: Te Ārai North

- Recreational use
- Need for facilities which support uses
- Need to manage uses to protect environment

Limited intervention

- Drainage districts
- Stream mouth/flooding and beach access (facilities)



Unit 2: Te Ārai South

- Clear on ownership & management
- Management of risk to road
- Changes in natural environment (loss of dunes)
- Importance of habitats & species

Limited intervention

- Managing uses, acknowledging and protecting biodiversity
- Clarity around council land and assets (roads)

Stretch Overview

Pākiri to Mathesons Bay / Te Kohuroa - Unit 3



Unit 3: Pākiri

- Clear on ownership & management
- Management of risk to road, flooding of the road
- Loss of dunes
- Need to manage access; people & dogs to protect habitats & species

No active intervention

- Recognition of private land
- Natural areas of regional park/limited assets

Limited intervention & adaptation priority

- Low lying roading infrastructure, already impacted. Dynamic environment cultural & ecological values.



Unit 4: North Leigh & Cape Rodney

- Marine life, highly valued supported and enhanced
- Importance for tourism
- Access to the coast and supporting facilities

No active intervention

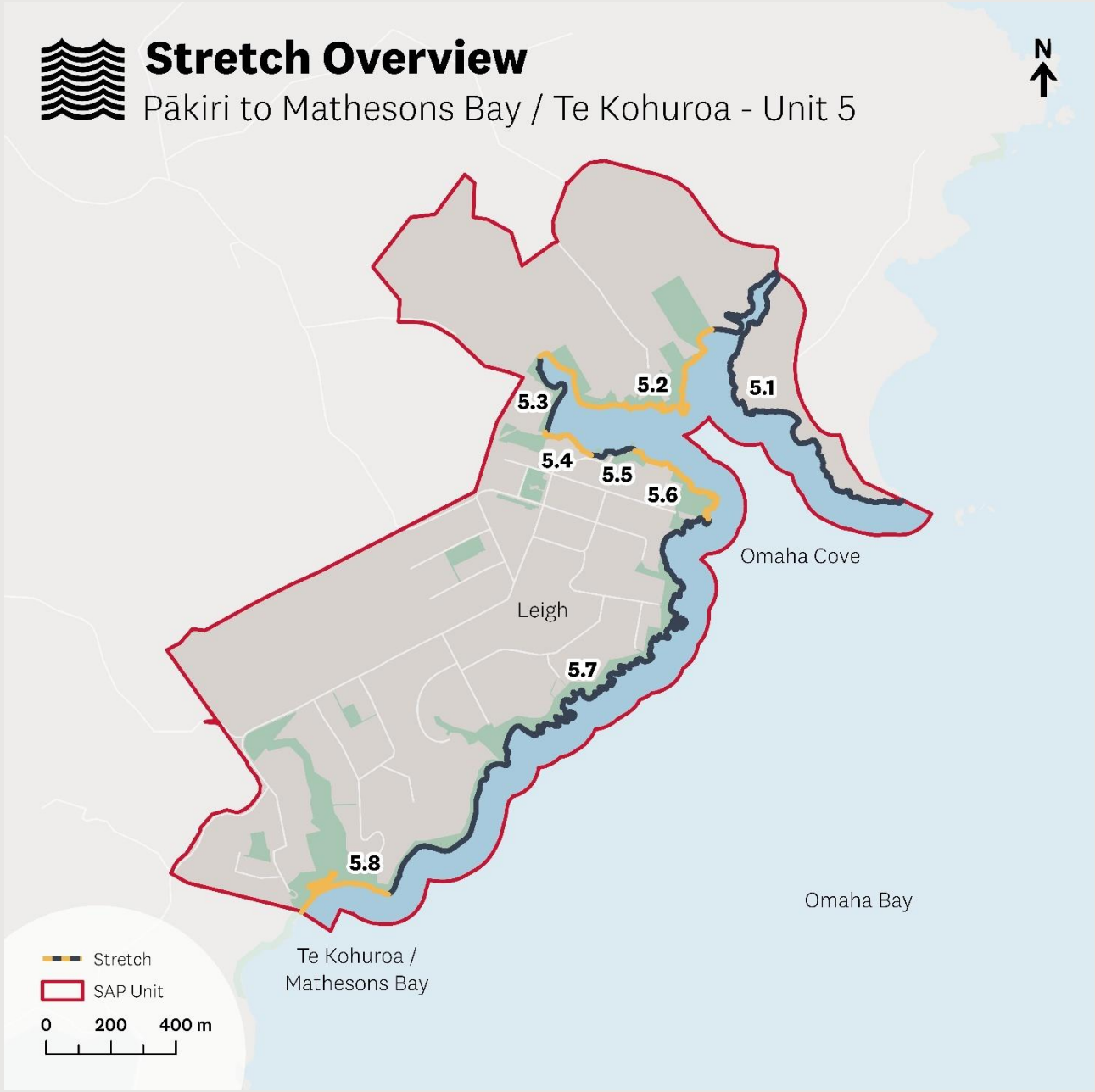
- Private land holdings

Limited intervention & adaptation priority

- Managing uses, erosion rates in long term; maintain access and connections to coast

Stretch Overview

Pākiri to Mathesons Bay / Te Kohuroa - Unit 5



Unit 5: Leigh and Mathesons Bay | Te Kohuroa

- Walkway; highly valued, closure impacting local community
- Coastal access for swimming, surfing & connection to the coast
- Observed erosion at Mathesons Bay & other coastal access spots (Nordics)

Limited intervention

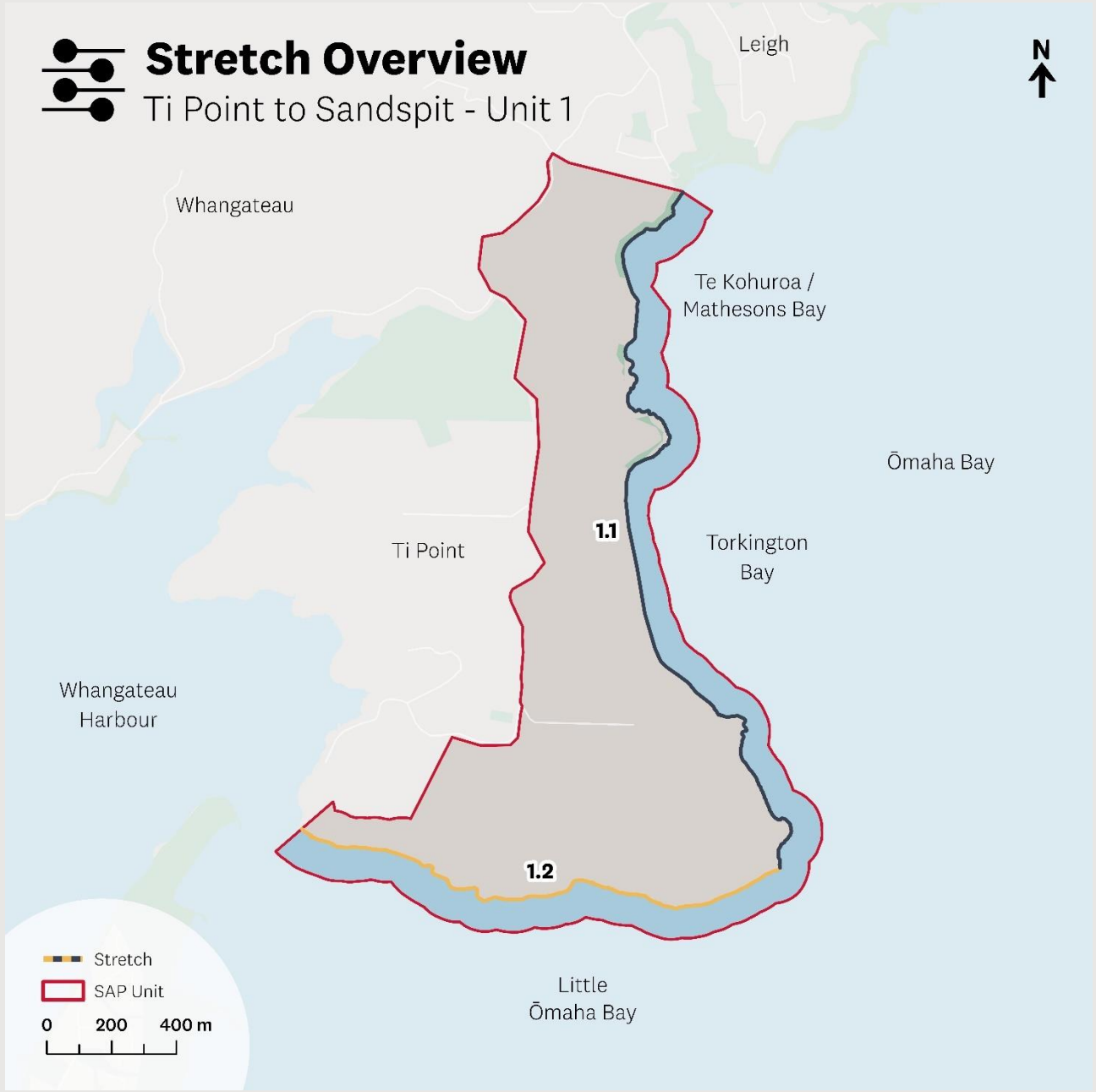
- Maintain access to the coast
- Work with Doc & others to support connections

Hold the line

- Key coastal access, existing assets & protection structures

Adaptation priority

- Maintaining values (beach) and managing hazard risk with increasing inundation and erosion



Unit 1: Torkington Bay to Ti Point

- Highly valued walkway
- Management of uses / ecology

Limited intervention

- Ti Point walkway



Unit 3: Omaha

- Importance of boat launching and coastal access
- Maintenance of exiting assets
- Importance of groynes & dune systems
- Highly engaged and interested community

Limited intervention/ Hold the Line

- Maintain existing interventions & structures
- Monitoring natural buffers & supporting their function

Adaptation priority

- Increasing inundation risk in low-lying areas, need for consideration of how areas are managed and uses located

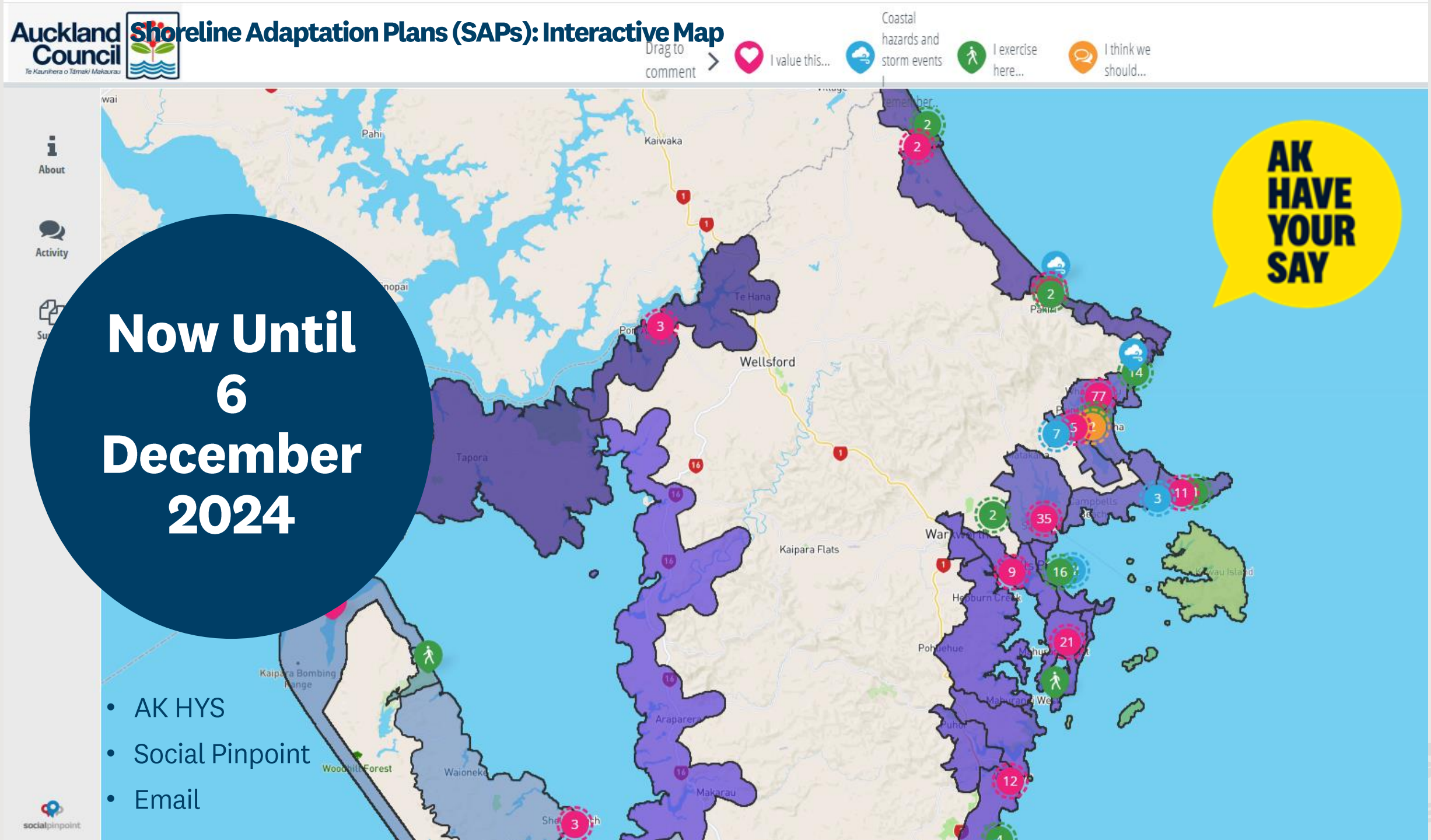
Join the conversation



What do we want to know?

- What you think of the **proposed coastal adaptation strategies**?
- Is there **anything else** you think should be included?
- Do you have **any other feedback** on **implementing the plan**?

Shoreline Adaptation Plans (SAPs): Interactive Map



- AK HYS
- Social Pinpoint
- Email

What do you think? Feedback

What matters most

Extra slides if needed

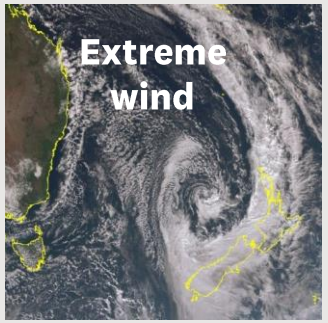
Part 1 – 10 hazards most significant to Auckland













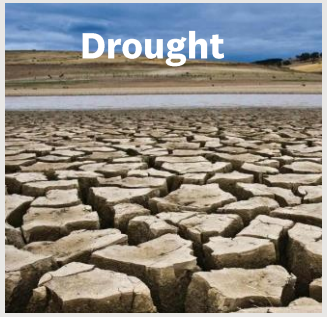








Additional hazards added to Councils Natural Hazards programme







Why? Our coastal environment



~3,200 km of coast

Home to many things we value.

Coastal processes become hazards when they impact on things we value.

+

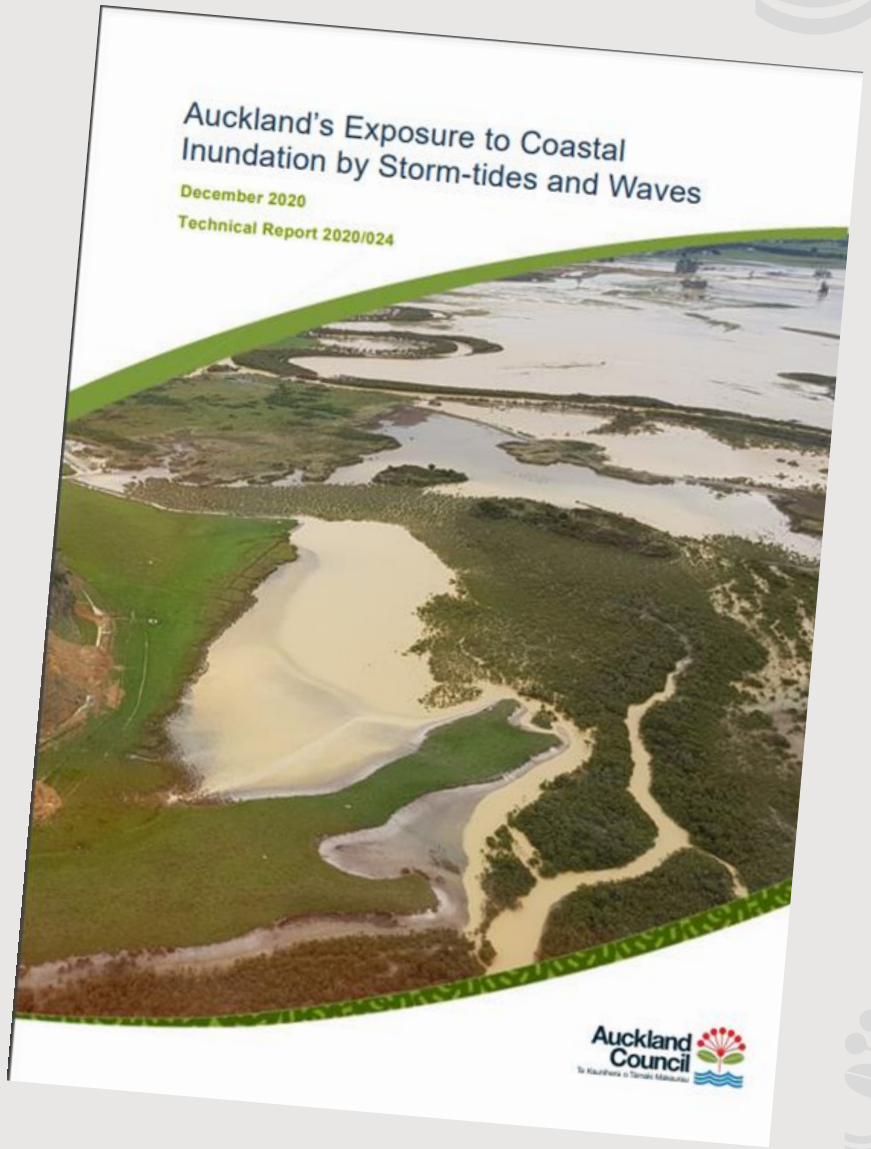
climate change and future growth

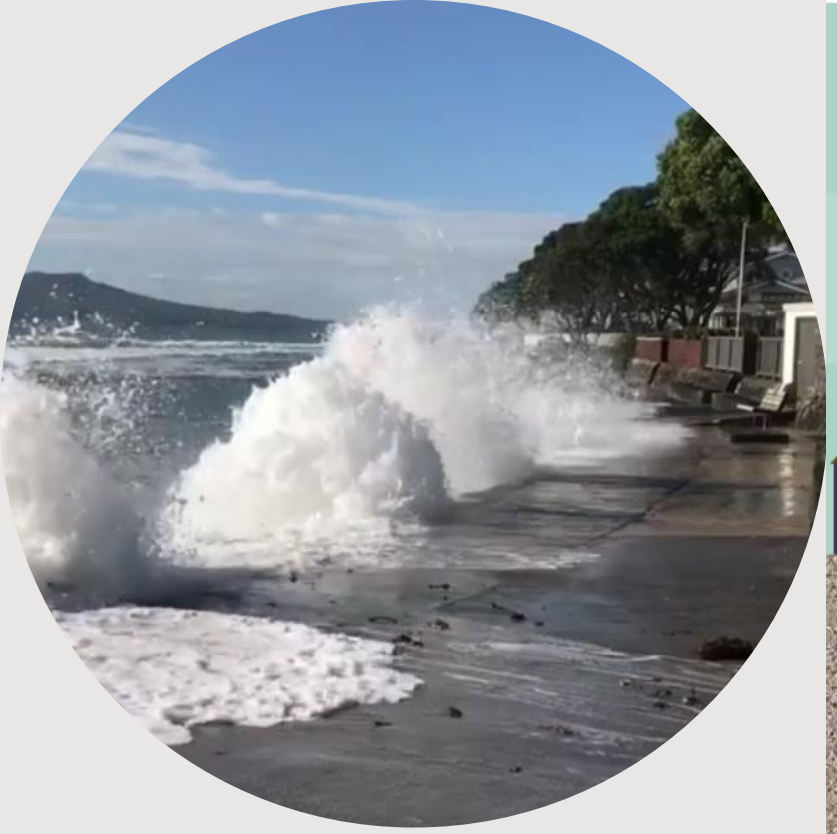
=

significant future challenges for our coastal areas

Coastal inundation

The flooding of normally dry, low-lying coastal land by high sea water levels, often due to extreme weather events.





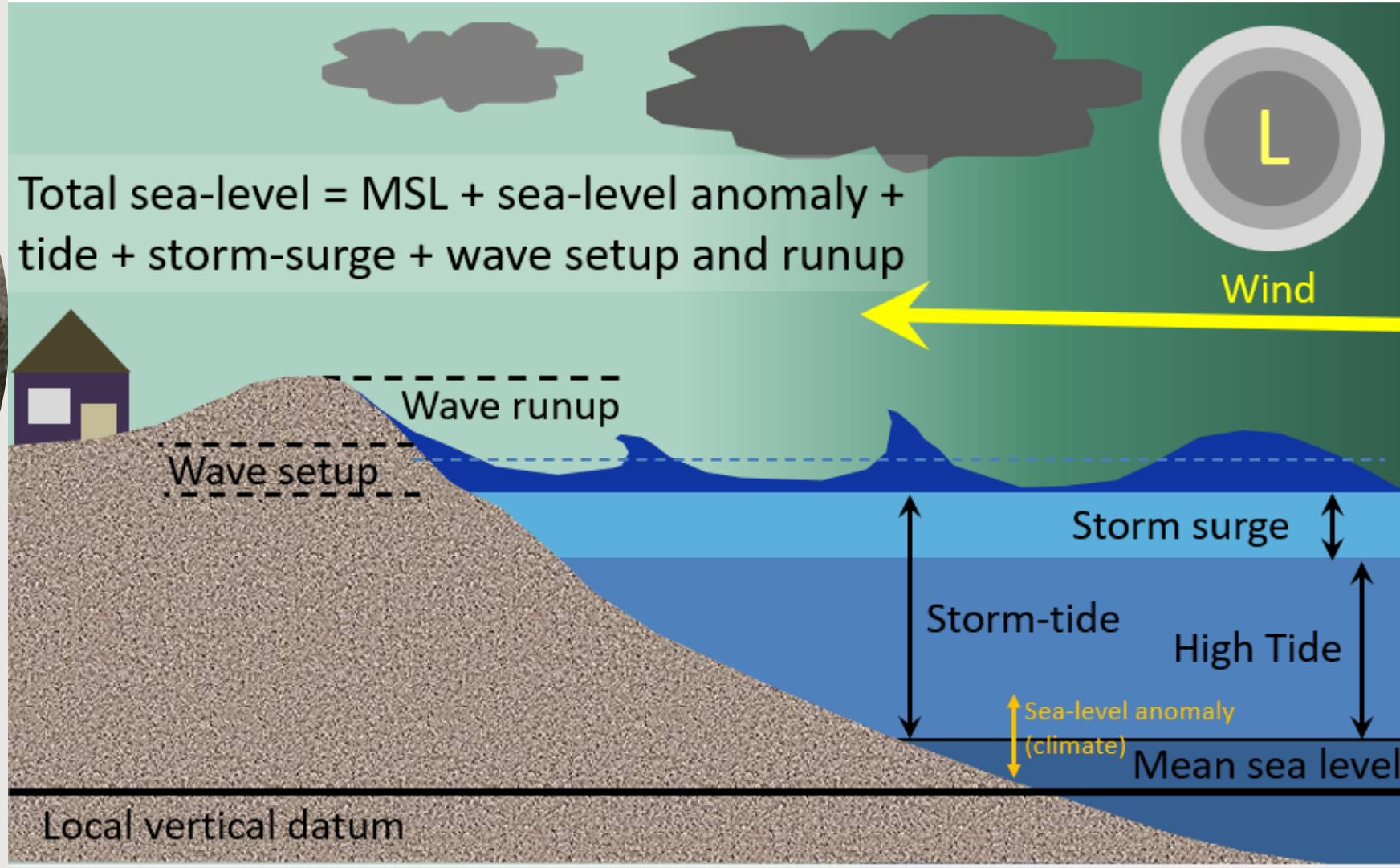
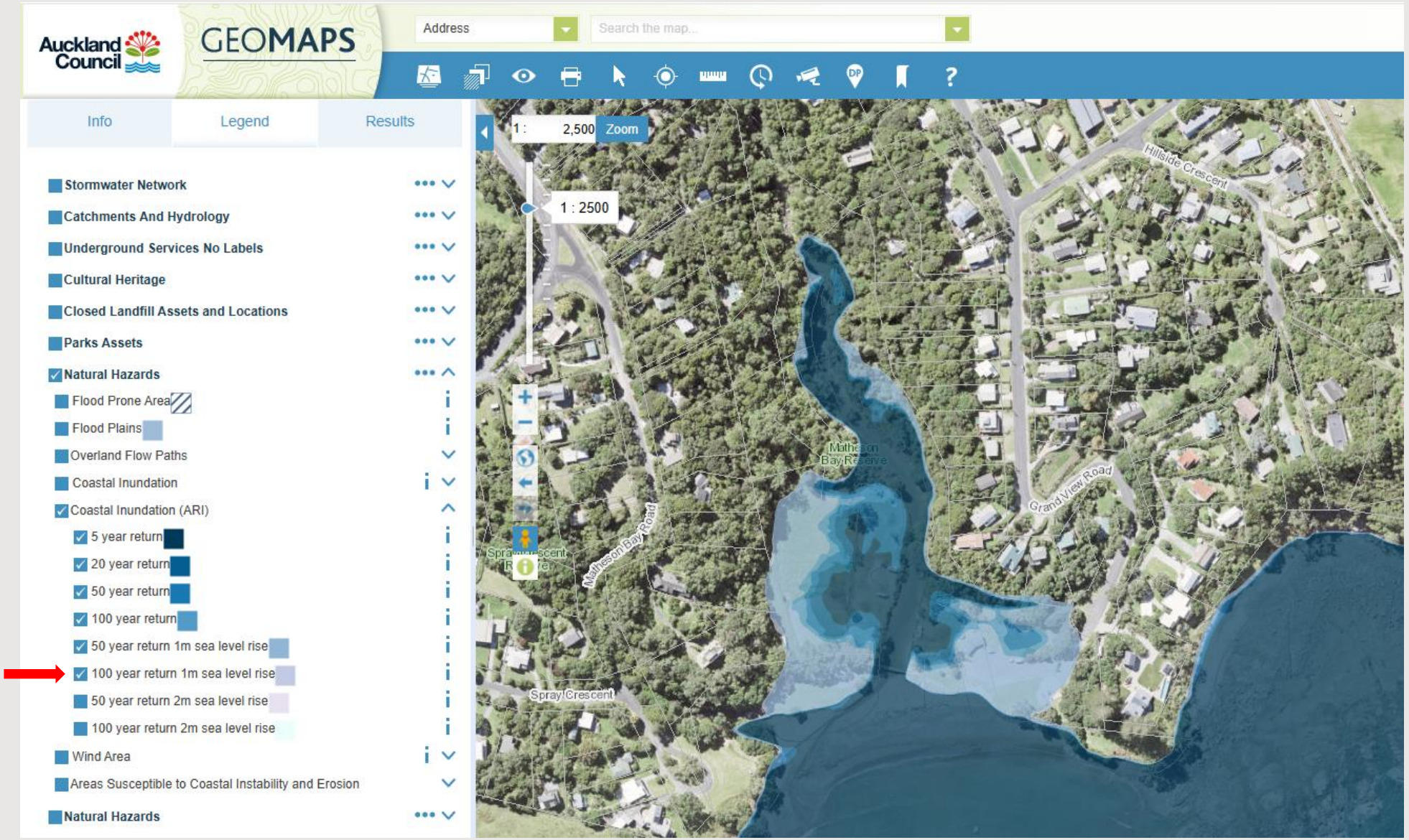


Photo credit: top- Auckland council bottom- News room/Nikki Gibson

Auckland's Coastal Inundation Mapping



Coastal erosion susceptibility

The removal of the material forming the land due to natural processes, resulting in the coastline moving inland over time. It is a complex process caused by a range of factors.







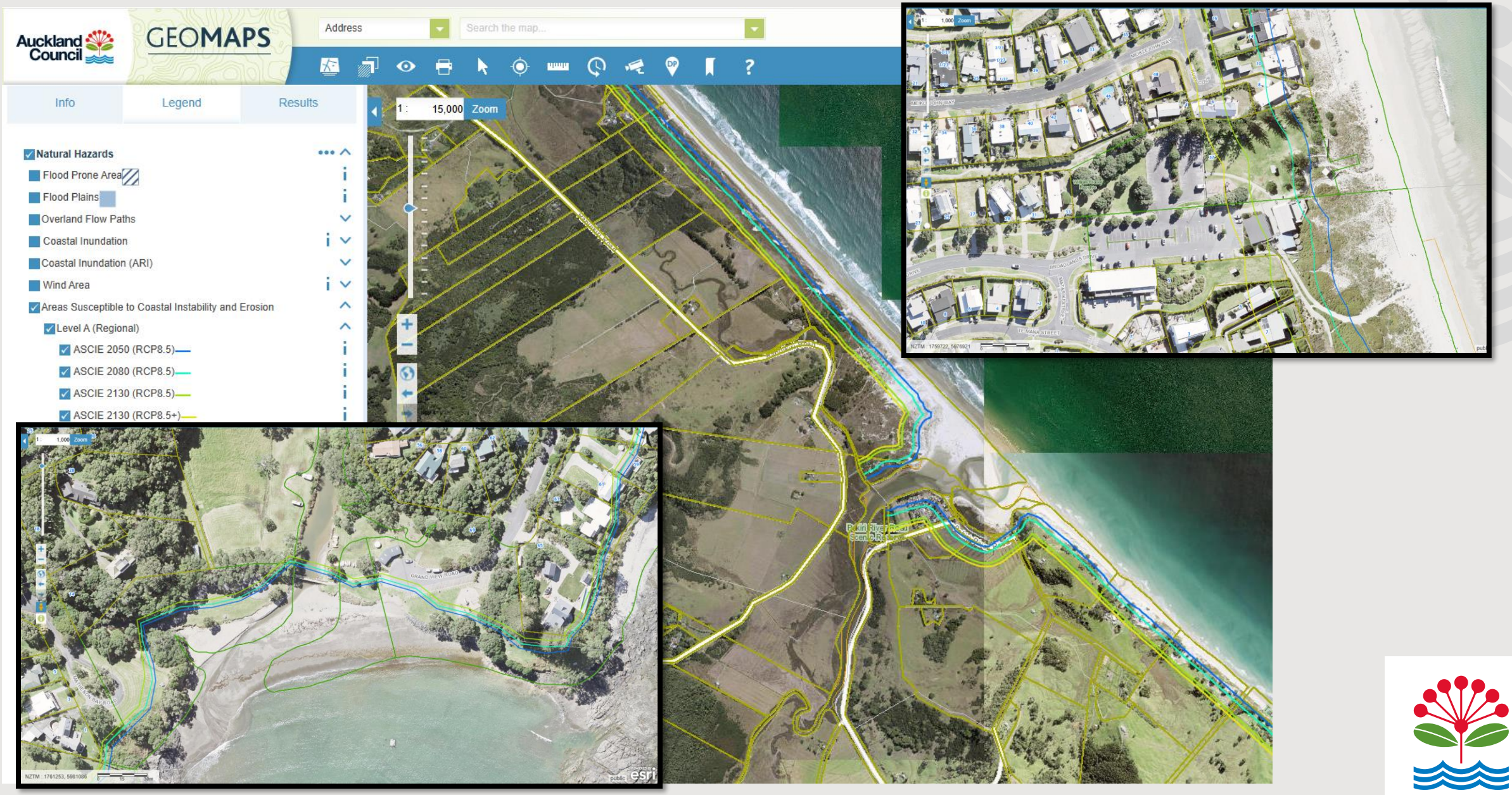
Predicting Auckland's Exposure to Coastal Instability and Erosion

Technical Report 2020/021

December 2020

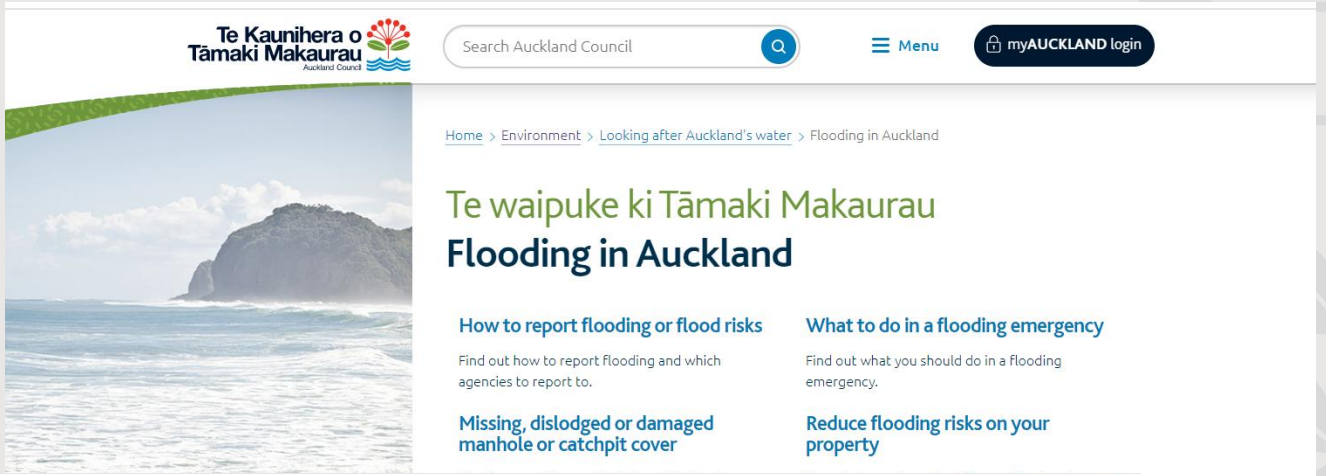
aucklandcouncil.govt.nz

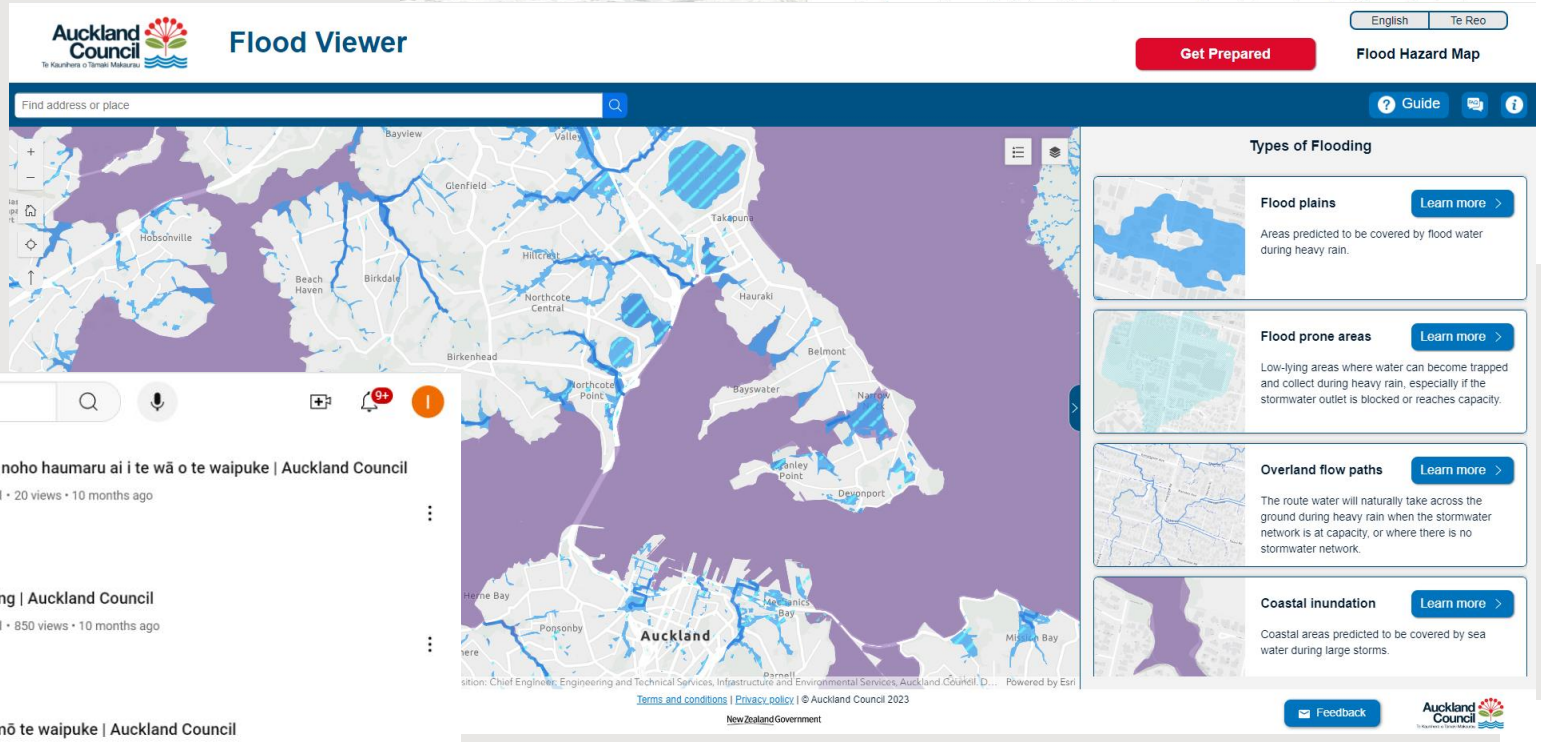
Auckland's Coastal Erosion Susceptibility Mapping

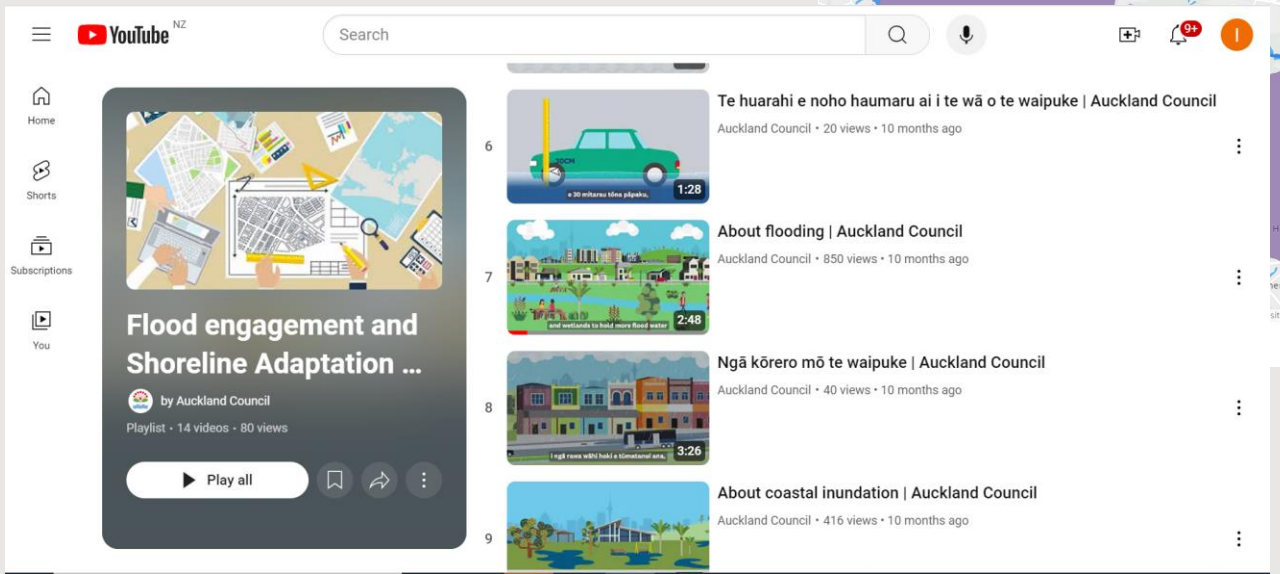


Catchment flooding

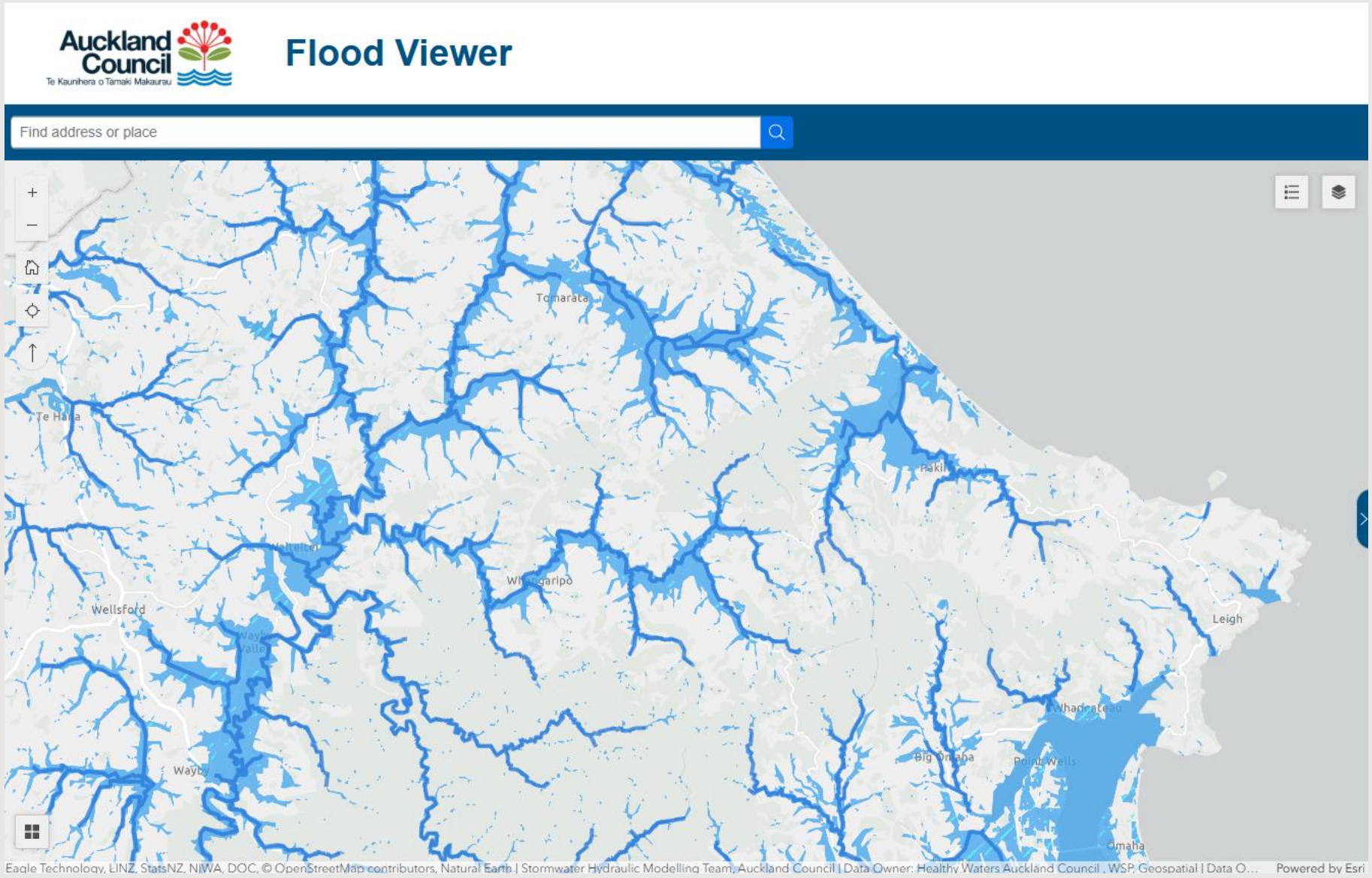
Floods are usually the result of continuous heavy rainfall overwhelming the capacity of natural or designed drainage systems







Catchment Flooding



Understanding what is happening: climate scenarios

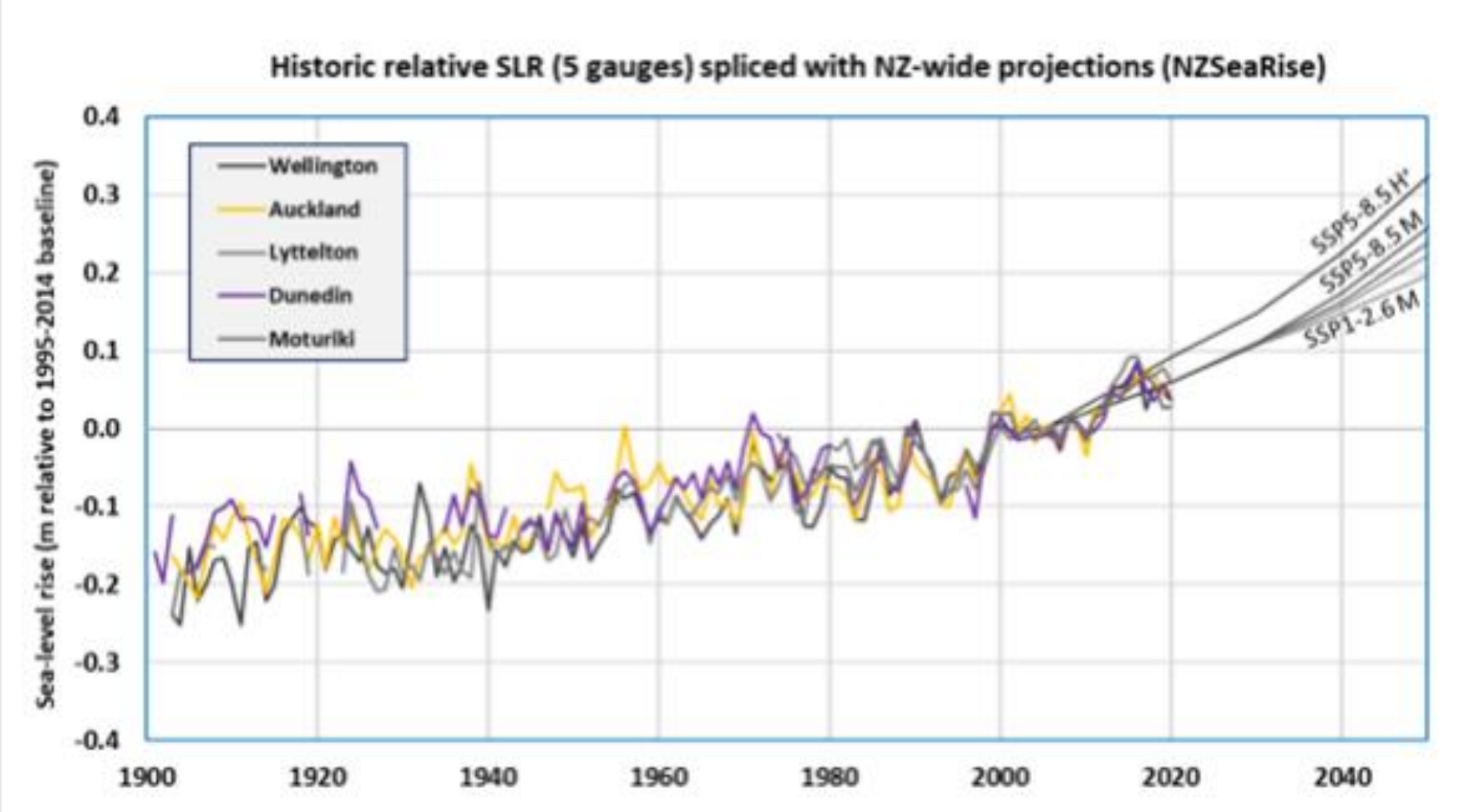


Figure shows changes in mean sea-level at the country's main ports

Sea level rose 0.21m between 1901 and 2020

Figure source: Coastal hazards and climate change guidance (Ministry for the Environment, 2024)

Understanding what is happening: climate scenarios

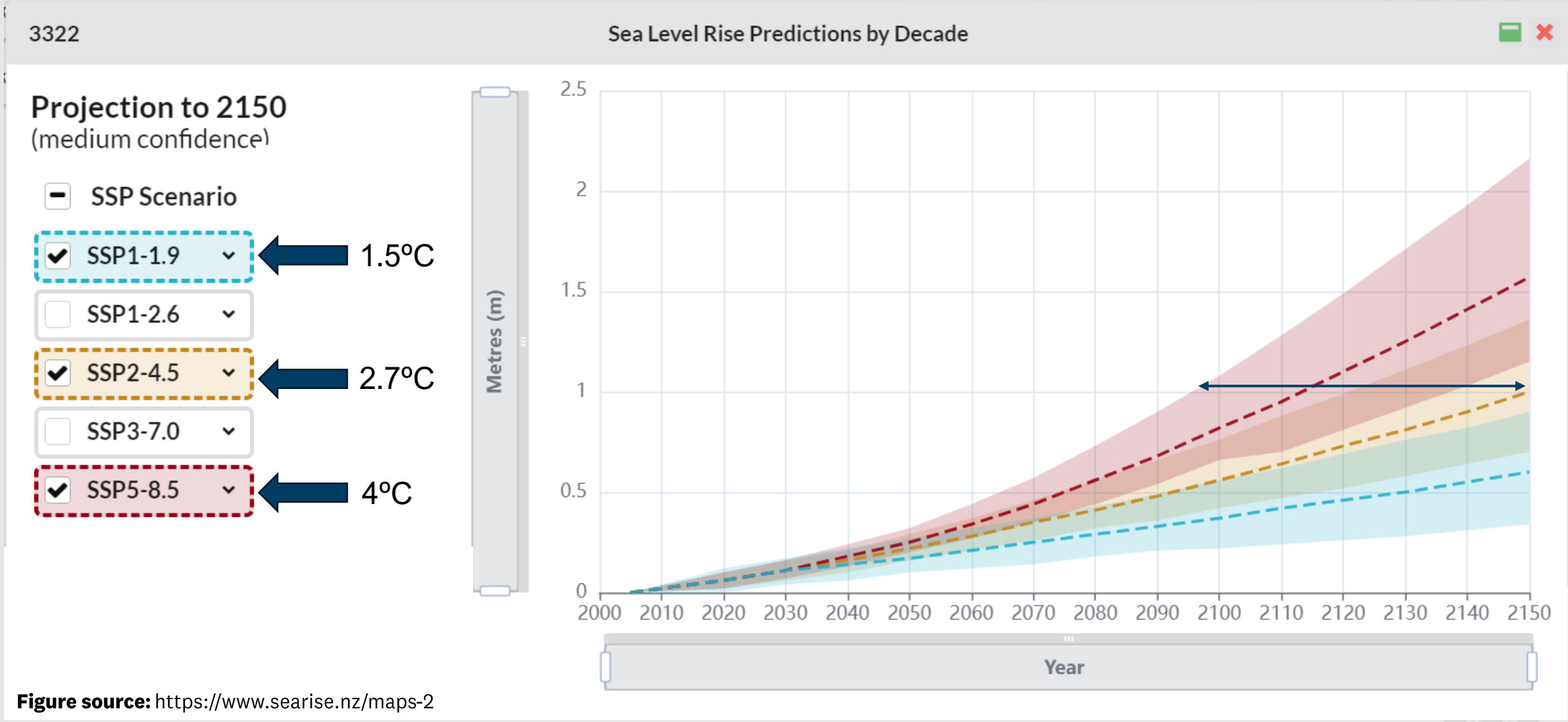


Figure source: https://www.searise.nz/maps-2



What it means: the coastline is not managed by council, to protect or maintain assets and infrastructure from climate related risks.

Where it's considered:

Areas of the coastline where Auckland Council-owned assets are not exposed/vulnerable to identified coastal hazard and catchment flooding within a particular time frame.

What it can look like: Natural processes are allowed to continue with no coastal defence or need for relocation or redesign of assets.



What it means: maintaining and making safe, uses, assets and infrastructure that are at risk. This can include through localised realignment or design of assets and uses and does not support a fixed coastline.

Where it's considered: where we need to manage risk to existing uses and land.

What it can look like: maintaining existing assets, including defences, relocating (locally) uses and assets and re designing assets and uses within the coastal environment.

Hold the line

What it means: in response to coastal erosion, it means the coastal edge is fixed at a certain location.

Where it's considered: This approach is considered when assets, uses and/or values are at risk and cannot be easily relocated.

What it can look like: may be through nature-based options (e.g. beach nourishment) or engineered hard structures (e.g. sea walls) to protect assets, uses and values from coastal erosion, or to reduce inundation exposure.

Adaptation priority Area

What it means: assets and land uses are adapted, relocated or realigned from hazard-prone areas to reduce risk and support values (ecological, cultural, amenity, character and recreational)

Where it's considered: where coastal processes and the impacts of climate change (sea level rise) present a risk to the uses and assets currently located in a coastal area and the options for manging this risk need to maintain the values of the coastal environment

What it can look like: change and relocation of uses, provision for a natural coastal edge, including dry high tide beach areas, supporting sand dunes and natural environments.

* Relocation is planned and undertaken proactively over time.

** Planning to retreat or relocate assets and land uses are responsive to community, cultural and ecological opportunities needs and aspirations.

Uncertainty (Natural Hazards & Climate change AND social & economic factors)

Short
Next 20 years

Medium
20-60 years

Long
60-100+ years



Allow natural processes to continue



Support existing

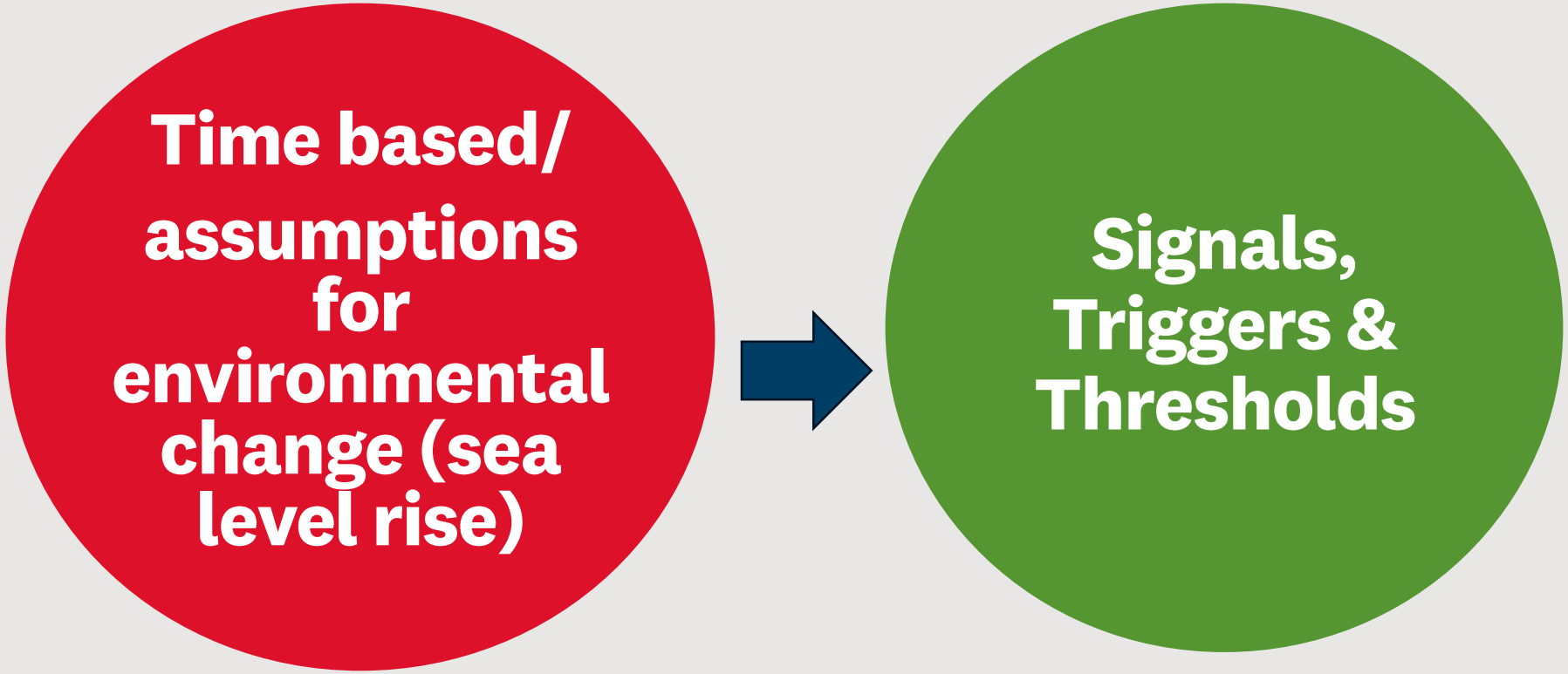


Defend the current coastline



Move assets and infrastructure back

Next step



Assumptions/ perception of fixed actions

Sea level rise

Changing risk tolerance

Changing economic or social factors