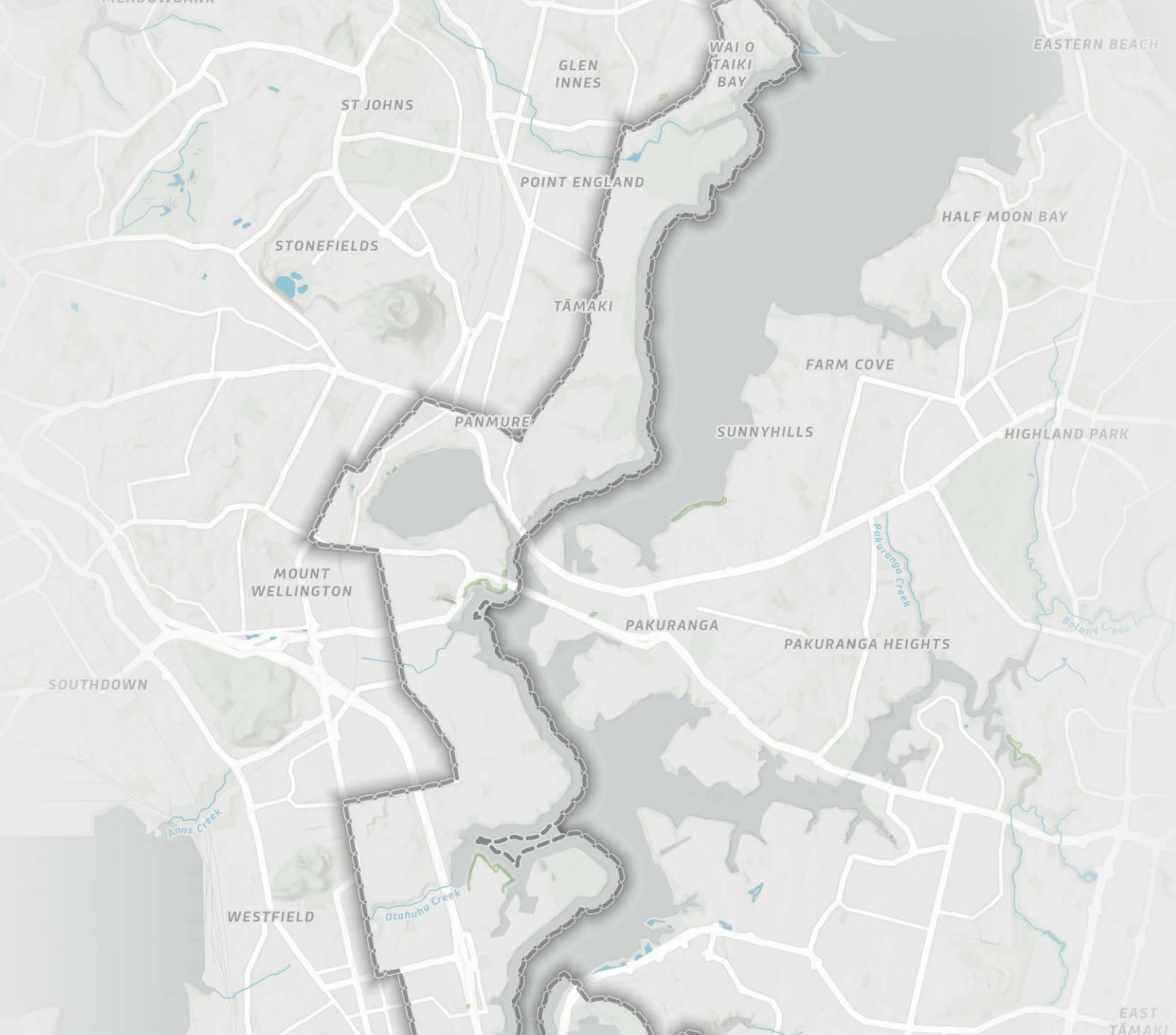




Ngā mahere whakaurutau mō te takutai

Shoreline Adaptation Plan

Tāmaki Estuary

Volume 2: Introduction to the SAP area

July 2025, Version 1.0

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Shoreline Adaptation Plan

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We would like to acknowledge and thank the Local Boards and Ward Councillors for their ongoing support of the Shoreline Adaptation Plan (SAP) Programme. The Local Boards and Ward Councillors have actively supported the development of this report, promoting and attending community events and providing valuable insights regarding the challenges for shoreline engagement across the Tāmaki Estuary coastline. The project team would like to acknowledge their support for the programme, as well as the local community, key stakeholders and third-party infrastructure and asset/landowners (including but not limited to Transpower and NZTA) and users of the wider Tāmaki Estuary coastline for their engagement, support, and ongoing interest in this SAP.

As set out in ***Volume 1: Understanding the Shoreline Adaptation Plans***, adaptation planning is an ongoing process, with SAPs being a collective first step towards an adaptive approach for the future of our coast for current Aucklanders and the generations to come. Reflecting on this, SAPs operate as living documents, with a strong commitment to continue working in partnership with project partners to inform and guide the implementation of each SAP area plan and further adaptation planning actions. As a living document, future revisions can be made to include additional context as / when requested (e.g. as per cultural context holding statements illustrated in Section 3.0).

Mātauranga Protection Statement (Disclaimer)

Auckland Council acknowledges that all cultural information within this document is the intellectual property of iwi who have contributed to the development and co-authoring of this Shoreline Adaptation Plan (SAP). To ensure the protection of Mātauranga Māori, cultural information must not be recirculated to other workstreams without direct consultation with and approval by iwi, to whom this information belongs and how it can be used.

To ensure that cultural values and associations are recognised and provided for in any works programme, it is fundamental that this partnership and co-management approach with the iwi of Tāmaki Makaurau is applied to each specific coastal stretch when implementing the direction set out in this SAP. Failure to do so has the potential to result in significant adverse cultural impacts.

Early and meaningful engagement with the relevant iwi groups on projects under this SAP is an essential requirement. This will ensure that Auckland Council and Auckland Council-owned organisations meet their obligations to Ngā Mana Whenua o Tāmaki Makaurau and Te Tiriti o Waitangi. Iwi must be given the opportunity to act in their role as Kaitiaki when implementing projects under this SAP.

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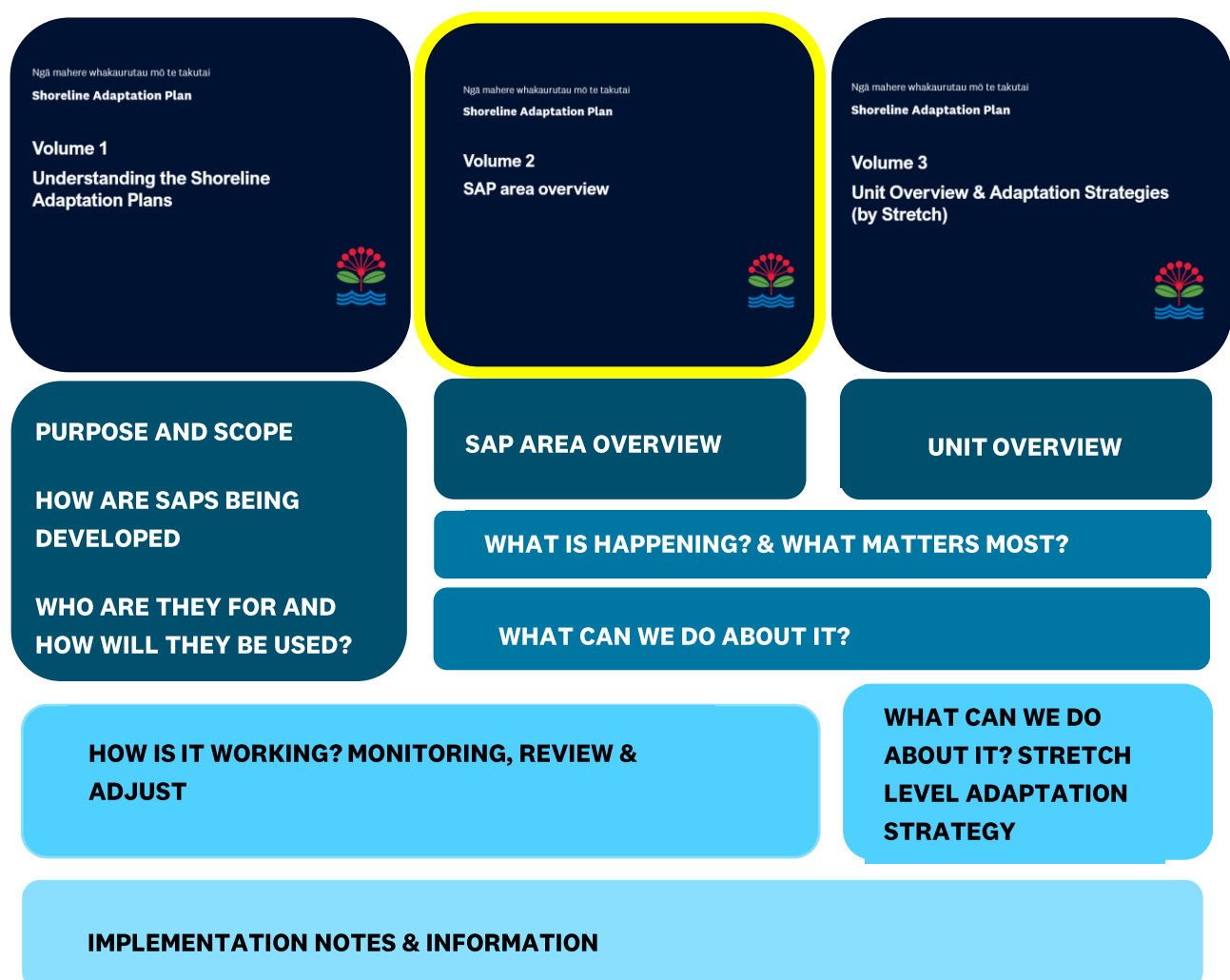
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Quick Reference

The Shoreline Adaptation Plan (SAP) programme is presented across three volumes of reporting:

- **Volume 1:** Understanding the Shoreline Adaptation Plans - programme and regional scale context
- **Volume 2:** Shoreline Adaptation Plan area specific overview – subregional scale (across 20 SAP areas)
- **Volume 3:** Unit (and stretch) context and adaptation strategies set for each section of Auckland’s 3,200 km of coastline.



Glossary

Key terminology and infographics commonly used within this volume and all of the SAP documents are outlined below.

	Definition
Adaptive planning	Adaptive planning encompasses the hazard assessments, the values and objectives and the vulnerability and risk assessments that feed into the dynamic adaptive pathways planning approach, and the measures to implement them through the Resource Management Act 1991, Long-Term Plans, asset plans and other Auckland Council plans, along with the monitoring framework for review and adjustment (Ministry for the Environment, 2024).
Annual Exceedance Probability (AEP)	The probability of an event occurring in any given year, e.g. the 1% AEP has a 1% chance of being met or exceeded in any given year.
Biodiversity Focus Area (BFA)	Prioritised areas of ecological significance that guide a delivery of conservation activity and were identified as they protect a representative range of all indigenous species and ecosystems within the region.
Catchment flooding	Flooding which occurs when the amount of rainfall exceeds the capacity of an urban stormwater network or the ground to absorb it.
Climate hazard	The potential occurrence of climate-related physical events or trends that may cause damage and/or loss.
Coastal erosion	The removal of the material forming the land due to natural processes, resulting in the coastline moving inland over time.
Coastal inundation	The flooding of low-lying coastal land that is normally dry, due to elevated sea levels.
Council-controlled organisation (CCO)	Organisations in which Auckland Council has the responsibility to appoint at least 50% of the board of directors or trustees. Auckland Council has four substantive CCOs: Auckland Transport, Tātaki Auckland Unlimited, Eke Panuku Development Auckland, and Watercare.
Council	Auckland Council
Cultural Heritage Inventory (CHI)	An Auckland Council database which contains records for archaeological sites, historic buildings, historic botanical sites, shipwrecks, and other places of heritage interest in the Auckland region.
Dynamic Adaptive Pathways Planning (DAPP)	A decision-making approach to analyse the flexibility of options and pathways under conditions of uncertainty using scenarios for stress testing options and monitoring of signals and triggers for anticipatory planning (MfE).
Exposure	The nature and degree to which a system is exposed to significant climate variations.
Hazardscape	The net result of natural and man-made hazards and the risks they pose to an area.

Term	Definition
Indigenous biodiversity	A living organism that occurs naturally in Aotearoa, and the ecological complexes of which they are part of – this includes all forms of indigenous flora, fauna, fungi, and their associated habitats.
Nature-based solution	A collection of approaches to address societal issues, including climate change, through the protection, management, and restoration of ecosystems.
SAP	Shoreline Adaptation Plan
SAP area	An identified area for the purposes of the SAP development of Shoreline Adaptation Plans. There are 20 SAPs for the Auckland region.
SAP stretch	Each SAP unit is typically broken down into smaller stretches considering coastal processes, Auckland Council-owned land and asset location, public-land boundaries, and infrastructure considerations.
SAP unit	The SAP area is divided into smaller SAP units to enable a more detailed and comparative view of how risk is attributed across the subject area.
Sea-level rise	The increase in the level of the ocean, caused by the melting of glaciers and ice sheets and thermal expansion of water as it warms.
Significant Ecological Area	- Significant Ecological Areas (SEAs) have been identified by the Auckland Unitary Plan (AUP: OP) for terrestrial areas, and parts of the coastal marine area. Marine Significant Ecological Area (SEA-M): - Identified areas of important indigenous vegetation or habitats of indigenous fauna located in the coastal marine area, and are afforded protection under the AUP:OP. Terrestrial Significant Ecological Area (SEA-T): - Identified areas of important indigenous vegetation or habitats of indigenous fauna located on land or in freshwater environments and are afforded protection from the adverse effects of subdivision, use and development.
Site and place of significance to Mana Whenua	Sites and Places of Significance to Mana Whenua applies to sites and places in the Tāmaki Makaurau/ Auckland region that are protected for their significance to mana whenua. It acknowledges that sites and places have tangible and intangible cultural values in association with historic events, occupation, and cultural activities.
Statutory Acknowledgement Areas (SAA)	A statutory acknowledgement is an acknowledgement by the Crown that recognises the mana of a tangata whenua group in relation to specified areas - particularly the cultural, spiritual, historical, and traditional associations with an area.
Social Infrastructure	Facilities and assets that support social activities, interactions, and wellbeing within a community.

Shoreline Adaptation Plan Areas

Tāmaki Makaurau, Auckland, is a coastal city, bounded to the east and west by the South Pacific Ocean and the Tasman Sea. The region has around 3,200 km of dynamic coastline and encompasses three major harbours: the Kaipara, Manukau and Waitemata. Due to its location, much of the city's urban development and supporting infrastructure is concentrated in coastal areas and exposed to coastal processes such as erosion and inundation. These natural processes are considered hazards when they impact on things or locations of value. Climate change related to greenhouse gas emissions is contributing to rising sea levels, which have a range of impacts including increasing the frequency and magnitude of coastal hazard events. Auckland Council began developing a series of SAPs in 2021. These area-based plans form the first step for the SAP programme in achieving a resilient future for Auckland's coasts. A more detailed discussion on the SAP Program can be found in *Volume 1: Understanding the Shoreline Adaptation Plans*. Twenty SAPs make up Auckland's ~3200 km of coast as follows:

- Aotea Great Barrier and the Hauraki Gulf Islands
- Āwhitu
- Beachlands and East
- Central Auckland
- Highbrook to Whitford
- Kaipara Harbour Moana
- Manukau Harbour East
- Manukau Harbour North
- Manukau Harbour South
- Orakei to Tahuna Torea
- Pahurehure Inlet
- Pākiri to Matheson Bay
- Snells Beach to Orewa
- Tāmaki Estuary
- Ti Point to Sandspit
- Waiheke Island and Hauraki Gulf islands
- Waimanawa Little Shoal Bay mini SAP
- Waitemata Harbour West
- Weiti Estuary to Devonport Peninsula
- Whangaparāoa
- Whatipu to South Head

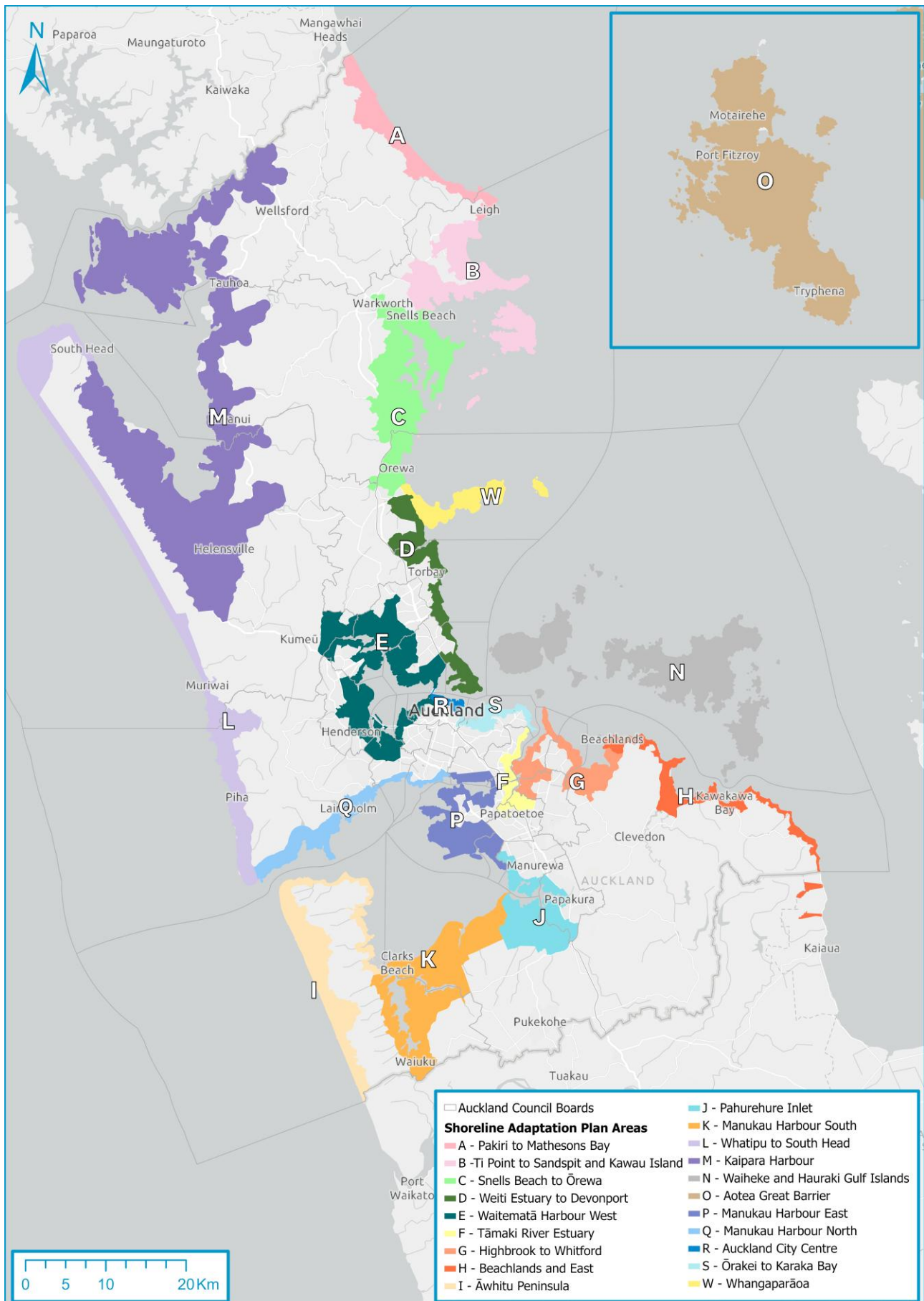
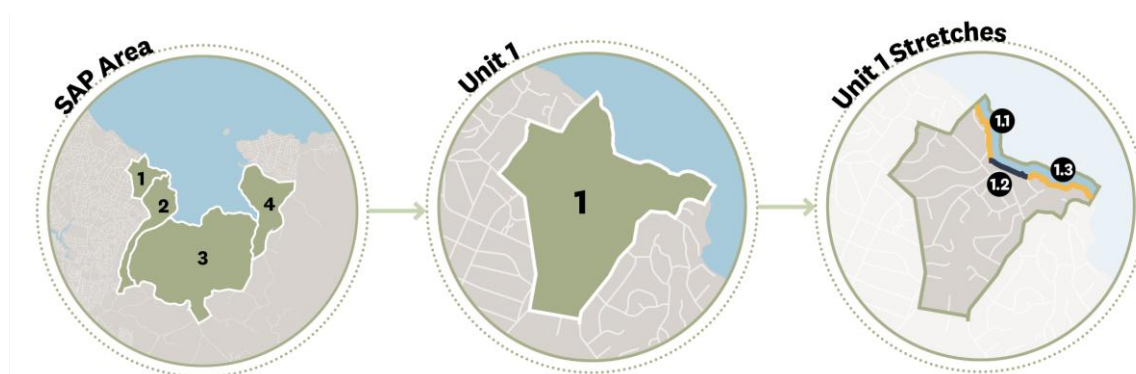


Figure 1-1: Shoreline Adaptation Plans (regional)

SAP areas, units & stretches

Within each SAP area, the coastline has been broken up into coastal stretches based on coastal processes, Auckland Council-owned land and asset location, public land boundaries, and infrastructure considerations. Coastal stretches have been grouped into broader coastal unit areas. It is important to note here that coastal units and stretches do not strictly reflect the historical cultural boundaries which often extend over multiple units or coastal stretches. The figure below outlines the delineation of scale between each SAP area, its sub-units and stretches:



Climate change scenarios (timeframes for change)

For the SAPs, the following scenarios are used to evaluate how exposure to coastal inundation, erosion and instability and sea-level rise may impact coastal land and assets.

Table 1-1: Shoreline Adaptation Plan climate change scenarios

	 Sea-level Rise	 Coastal Inundation	 Coastal Erosion	 Catchment flooding
Low climate change	• Present day (relative) sea level • Up to 0.5 m	• 1% AEP storm surge event	• Erosion & instability susceptibility line '2050' • (RCP 4.5) • includes consideration of 0.28 m of sea-level rise)	1% AEP rain fall event + climate change projections for rainfall
Moderate climate change	• 0.5 m • Up to 1 m	• 1% AEP storm surge event plus 0.5 m of sea-level rise	• Erosion & instability susceptibility line '2080 RCP 4.5 and 8.5' • Includes consideration of 0.55 m of sea-level rise	
High climate change	• 1.0 m • Up to 2 m	1% AEP storm surge event plus 1.0 m, 1.5 and 2 m of sea-level rise	• ASCIE 2130 (RCP8.5 and 8.5H+) • Includes consideration of 1.18 m and up to 1.52 m of sea-level rise	

Auckland Council's adaptation strategies

High-level adaptation strategies are developed for each coastal stretch under a low, moderate and high climate change scenario (inclusive of sea-level rise projections), with an indication of how these choices reflect the escalating risk, considerations of infrastructure providers, and the values and objectives of local iwi and the local community. Importantly, strategies outlined within each unit and subsequent coastal stretch apply only to the area of Auckland Council-owned land and assets along the coastal margin.

These recommended strategies do not apply to offshore activities (such as marine farms) or private property. Each high-level strategy provides flexibility for how it is applied to different assets. The value of the strategic approach is to ensure general continuity across asset management, acknowledging hazard risks and impacts of management of one asset class may impact on or have implications for others. Coastal adaptation strategies applied to each coastal stretch are described in further detail below:



No Action

- There are limited risks identified to Auckland Council land and assets as a result of coastal hazards and climate change.
- Natural coastal processes may be complementary to the natural coastal environment or its values.



Maintain

- Better decision-making today for Auckland Council land and assets.
- Actions manage risk, build resilience and support best practice coastal management outcomes.



Protect

- Uses and assets are maintained in their current location.
- Protection measures (mitigations) are required to manage risk, and nature-based solutions and hard protection may be utilised.



Adaptation Priority Area

- Auckland Council land and assets are exposed to hazard risk including the impacts of climate change.
- The value and importance of assets, complexity of the hazardscape and social, cultural or ecological values are present which requires further adaptation planning to determine a management response.

1

SAP Area introduction

The Tāmaki Estuary SAP area spans the middle and upper reaches of the Tāmaki inlet. The estuarine environment is a low energy coastal setting, characterised by numerous small embayments, wide intertidal flats and branching tidal side creeks, many of which contain ecologically valuable habitats. These include mangroves, fringing coastal vegetation and intertidal flats that house shellfish beds. The latter are key roosting and foraging grounds for shorebirds.

The SAP extends from Wai-o-Taiki Bay in the west around the coastline of the inlet (encompassing Glen Innes, Panmure, Ōtāhuhu), to the upper reaches in Middlemore. The SAP area then extends east around the inlet to Highbrook (encompassing Papatoetoe, Ōtara and Highbrook). As shown in the map below (Area Overview), the area is divided into four SAP units.

Most of the SAP area can be characterised as urban, except for parts of Mount Wellington and Ōtāhuhu (Units 2 and 3) which have areas of commercial and industrial land use in proximity to the coastline. Areas such as Ōtāhuhu have seen urban intensification development in recent years, with a change from single dwelling sites to multiple dwellings. Most units have small town centres within them.

The development of these shoreline adaptation strategies is a starting point for dynamic adaptation planning for the Auckland region and also acknowledges Te tiro ā Māori ki tōna ake ao, a Māori worldview. This reflects the consideration of intergenerational time horizons as a fundamental part of addressing the impacts of climate change and sea-level rise. It also acknowledges the need to consider the tangible and intangible, the inter-relationship of all living and non-living things and the vital connection between people and te taiao (the natural environment) in which they live. The adaptive strategies (Volume 3) which guide how coastal land and assets owned by Auckland Council will be sustainably managed have been informed by:

- Local iwi, acknowledging the cultural values and associations of iwi which centred on supporting local iwi objectives and aspirations set out in Section 3
- The objectives of the local community, identified through community engagement and analysis of social context, set out in Section 3 (community feedback and social context)
- Technical inputs including hazard risk, coastal hazard and climate change projections, ecological and policy framing (as set out in Section 2)
- Advice from infrastructure and assets owners/managers (Auckland Council asset owners, Auckland Transport, Eke Panuku and Watercare Services).

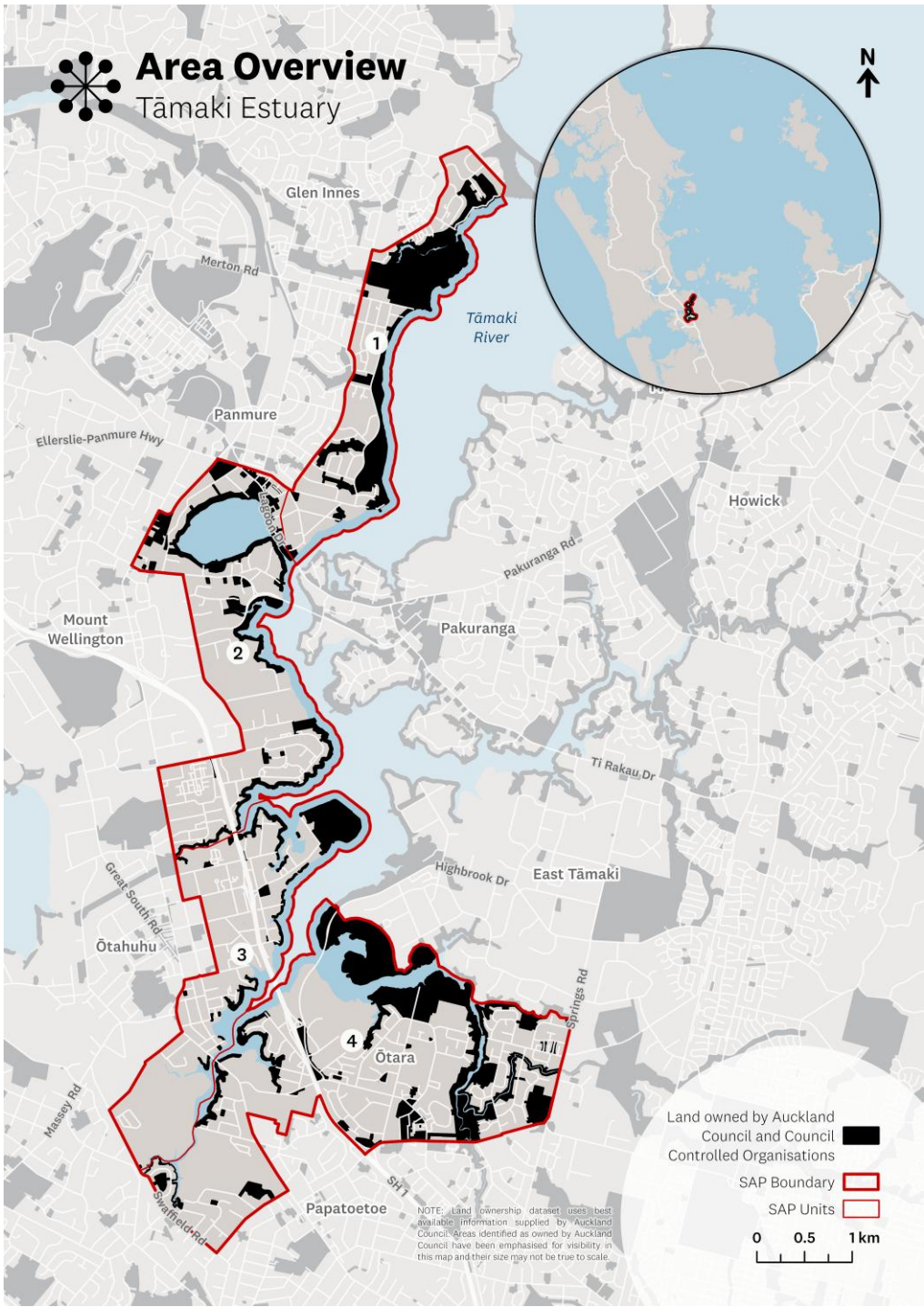


Figure 1-1: Tāmaki River Shoreline Adaptation Plan area overview

2

What is happening?

This SAP report considers natural hazards relating to coastal inundation, coastal erosion and coastal land instability, catchment flooding and climate-change induced sea-level rise. Other hazards, including inland land instability, drought and wildfires, are not within the scope of this assessment. In addition, risks from low probability but high potential impact events (such as volcanic, tsunami, and earthquake events) are not included. Such hazards are managed through measures put in place by emergency management groups including Auckland Emergency Management (Civil Defence).

For further discussion regarding coastal hazards and climate change, as considered within the scope of the SAPs, refer to *Volume 1: Understanding the Shoreline Adaptation Plans*.

Coastal context

This SAP area covers approximately 42 km of the inner Tāmaki River inlet shoreline encompassing the middle reaches along the western shore from Wai o Taiki Bay to Ōtāhuhu Creek and Ōtara Creek. The Tāmaki River can be broken down into three main sections:

The outer estuary	• Extending from the entrance to the Tāmaki Strait to the sandspit at Tahuna Torea Nature Reserve on the western side (included within the Ōrākei to Tahuna Torea SAP area), and Half Moon Bay Marina on the eastern side (located within the Highbrook to Whitford SAP area). • It is the flood delta portion of the estuary characterised by sand and shell tidal flats with exposed shore platforms.
The middle reaches	• Extending from Wakaaranga Creek (Farm Cove) to the Panmure Basin. • The area is a mix of tidal mud flats, marginal strips of mangroves and mud-covered shore platforms.
The upper reaches	• Consisting of four main arms (Ōtāhuhu, Middelmore, Ōtara and Pakuranga creeks). • These shores are all dominated by mangrove forest with mud-lined channels.

Due to the estuarine location and protection afforded by Tahuna Torea (seaward of this SAP area), the inner Tāmaki is predominantly a low energy setting. The sheltering effects of the surrounding Tāmaki channel mean that little swell is developed from other directions. The main Tāmaki River channel narrows through the middle reaches and is confined between Mount Wellington in the west and Pakuranga in the east, before the river widens out to a sheltered tidal basin that branches out to the creeks in the upper reaches.

The wave climate is driven by locally wind-generated waves and is both fetch and depth limited due to the relatively sheltered location. However, vessel wake can increase the wave energies that the Tāmaki River shoreline is exposed to. These shorter period waves have the ability to entrain and transport sediment, influence beach morphology, and potentially exacerbate shoreline erosion. There is less vessel movement and associated wake in the upper reaches of the inlet due to the shallow and confined nature of the channel.

Panmure Basin is a tidal lagoon located on the western shoreline of Tāmaki River. The shallow basin is a highly sheltered coastal environment being a nearly entirely enclosed area, connected to Tāmaki River by a narrow entrance channel. A thin band of mangroves fringes the majority of the shoreline, with increasing density in embayments and infilling the upper Ōtāhuhu Creek inlet.

Tāmaki River is a shallow, drowned valley located to the east of Auckland City. The estuary extends around 17 km inland from its mouth at Tāmaki Strait, with several smaller tributaries radiating out from the main channel. The majority of the water flow is of marine origin, with only a small contribution from terrestrial catchments. As a result, the tidal inlet is substantially drained at low water.

Catchment geology through the middle and upper reaches of Tāmaki River is comprised of Tauranga Group (Puketoka Formation) and Auckland basalts lava (Kerikeri Volcanic Group) of the Auckland Volcanic Field. The Tauranga sediments are weakly cemented pumiceous mud, sand and gravels with non-welded ignimbrites and alluvial pumice deposits. The Auckland volcanic sediments include lithic tuff, basaltic fragments, and unconsolidated ash and lapilli deposits of well-sorted basalt and basinite fragments.

The estuarine environment comprises large areas of intertidal sand and mudflats along with fringing mangrove forest and features numerous habitats and ecosystems that are regionally important. The coastal edge of Tāmaki River is predominantly urbanised. To support surrounding development, the shores include a number of boat ramps, jetties and coastal walkways. Many areas include hard protection structures in public or private ownership. There are extensive areas of pile and swing moorings located along the Tāmaki River.

Much of the catchment surrounding the Tāmaki River has a long history of commercial and industrial use (such as Mount Wellington and East Tāmaki). The pressures associated with these land uses have cumulatively had a negative impact on sediment quality, particularly in the estuary's muddier, sheltered upper reaches.

2.1 Natural hazards & climate change

Natural processes, such as coastal inundation and erosion, become hazards when they have the potential to negatively impact things of value. Tāmaki Makaurau / Auckland is frequently affected by natural hazard events and is likely to experience more frequent and severe events in the future due to climate change. Sea-level rise will increase the zone of exposure. For shoreline areas with assets and infrastructure, or cultural heritage sites near the coastal edge (including recreational and environmental areas), the impacts of coastal hazards may be significant.

Scenarios for change, or scenario-based climate projections (inclusive of sea-level rise) have been used to evaluate how the risk of coastal inundation, erosion and instability may impact the Tāmaki estuary, noting that projected conditions may occur sooner or later depending upon climate emissions.

A fulsome discussion around low, moderate and high scenarios for (climate) change and how each is considered to inform the selection of coastal adaptation pathways can be found in *Volume 1: Understanding the Shoreline Adaptation Plans*.

Coastal inundation (including sea-level rise)

Auckland Council's best available information on extreme sea-water levels in the Auckland region is presented in the report *Auckland's exposure to coastal inundation by storm-tides and waves*⁴. The modelled spatial extent of potential inundation is published on Auckland Council's web-based portal GeoMaps(Natural hazards theme). A range of scenarios are mapped on this platform, spanning from the 5-year Average Recurrence Interval (ARI), corresponding to the 18% Annual Exceedance Probability (AEP), to the 100-year ARI event (1% AEP) to demonstrate Auckland's exposure to a range of present-day extreme events.

The estuary extends around 17 km inland from its mouth at Tāmaki Strait, with numerous smaller tributaries radiating out from the main channel. As a result, several areas in the middle to upper reaches of the estuary are exposed to coastal inundation. Within the SAP area, coastal inundation flooding is predicted to have the greatest impact at the SAP scale on low-lying land and Auckland Council community facility assets in Mount Wellington/Panmure (Unit 1) and Ōtāhuhu (Unit 3). At a localised scale, there are other areas where the inundation extent will increase with future sea-level rise such as low reclaimed reserves and landing areas adjacent to boat launching ramps (e.g. Mount Wellington War Memorial Reserve, Panmure Wharf Reserve and Taamaki ki Taatahi / Seaside Park). With ongoing sea-level rise impacts, the extent and frequency of coastal inundation is predicted to increase over time.

Sea-level rise is projected to be uniform along this coastal area, but the relative sea-level rise (RSLR) experienced will be dependent on the rate of subsidence of land, and this varies throughout the Tāmaki Inlet area. Areas with the greatest subsidence rates will have greater RSLR. Within this SAP area, the maximum VLM is -2.3 ± 2.1 mm/year (Station #1265 Middlemore Creek) and minimum VLM is -1.3 ± 1.8 mm/year (Station #1154 at Pt England). This means that in areas with the greatest VLM per year, at 2150 under SSP5-8.5 RSLR could be 1.3 times the rate of change of sea-level rise without accounting for land subsidence through VLM.

Figure 2-2 below shows the resulting coastal flooding hazard extents at the Tāmaki Estuary SAP scale for:

- Coastal inundation 1% annual exceedance probability (AEP) event (equivalent to a 1% chance of occurring in any year, or a 1 in 100-year return period)
- The same event with 0.5 m and 1.0 m sea-level rise added (to represent medium- and long-term change).

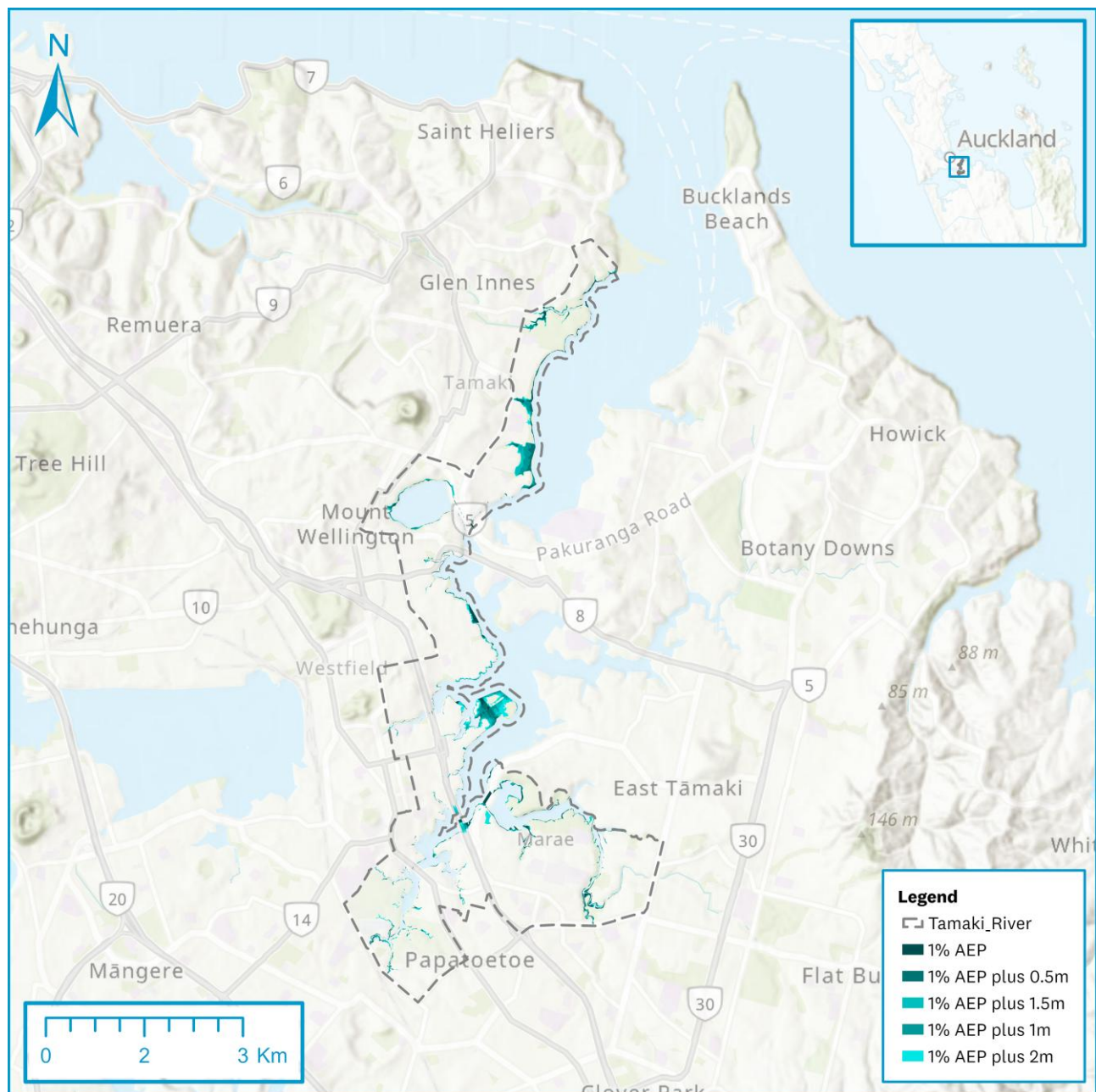


Figure 2-1: Coastal Inundation (CI) for 1% AEP storm surge for present day and with 0.5 m, 1 m and 2 m sea-level rise. for Tāmaki Estuary

Coastal erosion (including sea-level rise)

The areas along the Tāmaki Estuary shoreline that are susceptible to coastal instability and erosion (ASCIE) for a range of climate change (sea-level rise) scenarios and periods are published on Auckland Council's GeoMaps (Natural hazards theme). The mapping is based on Auckland Council's technical report *Predicting Auckland's Exposure to Coastal Instability and Erosion*⁶.

Coastal erosion is 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 factors including wave energy, changes to sediment availability and land use, and sea-level rise. Although some types of shorelines (e.g. beaches) may undergo short-term periods or episodes of erosion and then recover (i.e. build out again), other types of shorelines (e.g. cliffs) continuously erode with no cycle of recovery. Coastal instability is the movement of land (typically as a landslide) resulting from the loss of support caused by coastal erosion.

Areas Susceptible to Coastal Instability and Erosion (ASCIE) have been mapped using IPCC Assessment Report 5 (AR5) climate change scenarios (RCP emission trajectories), and LiDAR data. Further discussion of the use of hazard data and climate change scenarios is included in Volume 1. The ASCIEs are shown as a line, representing the distance (in metres) landward of the current coastline that is predicted to be susceptible to coastal instability and erosion, based on the modelled assumption of sea-level rise. The regional scale assessment of the ASCIE provides a conservative or 'first pass' appraisal of the natural hazard extent. A more detailed site-specific assessment is required to quantify exposure and risk of localised land or assets of significant value.

Areas with higher exposure to erosive forces are more at risk to coastal instability and erosion, where waves interact directly with cliff faces (e.g. no beach) or where cliffs are steep with little vegetation cover. As sea-level rise occurs, waves will interact with a larger portion of the cliff and slope instability and erosion along the coast are expected to increase. Along the beach shorelines, erosion predictions are gradual and increase over time with the expected impacts of sea-level rise. The ASCIE lines that indicate the area susceptible to coastal instability and erosion show a low to moderate coastal erosion risk, reflective of the more sheltered environment of Tāmaki Estuary. The predicted ASCIE is greater on higher elevated sections of coastline such as along the low cliff headlands, than the vegetated slopes in the sheltered tidal inlets. Coastal erosion predictions terminate before the upper reaches of the smaller side arms of tidal inlets at the MHWS boundary, however it is noted that these areas will still be exposed to stream bank erosion (particularly on outer meanders).

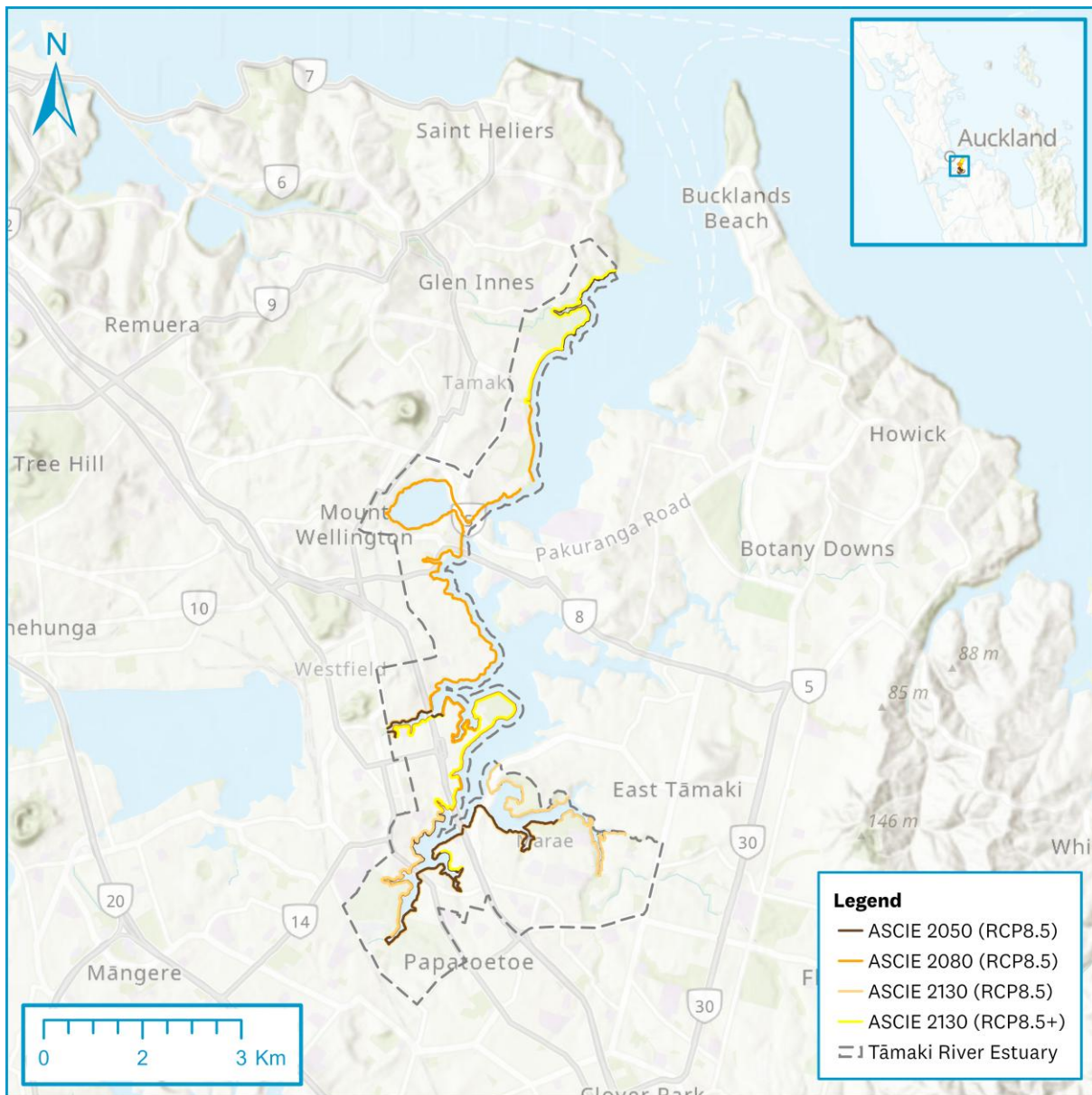


Figure 2-2: Coastal Instability and erosion susceptibility for 2050, 2080 and 2130 considering RCP4.5 and RCP8.5 emission scenarios for Tāmaki Estuary

Catchment flooding

Flooding, because of extreme rainfall when the drainage capacity of the natural and/or built environment systems cannot cope, is a natural occurrence and is Auckland's most frequent natural hazard. The flooding event with the highest probabilistic risk is a 1 % AEP event (1:100 year ARI), because an event of such intensity is likely to result in more severe consequences.

Auckland Council's web-based portal GeoMaps (Natural hazards theme) displays the spatial extent of potential flooding. The maps, developed at catchment scale, indicate flood plains, flood prone areas, flood sensitive areas, and overland flow paths, which may be affected by a rainfall event that has a 1% AEP, assuming maximum probable development in the catchment (as per the AUP) and future climate change.

The maps illustrate that flooding hazards along this SAP area are typically localised but plentiful, following the many overland flow paths and tributaries that feed into Tāmaki Estuary. More significant extents of flooding are noted for Mount Wellington War Memorial Reserve, and smaller tributaries in Ōtāhuhu, Papatoetoe and Ōtara.

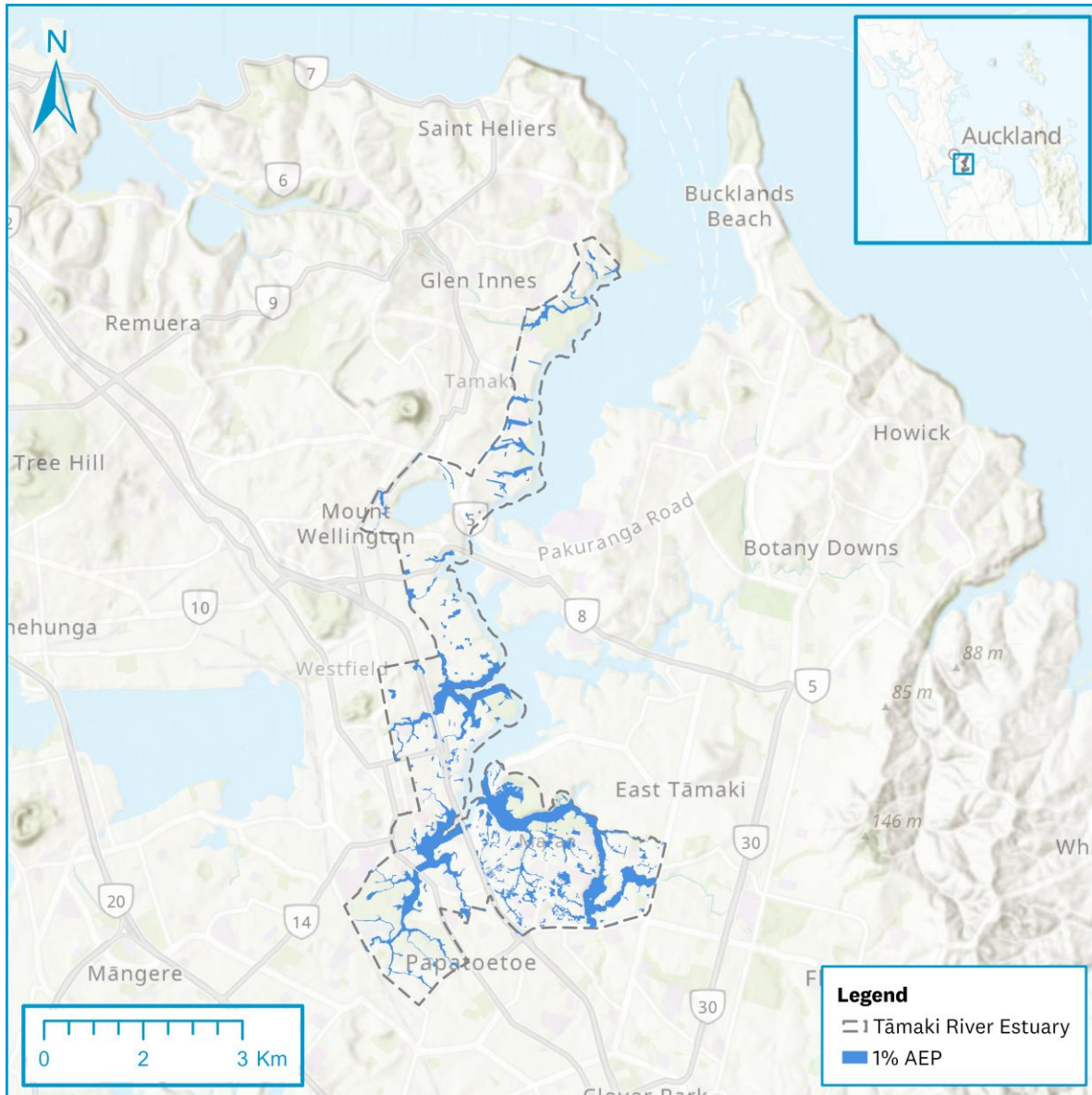


Figure 2-3: Flood Plain areas 1% AEP hazard, for Tāmaki Estuary, Auckland Council Flood Viewer.

Other hazards

Auckland is affected by several other natural hazards that are not considered within this shoreline plan, including wildfire, volcanic activity, tsunami, earthquakes, severe wind (such as cyclones) and tornadoes. Refer to *Volume 1: Understanding the Shoreline Adaptation Plans* for a more detailed discussion of other hazards impacting Auckland.

2.2 Current coastal management practices

An overview of existing current coastal management across Tāmaki Estuary is summarised in the table below and discussed in greater detail in *Shoreline Adaptation Plan Tāmaki Estuary Volume 3: Adaptation Strategies*. Detailed discussion of the management interventions is included at a unit scale in Volume 3. A non-exhaustive summary of some of the key features is included in the table below:



Coastal protection

- **Armoured reclamations:** Taamaki ki Taatahi / Seaside Park (closed landfill) perimeter is armoured with rock revetment and a sloping masonry seawall incorporating access points. Boat landing reserves (Panmure Wharf Reserve); Huia-tau /Schroffs Reserve (Avenue Road East).
- **Ōmaru Recreational Reserve /Point England/Mount Wellington seawalls:** Tahaki Road masonry seawall; engineered rock revetment armouring Ōmaru Recreational Reserve / Point England Reserve; Riverside Reserve; Dunkirk Reserve; grouted rock seawall armouring Mount Wellington War Memorial Reserve.
- **Panmure Basin:** Perimeter armoured with a masonry rock seawall.
- **Ōtāhuhu:** Boat launching areas at Ian Shaw Park and Flat Rock Reserve armoured with tipped rock.



Nature-based options

- Taamaki ki Taatahi / Seaside Park has a low rock reef constructed seaward of the toe of the rock revetment to facilitate establishment of native vegetation along the coastal fringe within the inlet.
- The reserve edge around the upper inlet (Ōtara Creek, Middlemore Creek) is unarmoured and more naturalised, fronted by established mangroves and saltmarsh vegetation.



Sand replenishment/ soft or nature based engineering

- Point England Beach: The backstop gabion seawall is fronted by a renourished beach and sculpted concrete groyne constructed in 2011 with imported sand.
- Panmure Basin localised beach renourishment of small beach areas between boat ramp and several stormwater outfall pipes that form low groynes buffers the reserve adjacent to Panmure Sailing Club.

2.3 Risk assessment

The SAP coastal risk assessment provides a regionally consistent method to quantify risk to Auckland Council land and assets over three climate change scenarios. This risk assessment demonstrates how the risk to these assets will increase over time with projected sea-level rise. To read more about the risk assessment please refer to *Volume 1: Understanding the Shoreline Adaptation Plans*.

The risk assessment results are summarised below, noting that these risk results were considered consistent for the topography, geology, and land use within the SAP area.

The table below lists the asset groupings for the risk assessment and a description of what they include.

Table 2-1: Risk assessment asset groupings and descriptions

Grouping	Description
Council-owned land	• Park and reserve land area.
Council community facilities	• Carparks, accessways, paths and tracks, ramps, seawalls, wharves and jetties, community buildings and park amenities.
Transport infrastructure	• Roads, bridges, ferry terminals and train stations.
Water assets and infrastructure	• Publicly-owned three waters infrastructure.

For the Tāmaki Estuary SAP area (Tonkin + Taylor Ltd, 2024), these risk results were considered consistent for the topography, geology, and land use within the SAP area. This is represented in the table below and at a unit scale in Volume 3

		Council-owned land			Council community facilities			Transport infrastructure			Water infrastructure		
Unit	Hazard	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	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Moderate	Low	Low	Moderate
	Inundation	Moderate	Moderate	Moderate	High	Very high	Very high	High	High	High	Low	Moderate	Moderate
2	Erosion	Moderate	Moderate	Moderate	High	Very high	Very high	High	High	Very high	Moderate	High	High
	Inundation	Low	Moderate	Moderate	Very high	Very high	Very high	Very high	Very high	Very high	Low	Moderate	Moderate
3	Erosion	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Moderate	Moderate	Moderate	High
	Inundation	Moderate	Moderate	Moderate	High	High	Very high	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
4	Erosion	High	High	High	Low	Low	Low	High	High	High	Moderate	Moderate	Moderate
	Inundation	Moderate	Moderate	Moderate	Low	Low	Low	Very high	Very high	Very high	Moderate	Moderate	Moderate

3 What matters most?



3.1 Auckland Council land and assets

Auckland's SAPs focus on coastal land and assets owned by Auckland Council. These include, but are not limited to, coastal reserves, defence structures, public facilities, roads, and water infrastructure. This also encompasses infrastructure located within coastal areas, whether situated on, beneath, or adjacent to Auckland Council land or on private land.

While the SAPs take into account third-party infrastructure near the coast, as well as culturally and ecologically significant areas, they are not specifically aimed at managing these assets or values. However, the strategies and associated guidance may reference these connections where relevant, particularly at the level of individual shoreline units or stretches.

The SAPs were developed with input from key stakeholder partners including Auckland Transport, Watercare Services, and Eke Panuku. Council-owned land is primarily identified through Auckland Council's GIS data; in some areas there are landholdings and facilities which involve numerous asset owners and third party infrastructure providers (i.e Transpower) with different ownership, management, or interests.

The Tāmaki Estuary area includes a wide range of Council-owned land and assets, including reserves and open space, boat ramps, wharfs, parks amenities and facilities and numerous Auckland Council or Council-controlled organisation (CCO)-owned buildings.

Over **280** ha of
park and reserve
land & over **90** km
of road
infrastructure.

Over **122**
Auckland
Council-owned
buildings

6
closed landfills

The figure overleaf shows the general location of Auckland Council land and assets located within the Tāmaki Estuary SAP area. These are identified in each unit and stretch as relevant to the shoreline adaptation strategies in Volume 3.



Auckland Council Land and Assets

Tāmaki Estuary



- Council building
- Closed landfill
- Wastewater pump station
- Stormwater pump station

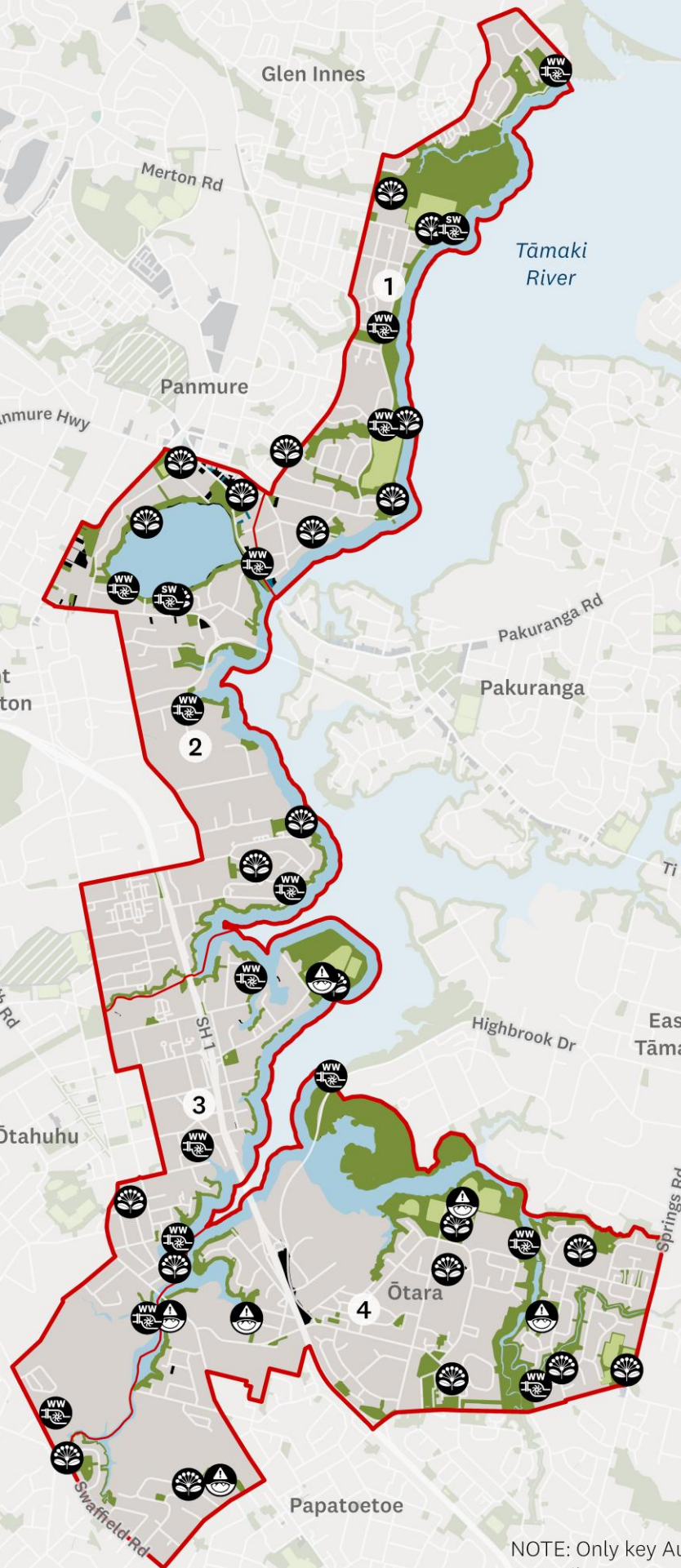
Auckland Parks

- Park
- Sport & active recreation area

Land owned by Auckland Council and Council Controlled Organisations

- Auckland Council
- Auckland Transport
- Watercare Services

0 0.5 1 km



NOTE: Only key Auckland Council assets are shown



Auckland Council land, parks and beaches

The Tāmaki Estuary SAP includes a range of coastal environments, including parks and beaches, with the estuary itself supporting four tributaries which are Ōtāhuhu Creek, Middlemore Creek, Pakuranga Creek and the Ōtara Creek. Across the SAP area are numerous coastal reserves and parks. Key coastal areas include the following:

- Allenby Reserve
- Bill Mckinlay Park
- Burswood Park
- Corta Bella Place Reserve
- Dunkirk Reserve
- Flat Rock Reserve
- Frank Nobilo Esplanade Reserve
- Gaye Crescent Esplanade Reserve
- Highbrook Park
- Ian Shaw Park
- Johnson Reserve
- Mayfield Park
- Middlemore Crescent
- Mount Wellington War Memorial Reserve
- Nelson St Reserve
- Ngāti Ōtara Park
- Ōmaru Recreational Reserve / Point England Reserve
- Ōtāhuhu Bay
- Ōtara Reserve Creek
- Panmure Basin
- Panmure Wharf Reserve
- Peterson Reserve
- Point England Beach
- Portage Canal Foreshore Reserve
- Riverside Reserve
- Stringers Point Reserve
- Taamaki ki Taatahi / Seaside Park
- Van Dammes Lagoon
- Wai o Taiki Nature Reserve
- Waipuna East Reserve
- Waipuna Foreshore

This is not an exhaustive list and smaller, less accessible beaches/ park areas located along this coastline have not been included and/ or may be discussed in Volume 3.

Each beach within the Tāmaki Estuary SAP offers various informal recreational activities such as swimming, kayaking, and boating. There are a range of amenities available at coastal reserves across the SAP area including restrooms, boat ramps, picnic areas and walking paths. Point England Beach within the SAP area is one of the most popular spots for swimming and beachgoers in the of Tamaki Estuary, whilst Panmure Basin serves as a vibrant hub for recreational activities. Coastal esplanade reserves are popular walkways with well-connected tracks through Units 2, 3 and 4.



Water Infrastructure

As a highly urbanised area of the Auckland region, the Tāmaki Estuary SAP area is traversed by numerous waste, potable and stormwater piped infrastructure. This includes key piped connections which are located in proximity to the coastal edge or traversing areas of the coastal marine area. Infrastructure is distributed across the entire SAP area but is most highly concentrated in Unit 2.

Water infrastructure such as wastewater and water pump stations are often located in low-lying areas due to the function of the networks. Key pump stations located in proximity to coastal areas include:

- Billington Reserve
- Bridge St
- Dunkirk
- Jane Cowie Place
- Joe Stanley Place
- Laureston Avenue
- Panmure Basin
- Panama Road
- Panmure Wharf Reserve
- Tangaroa St
- Watene Road
- West Tamaki Road

Stormwater assets include piped networks, stormwater management devices such as ponds and the management of watercourses which discharge to the coast.



Facilities and structures

Large recreational and sporting facilities include Ōmaru Recreational Reserve / Point England Reserve (Unit 1), Mount Wellington War Memorial Reserve (Unit 1), Taamaki ki Taatahi / Seaside Park (Unit 3), and Ngati Ōtara Park (Unit 4).

Historic land use has resulted in coastal modifications and reclamation in some areas of the Tāmaki Estuary SAP area. This includes six closed landfill assets in proximity to the coast which are managed by Auckland Council; their locations are generally spread across the upper inlet area with a highest concentration in Unit 4.

- Laureston/Halycon (Waiherenga) Esplanade
- Laxon Esplanade
- Mayfield Park
- Ngait Ōtara Park
- Springs Road Reserve
- Taamaki ki Taatahi / Seaside Park



Roads and access

The SAP area is generally well connected, with the Auckland Southern Motorway SH1 (linking to the South – eastern Highway), Mount Wellington Highway, Ellerslie Panmure Highway and Pakuranga Highway traversing the SAP area and connecting to regional and local arterial roads. Additionally for public transport, Middlemore Bus Station, and bus routes provide links with the wider Ōtāhuhu, Papakura, Mangere, Ōtara and Botany community, whilst both Panmure and Sylvia Park Stations offer train and bus services to access the area. Dedicated cycleways located along Dunkirk Rd, Lagoon Dr, and the Tāmaki shared path also provide key access routes/ transport options for this SAP. Key road connections providing access through the SAP and to the inlet are identified below (non- exhaustive list):

- Auckland Southern Motorway (SH1)
- Bairds Road
- Carbine Road
- Dunkirk Road
- East Tāmaki Road
- Ellerslie Panmure Highway
- Elstree Avenue
- Gilbert Road
- Great South Road
- Hospital Road
- Helebys Road
- Highbrook Drive
- Kings Road
- Lagoon Drive
- Mount Wellington Highway
- Pakuranga Highway
- Panama Road
- Princes St East
- Tahaki Road
- Tāmaki Road
- Taniwha Street
- Tripoli Road
- Waipuna Road



Access to the coast

As indicated in the section above, the Tāmaki Estuary area features diverse coastal environments, including numerous reserves that provide access along the tidal reaches. Noting that this is not an exhaustive list, key points of access to the coast via paths and walking trails include:

- Highbrook Path
- McCullough Walkway Panmure Basin
- Tahuna Torea Path (*whilst located north of and outside the SAP area, this path connects through to Ōmaru Recreational Reserve / Point England Park Reserve and Panmure Basin)
- Monterey Creek Accessway
- Ngati Ōtara Path
- Taamaki ki Taatahi / off Path
- Tamaki Path (2.5 km long), connecting Wai-o-Taiki Nature Reserve and Panmure Wharf Reserve



Harbour access

The Tamaki Estuary area features a variety of parks, reserves, beaches, and social infrastructure situated close to the coastline. This includes boating facilities, moorings, sports and recreation clubs, and playgrounds.

The estuarine environment in upper Tāmaki Estuary, with predominantly muddy intertidal flats and shallow mangrove lined inlets provides for water access for small watercraft and boat moorings (including pile moorings). While not all amenities are owned or managed by Auckland Council, they play a role in supporting social activities and emergency responses in the area. In turn, coastal access is provided through the following boat ramps/ coastal infrastructure (non-exhaustive list):

- Flat Rock Reserve boat ramp
- Huia-tau / Schroffs Reserve boat ramps
- Ian Shaw Park
- Panmure Basin boat ramp
- Panmure Basin jetty
- Panmure Wharf
- Point England boat ramp
- Riverside Drive boat ramp
- Taamaki ki Taatahi /Seaside Park
- Waipuna Road East

A more detailed social context is provided per unit in Volume 3.



3.2 Te Ao Māori

The diverse coastlines, estuaries, catchments and harbours of Tāmaki Makaurau hold great spiritual and cultural value to the hapū and iwi of Tāmaki Makaurau who not only live within these areas but are also kaitiaki (guardians, protectors, stewards) of these spaces. Acknowledging intrinsic ancestral connections to lands, water, wāhi tapu (sacred areas) and other taonga (treasures) dispersed in remnants around the coast of Tāmaki Makaurau, engagement and collaboration with iwi and hapū of Tāmaki Makaurau is a vital step in establishing partnership through the creation and implementation of SAP area plans under the SAP programme. Auckland Council's commitment to growing and supporting partnerships was developed at the programme's inception in 2021 and will continue beyond the completion of these SAP area plans. Programme principles underpinning the development of each SAP area plan are discussed in greater detail in *Volume 1: Understanding the Shoreline Adaptation Plans*, along with engagement processes underpinning Mana Whenua engagement regionally and locally.

Context and information



The cultural history and context of the area, especially the integration of mātauranga Māori and Te Ao Māori principles, has been crucial to the development of the Tāmaki Estuary SAP. To inform engagement with iwi who have an association with the area which this SAP applies to, initial research has been undertaken using publicly available information including that which is identified on the AUP:OP maps, within the Cultural Heritage Inventory, legacy parks planning documents and research from other publicly available iwi planning documents. Overarching matters considered within the scope of the Aotea Great Barrier SAP, along with the wider programme, are discussed in further detail in *Volume 1: Understanding the Shoreline Adaptation Plans*.

It is important to note that coastal units and stretches reflected in the Tāmaki Estuary SAP have been developed to capture Auckland Council asset units and do not reflect the historical cultural boundaries which often extend over multiple units or coastal stretches. Therefore, while all attempts have been made to align with the identified coastal units, the cultural commentary provided throughout this SAP often extends across multiple areas. Where possible, the names of these stretches and units have also been updated to reflect the traditional names.

3.3 Working together- Local iwi engagement

For the Tāmaki Estuary SAP, iwi groups were identified using several tools including treaty settlement documents, statutory acknowledgment areas and rohe overlays (identified using Auckland Council GeoMaps). Following identification, iwi were formally approached via a letter extending an invitation to engage on this particular SAP. Where no response was received following provision of the letters, email follow ups were provided restating the invitation to engage. Ongoing updates on the SAP programme are also provided through the I&ES Mana Whenua Forum, with an overview on the upcoming SAP areas and the extension of an invitation to engage if other parties wished to be involved in the development of upcoming SAP area plans.

In no particular order of relevance, those who whakapapa to the area and/or have expressed an interest in the Tāmaki Estuary SAP kaupapa include:

- Ngaati Whanaunga
- Ngāti Tamaterā
- Ngāti Maru
- Te Ākitai Waiohua
- Ngāi Tai ki Tāmaki
- Ngaati Te Ata Waiohua
- Ngāti Paoa
- Waikato Tainui
- Te Patukirikiri
- Marutūāhu Collective (Ngāti Maru, Ngaati Whanaunga, Ngāti Paoa, Ngāti Tamaterā, Te Patukirikiri (of Kapetaua))

Throughout the SAP development process, Auckland Council has been engaging with iwi representatives to develop individual iwi authored ‘Cultural Statements’ and/or cultural commentary to inform the understanding of cultural values, interests and associations with the coastal environment and the adjoining whenua. The Cultural Statements can guide the selection of adaptation approaches for each of the stretches set out within this SAP and are also to be held by iwi and used as they might require when addressing and commenting on other related kaupapa.

Importantly we recognise each iwi own and have control over their respective mātauranga and thus all cultural narrative (in this SAP and the supporting ‘Cultural Statements’) are safeguarded and subject to a disclaimer to protect the intellectual property of each iwi. The same applies for all cultural kōrero, values and mātauranga embedded within this report. Following publication of this report, each iwi has communicated that they will direct how their respective mātauranga and aspirations should be shared through ongoing and continuous engagement as project partners in the implementation of the SAPs. A partnership approach with iwi must be applied to coastal management within each specific coastal stretch and across the entire Tāmaki Makaurau coastline. Failure to do so has the potential to result in significant adverse cultural impacts and Auckland Council not fulfilling its obligations to iwi as Treaty partners.

Local iwi aspirations, values and principles

Holding statement:

All Auckland Council Shoreline Adaptation Plans are considered living documents, noting that the SAP team is committed to ensuring that the values, aspirations and outcomes sought by Ngā hapū me ngā iwi o Tāmaki Makaurau are represented in each plan and supported throughout implementation. The SAP team will continue to work with and support iwi to respond to the SAP programme and include linkages to this cultural narrative in further revisions of the SAP reports within the rohe of respective iwi authorities.

Acknowledging the importance of protecting cultural narratives and sustaining ongoing, lasting relationships with iwi for the Tāmaki Estuary SAP, the “Holding Statement” reflected above has been created. This serves as a reminder that this document, and any others which are developed as a result of this document, may be revised to incorporate additional cultural context provided by iwi when they choose to share it.

In addition, for each coastal stretch, iwi may share additional mātauranga through the ongoing engagement to occur as part of the implementation of the approaches set out in Section 4.0 and Volume 3. Reflected in the sections below, some iwi have chosen to share some high-level mātauranga ā iwi values that are fundamental to ensuring that coastal management is undertaken in a way that is respectful of the cultural associations of iwi and supports the cultural values present within each of these areas.

Beyond those which are identified in the Auckland Unitary Plan, the specific location of sites of significance may be protected by iwi and not shared. In addition, some of these sites, due to their proximity to the coast, may sit within private ownership which has resulted in iwi being excluded from these areas, with iwi unable to protect them and exercise the appropriate tikanga. Where Auckland Council has an interest and/or assets within these areas, it is vitally important for direct engagement to be undertaken with iwi so that cultural impacts can be identified and avoided.

Auckland Council is committed to the provision of ongoing engagement with iwi as project partners through the full extent of the SAP programme. Except where otherwise stated below, to ensure that engagement with iwi in the Tāmaki Estuary SAP is effective, meaningful and aligned with the principals of Te Tiriti o Waitangi / Treaty of Waitangi, the following guidelines set out below should be followed for each stage of the SAP programme.

SAP Development Phase	Local iwi who whakapapa to the area and have a recognised interest need to be provided the opportunity to review and respond to the risks and adaptation approaches identified by Council in each of the relevant SAP Plans.
Programming Phase	Local iwi who whakapapa to the area and have a recognised interest wish to be engaged with to provide cultural input on how the SAP kaupapa will be programmed and prioritised.
Design and Consenting Phase	For any tranche-specific implementation of the proposed adaptation approaches, local iwi who whakapapa to the area and have a recognised interest wish to be involved in the concept and detailed design of any approach.

Implementation Phase	• A role in the consent design and post consent process to provide for and enable the kaitiaki responsibilities of local iwi who whakapapa to the area and have a recognised interest in the Tāmaki Estuary SAP.
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Ngāi Tai ki Tāmaki

The rohe boundary of Ngāi Tai ki Tāmaki includes the area to which this SAP applies to being Tāmaki Estuary. The commentary included below outlines the aspiration and processes for fostering meaningful engagement with Ngāi Tai ki Tāmaki as the SAP programme advances through its various implementation phases. It also emphasises the importance of recognising Ngāi Tai ki Tāmaki interests and ensuring their active participation in the planning and execution of the SAP programme and highlighting that their role as kaitiaki of whenua, wai, and Taonga is respected and upheld.

The cultural narrative shared below serves as a starting point, acknowledging the partnership development and the intention to ensure each SAP report remains a living document and may be updated to reflect further cultural context shared by Ngāi Tai ki Tāmaki. The commentary below is provided as a ‘holding statement’ to identify:

- Ngāi Tai ki Tāmaki areas of interest with respect to the SAP kaupapa; and
- How Ngāi Tai ki Tāmaki wish to be involved in the kaupapa going forward – engagement.

The rohe boundaries of Ngāi Tai ki Tāmaki have a long and deeply rooted connection to their ancestral boundaries. Prior to the arrival of European explorers and their decision to adopt Tāmaki Makaurau as a hub of settlement and population growth, Ngāi Tai ki Tāmaki upheld their territorial responsibilities for hundreds of years, through the right of ahikā and the expression of manaakitanga to those who arrived on our shores. In some cases, these arrivals became their allies.

Ngāi Tai ki Tāmaki developed sophisticated agricultural practices, supported by domestic trade and well-established societal routes that extended through Tāmaki Makaurau and beyond. Enterprise was a cornerstone of Ngāi Tai identity, grounded in deep knowledge of maramataka, weather systems, and wave patterns.

Regarding the Council’s SAP programme, and acknowledging that Ngāi Tai ki Tāmaki wish to protect all of our areas of interest ki uta, ki tai, Ngāi Tai ki Tāmaki kaitiaki responsibilities extend over the area to which this SAP applies.

The partnership between Ngāi Tai ki Tāmaki and Auckland Council within the SAP programme presents a valuable opportunity to ensure that environmental adaptations are culturally aligned, sustainable, and acknowledge the role of Ngāi Tai ki Tāmaki as Kaitiaki. Ngāi Tai ki Tāmaki have identified a set of aspirations and outcomes, with the intention that these are upheld and supported through the implementation of coastal adaptation strategies and SAPs as follows:

- Mātauranga is equally important in guiding coastal adaptation and management strategies and approaches. All coastal / shoreline management should be subject to cultural input and co-design from Ngāi Tai ki Tāmaki.
- Ngāi Tai ki Tāmaki prefer the use of ‘soft’ engineering solutions wherever possible, recognising that interference with natural processes is not always necessary. Where

appropriate, we advocate for nature-based approaches to coastal engineering—initiatives that support and enhance ecologically significant areas and vital ecological corridors

- Ngāi Tai ki Tāmaki is supported to conduct its own monitoring of the effectiveness of environmental regulation in the protection of its cultural resources, biodiversity wāhi tapu and other taonga within their rohe.
- Kaitiakitanga is embraced and empowered as a commitment to rehabilitate and heal the natural systems that support us all.

Marutūāhu Confederation (Collective)

The Marutūāhu Confederation (collective) is comprised of **Ngāti Maru, Ngāti Pāoa, Ngāti Tamaterā, Ngaati Whanaunga and Te Patukirikiri (of Kapetaua)**. The interests across the Marutūāhu iwi extend from Mahurangi in the north to the Bay of Plenty in the south, noting that the individual rohe boundaries of each iwi entity within this confederation may fluctuate in terms of areas of interest.

Responding to matters raised during individual hui over 2024–2025, engagement has been undertaken with the Marutūāhu as a collective, with a statement in response to the SAP programme anticipated.

The intention is that this statement will set out a response to the SAP program, an overview of customary acknowledgements and historical accounts, as well as expectations around engagement and aspirations for the Marutūāhu collective in relation to coastal management across Tāmaki Makaurau.

Acknowledging the cultural footprint of the Marutūāhu confederation as set out in the Marutūāhu Collective Deed of Settlement Summary¹, the SAP team will continue to work collaboratively with the Marutūāhu collective to reflect this statement in future revisions of the Tāmaki Estuary SAP, as well as other SAPs of interest. The collective statement will also aim to enhance and provide vital context to the individual contributions each iwi has and will make to the SAP programme.

Ngāti Tamaterā

The SAP team is currently working with Ngāti Tamaterā on various SAP plans within their rohe, in with the aim of gathering Ngāti Tamaterā feedback on the SAP programme and the individual plans. This ongoing partnership has extended to the development of the Tāmaki Estuary SAP, noting that Ngāti Tamaterā has expressed interest in specific aspects of the Tāmaki Estuary SAP that relate to their rohe.

¹ https://www.whakatau.govt.nz/assets/Treaty-Settlements/FIND_Treaty_Settlements/Marutuahu/Marutuahu-Collective-Redress-Deed-Settlement-Summary.pdf

Multiple hui have been undertaken and a cultural statement in response to the SAP programme is anticipated. The SAP team will continue to work collaboratively with Ngāti Tamaterā to input into the implementation of the SAPs for the Tāmaki Estuary area and other SAPs of interest within their rohe.

Ngāti Pāoa

The SAP team is currently working with Ngāti Pāoa on various SAP plans within their rohe, with the aim of gathering Ngāti Pāoa feedback on the SAP programme and individual plans of interest. This ongoing partnership has extended to the development of the Tāmaki Estuary SAP, noting that Ngāti Pāoa has expressed interest in specific aspects of the Tāmaki Estuary that relate to their rohe.

Multiple hui have been undertaken and a cultural statement in response to the SAP programme is anticipated. The SAP team will continue to work collaboratively with Ngāti Pāoa to input into the implementation of the SAPs for the Tāmaki Estuary area and other SAPs of interest within their rohe.

Te Patukirikiri

The SAP team is currently working with Te Patukirikiri on various SAP plans within their rohe, in with the aim of gathering Te Patukirikiri feedback on the SAP programme and the individual plans. This ongoing partnership has extended to the development of the Tāmaki Estuary SAP, noting that Te Patukirikiri has expressed interest in specific aspects of the Tāmaki Estuary SAP that relate to their rohe.

Multiple hui have been undertaken and a cultural statement in response to the SAP programme is anticipated. The SAP team will continue to work collaboratively with Te Patukirikiri to input into the implementation of the SAPs for the Tāmaki Estuary area and other SAPs of interest within their rohe.

Reflecting on the above, this section of the report serves as a “holding statement” for Te Patukirikiri Iwi Incorporated are yet formalise their Treaty Settlement with the Crown.

Ngaati Whanaunga

Over the course of the SAP programme, the SAP team had the opportunity to work with kaitiaki representatives from Ngaati Whanaunga to develop numerous plans, with engaged supported by hui and workshops.

Over the 2024 -2025 calendar year the SAP team has deepened their understanding of Ngaati Whanaunga cultural footprint across the Tāmaki Estuary SAP through further hui and koorero with Ngaati Whanaunga, with hui remaining ongoing to support Ngaati Whanaunga to input into plans of interest at a regional scale via the completion of a Cultural Statement

Matauranga shared by Ngaati Whanaunga:

Kaupapa Matua Guiding Principles:

“Ki te whakarite te taha tinana, te taha hinengaro, te taha wairua, te taha whaanau ki te aoturoa, kia tino whai mana te mauri”

To ensure that there is a holistic balance between and in tune with the natural world and that the mauri of Te Taiao is enhanced via the implementation of all SAPs.

Whakataukii by “Auntie Betty Williams”

“Kaitiaki Principles are practised by all”

Ngaati Whanaunga enhances the mauri elements of the Te Taiao and seeks to protect our whenua tuupuna, moana waahi tapuu and other taonga, from the effects of development and the many activities that take place within the rohe.

The core objectives of Ngaati Whanaunga Environmental Plan seek to ensure the long-term wellbeing of land, freshwater, coastal and marine areas, biodiversity, air, culture, and heritage such as historic structures, archaeological sites, places of significance that may include nature features such as trees, springs, rivers, or awa²

Coastal and marine areas are important to Ngaati Whanaunga because they:

- Provide valuable habitat, nurseries and feeding grounds for native species. Ngaati Whanaunga advocate for the protection and enhancement of the mauri of indigenous flora and fauna
- Provide mahinga kai, weaving and carving materials
- Regulate rainwater, drinking water, and climate
- Recreational/ community values and amenities when they align with Te Taiao (kia tino whai mana te mauri)
- Economic values e.g. tourism/ ecology/ aquamarine areas/ commercial development of fisheries, shorebird adaptation centre (supporting the migration of taonga species)
- Ngaati Whanaunga Aspirations and Outcomes for the Takutai and whenua
- Ngaati Whanaunga seeks to achieve the following goals in the Takutai moana space:
 - To enhance coastal and marine habitats: regeneration of wetlands, use of mangroves as nature-based solutions and recognize their role in ecosystem services.

² Estuarine tool kit developed by NIWA in consultation with Ngaati Whanaunga. This can be supplied via the Ngaati Whanaunga office @ 24 Wharf Road Coromandel. Ph 07 866 1011.

Shellfish monitoring toolkit supplied by the Hauraki Gulf Forum/ translated in the dialect of Ngaati Whanaunga for use at schools – Yr 1- Yr 13. This can be supplied via Ngaati Whanaunga website www.ngaatiwhanaunga.maori.nz or office @ 24 Wharf Road Coromandel. Ph 07 866 1011.

- Sustainable resource use:
 - To recognise connections – mountains to the sea.

Documents which support Ngaati Whanaunga outcomes and aspirations include but are not limited to the Estuarine Tool Kit developed by NIWA in consultation with Ngaati Whanaunga and the Shellfish monitoring toolkits supplied by Hauraki Gulf Forum/ translated in the dialect of Ngaati Whanaunga for use at schools^{Error! Bookmark not defined..}

Further to the principles above, Ngaati Whanaunga seek to be included in any decision-making as part of the SAP kaupapa through:

- Encouraging applicants to consult with Ngaati Whanaunga prior to submitting any application for a Plan Change or resource consent application
- Ensuring plan rules and policies make provision for Ngaati Whanaunga involvement
- Recognising and supporting kaitiaki initiatives. For example, raahui, whakatapu (cultural tools) as well as monitoring, enforcement and enhancement programmes
- Ensuring staff have read and understand the Ngaati Whanaunga Environmental Management Plan³
- Working with Ngaati Whanaunga to develop appropriate risk and mitigation measures for protecting and enhancing Te Taiao and all cultural sites of significance within and beyond the confines of the SAP kaupapa.

Public access and equity

Ngaati Whanaunga acknowledges the importance of public access to coastal and marine areas but emphasises that access must be balanced with the protection of cultural sites, environmental sustainability, and kaitiakitanga responsibilities, advocated by the following principles:

1. Protection of cultural and environmental values	Public access should not compromise the mauri of Te Taiao or the integrity of wāhi tapu, urupā, mahinga kai, and other taonga. Ngaati Whanaunga advocates for: • Controlled access to wāhi tapu and culturally significant areas, ensuring tikanga and kawa are followed. • Clear guidelines on visitor behaviour to protect ecosystems and species. • The ability to implement rāhui where needed to allow natural recovery of resources.
2. Equitable access for	Ngaati Whanaunga expects that access to traditional lands, waterways, and marine areas will prioritise tangata whenua rights, including:

³ Ngaati Whanaunga advocates for ongoing recognition, acknowledgement and reference to the Ngaati Whanaunga Environmental Plan. Kaitaitanga is the responsibility of all.

Ngaati Whanaunga	• Unrestricted access to mahinga kai areas for customary harvesting • Recognition of tikanga-based management practices in access rules • Collaborative governance ensuring iwi voices shape access policies.
3. Sustainable and managed public use	Ngaati Whanaunga supports responsible public access that aligns with environmental and cultural values, such as: • Designated pathways or boardwalks to minimise ecological damage • Education initiatives to inform the public about kaitiakitanga and responsible behaviour • Limits on commercial or recreational activities that may harm Te Taiao, such as overfishing or unregulated tourism.
4. Expectations for decision-making	Public access policies must: • Be developed in partnership with Ngaati Whanaunga to ensure equity • Reflect Te Tiriti o Waitangi obligations and protect iwi rights • Provide mechanisms for monitoring and enforcement of access rules • Include resourcing for iwi-led management and educational programmes • Te ao Māori worldview: connection to the te taiao.

Understanding the impacts of climate change

Ngaati Whanaunga recognises that climate change is already affecting coastal and marine environments. Key impacts include:

- Rising sea levels threatening wāhi tapu, urupā, and coastal communities
- Increased coastal erosion affecting whenua tūpuna and biodiversity
- More frequent and severe storms damaging mahinga kai, ecosystems, and infrastructure
- Changes in ocean temperature and acidity impacting fisheries and traditional food sources.

Kaitiakitanga-based adaptation approaches

To respond to these challenges, Ngaati Whanaunga supports adaptation measures that uphold the mauri of Te Taiao, including:

Nature-based solutions	• Restoring wetlands, maintaining mangroves, and using native vegetation to prevent erosion.
Cultural protection measures	• Identifying at-risk wāhi tapu and developing strategies to safeguard them from climate impacts.
Sustainable resource management	• Ensuring fisheries, freshwater sources, and other taonga species are managed in a way that adapts to changing conditions.
Community resilience	• Supporting whānau and hapū in preparing for climate-related risks, including emergency planning and relocation strategies if necessary.

Expectations for decision-making and engagement

Ngaati Whanaunga expects that climate adaptation planning will:

- Be co-developed with iwi, ensuring Te Ao Māori perspectives shape adaptation strategies.
- Recognise and uphold tino rangātiratanga over natural resources.
- Include mātauranga Māori alongside Western science in risk assessments and solutions.
- Provide funding and support for iwi-led climate adaptation projects.
- Ensure that any changes do not further harm cultural and environmental values.

Early and ongoing consultation	• Ngaati Whanaunga must be engaged before any plans or changes are made, not just after decisions have been drafted. • Regular hui and wānanga with iwi representatives to discuss concerns, priorities, and aspirations. • Access to all relevant information (i.e. coastal hazard assessments, coastal options assessments) in a timely and transparent way.
Co-governance and decision-making	• Ngaati Whanaunga has a seat at the table for planning, implementation, and monitoring. • Decision-making should align with Te Tiriti o Waitangi principles and ensure Māori perspectives shape outcomes. • Recognition of mātauranga Māori (traditional knowledge) alongside scientific approaches.
Protection of cultural sites and taonga	• Active identification and safeguarding of wāhi tapu, mahinga kai, and other areas of significance. • Support for iwi-led kaitiaki initiatives, including rāhui, ecological restoration, and resource monitoring. • Development of cultural protocols for site access, use, and protection.
Clear communication and accountability	• A formal agreement outlining how engagement will happen and who is responsible. • Regular progress updates and opportunities for iwi to provide feedback. • Commitment from councils and agencies to honour the role of Ngaati Whanaunga as kaitiaki.

Ngāti Maru

The SAP team is currently working with Ngāti Maru on various SAP plans within their rohe, with the aim of gathering Ngāti Maru feedback on the SAP programme and the individual plans. This ongoing partnership has extended to the development of the Tāmaki Estuary SAP, noting that many areas and sites across Tāmaki Estuary hold great significance to Ngāti Maru. In Tāmaki, Ngāti Maru along with other the Marutūahu Tribes had many fortified Pā, sites of significance and Wahi Tapu and a deep whakapapa connection and intermarriages with other early iwi of the district. The Ngāti Maru

History an occupation in the Tāmaki area began many generations before the coming of the British Crown's occupation and settlements.

Reflecting on the above, this section of the report serves as a “holding statement” for Ngāti Maru to add to once ready, noting a Cultural Statement in response to the wider SAP Programme is under development.

Ngāti Whātua Orākei

The SAP team has worked with Ngāti Whātua Orākei on various SAP plans within their rohe, with the aim of gathering Ngāti Whātua Orākei's feedback on the SAP programme and the individual plans. This ongoing partnership has extended to the development of the Tāmaki Estuary SAP, noting that Ngāti Whātua Orākei has expressed interest in specific aspects of the Tāmaki Estuary SAP that relate to their rohe.

Multiple hui have been undertaken and a cultural statement in response to the SAP programme is anticipated. The SAP team will continue to work collaboratively with Ngāti Whātua Orākei to input into the implementation of the SAPs for the Tāmaki Estuary area and other SAPs of interest within their rohe.

Te Ākitai Waiohū

Over the course of the SAP programme, the SAP team has had the opportunity to work with kaitiaki representatives from Te Ākitai Waiohū on numerous plans transversing their rohe. Over the 2024 - 2025 calendar year, the SAP team deepened their understanding of cultural landscapes and values through further hui and hikoī for the Tāmaki Estuary SAP area. Kōrero and hui remain ongoing.

This SAP is considered a living document, and the SAP team is committed to ensuring that the values, aspirations and outcomes sought by Te Ākitai Waiohū are represented in this plan and through implementation. The SAP team will continue to work with and support Te Ākitai Waiohū to prepare a cultural statement in response to the SAP programme and include linkages to this in further revisions of the Tāmaki Estuary SAP report.

Ngaati Te Ata Waiohū

The SAP team has been working with Ngaati Te Ata Waiohū on various SAP plans within their rohe, with the aim of gathering Ngaati Te Ata Waiohū feedback on the SAP programme and the individual plans as they have been developed. This ongoing partnership has extended to the development of the Tāmaki Estuary SAP, noting that Ngaati Te Ata Waiohū has expressed interest in specific aspects of the Tāmaki Estuary SAP that relate to their rohe. Whilst Ngaati Te Ata Waiohū has an interest in the Tāmaki Estuary coastline, they acknowledge the interests of other iwi and hapu. Ngaati Te Ata Waiohū place a high importance on the connection of portages around the Tāmaki Estuary, noting many locations around the moana are important for traditional cultural practices, mahinga kāi and the Ngaati Te Ata Waiohū way of life.

Through hui, Ngaati Te Ata Waiohū shared kōrero in relation to portages and key cultural landscapes in relation to Unit 4, with references to aspirations around the Highbrook Drive Causeway.

During hui, Ngaati Te Ata Waiohua raised the issue of the causeway running outside Highbrook Drive (Otara Creek Bridge), and perceived impacts to cultural landscapes, waterflow and local ecology and advocated for the removal remediation of the causeway to mitigate cultural and ecological impacts. This feedback has been captured within the relevant sections of Volume 3.

Noting the significance of the Tāmaki Estuary SAP to Ngaati Te Ata Waiohua, Ngaati Te Ata Waiohua require effective consultation and collaboration during the planning and implementation process of shoreline adaptation measures within the Tāmaki Estuary SAP, as well as throughout their entire rohe, so to ensure Ngaati Te Ata can effectively carry out their kaitiaki responsibilities and appropriately manage adaptation measures so to not degrade Ngaati Te Ata sites and their cultural values and association with te taiao.

Effective engagement with Ngaati Te Ata Waiohua will enable the incorporation of Ngaati Te Ata mātauranga and values into adaptation strategies to ensure important sites to Ngaati Te Ata are acknowledged and protected.

In addition to the feedback on Highbrook causeway captured above and in Volume 3, Ngaati Te Ata Waiohua aspirations for this area include but are not limited to:

- Maintaining access to the coastline to respect and support Ngaati Te Ata Waiohua whakapapa connections to the area
- Preventing and/ or mitigating flood risk where possible to preserve the cultural significance of wahi tapu sites in the area, as well as the wider cultural landscape and associated values. The consequences of climate change and rising sea levels have the potential to be destructive for sites of importance to Ngaati Te Ata, as changes threaten not only the physical environment but also Ngaati Te Ata's cultural identity.
- Upholding Ngaati Te Ata Waiohua principles (set out in the table below)

The table below sets out a series of guiding principles provided and advocated for by Ngaati Te Ata Waiohua. Future coastal management strategies across the Tāmaki Estuary SAP area aim to acknowledge and support these principles through implementation, recognising the principles below as the starting point for more meaningful consultation with local iwi groups within the Tāmaki Estuary area.

Mana Whakahaere	• Recognising whanau, hapu, and iwi rights to exercise their own tikanga concerning the CMA, foreshore and seabed.
Iwi Rangatiratanga	• Recognising iwi rights to self-determination including their right of self-governance and self-regulation of their CMA, foreshore and seabed.
Maru Taha Tika	• Actively protecting whanau, hapu and iwi rights as well as interests concerning the CMA, foreshore and seabed.
Paneketanga	• Recognising the whanau hapu and iwi rights to development over its foreshore and seabed within their own cultural preferences.
Manākitanga	• Recognising the role that government and Council must play in supporting whanau, hapu and iwi rights, needs and aspirations concerning CMA, foreshore and seabed.

Hono Marino	Acknowledging that Ngāti Te Ata Waiohua would not unreasonably or without good cause deny others the use and sharing of certain CMA, foreshore and seabed resources consistent with the tikanga of the iwi.
Turukitanga	Ngāti Te Waiohua consider the principles of access, certainty and protection can be met through recognition of the above principles as the starting point for more meaningful consultation.
Kaitiakitanga	Or guardianship is inextricably linked to tino rangatiratanga and is a diverse set of tikanga or practices which result in sustainable management of a resource. Kaitiakitanga involves a broad set of practices based on a world and environmental view and is about healing and restoring the land and water. The root word is tiaki, to guard or protect, which includes a holistic environmental management approach which provides for the following: - Restore mana of the Iwi (e.g. protect sensitive cultural and natural features of the environment) - Restoration of damaged ecological systems - Restoration of ecological harmony - Ensuring that resources and their usefulness increases, i.e. plan for the provision for and the restoration of traditional resource areas for future generations (e.g. kaimoana, fish, tuna) - Reducing risk to present and future generations (i.e. plan long term management and use of taonga) - Providing for the needs of present and future generations - Advocate for no illegal seawalls and coastal structures, reclamations that impede our ability to exercise our kaitiakitanga and access to our traditional fishing grounds.

3.4 Ecological context



Ecosystems and significant ecological areas

The Tāmaki Estuary is a shallow, drowned valley that extends 17 km inland from its mouth to Curlew Bay. The estuary is made up of extensive intertidal sand and mudflats fringed by mangrove forest and scrub transitioning into freshwater tributaries in the upper catchment. The upper estuarine creeks fall within a low energy, sheltered coastal environment where sea-level rise and coastal inundation are the main hazards. More exposed cliffs and beaches at the entrance of the estuary are prone to coastal erosion.

The intertidal mudflats and mangroves provide regionally significant habitat for coastal shorebirds, while the channel itself supports a wide range of marine fish and macroinvertebrates. Marine mammals, specifically dolphins and seals, have occasionally been spotted or recorded utilising the estuary waters. The wider area has been extensively developed into residential, industrial, and commercial areas, however the shoreline itself includes narrow esplanade reserves, sports fields, and local recreational parkland. The Tāmaki River Inlet is recognised as one of the most degraded estuaries in Tāmaki Makaurau / Auckland. It is impacted by several sources of pollution, including sewage substation overflows, industrial discharges, rubbish dump leachates, and commercial boat yards (Chapple 1993; Hayward & Morley 2005).

A more detailed discussion of the key features, located within each unit, is included in Volume 3. This includes ecological features and values that may influence the selection of adaptation strategies or are vulnerable to climate change hazards. The table below has been informed by Significant Ecological Area (SEA) schedules and descriptions (Auckland Council, 2024t), Biodiversity Focus Area (BFA) information, fauna and flora records and other publicly available information. These ecological features and values should be considered alongside the significant cultural values associated with them and where possible, factored into decision making. Statutory direction to protect and enhance the Tāmaki Estuary area is reflected in several national and regional policy documents and more specifically, local board plans for the three local boards. Taonga species within the area will be informed based on local iwi recommendations, as different hapū and iwi associate with different taonga species

Summary by SAP unit of Tāmaki Estuary vulnerable ecological features and values	
Unit	Summary of ecological features and values
1	There is a small area of regenerating broadleaved scrub in the Wai o Taiki reserves. • Ōmaru Creek, a small mangrove-lined channel near Ōmaru Recreational Reserve / Point England Reserve, is currently being restored due to the presence of inanga spawning habitat within the creek. Several native freshwater fish species have been recorded in the creek and its tributaries, including shortfin eel and banded kokopu. • Ōmaru Recreational Reserve / Point England Reserve provides shorebird high-tide roost and foraging area for a variety of coastal avifauna, including SIPO.
2	This unit consists of the Panmure Basin and the southern arm of the estuary. • The Panmure Basin Reserve is recognised as an important high-tide bird roost. Colonies of red-billed gull, pied shag and white-fronted tern have been recorded utilising this roost. The Panmure Basin pied shag colony has experienced an unexplained decline in numbers, decreasing from 300 individuals in 1997 to 10 in 2017, according to Lee (2019). • Van Damm's Lagoon, a 0.4 ha <i>Machaerina</i> sedgeland is located to the west of the Panmure Basin Reserve.
3	This unit is characterised by areas of mangrove forest and scrub and intertidal flats which provide important habitat and feeding ground for wading birds. • A raupō reedland wetland is located in a smaller area near the Middlemore Hospital. • A population of copper skink have been recently translocated to the vegetation surrounding Taamaki ki Taatahi /Seaside Park.
4	This unit is characterised by areas of mangrove forest and scrub and saltmarsh – sea rush oioi along Ōtara Creek. • There is a small area of regenerating broadleaved scrub located in the upper reaches of the Creek.

Potential opportunities: nature-based solutions?

Coastal environments around the world are under pressure from climate change. Pressures can vary from localised flooding and erosion to changes in habitats and species distribution. To avoid losing highly valued, vulnerable ecosystems, there is an opportunity to consider a range of nature-based solutions.

For example, where indigenous ecosystems are threatened by increasing inundation and sea-level rise, supporting ecosystems to shift inland, or allowing to adapt naturally is encouraged. Another opportunity is to utilise nature-based solutions (e.g. beach nourishment, coastal revegetation planting) to protect shorelines from climate change in favour of hard protection structures, which can cause displacement of impacts further around the coastline and coastal squeeze (amongst other impacts).

Tāmaki Estuary supports a microcosm of ecosystems, supporting and providing habitat for a range of species across the SAP area, particularly for shorebirds. The resilience of native fauna populations is dependent on the protection or provision of alternative, suitable sites as part of adaptation strategies where in situ management is not feasible.

In the context of shoreline adaptation planning, the following ecological objectives merit consideration:

- Maintaining and enhancing indigenous vegetation and ecological corridors, working to contribute to the adaptive capacity of fragmented coastal vegetation and support ecosystem services for the coastal environment.
- Minimising impacts on nearshore marine habitats, noting the impact of sedimentation and encroachment into the near-shore mangrove forest and scrub, soft sediment habitats and intertidal reefs, of which are known to be particularly vulnerable to coastal squeeze as sea level rises with limited adaptive capacity.
- Minimising impacts on threatened and at-risk species, such as shorebirds, cryptic wetland birds (banded rail), seagrass, marine mammals, freshwater fish and copper skink.

To meet these objectives, opportunities for nature-based solutions should be factored into decision making in implementation, with some of these opportunities including but not limited to:

- Wetland restoration for Units 2 & 3. Potential restoration areas include Van Damm's lagoon and the raupō reedland at Middlemore Hospital. Van Damm's lagoon and the hospital wetland are currently in a degraded condition and require management.
- Restoration of coastal terrestrial vegetation in Unit 1. Removal of pest plants (e.g. pines, agapanthus, pampas). Retention of indigenous vegetation such as pōhutukawa and toetoe.
- Restoration and protection of vulnerable and uncommon coastal ecosystems. Applicable to all areas of the Tāmaki Estuary, with restoration and protection of salt marsh and seagrass ecosystems that reduce and dissipate wave and tidal energy and sequester carbon helpful for both climate adaptation and mitigation.
- Blue-grey infrastructure for areas of the coast where a 'protect' strategy has been selected, to support the enhancement of coastal and marine habitats via the addition of ecological features (e.g. habitat tiles) on manmade structures.
- Riparian planting. Applicable to all watercourses adjoined to the estuary, with potential areas including but not limited to Ōtara Creek and Lake, Ōmaru Recreational Reserve / Point England Reserve, Pakuranga Creek and Wakaaranga Creek
- Protection and enhancement of high-tide roosts for Units 1 & 2 (around Ōmaru / Point England Reserve and Panmure Basin). This could involve building up the shellbanks to maintain them above the Mean Water High Springs (MWHS) and continuing mangrove management as well as maintenance of existing grassed areas at the coastal edge.
- Provision of nesting trees for shorebird colonies. Potential areas (with a lack of appropriate nesting vegetation) include Panmure Basin.
- Mangrove management and the creation of mangrove-corridors and inlets for cryptic wetland birds. Applicable to all units with mangroves to allow cryptic wetland birds and native passerine species to pass through mangrove scrub and forest – particularly in Pakuranga Creek where banded rail has been recorded.



3.5 Social and policy context

The social (and policy) context provides a foundation of knowledge for testing adaption strategies and the key drivers for each community, their assets, uses and how this may be conveyed in local policy within a SAP area.

It is important to understand who lives in an area and how they use and interact with coastal areas to understand the role that Auckland Council land and assets play in supporting community and social outcomes. Considering what communities have already conveyed as important and the outcomes or aspirations they may have adopted in policy also complements the engagement undertaken directly with communities.

Who lives here

The population of the Tāmaki River Inlet area is approximately 70,300 people (Statistics New Zealand, 2018). The areas with highest population density include Pakuranga, Ōtāhuhu, Ōtara and Panmure. The largest age group was between 25-29, which accounted for approximately 9% of the population (Statistics New Zealand, 2018). The median age for the area is 42 years; this is slightly older than the national proportion which is approximately 37.5 years old (Statistics New Zealand, 2018).

The SAP area has a higher population of Māori (15%) and Pacific peoples (30%) compared to the Auckland proportions which are 13.2% for Māori and 15.5% for Pacific peoples (Statistics New Zealand, 2018). Additionally, 39% of the population identify as being of NZ European descent, while 29% identify as being of Asian descent (Statistics New Zealand, 2018).

The infographic overleaf summarises key demographic characteristics for this area.

Tāmaki River Inlet VS Auckland Region



Weighted average deprivation index

Tāmaki River Inlet

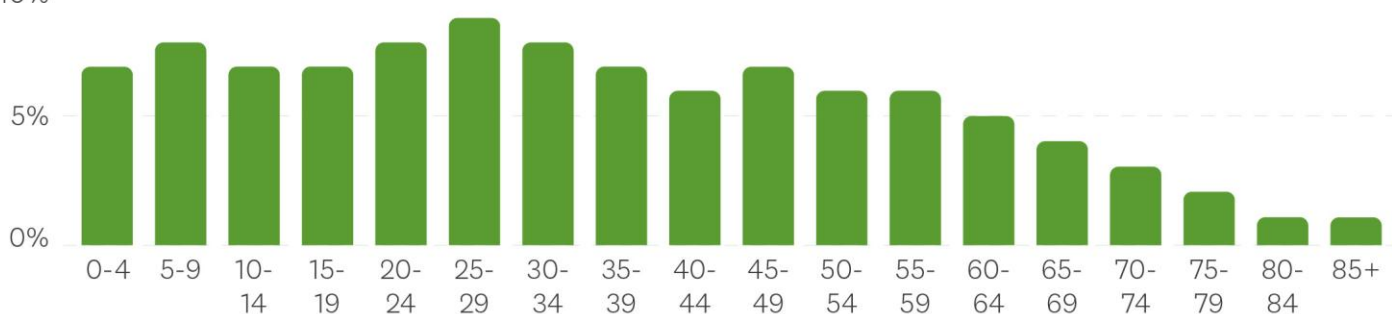
Auckland Region



Population age structure (2018)

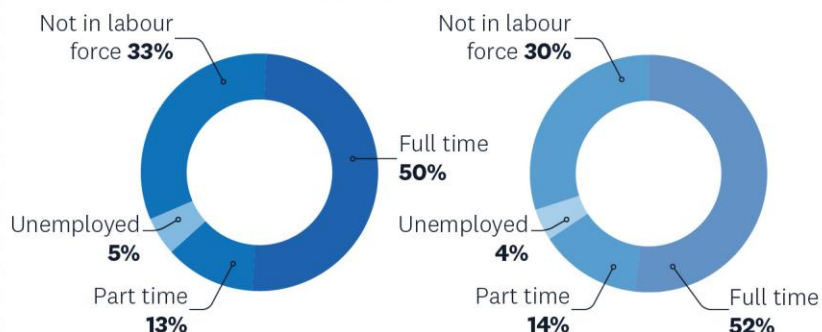
Tāmaki River Inlet

10%

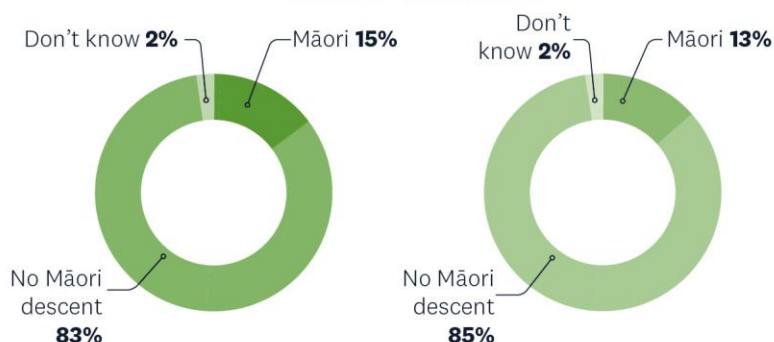


Tāmaki River Inlet VS Auckland Region

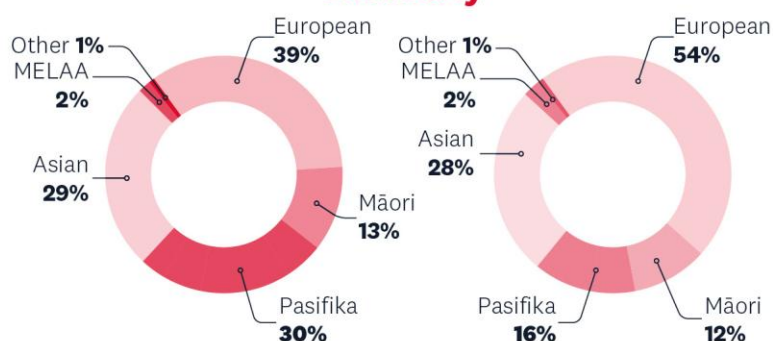
Employment status



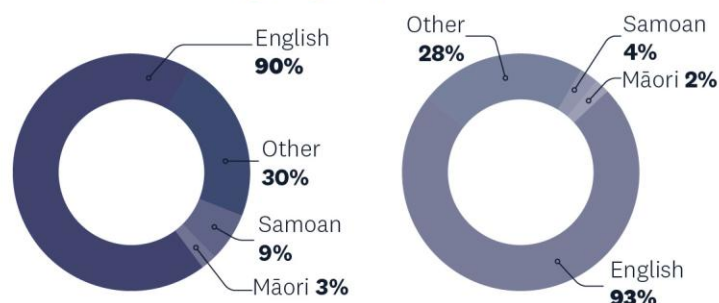
Māori descent



Ethnicity



Language spoken



Source: Statistics New Zealand (2018 Census)

Community groups and organisations

There are several community groups and organisations that actively use Council- owned assets and/or land within the Tāmaki River Inlet area, particularly along the coastline. While there are community groups identified across all the units in this area, a high concentration of community groups and organisations are located within Unit 2 and Unit 3 within the Panmure and Point England area. The community groups within the Tāmaki River Inlet area include sporting clubs, water-based sports clubs (i.e. rowing clubs, Waka Arma Associations), scout groups, environmental groups and neighbourhood/ratepayer groups.

Community groups known to be concentrated within this SAP include but are not limited to:

- Auckland Grammar Rowing Club
- Auckland Marist Rugby Football Club
- Auckland Rowing Club
- East Tāmaki Tennis Club
- Mount Wellington Bowling Club
- Ōtāhuhu Badminton Club
- Ōtāhuhu United AFC
- Ōtara Rugby League Football Club Inc
- Panmure Squash Club
- Panmure Yacht & Boating Club
- Papatoetoe Athletics Club
- Riverside Sports St Georges Rowing Club
- Wainui Sea Scouts
- Y Glen Innes Pool & Leisure Centre

The following are some of the key environmentally focused community groups in the Tāmaki Estuary, noting that there is a high community interest in the biodiversity values of the inlet with several long-standing community-led conservation initiatives underway.

- Eastern Bays Songbird Project
- Ōtāra Waterways & Lakes Trust
- Tāmaki Estuary Environmental Forum (TEEF)
- Tāmaki Estuary Protection Society
- Wai – o Taiki Nature Reserve Rangers Group

Residents of the surrounding eastern suburbs actively participate in volunteer efforts to restore the terrestrial, freshwater, and coastal features of the area. Reflecting this, several initiatives are underway with the community including the stream clean-ups, community planting days, riparian restoration, pest control and supporting ecological corridors.

Each of these organisations has their own values and serve a unique function in the community. Changes to the assets which these groups and organisations use will need to be considered as part of adaptation planning and will be informed by community engagement processes.



Relevant Policy

Understanding the regulatory and policy context applicable to the area helps us understand previously expressed issues by the communities, as well as their values, objectives and aspirations. The following are key plans and documents of relevance to the Tāmaki Estuary SAP development. Key documents are identified as applicable to the programme in Volume 1 and at a unit scale in Volume 3.

Policy direction of note includes (not an exhaustive list):

- Auckland Unitary Plan 2016
- Auckland Council Long Term Plan 2024 – 2034 (Auckland Council, 2024)
- Marine and Coastal Area (Takutai Moana) Act 2011 (MACAA)
- Auckland Sport and Recreation Action Plan (Auckland Council, 2017)
- The Auckland Plan 2050 (Auckland Council, 2018)
- The Hauraki Gulf Marine Park Act 2000 (New Zealand Government, 2000)
- Tāmaki Makaurau Recovery Plan (Auckland Council, 2023).
- Thriving Communities Strategy Ngā Hapori Momoho (Auckland Council, 2022b)
- Asset-specific asset management plans (various including Coastal, Auckland Transport, Stormwater Asset Management Plan, Watercare Services, Open Space Strategic Asset Management Plan, and Community Facilities Strategic Asset Management Plan)

Local boards in the area have expressed their aspirations for future development and highlight communities' visions of greater tree canopy cover, improved open spaces and waterways, and embedding cultural narratives into public spaces (Maungakiekie-Tāmaki Local Board Plan 2023; Māngere-Ōtāhuhu Local Board Plan 2023). Empowering mana whenua as kaitiaki is also a key aspiration for many of the local boards adjoining the Tāmaki River.

To enable State housing development and support the growth of Tāmaki, Auckland Council is currently undertaking stormwater upgrades within Taniwha Reserve (Auckland Council, 2024). Though these works and upgrade are occurring outside the Tāmaki River Inlet area referenced in this report, the improvements of the stormwater network will likely benefit the wider catchment.



Community use

This section provides an overview of the key land uses within the Tāmaki River Inlet area. Although this includes uses and activities outside Council or CCO-owned land, this aids with providing an understanding of the wider context, the potential levers that influence development, and how the area is used by communities.

Tāmaki Estuary is characterised by a range of different coastal environments, including beaches and estuarine areas. Coastal areas also provide a range of community facilities, with key areas including Point England Beach and Panmure Basin. The coastline is utilised for varying recreational activities including boating, swimming, walking and use of parks / sports fields. Infrastructure to support water-based sports (i.e. sailing, kayaking, rowing, and motoring) is located along the coast, including boat

ramps, jetties, yacht clubs, and rowing clubs (Auckland Council, 2024). Notable water based sports clubs include but are not limited to:

- Auckland Rowing Club
- Panmure Lagoon Sailing Club
- Panmure Yacht & Boating Club
- St Georges Rowing Club
- Tāmaki Outrigger Canoe Club
- Waipuna Waterski Club

The residential zoning follows a similar pattern as the wider Auckland region, with dense development primarily concentrated around centres (including Panmure, Pakuranga and Ōtara Town Centres) and key transport routes (including Pakuranga Road and Ti Rakau Drive). Point England to Panmure includes a variety of residential typologies. When it comes to non-residential land use, the Tāmaki River includes the Highbrook and Ōtāhuhu, Wai o Taiki neighbourhood centres and Panmure, Pakuranga, and Ōtara town centres, noting that part of the East Tāmaki and Mount Wellington industrial areas are also within the area.

The greater Tāmaki area, Panmure, Ōtāhuhu, and Pakuranga have been identified in the Auckland Plan 2050 as key growth areas over the 2018-2028 period. The Tāmaki Development is also of note, driving land use change in Tāmaki, alongside the Tāmaki regeneration programme, which is forecast to deliver 10,500 homes over a 20-year span, and a new Papakāinga development is planned in Ōtara. As one of Auckland's long-term high-growth areas, large investment in supporting infrastructure is planned for the areas to the west and south of the Tāmaki River in both the Annual (2023/24) and 10-year (2021-2031) Auckland Council Budgets. Investments include extending the Eastern Busway; walking and cycling projects such as the Tāmaki Loop and Jubilee Bridge; and improvements to the water supply network.

There are three local boards within the SAP area: Maungakiekie Tāmaki, Mangere Ōtāhuhu, Ōtara Papatoetoe. Key development aspirations for these local boards include the following outcomes:

- Develop accessible and safe pathways and cycleways near key roads, reserves and parks
- Manage rapid population growth and address climate change through waterway restoration and stormwater management
- Enhance the rapid transport network and future-proof flood-prone areas
- Support community hubs for employment and social interaction
- Improve wastewater connections
- Honour Māori heritage in the area.



Community buildings/ assets

Tāmaki River Inlet area includes a range of social infrastructure surrounding the coast, some of which may be located on Auckland Council-owned land or other landholdings.

Social infrastructure includes facilities and assets that support social activities and interactions, and wellbeing within a community. Understanding the role of social infrastructure, as well as its vulnerability, will enable it to be better protected by asset owners. Social infrastructure can also play a pivotal role during extreme weather events, as a common meeting point and shelter during extreme weather and climate induced disasters, including those within coastal environments.

Note that while the adaptation strategies set out in Volume 3 and Section 4 of this report relate to Auckland Council-owned land, infrastructure and assets, the wider social context of the area has been considered when determining strategies in terms of understanding how the community use and value the area, including:

- Medical centres, including Middlemore Hospital, a major public hospital in the suburb of Ōtāhuhu (24 hour emergency service relying on surrounding roading networks and infrastructure) and the largest hospital operated by Te Whatu Ora - Health New Zealand
- Educational centres: Point England School, Point England Kindergarten, Point England KIDS Early Learning Centre, Tāmaki Primary School, Sommerville School, Panmure Bridge School, St Patrick's School, and Marian Early Childhood Centre, Panama Road School, Ōtāhuhu Intermediate School, Play & Learn Childcare, Kenani Tongan Pre School, Fairburn School, and St Marys Preschool.
- Sports facilities, public pools and fields across the SAP area including Ōmaru /Point England Reserve.



Key projects, critical infrastructure, facilities or key infrastructure

As one of Auckland's long-term high-growth areas, large investment in supporting infrastructure is planned for the areas to the west and south of the Tāmaki Estuary in both the Annual (2023/24) and 10-year (2021-2031) Auckland Council Budgets.

Investments and key infrastructure in this area (including Auckland council and others) include:

- SH1, owned and operated by the NZ Transport Agency
- Transpower corridor/ National grid, traversing areas of the SAP area
- Ōtāhuhu Power Station
- The Eastern Busway
- Tāmaki Loop and Jubilee Bridge walking and cycling projects
- Auckland Manukau Eastern Transport Initiative (AMETI) is also a key consideration for the wider Tāmaki Estuary area, New Zealand's first urban busway with buses travelling on their own congestion-free lanes between Panmure, Pakuranga and Botany town centres. This initiative features a range of projects focused on improving cycleway connections and transport routes across Tāmaki Estuary.
- Panmure regeneration project (Eke Panuku)
- Improvements to the water supply network (Watercare).

Ensuring key connections and the ongoing provision of supporting infrastructure and road networks for emergency services, servicing and connecting Middlemore Hospital is a key consideration for the Tāmaki Estuary area.



Landscape features and character

The Tāmaki River Inlet includes a range of Outstanding Natural Features. These areas contribute to the natural character of the coastal environment and are identified under the AUP: OP.

- Panmure Basin volcano
- Pukewairiki (Waioru) tuff ring
- Point England accretionary lapilli.

There are also a significant number of features listed as heritage sites or features under the Auckland Unitary Plan (AUP:OP) (Auckland Council, 2016a). These include historic buildings, plaques, and middens, with two historic heritage places in the Tamaki River Inlet area listed as a Category A site of significance. A Category A site is defined as having “outstanding significance well beyond their immediate environ”. In the Tamaki River Inlet these Category A sites include Mount Wellington Stone Cottage and St Matthias Anglican Church and cemetery. Both of these sites are located in Unit 1. The Mount Wellington Stone Cottage is currently a Council-owned building (Panmure Historical Society & Stone Cottage Museum) and St Matthias Anglican Church and cemetery is currently used as a church.

Cultural and heritage features are identified at a unit and stretch level in Volume 3. Engagement with local iwi and/ or Heritage New Zealand may be needed to understand whether any cultural and/ or heritage features are exposed to climate hazards or are likely to be impacted by the implementation of adaptation strategies.



3.6 Community Feedback

Community engagement throughout the SAP development process has been extensive in order to understand how communities use and value their coastal areas including contemporary interests, issues and aspirations regarding their interaction, and use of coastal areas. By identifying broad community objectives which reflect shared contemporary outcomes or aspirations sought by each community for their coastal areas, this can then inform the selection of appropriate coastal adaptation strategies.

Community engagement for the Tāmaki Estuary SAP ran in parallel to the development of the Highbrook to Whitford SAP. Engagement for both plans was undertaken in two rounds.

To capture a diversity of demographics, a range of events and engagement opportunities were utilised, including both in-person and online engagement. These are summarised in the discussion below, noting that during both periods of community engagement feedback was received via the ‘AK have your say’ survey, social pinpoint and email submissions. Refer to Volume 1 for more on the methodology used to plan and undertake community engagement.

Round 1: Values and use based community engagement

The first round of community engagement was focused on understanding community values and uses of coastal spaces and places along each SAP and was open from the 1 February 2024 to 2 April 2024. In-person events during this time included:

- 17 March 2024: Rotary River Carnival
- 17 March 2024: Panmure Yacht & Boating Club Open Day
- 30 March 2024: Beach Barbecue Pop Up The Esplanade, Eastern Beach
- 6 March 2024 Youth targeted engagement: Sustainable Schools engagement at St Kentigern's College Sports Centre, Pakuranga
- 23 March 2024: EcoFest Event - Coffee, Coastlines and Korero, Mellons Bay
- 23 March 2024: Whitford Village Markets
- 12 February 2024: Tamaki Estuary Environmental Forum
- 2024 Pacifika festival: Market Stall
- 21 March 2024 youth targeted engagement: Eye on Nature with the Beautification Trust

Running in parallel to digital engagement platforms, public events during this period provided an opportunity to inform people of the SAP programme, sharing prior examples with experts to respond to questions as required. The key call to action at these events was encouragement to identify ‘what matters most’ to them about the public coastal areas and their associated facilities (through sharing this with the team or identifying this on sticky notes on the large format maps) or to use the ‘AK have your say’ survey or social pinpoint to share their thoughts. Notes from each event captured basic attendance observations and key issues or matters discussed.

During this time, approximately 259 comments were received via the digital platform Social Pinpoint, whilst 188 surveys were completed via ‘AK Have Your Say’.

Round 2: Draft coastal adaptation strategy community engagement

The second round of community engagement focused on socialising and seeking feedback on draft coastal adaptation strategies developed based on changing coastal hazardscapes and input from asset owners and infrastructure providers, and local iwi and communities, running from 21 October -

2 December 2024. Community feedback during this time was primarily received via community submissions and in-person events, plus comments and feedback forms submitted via digital platforms ‘AK Have Your Say’ and Social Pinpoint. In-person events during this time included:

- 5 November 2024: Pakuranga Library Drop-In Session
- 6 November 2024: Ōtara Library Drop-In Session
- 13 November 2024: Howick Library Drop-In Session
- 17 November 2024: Auckland Eastern Market
- 7 November 2024: Botany Library Drop-In Session
- 11 November 2024: St Heliers Library Drop-In Session
- 4 November 2024: Downtown Ferry Terminal

Community feedback (in-person and digital) was analysed alongside that which has been received from Local Boards and key stakeholders. Key themes were identified from the feedback and findings at a SAP scale are shown below. Volume 3 includes more detailed analysis of specific feedback alongside any quantitative community views of the draft adaptation strategies that were provided for engagement.

Who did we hear from

Feedback was received via a number of different platforms. Of those where statistics were gathered (optional), the following profiles can be identified:

- **Connection to the coast:** The majority of submitters lived within the Tāmaki Estuary SAP area
- **Gender:** A slightly higher percentage of males (52%) than females (47.3%) responded to the Have your Say survey
- **Ethnicity:** A significant portion in this area say the ethnic group they belong to is Pākehā /NZ European, followed by those who selected “other European” and “other”
- **Age Group:** Of those who engaged in digital feedback, the majority are aged 45-64 or 65+, followed by those aged between 15- 17 and 35- 44.

Community Discussions

In addition to digital engagement platforms and in-person events, feedback was also received via submissions sent to the SAP inbox. These submissions were primarily from individuals, community groups and organisations (Tāmaki Estuary Protection Society, the Tāmaki Estuary Environmental Forum, Wai-o-Taiki Bay Residents’ Association, Wai-o-Taiki Bay Nature Reserve Ranges and NZ Motor Caravan Association) providing a response, with groups engaging directly through in-person events and communications.

Over the course of both rounds of engagement, webinars and direct engagement with key community groups also took place, including a Coastal Hazards 101 deep dive webinar and presentations to the Auckland East Society and the Tāmaki Estuary Environmental Forum.

Engagement with key community groups included a boat trip, hosted by the Tamaki Estuary Environmental Forum around the Tāmaki Estuary. The tour was attended by members of the SAP Team, the Howick Local Board and the Tāmaki Estuary Environmental Forum.

Additionally, with a focus on capturing a wide array of demographics, the SAP Team ran a youth targeted workshop in August 2023 as part of the “Innovation from the Roots Harvesting Indigenous Ingenuity 2023” Symposium, based at the Sir Edmund Hillary Collegiate, Ōtara.

As highlighted in *Volume 1: Understanding the Shoreline Adaptations Plans*, and under the local board views section above, SAPs are living documents, with a note that initial community engagement over the course of developing the Tāmaki Estuary SAP marks the beginning of an ongoing dialogue with communities about how we adapt our coastlines (room for further engagement with local communities in implementation of this plan).

Local Board Views

During the development of the Tāmaki Estuary SAP, locals boards (Māngere-Ōtāhuhu, Ōtara-Papatoetoe and Maungakiekie-Tāmaki) highlighted a range of considerations, including but not limited to:

- The need for ongoing engagement with local communities and sports clubs with facilities near to and along the coast to ensure alignment in adaptive planning. More specifically, the Maungakiekie-Tāmaki local board highlighted the need to engage with the Marist Rugby Club (Dunkirk Road), who are working through design for a multi-facility building/ upgrades for their current clubrooms, to ensure alignment in coastal management approaches.
- Consideration of future greenways plans; noting that the Maungakiekie-Tāmaki Local Board highlighted local communities in Unit 2 (Panmure) are working through developing a Greenways Plan for the area.
- Recognition of co-governance land holdings and future management intentions for parks and reserves in adaptive planning, noting that the Maungakiekie-Tāmaki advocated for a “protect” based approach around Point England Reserve (Stretch 1.2 in Volume 3) to acknowledge that the Ngāti Pāoa Iwi Trust and the Maungakiekie-Tāmaki Local Board have formed a committee to manage the future of Ōmaru Reserve (Point England Reserve). Additionally, as part of treaty settlements, 40.6 ha of land at Ōmaru / Point England will return to Ngāti Pāoa ownership, with future aspirations for property development at Ōmaru / Point England. A strategy of maintain over all timeframes has been applied in this area recognising continued management of Council-owned land and assets (e.g. Tamaki Coastal Path). Future land development aspirations will be managed through appropriate statutory planning instruments and the SAPs can be updated, as required.
- Advocacy for plain language in coastal management and adaptive planning: Local boards supported the shift toward using clear, accessible language—particularly in communicating adaptation pathways within the SAP programme. Reflecting this, terminology describing the overarching strategies within the SAP report have been updated.

- Support for ongoing engagement and education: A key matter raised was the importance of ensuring that community feedback accurately reflects the voices of those across the Tāmaki Estuary and in turn respective local board areas. The need for continued engagement with local communities, iwi, and local boards through educational workshops and in-person events located within the boards area was noted. This acknowledges that adaptive planning is a complex kaupapa, requiring time, trust, and sustained relationship-building to ensure meaningful and inclusive outcomes. The importance of recognising SAPs as living documents was also noted, marking the beginning of an ongoing dialogue with communities about how we adapt our coastlines.
- Recognition of critical infrastructure and roading connections: Feedback emphasized the need to identify and account for key roading links and essential lifeline infrastructure—such as Middlemore Hospital—within the SAP to ensure they are considered in coastal hazard risk responses.
- Interest in future funding and decision-making: Boards expressed a need for clarity on the funding required to deliver planned activities.



Community uses/ values

During the period of community feedback, respondents were asked, *‘when thinking about the coastal areas they use in the Tāmaki Estuary area, which values matter the most to them’*. The most popular values centred around ecosystem health (e.g. coastal habitats and biodiversity, fauna and flora) and recreation and amenity (e.g. general enjoyment, swimming and water sports at the coast), closely followed by being able to access to the water via boat ramps, wharves and jetties.

Natural landscapes and a ‘sense of connection’ to the coast was also a common theme in community feedback, noting that many respondents commented on their use of popular coastal walkways to get to and from the coastal environment.

Uses, access and frequency

The majority of respondents (approx. 62%) said they most often go to the coast by cycling or walking, with (32%) using a private vehicle. Just over half (51%) said they visit the coast daily or “most days”; whilst approx. 36% visit the coast at least once a week. When it came to beaches visited, the majority of respondents visited Wai o Taiki Bay the most, closely followed by Panmure Basin and Point England. The most popular parks appeared to be Mayfield Park, Taamaki ki Taatahi / Seaside Park, Ōmaru Recreational Reserve / Point England Reserve, Panmure Basin and Waipuna Foreshore Reserve, Mt Wellington War Memorial Reserve.

Interestingly, community engagement across the Tāmaki Estuary area revealed that most residents from hubs such as Ōtara and Ōtāhuhu tended to visit coastal areas beyond their immediate neighbourhoods—frequenting places like Eastern Beach, Cockle Bay, Howick Beach, and Mission Bay. This was reflected in higher amounts of comments/ feedback for areas such as Eastern Beach on digital platforms (i.e. Social Pinpoint pin drops). Community aspirations for local coastal areas are identified in the discussion below (i.e. values for the future – notes around coastal connectivity and access to and along the coast).

Activities

Activities enjoyed were quite varied across the various units within the Tāmaki Estuary covering passive recreation, water-based activities, open-water activities, walking / cycling and nature-watching, etc. Overall, the three most popular were:

- Walking or running on the beach, walkways or roads, e.g. for exercise, dog walking, etc.
- Passive recreation, e.g. sitting, relaxing, picnicking, sunbathing
- Nature watching, e.g. birds, marine mammals etc.



Community cultural values / comments

Community responses highlighted:

- A strong expression of cultural connection to the land and coastline, particularly in areas of historical significance, acknowledging portages along the Tāmaki Estuary. This included recognition of traditional Māori use of the space and appreciation for educational elements like plaques that explain the cultural uses of native plants.
- Cultural traditions and a sense of connection to the coast with deep personal and familial connections to the coastal environment.
- The presence and role of local iwi is acknowledged with support expressed for their involvement in planting and conservation initiatives.
- That the coastal landscape is valued not only for its natural beauty but also for its deep spiritual and cultural meaning. This reinforces the importance of protecting and conserving these areas for future generations.



Community values of ecosystems and impacts of climate change

Reoccurring themes across the wider harbour included:

- Conservation was seen as vital, with strong community support for protecting native flora and fauna—particularly the rich birdlife and important coastal and freshwater wetland habitats. The area is noted as a key site for birdwatching, with over 70 species recorded, alongside other recreational activities.
- Widespread concern was raised about erosion, sediment runoff, and habitat degradation. There was a clear call for more sustainable, nature-based approaches—such as bioengineering solutions—to manage coastal hazards and maintain ecological balance.
- The environmental value of the coastline is deeply appreciated, not just for its biodiversity, but also for its natural beauty and tranquillity. Locals want to see these qualities preserved for future generations, ensuring continued access and enjoyment for both residents and visitors.
- Ecosystem services: Recognise the critical role of kelp forests and shellfish reefs in providing diverse ecosystem services, acknowledging that kelp forests are among the most productive and biodiverse marine ecosystems globally, and are essential to the health and function of coastal environments.

- Support the restoration of native habitats via dune planting helping to buffer the natural coastal from storm surge.
- The need for better habitat protection from overfishing within the wider Tamaki Estuary, with advocacy for this to be taken into consideration in current and future policy.
- Water quality and the cumulative impacts of development are recurring concerns. Feedback points advocated for more sustainable coastal management practices to protect the health of marine and terrestrial ecosystems.
- In addition to environmental issues, the lack of effective litter control was noted in some submissions. Comments emphasized the need for stronger enforcement of regulations and improved public education on responsible behaviour. While outside the scope of the SAPs, this has been passed on to the appropriate Council departments for action.



Community experience of hazards / concerns

This section details local communities perception of coastal hazards and concerns across the Tāmaki Estuary, noting coastal erosion was the most common concern cited by respondents.

Others were rainfall flooding/ flooding from extreme events, coastal storm events and sea-level rise. These insights are identified in Volume 3 in relation to each unit area, with a high-level summary as follows:

- Coastal erosion is a concern along vulnerable areas along the coastline, noting that community members have called for the establishment of buffer zones to protect both homes and the natural environment from further erosion and instability.
- Ongoing development in the area is contributing to sediment runoff, which in turn is perceived to lead to sediment accumulation along beaches and degradation of coastal ecosystems. This has raised concerns about habitat loss, increased flood risk, and the cumulative environmental impact of poorly managed urban expansion.
- The rise in erosion and landslip events is seen as both a symptom of and a contributor to wider coastal degradation. The feedback highlighted the urgent need for proactive, long-term protective measures to manage these risks

Sediment pollution due to coastal erosion at Point England/Wai-o-Taiki Bay reserve was a key submission point by the Tāmaki Estuary Protection Society. Specific feedback detailed the perceived ongoing erosion of the 800 m section of Wai-o-Taki Bay nature reserve (from the end of Tāhaki Road to the northern bank of Ōmaru Creek), which has only partially completed seawall structures. In the submission, it was perceived that despite extensive seawall protection provided elsewhere in the Tāmaki Estuary, this area remains unprotected, leaving sediment to flow into the estuary and wider Hauraki Gulf. The need for ongoing collaboration and discussion with community groups, including the role of natural coastal processes, coast protection structures and the wider impacts of sediment run-off are noted as a key implementation action.

Feedback clearly advocated that closed sections of the coastal walkway at Wai-o-Taiki Bay should be repaired so they can be safely reopened.



Community values and aspirations

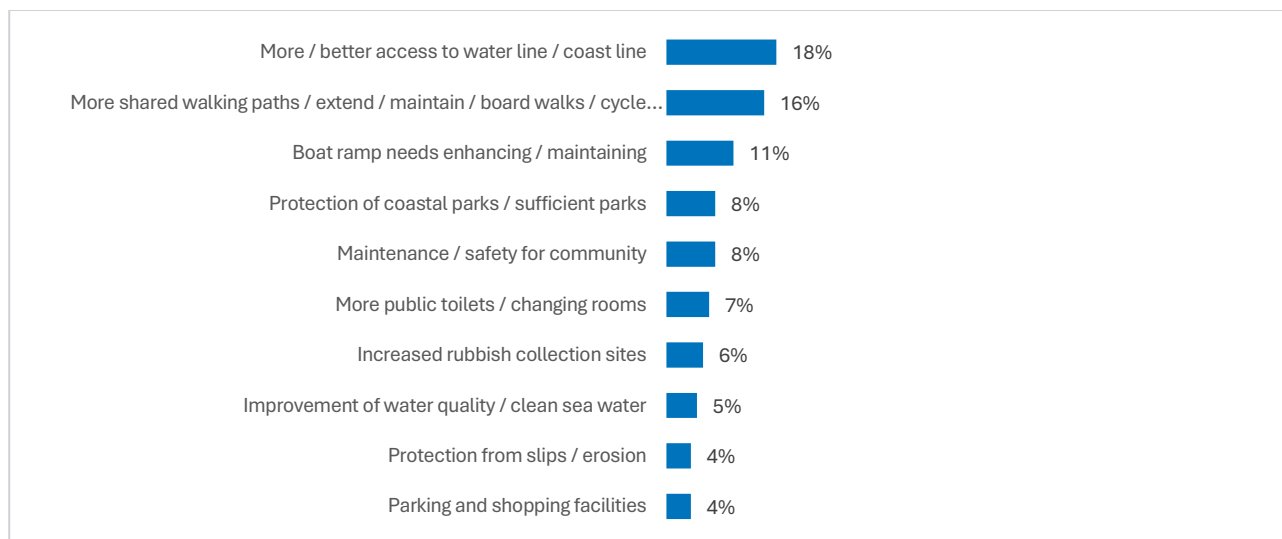
Values for the future

Respondents were asked, when considering overall how they access and use the coastal areas, and what they value about them, what type of values they'd like to see maintained, enhanced, or restored in coastal areas across the Tāmaki Estuary SAP. A broad range of values, aspirations and suggestions were provided. The main themes and topics mentioned were:

- Asset management and maintenance:
 - The need for upgraded and maintained walkways was highlighted, with some paths being difficult for elderly or disabled people. Suggestions included raising walkways to prevent flooding and improving the quality of the paths.
 - There was also feedback about the condition of local roads, indicating a need for better road maintenance.
 - Maintaining and improving coastal seawalls to manage coastal erosion around the coast to protect critical infrastructure, with specific comments highlighting the desire for full reinstatement of native planting, supported by appropriate engineering solutions.
- Ecology and nature-based solutions in coastal management:
 - Respondents highlighted the need to consider shorebird populations across the Tāmaki Estuary, with concerns raised about the impacts of sea-level rise on shorebird roosting and feeding grounds, particularly around Wai O Taiki Reserve.
 - Additionally, the need to consider the impact of sediment run off on marine life and biodiversity was also highlighted as a key consideration.
 - Wai-O-Taiki Nature Reserve received a high degree of feedback, with comments highlighting this reserve as a unique coastal native reserve that supports a rich ecosystem, including 57 species of native birds, along with diverse flora and fauna. Community feedback emphasised that the reserves ecological significance warrants careful protection and integration into future planning.
 - Recognise and collaborate with community groups involved in restoration efforts. Some comments spoke to mangrove overgrowth becoming a significant issue in local waterways, impacting ecological balance and access.
 - While general facilities in the area were appreciated, improvements to water quality are needed to match the standard of amenities.
- Preservation vs. development:
 - Limit overdevelopment along coastlines to preserve natural beauty and public access.
 - Focus on ecological values, historical preservation, and community well-being instead of housing intensification.
- Access and recreational opportunities:
 - Improve walkways along the coast, with comments highlighting the need to see more coastal walkways, cycleways, boat ramps and improvements to watercraft access points.
 - Desire for more family-friendly areas, including playgrounds, picnic spots, shaded seating, and BBQs, to ensure these spaces remain enjoyable for all ages.

Aspirations for the future

Respondents were also asked if they had any aspirations specifically for access, facilities or uses at the coast in the Tāmaki Estuary area. Key themes are discussed above at a high level. In terms of what residents would like to see maintained, enhanced or restored in the Tāmaki Estuary coastal areas, the two highest mentions were for ‘more/better access to water line....’ and ‘more shared walking paths’ The next level down was ‘improvement of water quality’.



Source: AK Have Your Say Tāmaki Estuary Feedback Form. *Do you have any aspirations for access, facilities or uses at the coast in the Tāmaki Estuary SAP area in the future?* (Sample = 129)



Community objectives for the Tāmaki Estuary SAP area

Community feedback received during the period of engagement was collated and reviewed in collaboration with Auckland Council’s Parks and Community Facilities Department, to develop the following high-level objectives:

Coastal connections, use and access	- Coastal infrastructure—including walkways, roads, and seawalls, is more resilient and accessible and existing protection structures are well maintained to prevent erosion, and protecting critical assets. - Coastal walkways, cycleways, boat ramps, and watercraft access points and improved to enhance connectivity, particularly by linking key routes such as West Tāmaki Road to Wai-o-Taiki Nature Reserve.
Social and Cultural	- Recognise, respect, and uphold the deep cultural, spiritual, and historical connections local iwi and communities have with the land and coastline along Tāmaki Estuary by actively involving tangata whenua, communities, and stakeholders as central leaders in conservation, restoration, adaptation decision-making, and implementation. - Develop more family-friendly accessible recreational spaces in proximity to coastal areas, considering playgrounds, picnic areas, shaded seating, and BBQ facilities, for people of all ages. - Collaborate with local communities and local iwi and stakeholders to establish locally meaningful indicators and thresholds that reflect the changing coastal environment and

sea-level rise, to guide informed adaptation decisions, supporting an awareness of changing coastlines and hazard risk across Tāmaki Estuary.

Responding to risk

- Proactively manage risks to key transport networks, popular coastal walkways, critical healthcare facilities and access points to the coast to ensure communities maintain safe and reliable access during and after hazard events.
-

Environmental

- Enhance the ecological health, biodiversity, and natural landscapes (especially at key sites like Wai O Taiki Reserve) across Tāmaki Estuary by prioritising sustainable, nature-based coastal management approaches that address erosion, sedimentation, habitat loss, and water quality—while ensuring ongoing public access and enjoyment of coastal environments and supporting strong community stewardship for present and future generations.
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4**What can we do about it?****Summary of adaptation strategies per unit**

The adaptation strategies are identified in the quick reference guide at the start of the document. The table below lists adaptation strategies for each unit and stretch. Volume 3 provides additional detail on adaptation strategies at a stretch level.

Climate scenarios

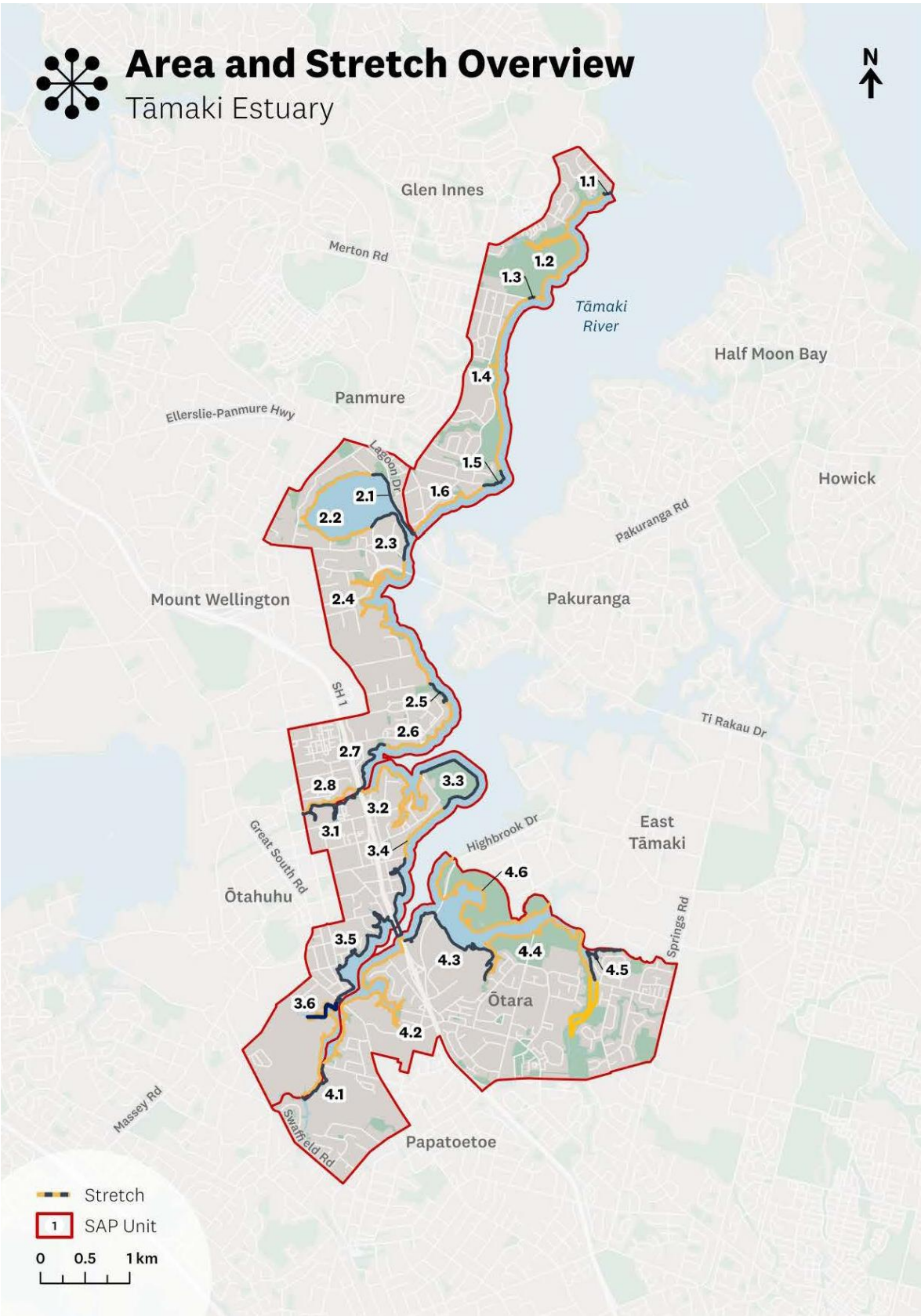
To reflect that exposure and therefore risk will change depending on climate scenarios, necessitating flexibility to change as required, strategies are split across:

- Low (climate) change – sea-level rise
- Moderate (climate) change – sea-level rise
- High (climate) change – sea-level rise.

Scenarios are indicative only and transitions between strategies will be in response to identified changes in conditions at a given location (i.e. signals, triggers and thresholds).

Auckland Council’s adaptation strategies

Coastal adaptation strategies applied to each coastal stretch are described in further detail below:



Icon	Acronym / colour	Adaptation strategy
		No Action
		Maintain
		Protect
		Adaptation Priority

Unit	Stretch	Low	Moderate	High
1: Wai o Taiki & Panmure	1.1: Tahaki Road	Maintain	Maintain	Adaptation priority
	1.2: Wai-o-Taiki & Ōmaru / Point England Park	Maintain	Maintain	Maintain
	1.3: Point England Road	Maintain	Maintain	Maintain
	1.4: Point England Road to Mount Wellington	Protect	Adaptation priority	Adaptation priority
	1.5 Panmure Wharf Reserve	Protect	Adaptation priority	Adaptation priority
	1.6: Kings Road to Lagoon Drive/Pakuranga Road	No Action	No Action	No Action
2: Panmure to Ōtāhuhu	2.1 Lagoon Drive to Cleary Road end	Protect	Protect	Protect
	2.2: Panmure Basin to Cove Lane	Maintain	Maintain	Adaptation priority
	2.3 Cove Lane end to Waipuna East Road end	Maintain	Maintain	Maintain
	2.4 Waipuna East Reserve to Ian Shaw Park	Maintain	Maintain	Maintain
	2.5 Ian Shaw Park & Flat Rock Reserve north	Maintain	Adaptation priority	Adaptation priority
	2.6 Panama Road south	No Action	No Action	No Action
	2.7 Flat Rock Reserve (play facilities & SH1 motorway connection)	Maintain	Maintain	Maintain
	2.8 Te Tō Waka Ōtāhuhu Portage	No Action	No Action	No Action

3 Ōtāhuhu	3.1: Te Tō Waka Ōtāhuhu Portage to SH1 motorway	No Action	No Action	No Action
	3.2 SH1 motorway to Taamaki ki Taatahi / Seaside Park	No Action	Maintain	Maintain
	3.3: Taamaki ki Taatahi / Seaside Park	Protect	Protect	Adaptation priority
	3.4: Taamaki ki Taatahi / Seaside Park to Huia-tau / Schroffs Beach Reserve (Avenue Road)	Maintain	Maintain	Maintain
	3.5 Frank Grey Place to The Grange Golf Course	No Action	Maintain	Maintain
	3.6: Grange Auckland Golf Course	No Action	No Action	No Action
4 Ōtara	4.1: Grange Golf Course to Grange Road	No Action	No Action	No Action
	4.2 Grange Road to east of SH1 motorway	Maintain	Maintain	Maintain
	4.3 Highbrook industrial redevelopment area	No Action	No Action	No Action
	4.4 : Ngāti Ōtara Park	Maintain	Maintain	Maintain
	4.5 Upper Ōtara Creek (Johnstone Road to East Tamaki Road)	No Action	No Action	No Action
	4.6 Highbrook Park	Maintain	Maintain	Maintain

4.1 SAP Monitoring and implementation

Implementation of this SAP is a live and developing process which will require continued collaboration across multiple Auckland Council departments and Auckland Council-controlled organisations and entities. This will be undertaken alongside ongoing engagement with iwi to ensure that iwi have a partnership/co-management role in the project design, development, and implementation phases. This is a live document which will be kept updated by Auckland Council to reflect any developments in the ongoing implementation of the SAP.

The SAP area reports are currently anticipated to be reviewed on a five-yearly cycle. This will enable updated information to become available and be appropriately considered. Several specific factors may trigger a review or update of this SAP including review requested by iwi and national or regional legislative or policy changes.

Coastal monitoring activities in the Tāmaki Estuary SAP area will be considered in implementation to inform signals triggers and thresholds. A more detailed discussion regarding implementation of the SAP Programme can be found in Volume 1.

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