

# Auckland Council Shoreline Adaptation Plans (SAP)

Draft SAP: Te Henga Community Hui

**AK  
HAVE  
YOUR  
SAY**

Whatipu to South Head DRAFT SAP consultation: 12<sup>th</sup> July- 30<sup>th</sup> Aug 2024



# Shoreline Adaptation Plans (SAPs)

**Tonight's  
presentation**

**7.00 PM** commences

**7-8.00 PM** Facilitated discussion (Mark Allen- Local Board member)  
with Auckland Council Shoreline Adaptation Plan team

**8-9.00 PM** Free space for koorero- community feedback

**9.00 PM** Meeting close



**Why?  
What?  
Shoreline adaptation plans**



## Why?

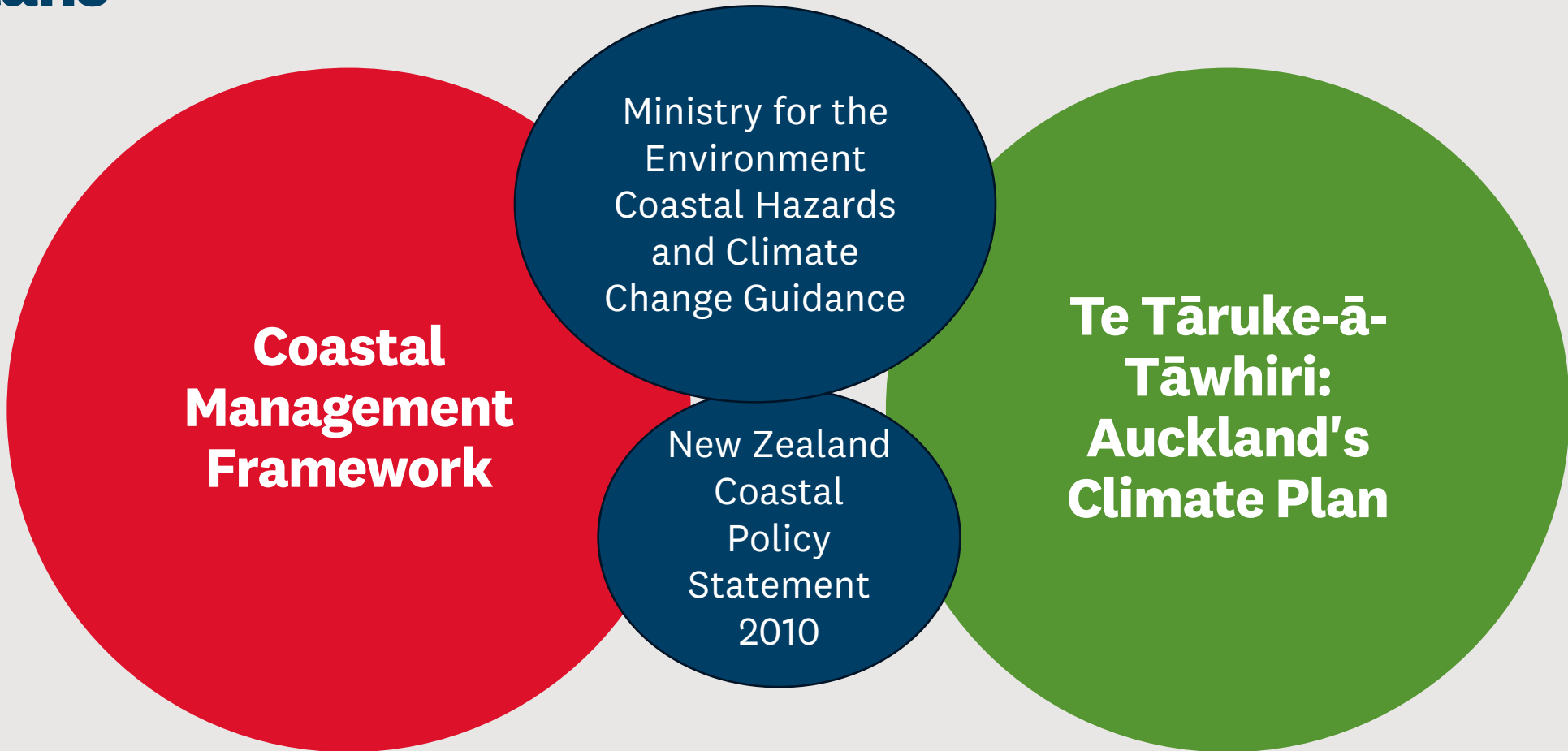
Coastal hazards are increasing and rate of change will increase into the future due to sea level rise combined with natural processes

Shoreline adaptation plans set long-term strategic direction for coastal management:

- working towards sustainable future management approaches
- projects apply a joined-up approach for each section of coast
- apply consistent decision-making
- better prepared to respond to future extreme events



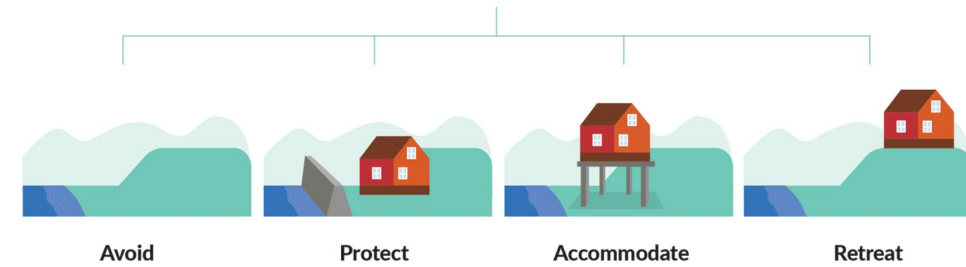
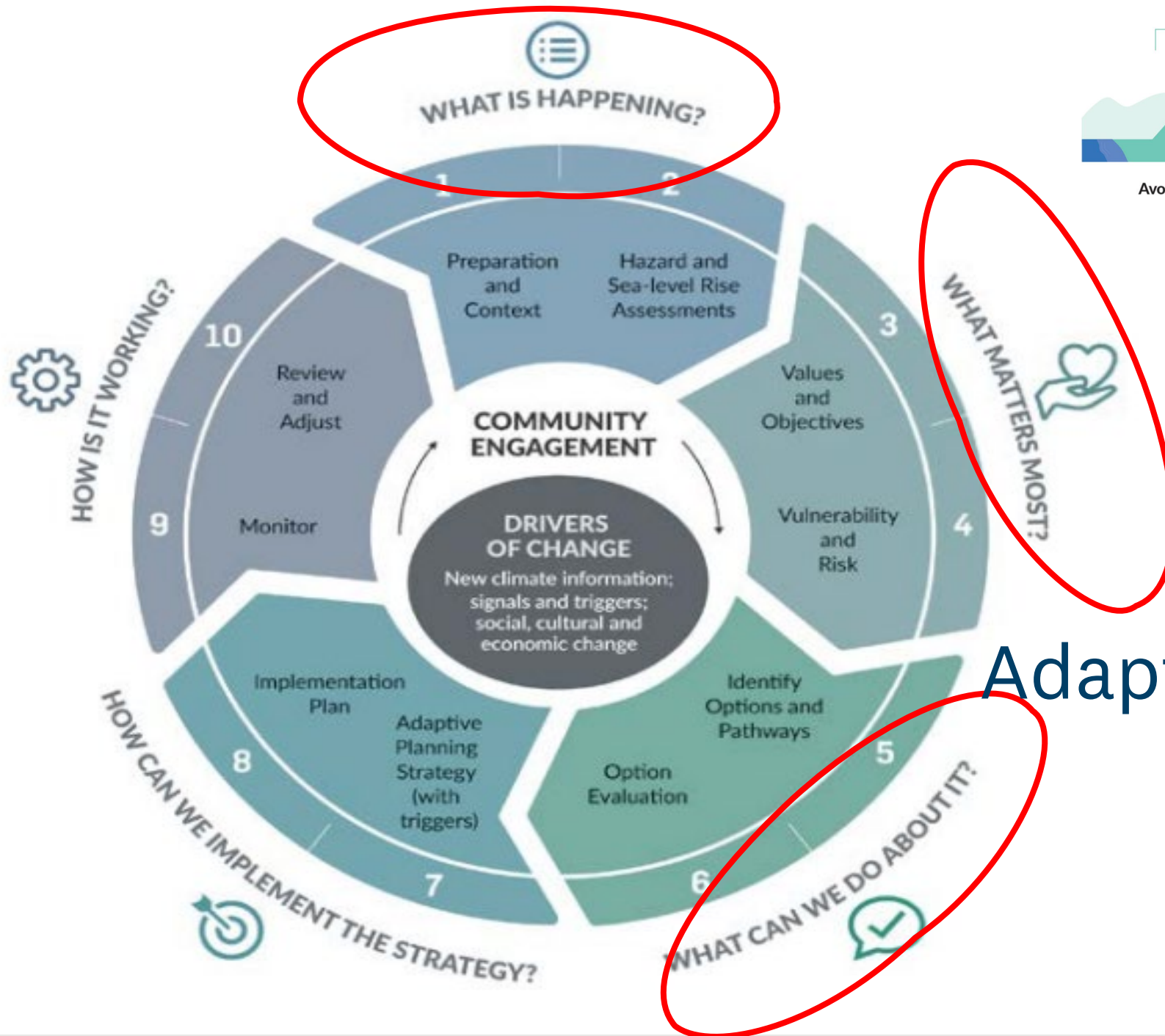
# Why? Policy framework for our shoreline adaptation plans



Adopted in 2017; identified the need for long term planning for how we manage our coasts

Adopted in 2020, long term approach to climate action. Preparing Auckland for the impacts of climate change



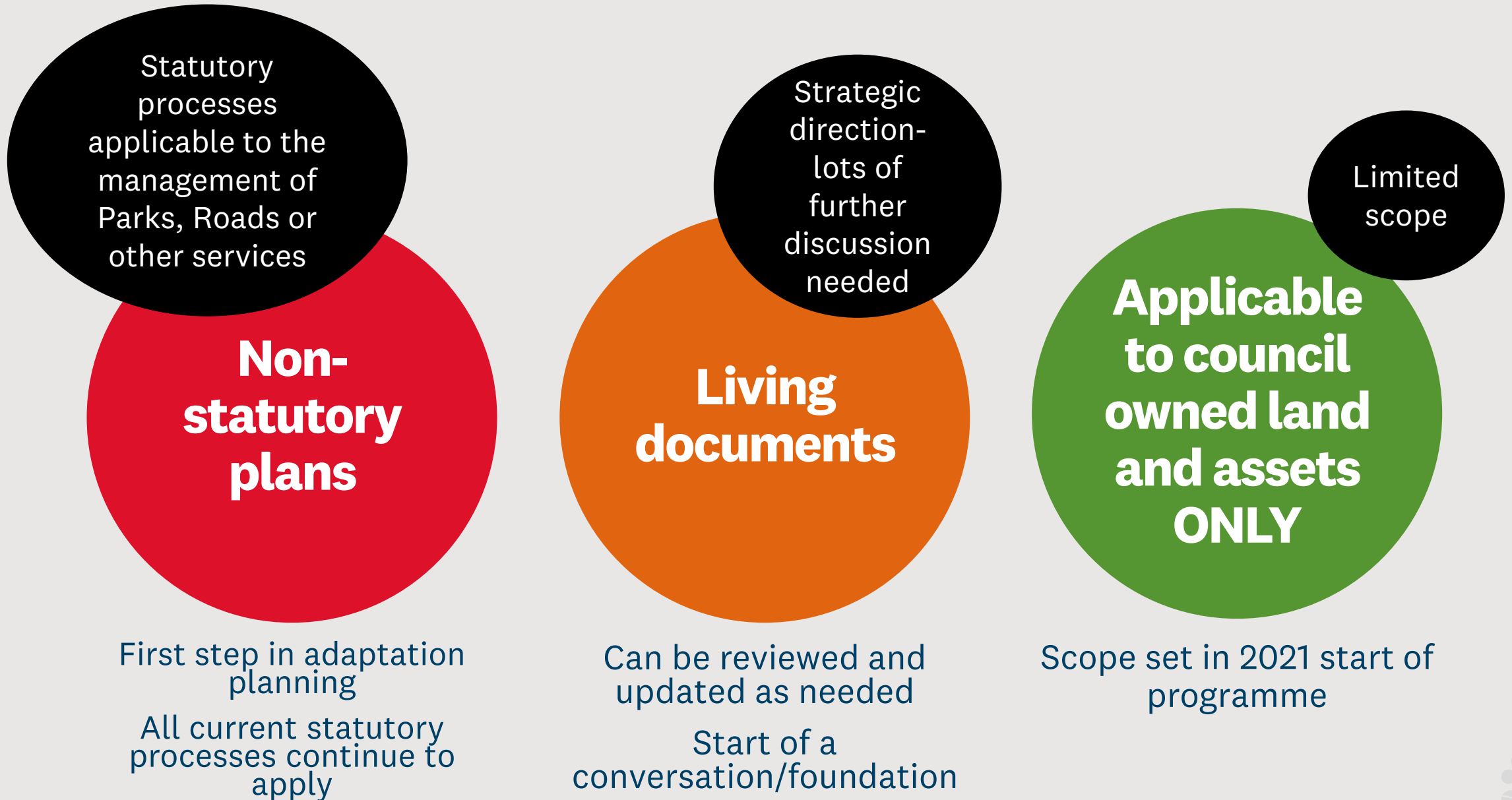


# Adaptation planning

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



## What? Key matters of scope



# What do they apply to? Auckland Council & Council Controlled Organisations

**Council  
owned  
land &  
assets**

Stormwater,  
drinking water  
& waste water  
infrastructure

Public facilities  
(playgrounds,  
walkways,  
halls)

**Roads**



Public beaches



Regional parks



Coastal structures



Esplanade reserves



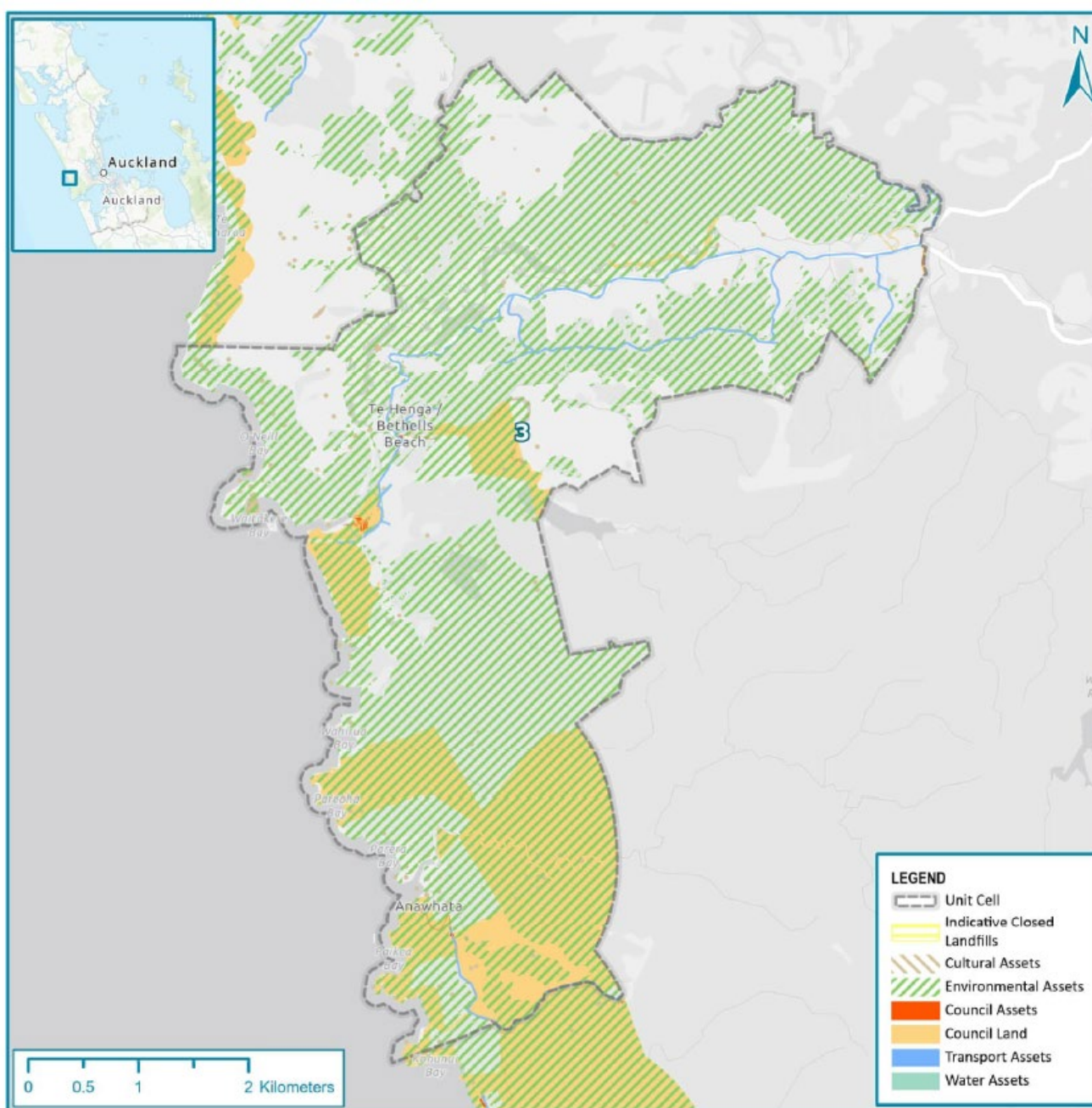


Figure 4.3: Location of Council-owned land and assets subject to the risk assessment in unit 3



# Adaptation Strategies & Pathways

**No Active Intervention**



Allow natural processes to continue

Multiple assets & Multiple hazards

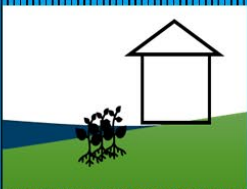


Defend the current coastline

**Hold the Line**



**Limited Intervention**



Support existing



Move assets and infrastructure back

**Managed Realignment**



Natural hazards and climate change (uncertainty)

Short  
Next 20 years

Medium  
20-60 years

Long  
60-100+ years



No/limited  
council land &  
assets at risk

## No active intervention

- **Natural processes are allowed to continue** with no active interventions to protect or maintain assets and infrastructure from climate related risks.
- Includes no investment in the provision or maintenance of any hazard protection structures associated with coastal hazards and flood protection (does not apply to the management of land stability or subsidence or other hazard risk management).
- This strategy is identified for 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.**
- This approach is the preferred strategy where Auckland Council assets are appropriately located out of the hazard zone, and are not at immediate risk from those hazards, within the relevant time scale.



Maintain &  
make safe  
within current  
landholdings

## Limited intervention

- Generally focussed on **maintaining and making safe**, assets and infrastructure that are at risk.
- Works may be undertaken to repair **existing protection structures** for the purpose of extending the asset's life.
- Works may support **localised realignment** of individual asset classes.
- Does not support a fixed coastline.



Protect at a  
fixed location;  
(often  
applicable to  
erosion)

# Hold the line

- The **coastal edge is fixed** at a certain location.
- Defence of the coastal edge 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.
- Nature-based options are the preferred method where possible, but in most cases engineered hard structures would be required.
- An identified **use or service is maintained within its existing location**, e.g. a road is maintained in a fixed location or parks land uses are maintained in an existing location.
- This approach could result in losing some intertidal areas or beach space due to preventing a landward realignment of the coast in response to coastal processes and sea-level rise.
- This approach is considered when assets, uses and/or values are at risk and cannot be easily relocated.
- This approach may **not be feasible in high hazard exposure zones**.



Adaptation  
priority area;  
further work  
needed

# Managed retreat

- Assets and land uses are **relocated or realigned** from hazard-prone areas to **reduce risk** to assets and maintain identified values (ecological, cultural, recreational etc).
- **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.
- Supports opportunity for nature-based solutions, and **maintenance of coastal values**



# How will we use them? Implementation

## Local implementation, from now:

- directs **operational responses** (post storm, maintenance)
- preferred options within **Coastal Renewals Programme** (where existing budget available)
- supports regional **Coastal Asset Management Plan** and risk-based decision making.
- Inform future statutory plans and processes e.g. **LPMP**

Statutory processes continue to apply

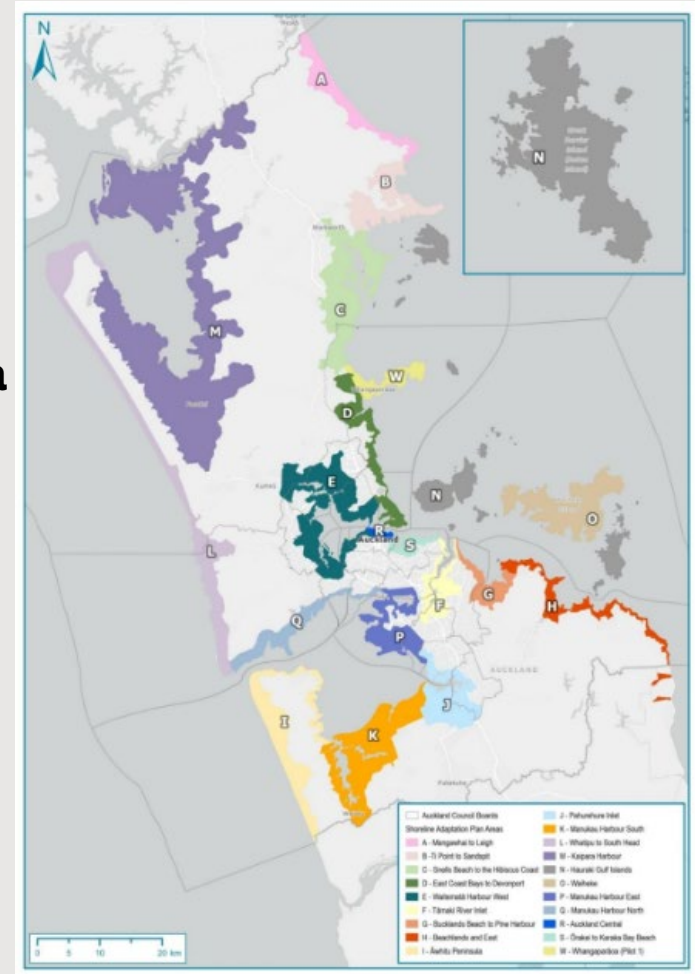
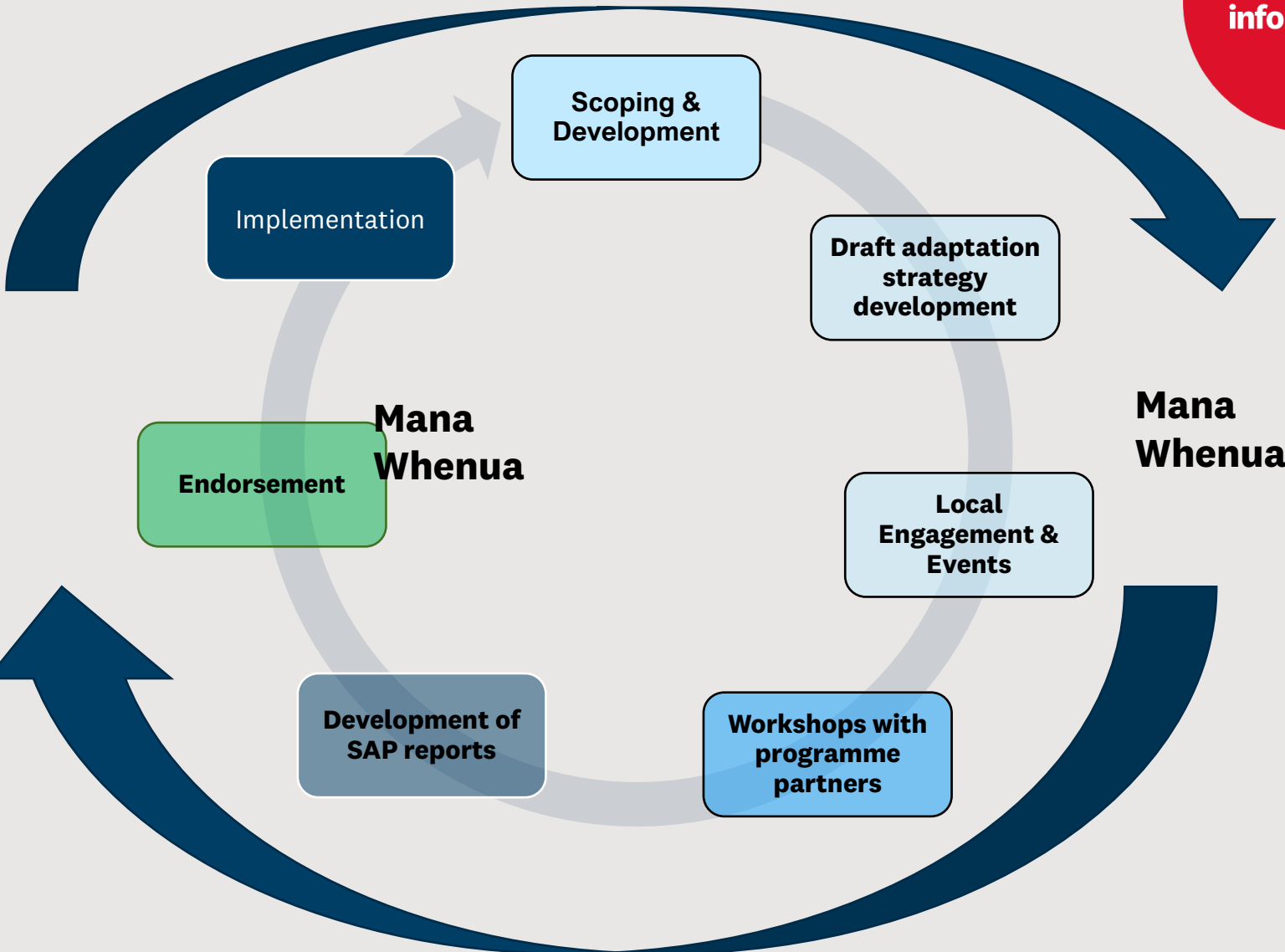
## Regional implementation, from mid-2025\*\*:

- **Regional risk-profile**
- **Future funding** requirements
- **Prioritisation schema** for future works.

\*\* following completion of all area plans



# How do we develop the plans?





# Whatipu to South head: Area Context



# How do we develop the plans?

**Technical  
information**

Coastal hazards & climate  
change

Risk

Social, policy ecological and  
cultural context

**Values from  
Mana  
whenua**

Values

Sites of significance &  
value

Te Ao Māori

**Community  
Values**

Values

Uses

Experiences



# How do we use feedback?

**Helps us understand** perceptions and views on risk

**Develop** community objectives

**Identify** challenges & opportunities

**Informs** adaptation options & guidance notes for implementation

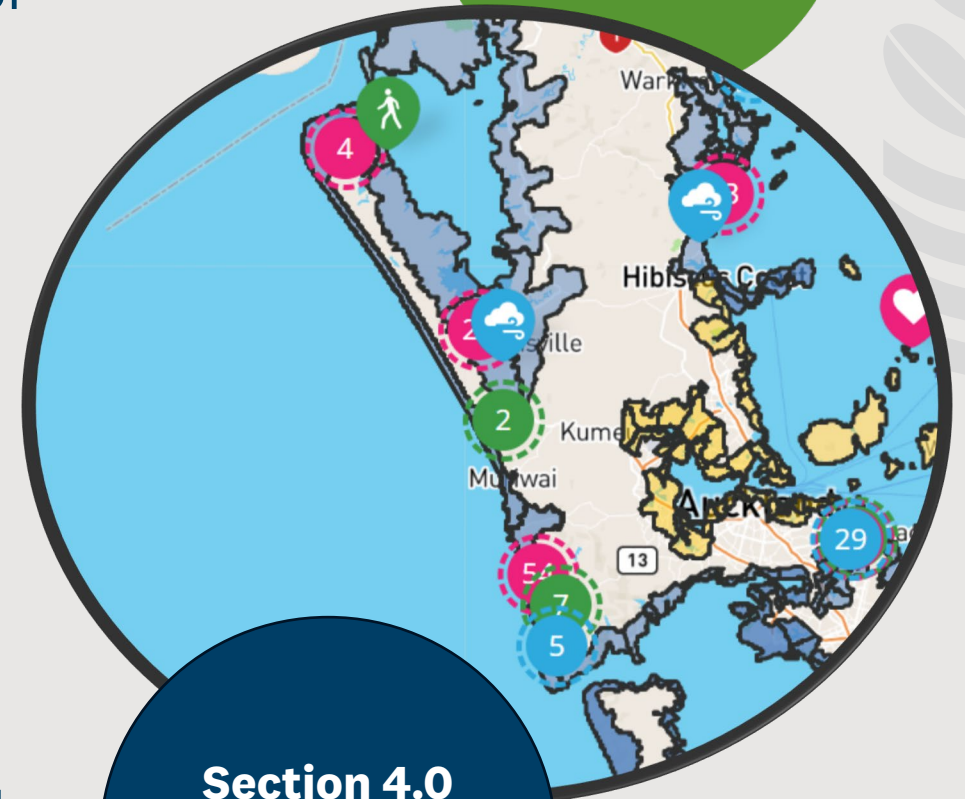
**Community Values**



# Key themes

- Significant weather events over a number of years, have caused significant damage and harm, communities have a unique resilience.
- Pressure on west coast areas from visitor; various views on how to respond to this.
- Management of access to the coast and on beaches.
- Community facilities important social infrastructure to support safe use and enjoyment of the west coast beaches.
- Interest in the acknowledgement of the Māori cultural significance
- Importance of ecosystem health, including coastal habitats, biodiversity, and flora and fauna in the Whatipu to South Head areas. Environmental degradation.

**Community  
Values**



**Section 4.0  
DRAFT  
report**



# Community objectives

## Coastal connections, use and access

- Rooding connections and walking accessways are resilient, well located and managed to minimise risks from coastal hazards (and catchment flooding) to maintain critical connection for communities.
- Assets and infrastructure that provides access to coastal areas and supports the use of these areas is designed to be resilient, support communities and minimise impacts on the natural character and ecological values of the Whatipu to South Head coastal areas.
- Use of coastal spaces for recreation and enjoyment occurs in a manner which preserves and supports natural systems, habitats and supports the functions of dunes to respond to coastal processes and the impacts of climate change.

## Cultural

- Community and visitors understanding of the cultural significance of the Whatipu to South Head area to mana whenua continues to grow.

## Responding to risk

- Rooding connections and walking accessways are resilient, well located and managed to minimised risks from coastal hazards (and catchment flooding) which prevent use and maintain critical connection for communities.
- Information is shared, risk communicated and community resilience and the reduction of harm from natural hazard risk is prioritised, and community led

## Environmental

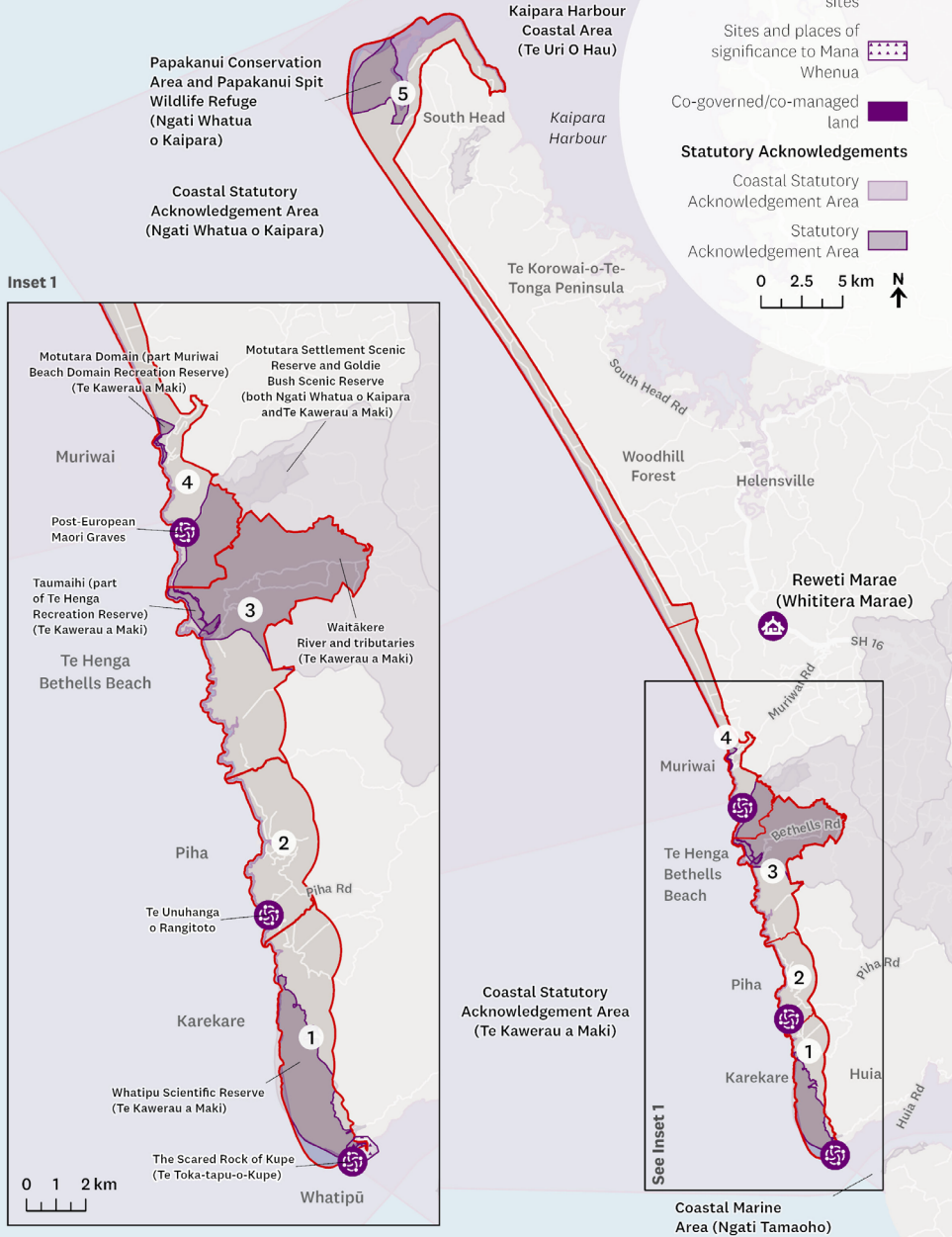
- Natural systems are supported and uses and activities managed to ensure habitats are identified, valued, protected, enhanced and natural systems, such as dunes, are supported as buffers for coastal processes and the impacts of climate change.

## Community Values

## Section 4.3 community objectives



**Cultural Context**  
Whatipu to South Head



**Mana Whenua**

**Kaitiaki Forum principles**  
(see section 2.1 Report)

**Values from Mana whenua**

**Engagement for the Whatipu to South Head SAP**



# Social & regulatory context

- **2023 storm events**
- **Key coastal areas** for regional (international) visitors & industry
  - Roading connections and key walking tracks and amenities.
  - Diverse range of activities
- **Heritage features** within the SAP area have considerable significance
- **Social infrastructure** and community facilities located near the coastline
- Waitākere Ranges Heritage Act 2008, Auckland Unitary Plan (Operative in Part), Auckland Council Regional Parks Management Plan (2022), Waitākere Ranges & Rodney Local Board Plan (2023) and Rodney Local Park Management Plans.

Section 3.5 of the DRAFT report

**Technical information**



# Ecological context

- Large number of terrestrial Significant Ecological Areas (SEAs) than other coastal areas in the region
  - 90 terrestrial SEAs
  - 15 marine SEAs
  - Eight (8) Biodiversity Focus Areas (BFAs)
- The natural function and adaptive capacity of these ecosystems (coastal dunes and river mouths) depends on the ability to move inland or along the coast.
- Sites are vulnerable to inundation and coastal erosion as well as facing challenges from other impacts & climate change.



**Technical information**

Section 3.6 of the DRAFT report



# Coastal processes, hazardscape: Coastal Inundation & catchment flooding

## Coastal Inundation Whatipu to South Head

Section  
3.3 of the  
DRAFT  
report

Technical  
information

3 key  
hazards



*Left: coastal inundation Auckland's northern motorway, 2011*

Source: Auckland's Exposure to Coastal Inundation by Storm-tides and Waves December 2020 Technical Report 2020/024

*Above: Te Henga wetland and Waitakere River flooding inundating Bethells Road, cutting off access to Bethells Beach, August 2021.*

Source: Peter Quilter (Tonkin & Taylor)

Figure 8-15: Verification of present-day 0.01 AEP (100-year ARI) storm-tide line against photograph of observed flooding on the Northern motorway during the 23 Jan 2011 storm-tide.



Waionui Inlet



Flood Risk






SAP Units

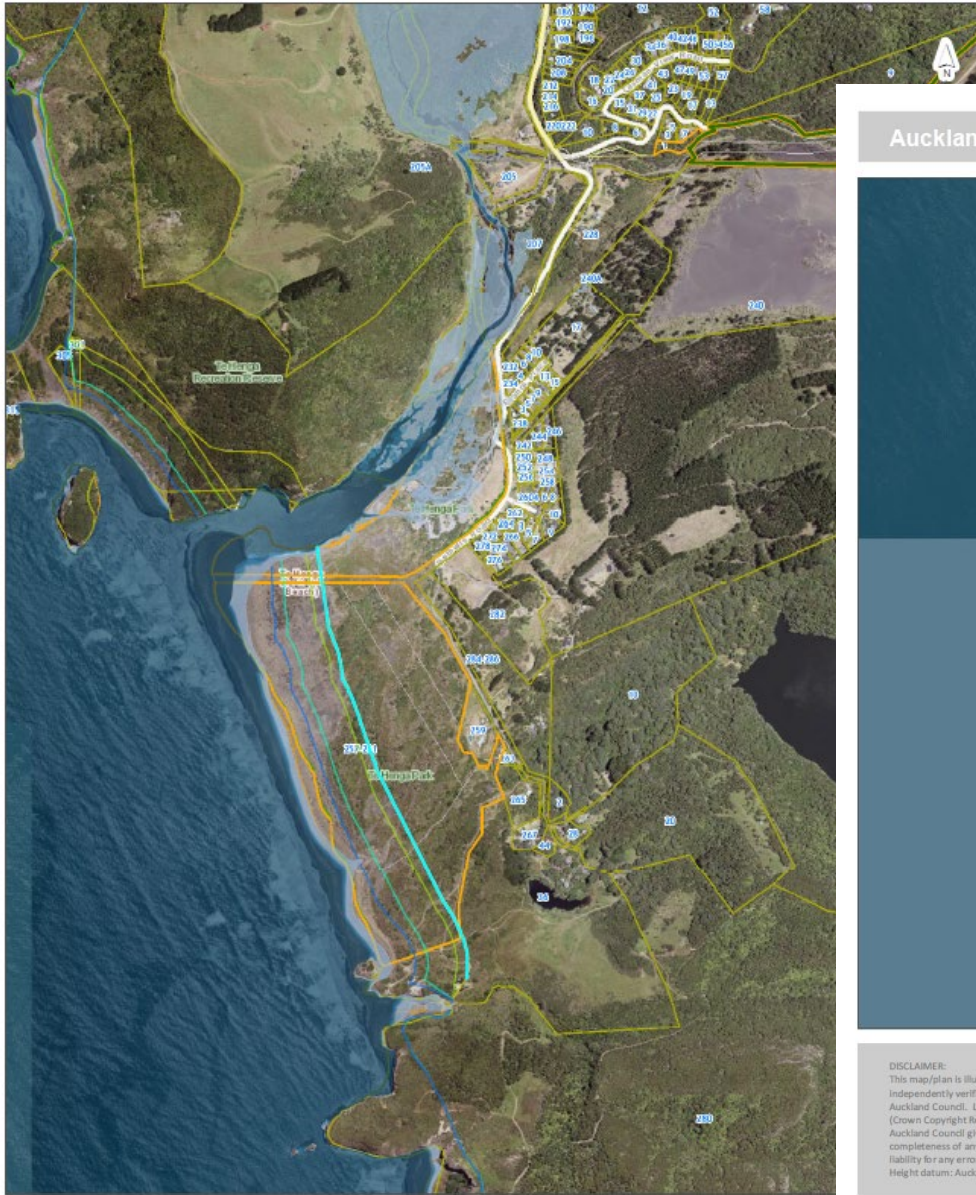


Coastline

### Coastal Inundation Scenarios

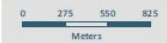
-  1% AEP Coastal Inundation
-  1% AEP Coastal Inundation + 0.5m SLR
-  1% AEP Coastal Inundation + 1m SLR





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Te Henga 1 % +2m



Scale @ A3  
 = 1:25,000

Date Printed:  
 20/08/2024



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1% AEP + 1m SLR



Scale @ A3  
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### Flood plain

0 50 100 200  
Metres  
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20/08/2024



# Coastal processes, hazardscape: coastal instability & erosion and other hazards

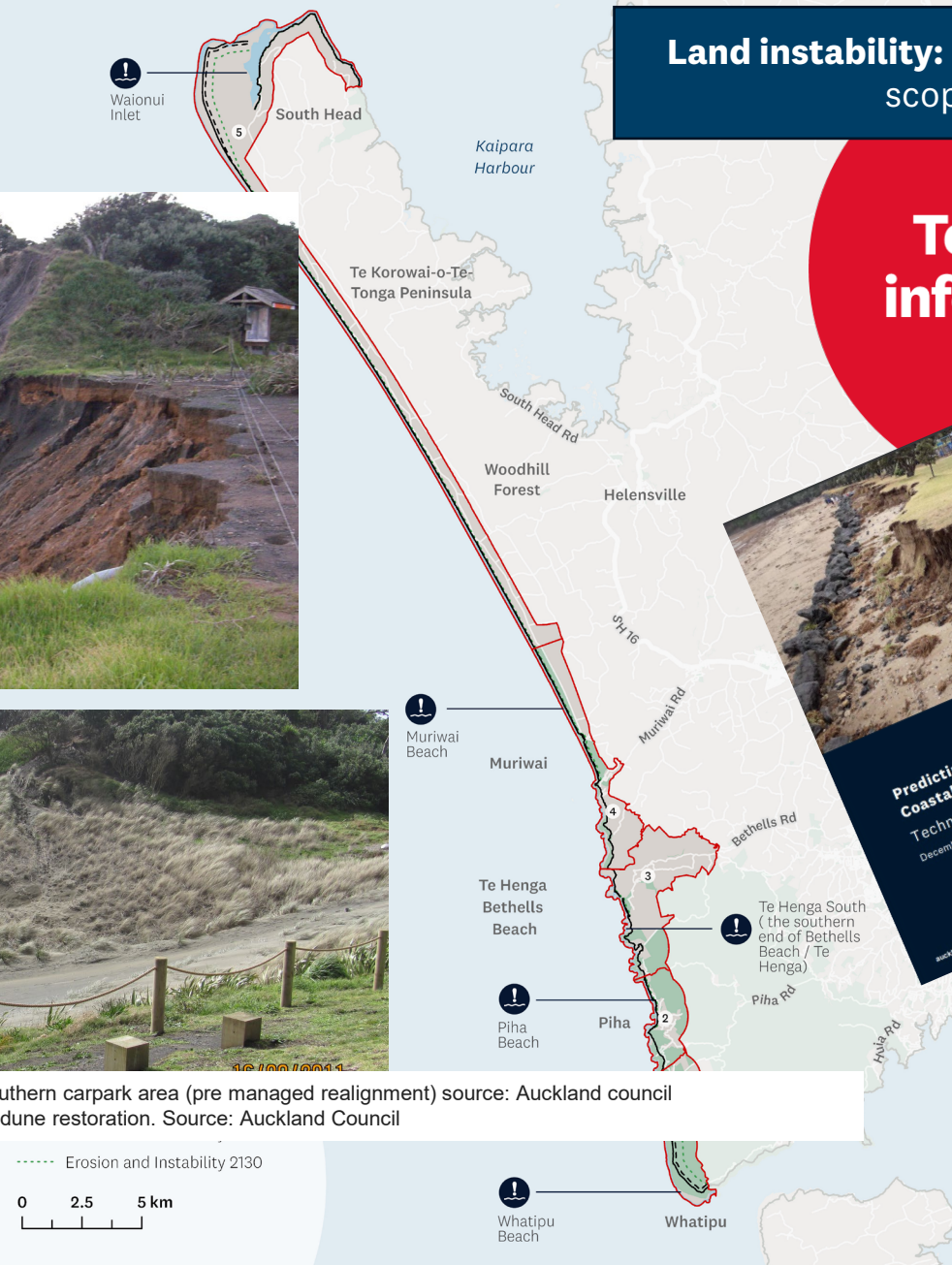


Left (top): Dune construction in 1991 across the seaward margin of Moana Stream (Economos, 2013)  
 Left (bottom): Moana Stream in 1991 subsequent to training of the stream in the 1980s and prior to construction of the seaward dunes (Economos, 2013)



Right (top): Muriwai 2005 erosion of southern carpark area (pre managed realignment) source: Auckland council  
 Right (bottom) Muriwai 2011, following dune restoration. Source: Auckland Council

## Coastal Erosion Whatipu to South Head



**Land instability:** beyond current scope

**Technical information**



----- Erosion and Instability 2130  
 0 2.5 5 km



# Coastal Hazards: Risk assessment

- Coastal inundation & coastal erosion, and climate change impacts.
- Assessment of the exposure & asset vulnerability of land & assets (as identified through spatial layers)
- Three timeframes: short, medium and long term.
- Six (6) grouping of assets & values
- Traffic light table results

Table 1.1: Six groupings and description

Grouping	Description
Council-owned land	Park and reserve land area
Council-community facilities	Carparks Accessways Ramps Wharves Jetties Park and reserve amenities (buildings)
Transport Infrastructure	Roads Bridges Ferry terminals Train stations
Water assets and infrastructure	Publicly owned three waters infrastructure.
Environmental	Significant Ecological Areas (SEA) based on the Auckland Unitary Plan (AUP <sup>1</sup> )
Culture and heritage	Cultural heritage points Mana Whenua areas of significance Historical heritage significance

Technical information

Section 3.2 of the DRAFT report



# Coastal Hazards: Risk assessment

Table 3.1: Coastal erosion susceptibility and inundation risk rating for each unit in council-owned land, council community facilities, transport infrastructure and water infrastructure. Colour ramp reflects thresholds in Section 3.0

Unit	Hazard	Council-owned land			Council-community facilities			Transport infrastructure			Water infrastructure		
		Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term
1	Erosion	High	Very high	Very high	None	None	Low	None	None	None	None	None	None
	Inundation	High	Very high	Very high	Low	Low	Moderate	Low	Low	Low	Low	Low	Low
2	Erosion	High	High	High	High	High	High	Moderate	Moderate	High	Low	Low	Low
	Inundation	Moderate	Moderate	Moderate	Moderate	High	High	Moderate	Moderate	Moderate	Low	Low	Low
3	Erosion	High	High	High	Low	Low	Low	None	None	None	None	None	None
	Inundation	Moderate	Moderate	Moderate	Moderate	Moderate	High	Low	Low	Moderate	Low	Low	Low
4	Erosion	High	High	High	High	High	High	Moderate	Moderate	Moderate	Low	Low	Low
	Inundation	High	High	High	None	Moderate	Moderate	Low	Low	Low	Low	Low	Low
5	Erosion	Moderate	Moderate	Moderate	None	None	None	None	None	None	None	None	None
	Inundation	Low	Low	Low	None	None	None	None	None	None	None	None	None

Table 3.2: Coastal erosion susceptibility and inundation risk score for each unit in the environmental grouping

Unit	Hazard	Environmental		
		Short-term	Medium-term	Long-term
1	Erosion	High	High	Very high
	Inundation	High	High	High
2	Erosion	High	High	High
	Inundation	Moderate	Moderate	Moderate
3	Erosion	High	High	High
	Inundation	Moderate	High	High
4	Erosion	High	High	High
	Inundation	Moderate	High	High
5	Erosion	Very high	Very high	Very high
	Inundation	Very high	Very high	Very high

Table 3.3: Coastal erosion susceptibility and inundation risk score for each unit in the culture and heritage grouping

Unit	Hazard	Culture and heritage		
		Short-term	Medium-term	Long-term
1	Erosion	Moderate	Moderate	Moderate
	Inundation	Moderate	Moderate	Moderate
2	Erosion	Moderate	Moderate	High
	Inundation	Low	Low	Low
3	Erosion	High	High	High
	Inundation	Moderate	Moderate	Moderate
4	Erosion	High	High	High
	Inundation	Moderate	High	High
5	Erosion	Moderate	Moderate	Moderate
	Inundation	High	High	High

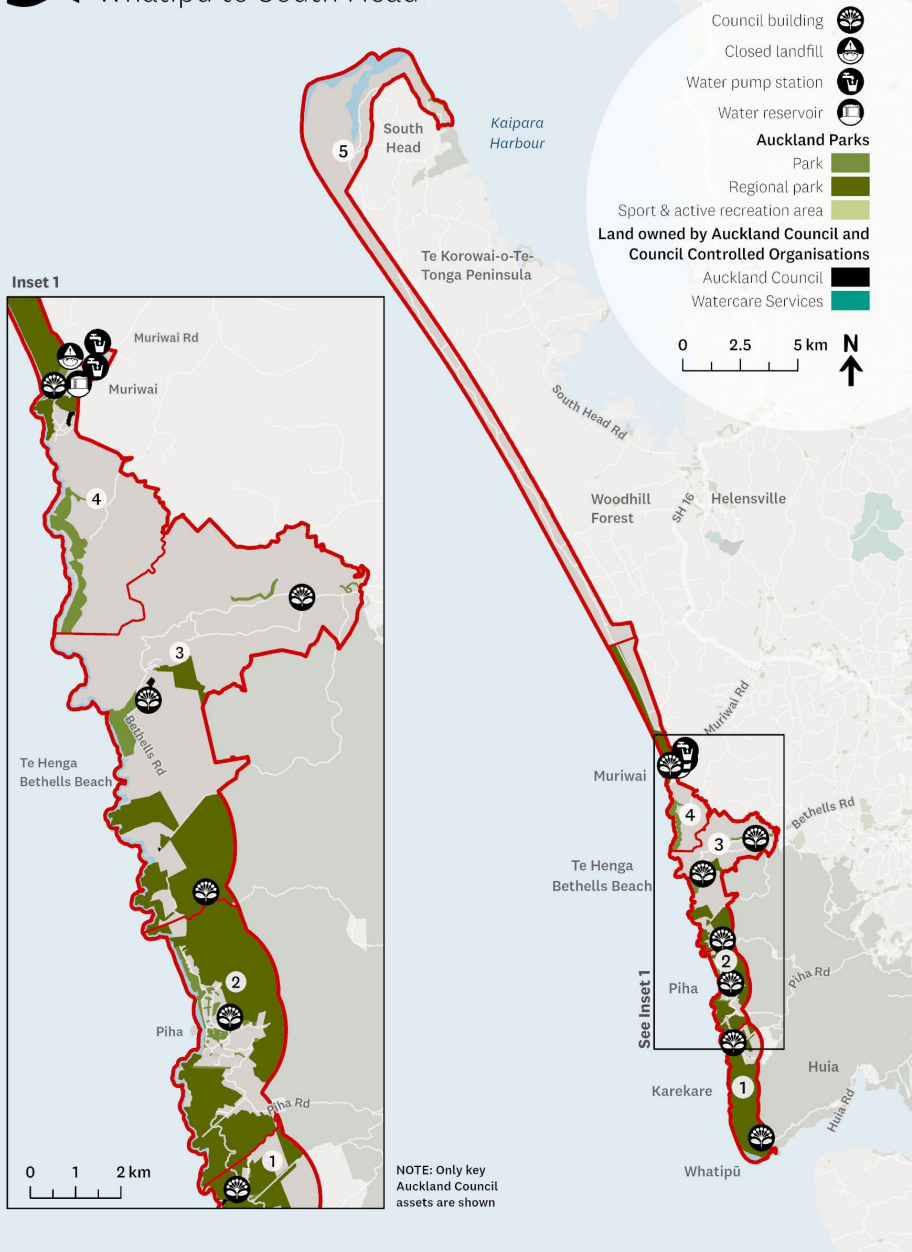


# Whatipu to South head: proposed strategies



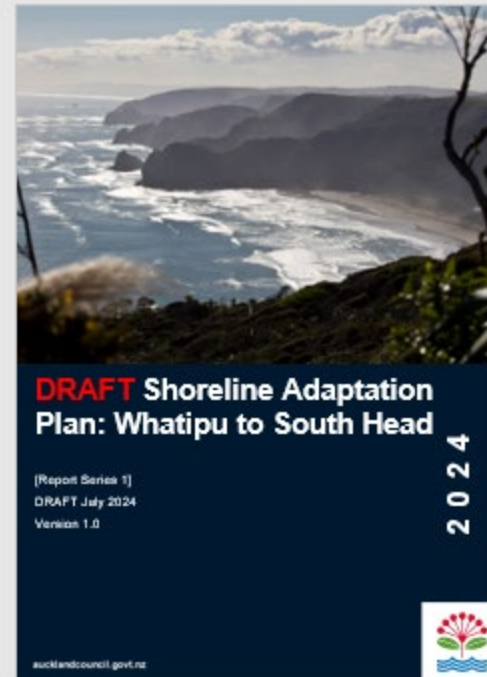
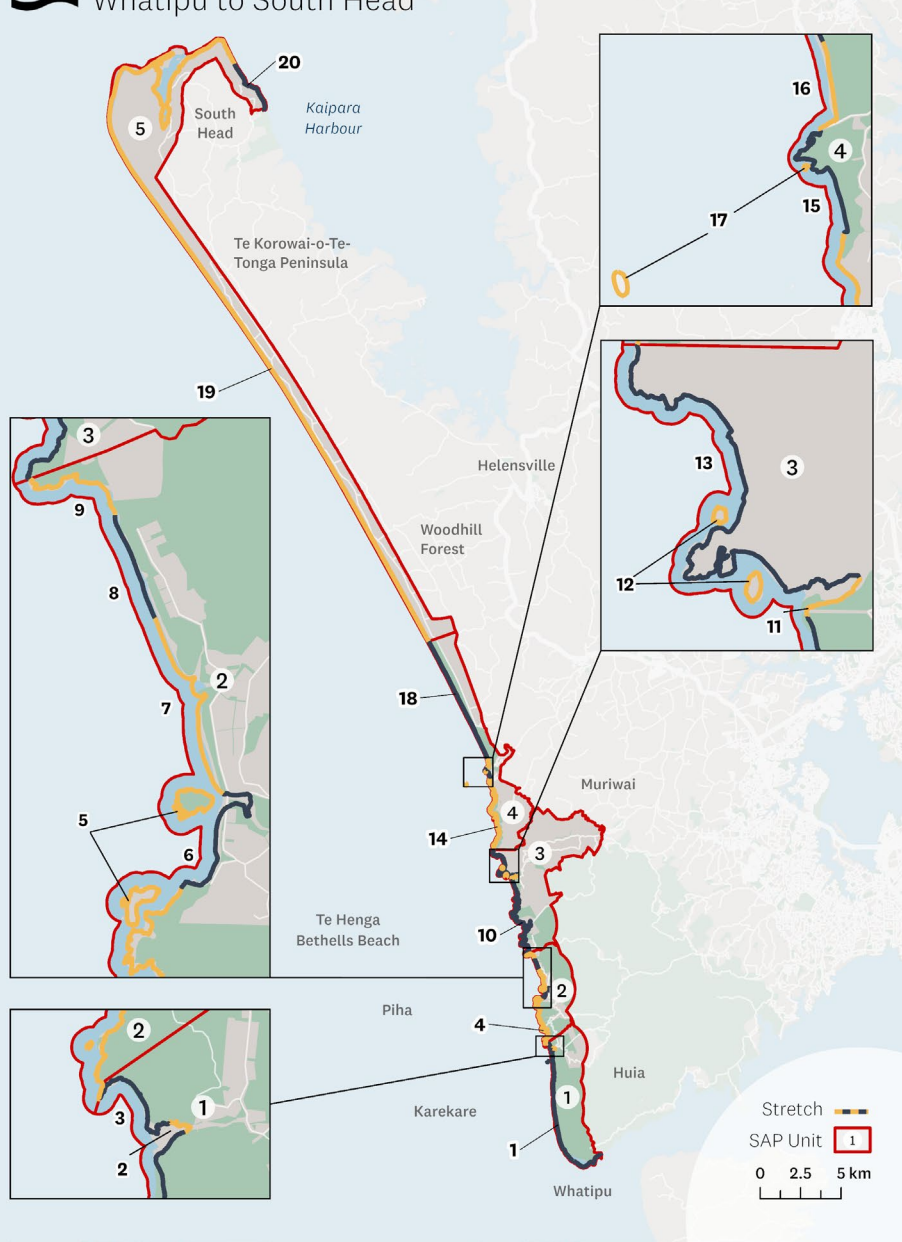
# Auckland Council Land and Assets

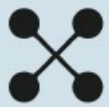
## Whatipu to South Head



# Area and Stretch Overview

## Whatipu to South Head





# Unit 3

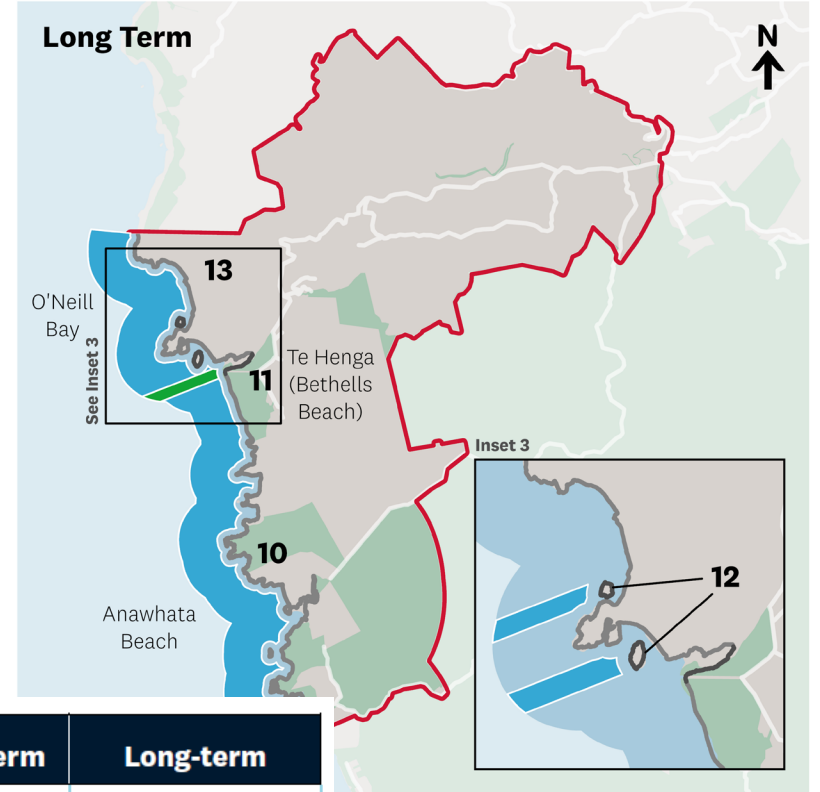
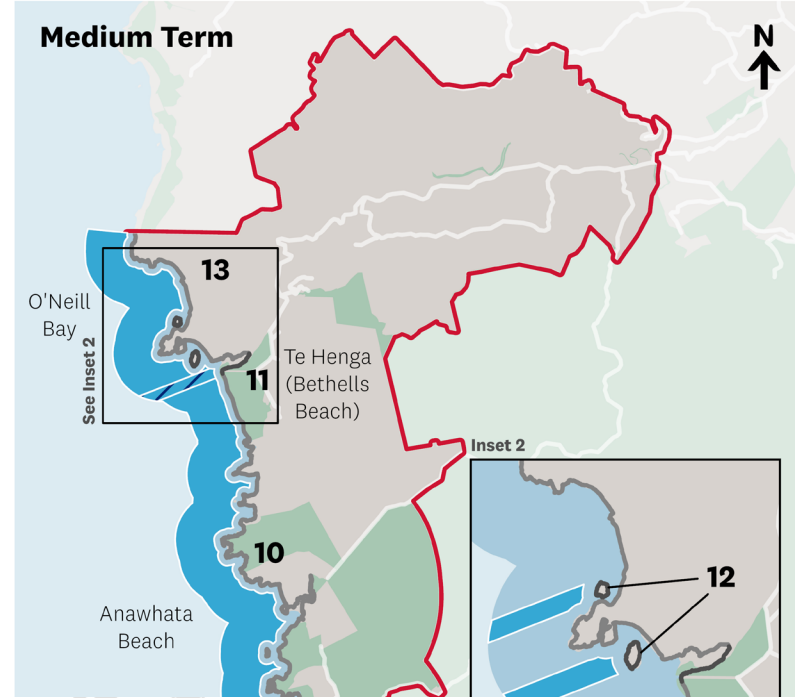
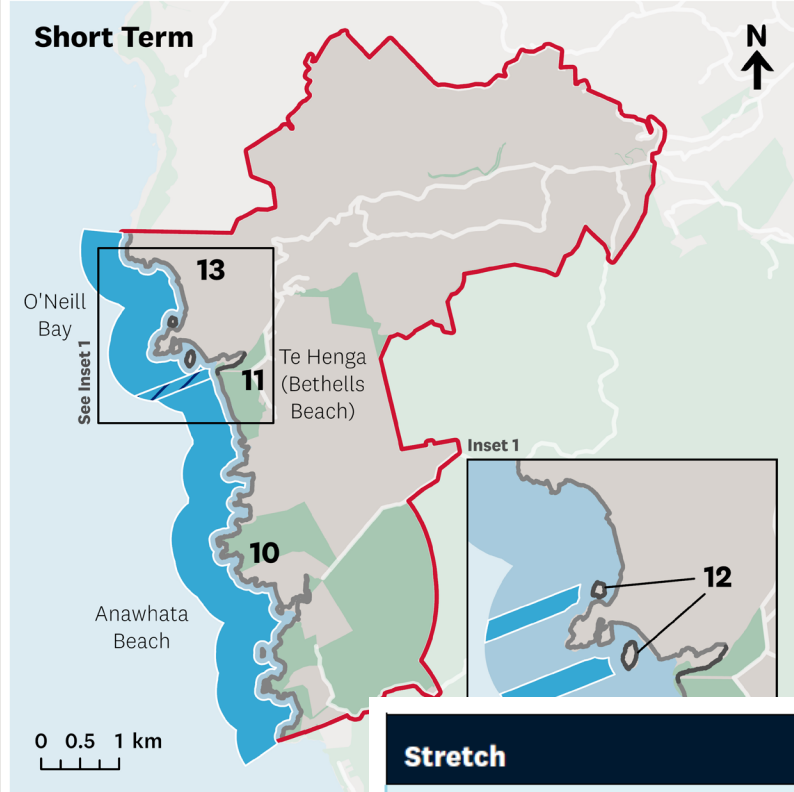
## Whatipu to South Head





# Adaptation Strategy

Whatipu to South Head - Unit 3 - Te Henga / Bethells and Anawhata



Unit Boundary

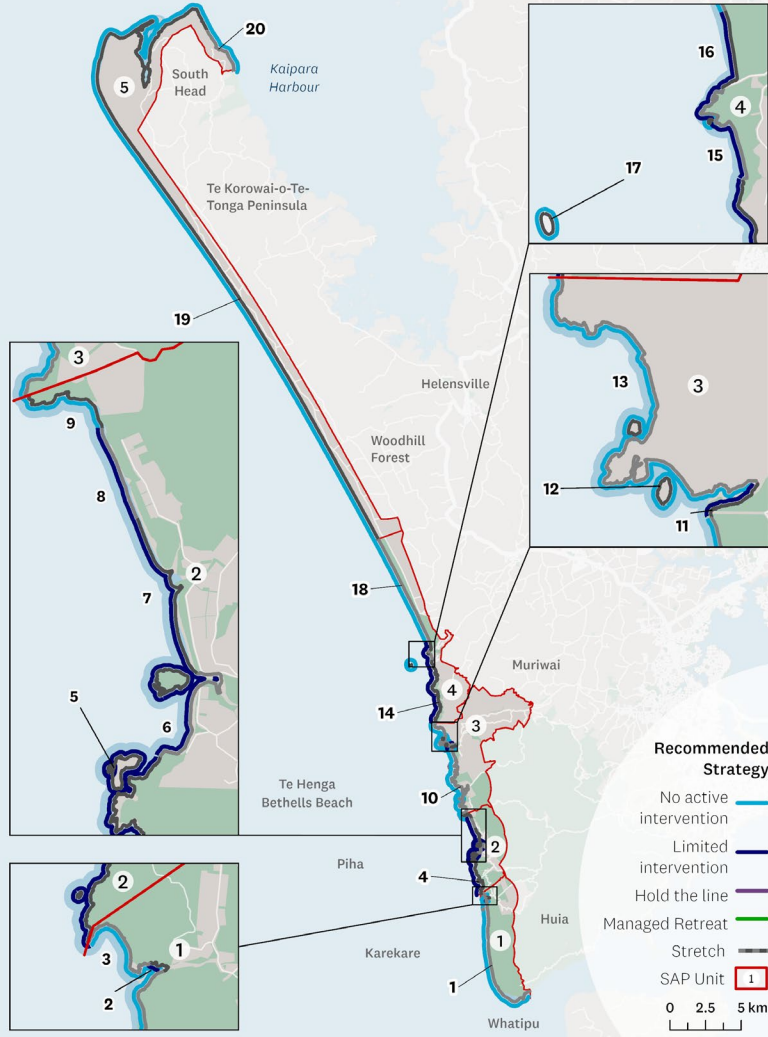
Managed Retreat

Stretch	Short term	Medium term	Long-term
Stretch 10: Anawhata	NAI	NAI	NAI
Stretch 11: Te Henga	LI	LI	MR
Stretch 12: Ihumoana and Kauwahaia Islands	NAI	NAI	NAI
Stretch 13: Waitākere River to Raetahinga	NAI	NAI	NAI



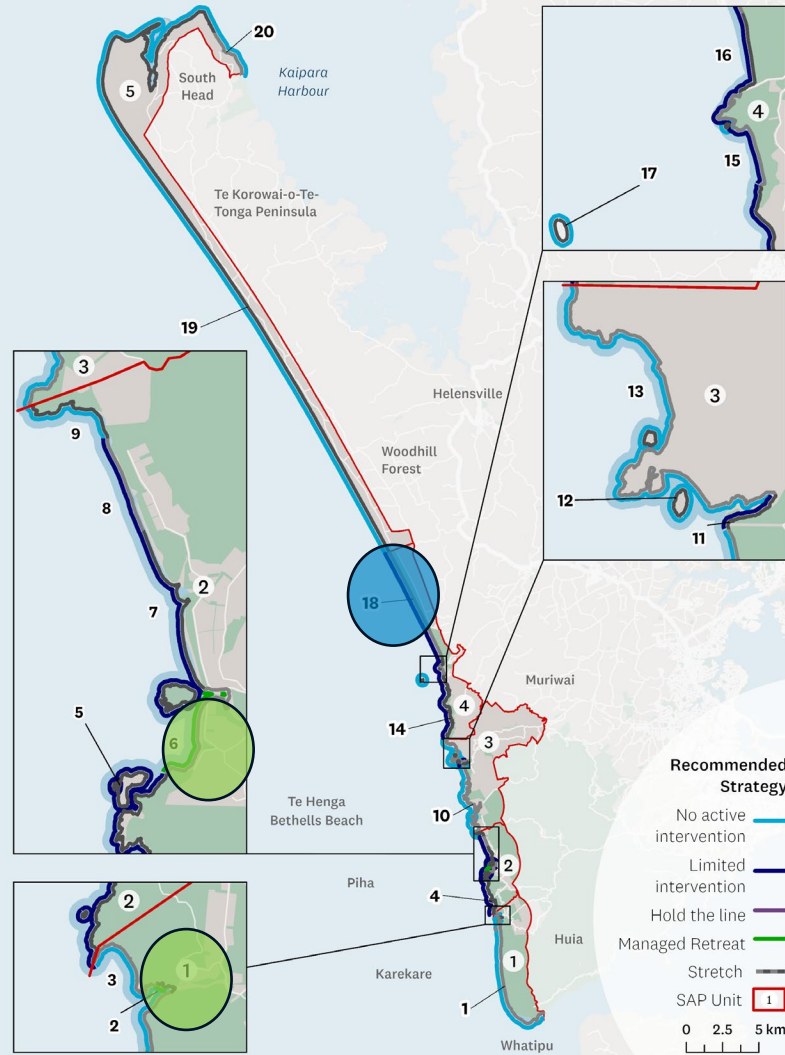
# Adaptation Summary - Short Term

Whatipu to South Head



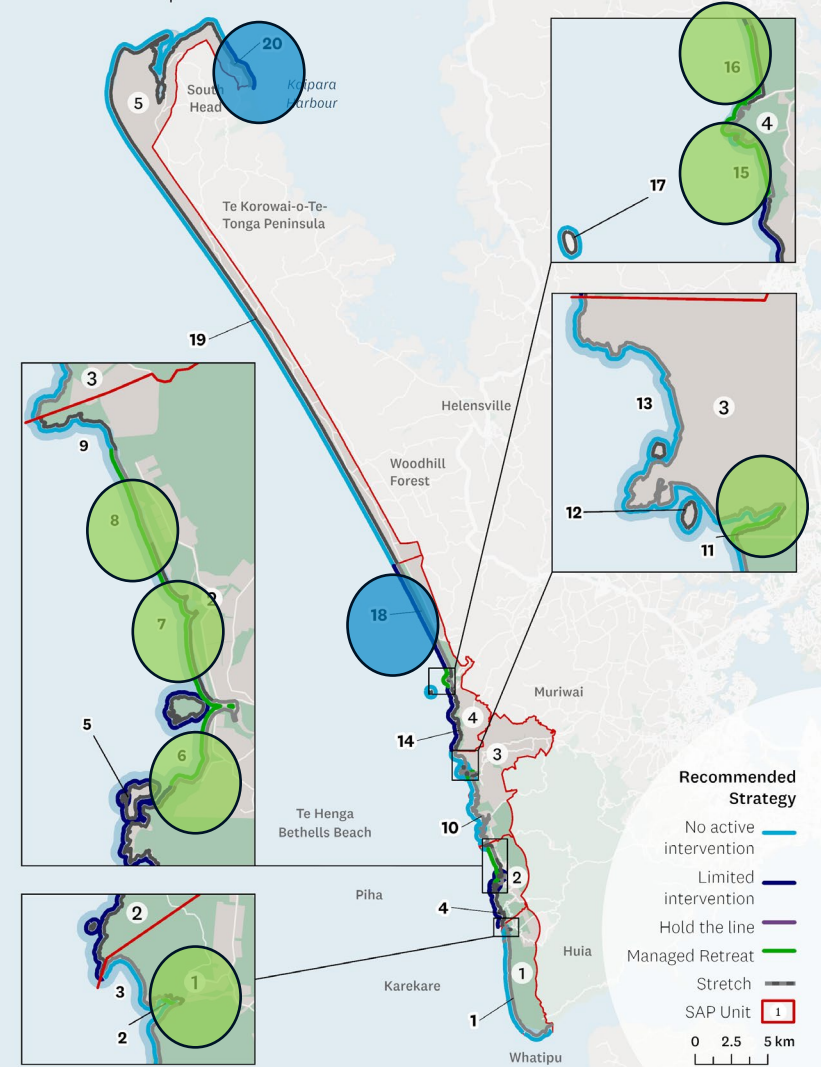
# Adaptation Summary - Medium Term

Whatipu to South Head



# Adaptation Summary - Long Term

Whatipu to South Head





**What do you think? Feedback**



# 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**?



Draft Shoreline  
Adaptation  
Plan(s) are now  
available on AK  
Have Your Say



# Shoreline Adaptation Plans (SAPs): DRAFT MANUKAU NORTH SAP

**Key dates  
2024**

**DRAFT  
SAP  
Feedback**

**AK  
HAVE  
YOUR  
SAY**

## **12 July - 12 Aug 2024**

- AK Have Your Say feedback: digital engagement and in person events

## **August – October 2024**

- Analysis of feedback, review of DRAFT plan

## **Late 2024**

- Local Board engagement & endorsement



# Pātai Questions and Answers





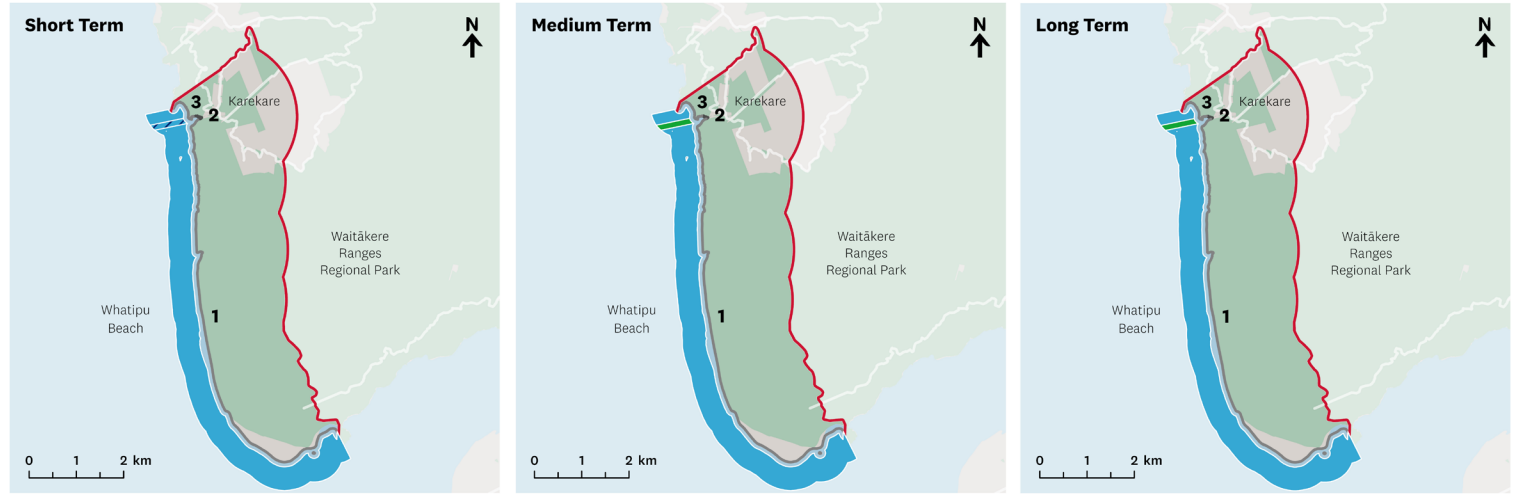
# Unit 1

## Whatipu to South Head



# Adaptation Strategy

## Whatipu to South Head - Unit 1 - Whatipu to Karekare



Unit Boundary  
  Stretches  
**Recommended Strategy:**  
 No Active Intervention  
 Limited Intervention  
 Hold the Line  
 Managed Retreat

Stretch	Short term	Medium term	Long-term
Stretch 1: Whatipu beach to Karekare	NAI	NAI	NAI
Stretch 2: Karekare Beach	LI	MR	MR
Stretch 3: <u>Tāhoro Union Bay to Hīnerangi Pou</u>	NAI	NAI	NAI





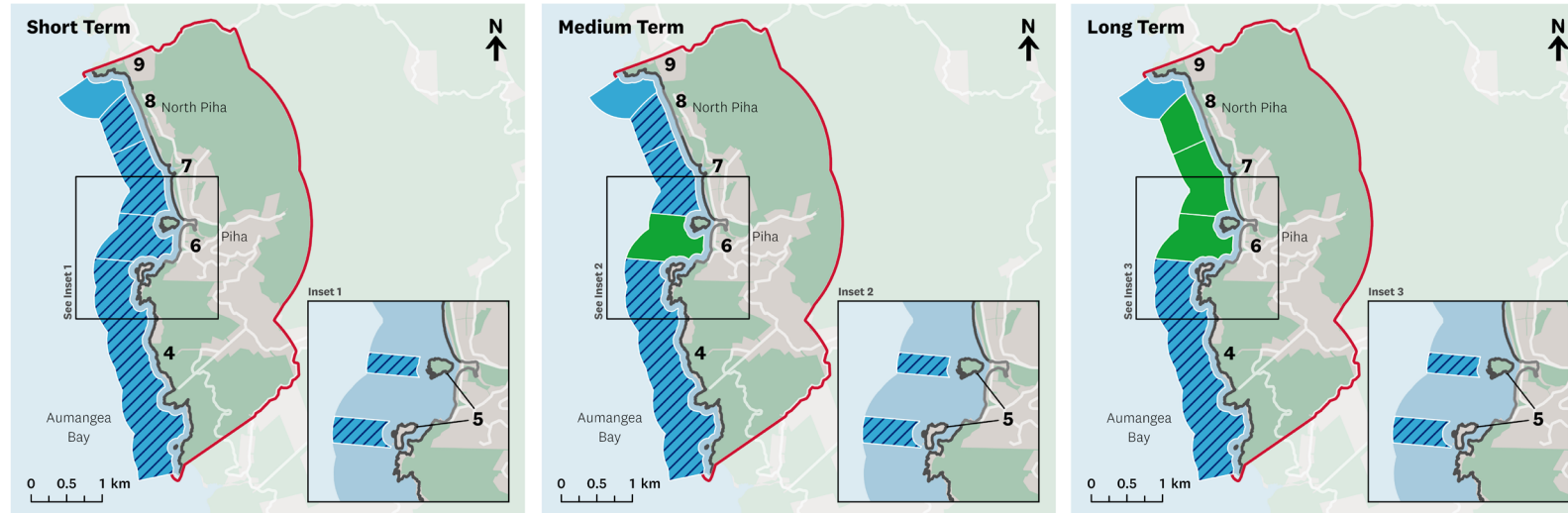
# Unit 2

Whatipu to South Head



# Adaptation Strategy

Whatipu to South Head - Unit 2 - Piha



Unit Boundary  
  Stretches  
 Recommended Strategy:  
 No Active Intervention  
 Limited Intervention  
 Hold the Line  
 Managed Retreat

Stretch	Short term	Medium term	Long-term
Stretch 4: Te Unuhanga o Rangitoto / Mercer Bay	LI	LI	LI
Stretch 5: Taitomo Island and Te Piha /Lion Rock	LI	LI	LI
Stretch 6: Piha Beach South	LI	MR	MR
Stretch 7: Piha Beach Marine Parade North	LI	LI	MR
Stretch 8: Piha Beach North	LI	LI	MR
Stretch 9: Kohunui Bay & Te Waha Point	NAI	NAI	NAI





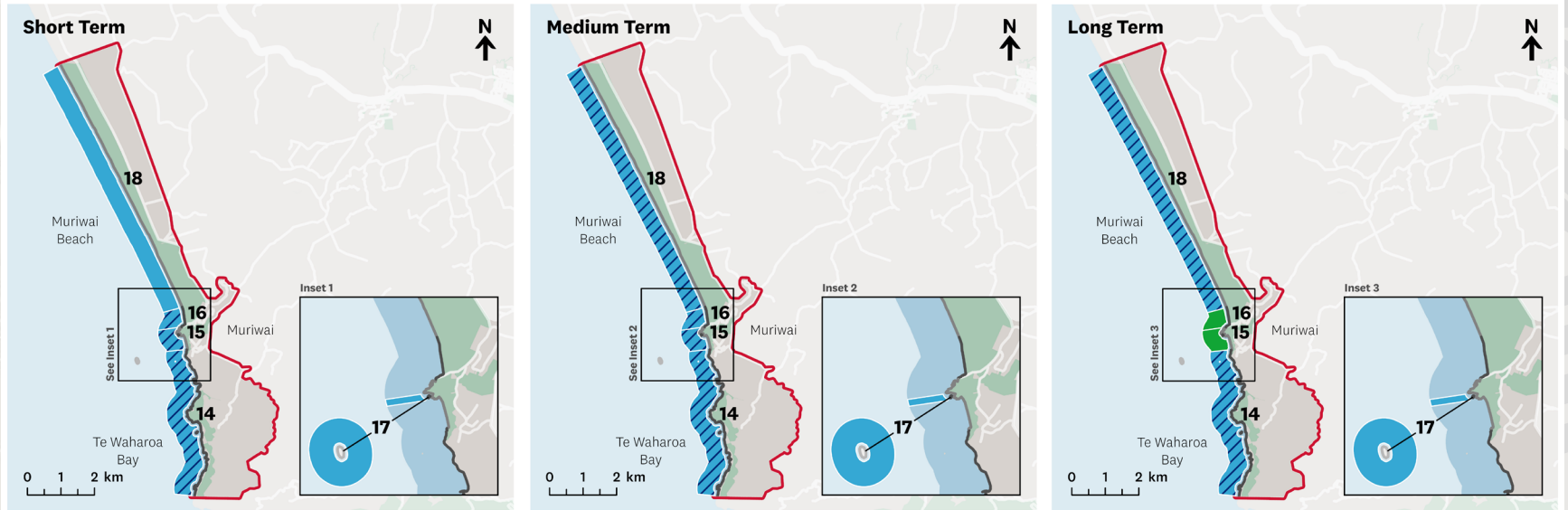
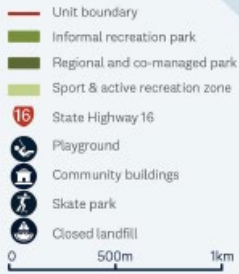
# Unit 4

Whatipu to South Head



# Adaptation Strategy

Whatipu to South Head - Unit 4 - Te Oneone Rangatira Muriwai



Unit Boundary — Stretches **Recommended Strategy:** No Active Intervention Limited Intervention Hold the Line Managed Retreat

Stretch	Short term	Medium term	Long-term
Stretch 14: Te Waharoa to Maukatia Bay	LI	LI	LI
Stretch 15: Maukatai Bay /Māori Bay & Otakamiro Point	LI	LI	MR
Stretch 16: Muriwai Motutara	LI	LI	MR
Stretch 17: Motutara Pa & Oaia Islands	NAI	NAI	NAI
Stretch 18: North Muriwai Regional Park	NAI	LI	LI





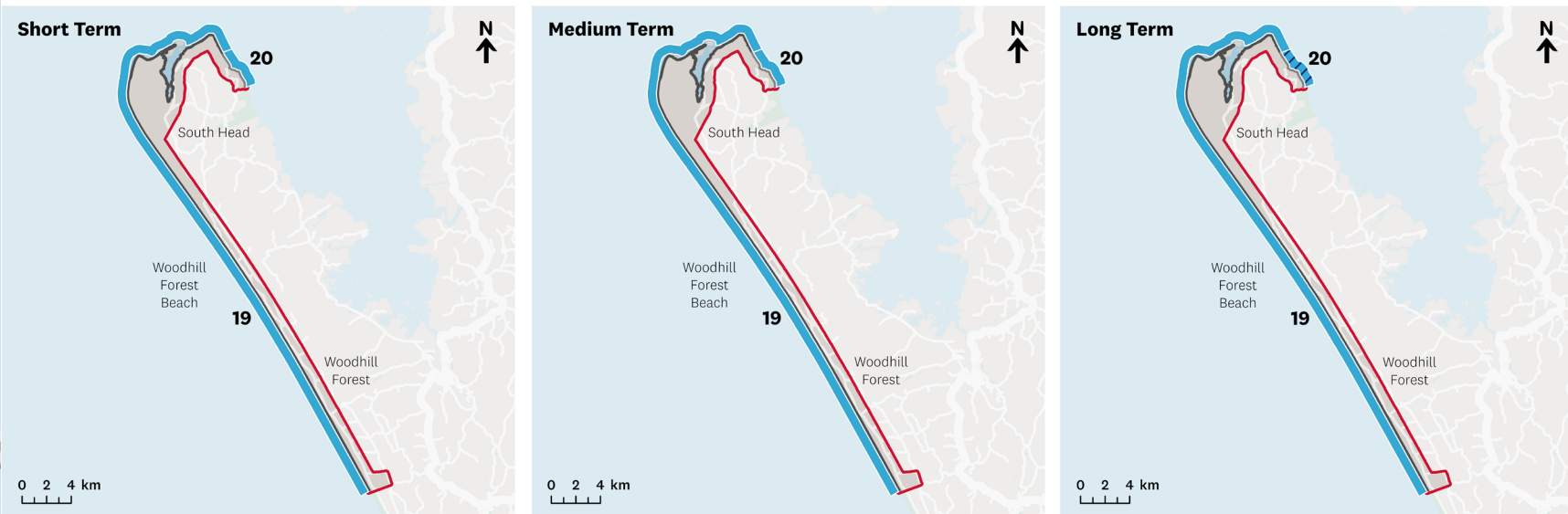
# Unit 5

## Whatipu to South Head



# Adaptation Strategy

## Whatipu to South Head - Unit 5 - Te Korowai o te Tonga / South Head



Unit Boundary  
  Stretches  
 Recommended Strategy:  
 No Active Intervention  
 Limited Intervention  
 Hold the Line  
 Managed Retreat

Stretch	Short term	Medium term	Long-term
Stretch 19: Te Oneone Rangatira and South Head	NAI	NAI	NAI
Stretch 20: Mānunutahi Bay / Mosquito beach to Te Kawau Point	NAI	NAI	LI

