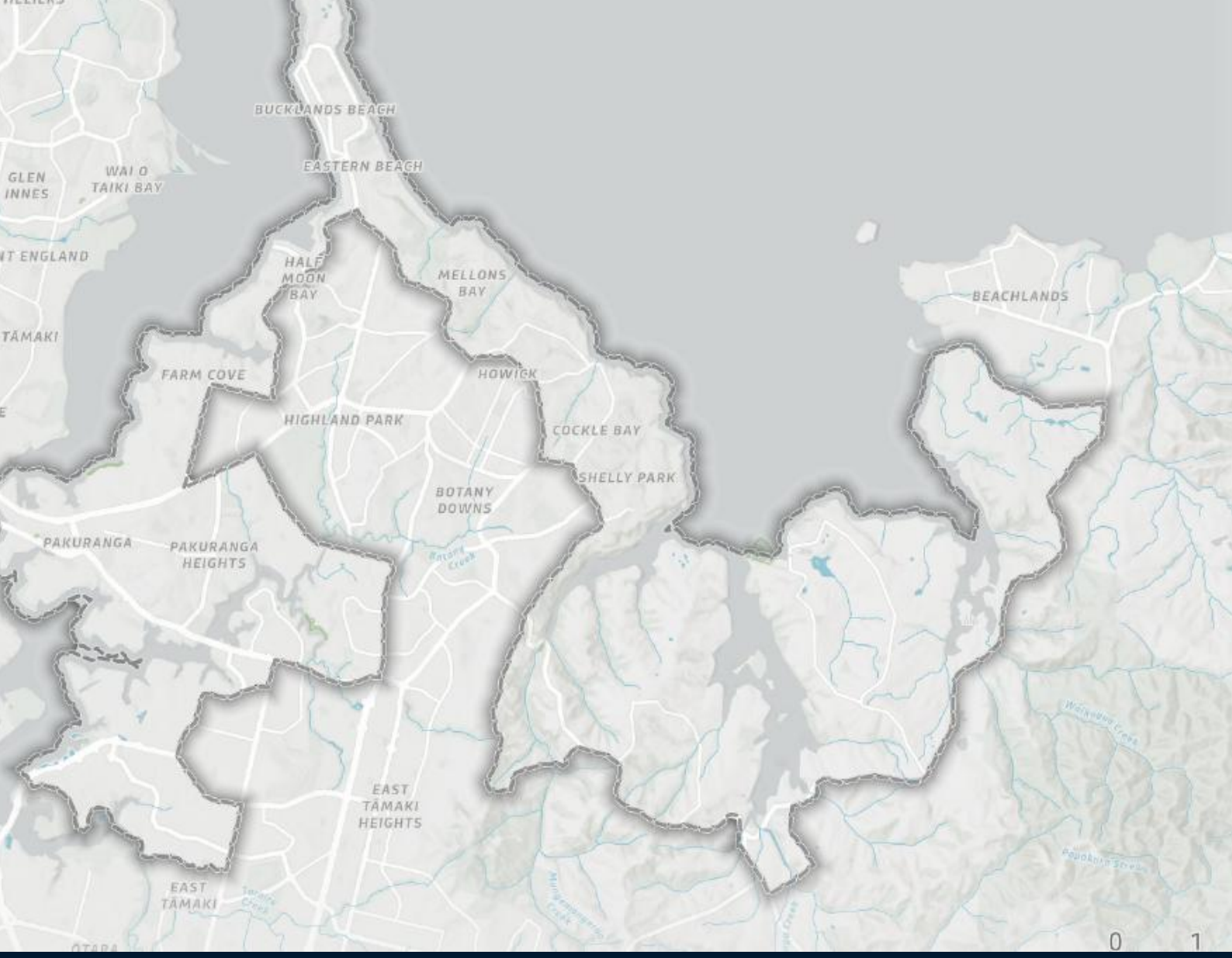


Ngā mahere whakaurutau mō te takutai

Shoreline Adaptation Plan

Highbrook to Whitford

Volume 2: Introduction to the SAP area

August 2025, Version 1.0

aucklandcouncil.govt.nz

DRAFT Shoreline Adaptation Plan

Highbrook to Whitford

Volume 2: Introduction to the SAP area

DRAFT: *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 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.*

September 2025

Auckland Council

ISBN (PDF)

Reviewed and recommended for publication by:

Name: Natasha Carpenter

Position: Head of Coastal Management, Engineering, Assets & Technical Advisory, Auckland Council

Approved for publication by:

Name: Paul Klinac

Position: General Manager Engineering, Assets & Technical Advisory, Auckland Council

Recommended citation:

Auckland Council (2025). Shoreline Adaptation Plan Highbrook to Whitford Volume 2: Introduction to the SAP area

Acknowledgements

The SAP team would like to acknowledge and thank all iwi and their representatives and Kaitiaki who have been involved in developing this document and have engaged with the SAP team throughout the development of this document.

The document was prepared by Engineering, Assets and Technical Advisory, and supported by advice from Healthy Waters, Parks and Community Facilities and numerous other Auckland Council departments including Eke Panuku, Auckland Transport and Watercare Services. Ecomatters and the Beautification Trust have been both community partners and consultants to the Auckland Council team supporting inputs and making community connections.

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 Highbrook to Whitford 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 Highbrook to Whitford 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 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.

Contents

Figures

Tables

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.

Term	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.
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.

Term	Definition
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, pubic-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 Waitematā. 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 Shoreline Adaptation Plans (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 outer Hauraki Gulf Islands
- Āwhitu
- Beachlands and East
- Central Auckland
- Highbrook to Whitford
- Kaipara Harbour Moana
- Manukau Harbour East
- Manukau Harbour North
- Manukau Harbour South
- Ōrākei to Karaka Bay
- Pahurehure Inlet
- Pākiri to Matheson Bay
- Snells Beach to Ōrewa
- Tāmaki Estuary
- Ti Point to Sandspit
- Waiheke Island and the inner Hauraki Gulf Islands
- Waimanawa Little Shoal Bay mini SAP
- Waitematā Harbour West
- Weiti Estuary to Devonport Peninsula
- Whangaparāoa
- Whatipu to South Head

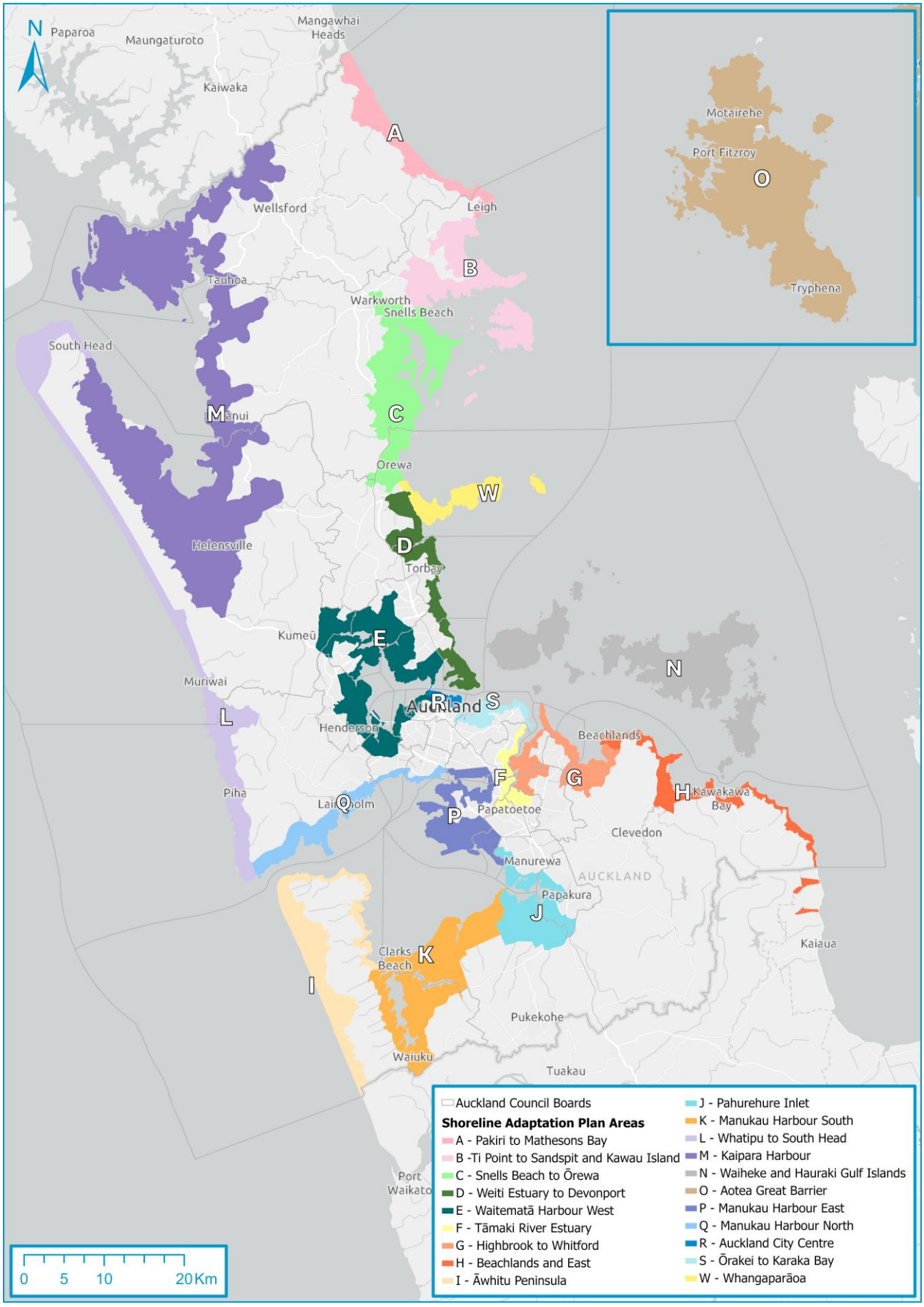
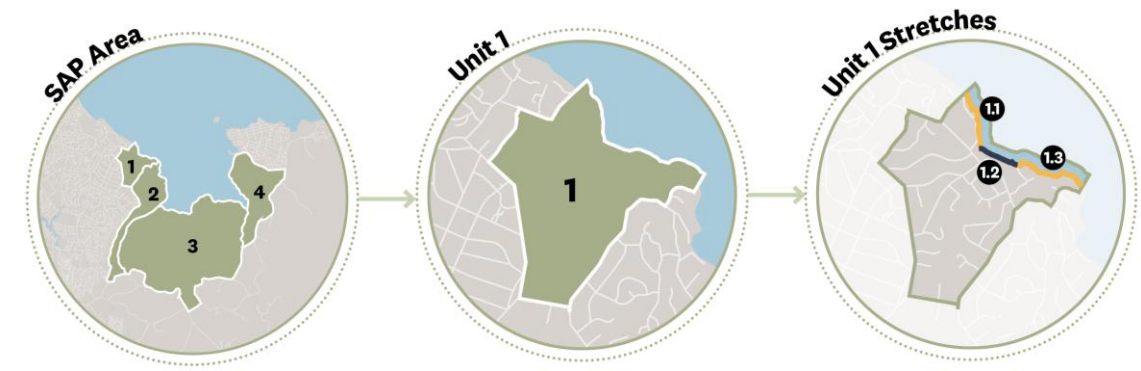


Figure 1-1: Regional overview of Shoreline Adaptation Plans

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.

	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 Highbrook to Whitford SAP is located in the east of Auckland and includes coastal communities across Farmcove, Pakuranga, Half Moon Bay, Bucklands Beach, Mellons Bay, Cockle Bay, Shelly Park, Somerville and a portion of Howick, extending south to the rural community of Whitford and Pine Harbour.

The eastern coast of Howick is predominately a cliff face with beaches in lower lying and embayed areas. The SAP area extends along the coast of the Whitford Embayment and includes the Mangemangeroa, Turanga and Waikopua creeks. Most of the shoreline has extensive intertidal areas of rock reef systems extending 200 m to 400 m from the coastline which is a relatively sheltered coastal environment being protected by offshore islands. The area attracts visitors due to the network of walking tracks, beaches and estuarine reserves. Auckland Council-owned land within this SAP consists of a diversity of park land and coastal reserves as well as a range of assets including roads, parking areas and recreational amenities, which are typically clustered around the residential communities along the coast.

Other assets along the Highbrook to Whitford coastline are discussed in further detail in Section 3.0, detailing non-exhaustive summaries of:

- Facilities to support the access to, and use and enjoyment of local park areas and beach reserves including parking areas, toilets and playgrounds.
- Walking tracks and associated infrastructure including Eastern Beach, Mangemangeroa Rotary Loop Path, Mangemangeroa Shelly Park Beach Path, Mangemangeroa Kōwhai Path and Turanga Reserve - Wade Walkway.
- Closed landfills (i.e. Potts Road Esplanade Reserve, Pōhutukawa Park and Mangemangeroa Bridge).
- Coastal infrastructure such as boat ramps and jetties.
- Water infrastructure including wastewater pump stations (i.e. Mellons Bay, Howick Beach, Cockle Bay, The Sandspit and Pōhutukawa Avenue Esplanade Reserve).
- Community buildings and sports clubs, which are primarily concentrated along the coastline. These include, but are not limited to the Howick Sailing Club, Cockle Bay Scouts, Shelly Park Cruising Club, and Sea Scouts.

For the purposes of adaptive planning, the Highbrook to Whitford area comprises 9 units and 59 stretches. Most of the SAP area can be characterised as suburban/ urban, except for Whitford and Beachlands which are more rural (but may urbanise further as future development plans progress).

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).

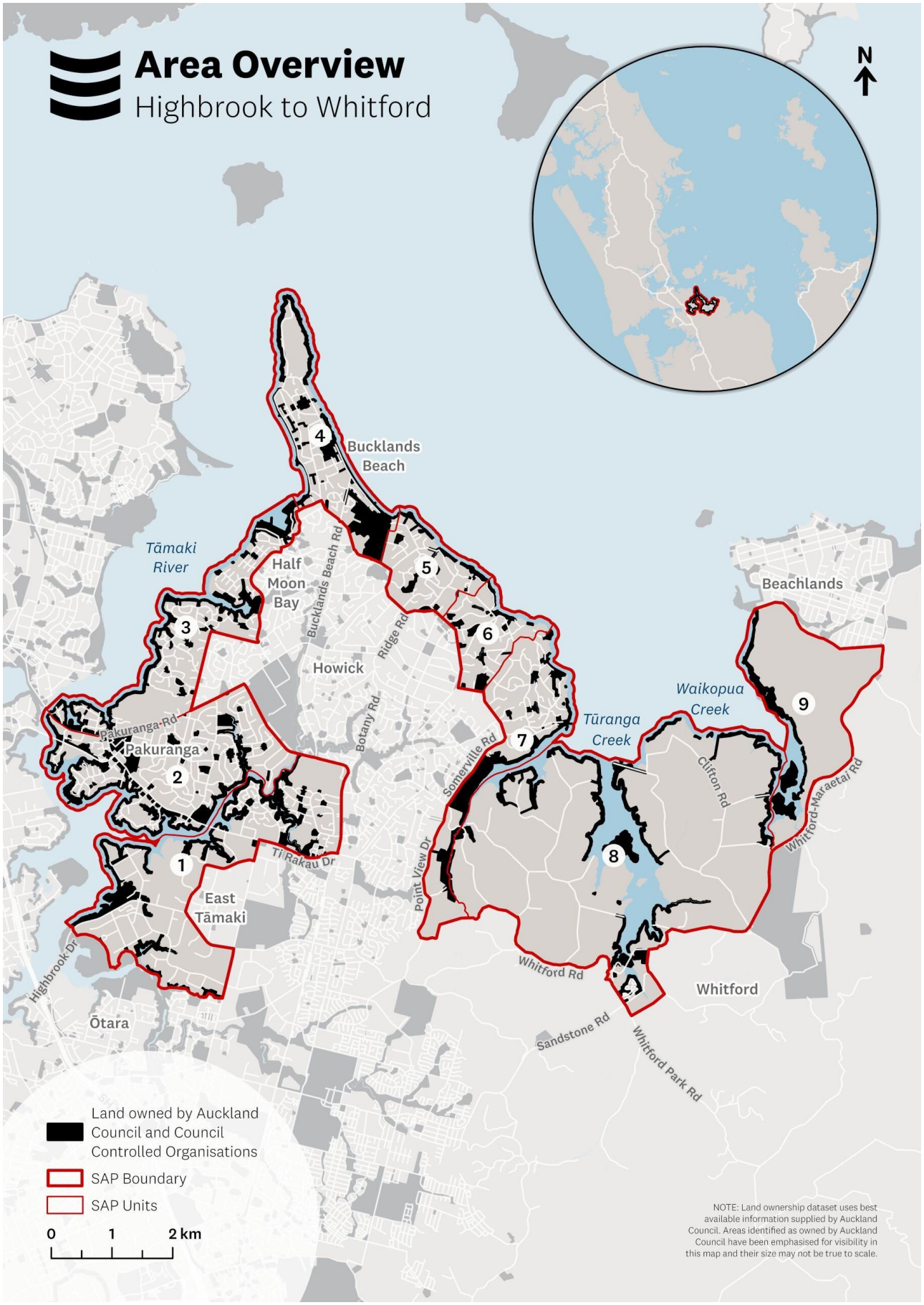


Figure 1-1: Highbrook to Whitford SAP area overview

2 What's 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

The SAP area of Highbrook to Whitford covers the eastern shoreline of the Tāmaki Estuary, and a section of Tāmaki Strait's shoreline.

The Tāmaki Estuary inlet shoreline covers approximately 13 km and can be broken down into three main sections:

The outer estuary	• Extending from the entrance to Tāmaki Strait to the sandspit at Tahuna Torea Nature Reserve (included within the Ōrākei to Tahuna Torea SAP area) and Half Moon Bay Marina (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, Middlemore, 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 sandspit (beyond this SAP area), the inner Tāmaki is predominantly a low energy setting. The sheltering effects 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. Vessel wake generated from private vessels and commercial ferries can increase the wave energies that the Tāmaki Estuary shoreline is exposed to. These shorter period waves can 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.

This SAP also covers a significant, approximately 40 km long, portion of the coastline of Tāmaki Strait, situated to the east of Auckland and in the lee of the Hauraki Islands. This has a relatively sheltered coastal environment with fetch distances limited by the offshore islands including Rangitoto, Motutapu and Waiheke. However, combined with the high degree of suburban

development (particularly between Eastern Beach and Shelly Beach), exposure to coastal hazards and the associated impacts of climate change are ongoing.

The coastal topography of the area is characterised by a (comparatively recently) submerged area of low relief terrain. This has been modified by coastal erosion to give the present-day coastline. Along the Waitematā Group terrain from Tāmaki River to Cockle Bay, this resulted in the development of even lines of sheer cliff fronted by extensive wave-cut platforms. The result of selective erosion along the lines of cliffs is the formation of pocket beaches and zones of marked contortion of the sandstone strata, and in the cutting of small sea caves along fault lines or in the weaker members of highly tilted strata (Firth, 1930). There are also three creeks within the area: Mangemangeroa, Tūranga and Waikopua.

Due to the presence of the wave-cut platforms, most of the shoreline has extensive intertidal areas of rock reef flats or reef systems that extend 200 m to 400 m from the coastline. The seabed then slopes gently to depths of around 4 to 5 m below Chart datum.

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 area, 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 SAP extent between Highbrook and Whitford includes several lower-lying beaches, embayments and estuarine areas that are exposed to coastal inundation and sea-level rise impacts. This includes Farm Cove, Half Moon Bay (including the adjoining Rotary Walk), Little Bucklands Beach, Bucklands Beach, Eastern Beach, Howick, Cockle Bay and areas of Whitford. Eastern Beach, situated on the eastern side of Musick Point includes a notable extent of road frontage running parallel to the coast that is exposed to inundation during coastal storm events. With ongoing sea-level rise impacts, the extent and frequency of coastal inundation is predicted to increase over time, with low-lying areas particularly susceptible to inundation.

Figure 2-2 below shows the resulting coastal flooding hazard extents at the Highbrook to Whitford 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).

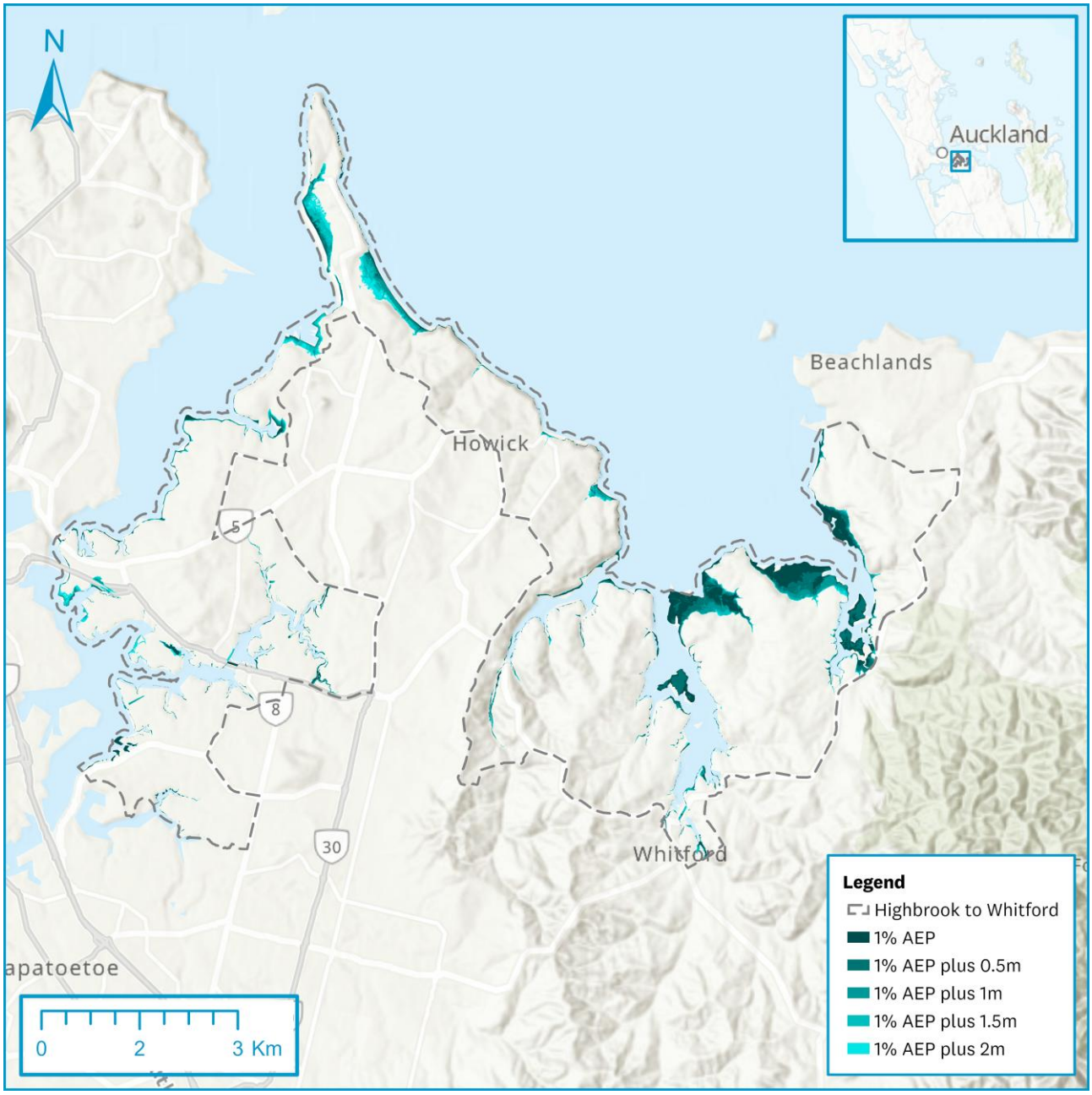


Figure 2-1: Coastal Inundation (CI) for 1% AEP storm surge for present day and with 0.5 m, 1 m and 2 m sea-level rise for Highbrook to Pine Harbour

Coastal erosion (including sea-level rise)

The areas along the Highbrook to Whitford 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 along the open west coast varies between the soft beach/dune coast extents and the harder cliffed headlands that intersperse them. Erosion predictions along the unconsolidated beach shorelines are gradual and increase over time with the impacts of ongoing sea-level rise. For example, at Eastern Beach approximately 7 m of the coastline is predicted to be susceptible to erosion from the current vegetation line by 2050, extending to approximately 18 m by 2130 (assuming no protection structures and the RCP8.5 climate change scenario).

Erosion rates of this SAP area's cliffed extents are more substantial and are further influenced by the topography (cliff height) and geology of the area that ultimately control the stable slope angles and extent of landward retreat required for them to be achieved. For example, along Marine Parade Esplanade Reserve, the East Coast Bays Formation cliffs are susceptible to up to 80 m of instability by 2050 but with limited ongoing erosion due to future sea-level rise effects acting at the cliff toe.

In 2018 a study was commissioned by Auckland Council (Tonkin & Taylor 2018)[1] which explored the erosion issues and provided an options analysis for Bucklands Beach Little Bucklands Beach and Cockle Bay. This report can be referred to for a more comprehensive explanation of the coastal setting and options identified in response to the erosion issues at these specific coastal locations.

[1] Tonkin and Taylor, 2018, Bucklands Bach, Little Bucklands and Cockle Bay Erosion issues and options analysis. Accessed August 2025 Agenda of Howick Local Board - 18 February 2019

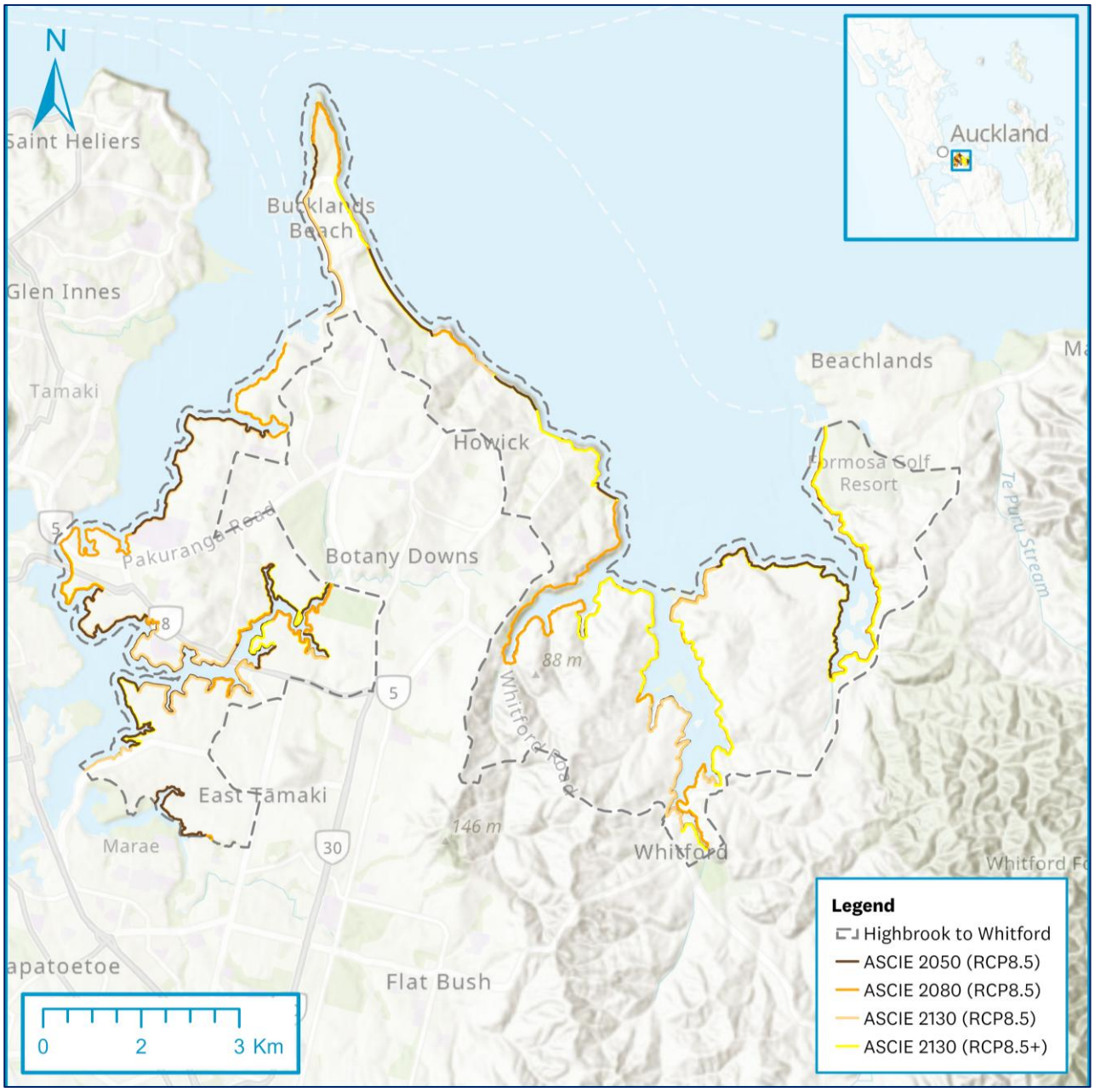


Figure 2-2: Coastal Instability and erosion susceptibility for 2050, 2080 and 2130 considering RCP4.5 and RCP8.5 emission scenarios for Highbrook to Pine Harbour

Catchment flooding and climate change

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 map below highlights that there are several areas exposed to flooding within this SAP area including Eastern Beach, Howick Beach, Cockle Bay and the more significant floodplains in Whitford.

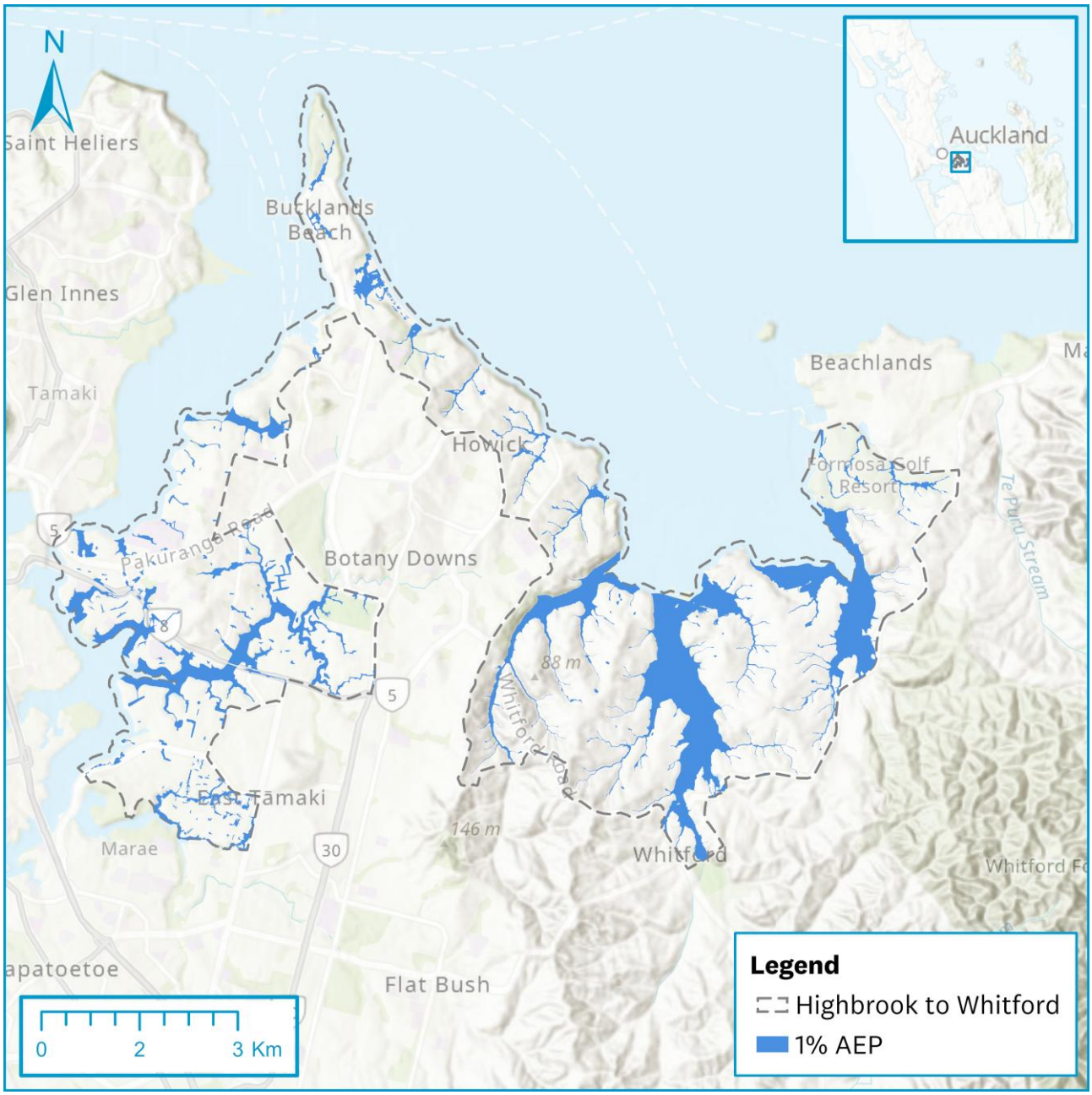


Figure 2-3: Flood Plain areas 1% AEP hazard, for Highbrook to Pine Harbour, Auckland Council Flood Viewer.

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.

2.1 Current coastal management practices

An overview (of existing current coastal management and key features across the Highbrook to Whitford SAP is summarised in the table (non – exhaustive list) below, noting the extensive coastal edge of this coastline. Detailed discussion of the management interventions is included at a unit scale in *Shoreline Adaptation Plan Highbrook to Whitford Volume 3: Adaptation Strategies*.

Coastal protection

- The headland reserves at Tiraumea Reserve and Riverina Reserve are armoured with seawalls made of grouted rock, tiered gabion basket and tipped rock.
- Seawalls, sandbags, groynes, rock revetment, rock rip-rap armours the coastline from Half Moon Bay Marina to Bucklands to Eastern Beach, which includes Little Bucklands Beach, Granger Point, and Bucklands Beach.
- Seawalls constructed from tiered gabion baskets, mudcrete and rock armour revetment protect the coastal margin of the Pakuranga Rotary Walkway.
- Various forms of seawalls formed of concrete, grouted basalt rock and brick extend along Howick Beach.
- Mellons Bay: A two-tiered timber seawall and section of rock revetment protects the carpark and reserve.
- Cockle Bay: There is a vertical concrete seawall armouring the reclamation at the stream mouth with tipped rock toe armour.
- Whitford Wharf Road Reserve: A retaining wall along the edge of Tūranga Creek Channel is adjacent to the boat ramp.

Nature-based options

- Dense mangrove habitat fringes the many creeks branching from Tāmaki River, and within the Mangemangeroa, Turanga and Waikopua Creeks, providing a natural buffer from coastal processes.

Sand replenishment/ soft or nature based engineering

- Large-scale beach renourishment with imported sand was previously undertaken at Eastern Beach in 2005.
- Operational maintenance sand transfers ranging from small to large-scale transfers have been undertaken at Eastern Beach and Cockle Bay to maintain beach levels and provide a natural buffer for dissipating wave energy.

Some of the key features of this coastline are depicted below.

The Pakuranga Rotary Walkway is a popular coastal accessway along the Tāmaki River. Seawalls constructed from a range of tiered gabion baskets, mudcrete and rock armour revetments protect the coastal margin.

Pakuranga Rotary Path – view back to Maungarei (Auckland Council)

Large-scale beach renourishment with imported sand was previously undertaken at Eastern Beach in 2005. Periodic sand-transfers are completed to maintain beach levels along the beach in response to longshore drift.

View from the northern end of Eastern Beach (Auckland Council)

Mangemangeroa Shelly Park Beach Path includes a range of bush clad gravel tracks and boardwalk sections. The creek is fringed by mangrove habitat.

Full tide view from Archies Lookout (Auckland Council)

The Whitford path follows the western side of Tūranga Creek.

Viewing platform on the Whiford Path (Auckland Council)

2.2 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 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 Highbrook to Whitford 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	High	High	High	Moderate	Moderate	Moderate	High	High	Very High	Moderate	Moderate	High
	Inundation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Very High	Very High	Very High	Low	Low	Low
2	Erosion	Low	Moderate	Moderate	Low	Moderate	Moderate	Very High	Very High	Very High	Moderate	Moderate	High
	Inundation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Very High	Very High	Very High	Low	Low	Moderate
3	Erosion	Moderate	Moderate	High	High	High	High	High	High	Very High	High	High	Very High
	Inundation	Moderate	Moderate	Moderate	Very High	Very High	Very High	Very High	Very High	Very High	Moderate	Moderate	Moderate
4	Erosion	High	High	High	Moderate	Moderate	Moderate	High	High	High	Moderate	Moderate	High
	Inundation	Moderate	Moderate	Moderate	Moderate	High	High	Moderate	High	High	Low	Moderate	High
5	Erosion	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Moderate	High	High	High
	Inundation	Low	Low	Low	Very low	Low	Low	Very low	Very low	Very low	Low	Low	Moderate
6	Erosion	Moderate	Moderate	Moderate	High	High	High	Moderate	Moderate	Moderate	Moderate	Moderate	High
	Inundation	Low	Low	Low	High	High	High	Low	Low	Low	Low	Moderate	Moderate
7	Erosion	High	High	High	High	High	High	Moderate	Moderate	High	High	High	High
	Inundation	Moderate	Moderate	Moderate	High	High	High	Moderate	Moderate	Moderate	Low	Moderate	Moderate
8	Erosion	High	Very High	Very High	Very High	Very High	Very High	High	Very High	Very High	Low	Low	Low
	Inundation	High	High	High	Very High	Very High	Very High	High	Very High	Very High	Low	Low	Low
9	Erosion	Moderate	Moderate	Moderate	Very low	Very low	Very low	Very low	Very low	Very low	Very low	Very low	Very low
	Inundation	High	High	High	Very low	Very low	Very low	Low	Low	Moderate	Very low	Very low	Very low

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 consider 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 with different ownership, management, or interests.

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

Over **400** ha of park and reserve land & over **1500** km of road infrastructure

Over **140** Auckland Council-owned buildings

12 closed landfills

The figure overleaf shows the general location of Auckland Council land and assets located within the Highbrook to Whitford 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

Highbrook to Whitford

Auckland Council land, parks and beaches

The Highbrook to Whitford SAP includes diverse coastal environments, including beaches and estuaries. Key beaches located between Highbrook Park and the entrance to Mangemangeroa Creek include but are not limited to: Bucklands Beach, Half Moon Bay, Eastern Beach, Mellons Bay, Howick Beach, Cockle Bay, and Shelly Park Beach. Eastern Beach is particularly notable for its extensive length and boating facilities within the area. There are a range of amenities available at beaches across the SAP area including restrooms, boat ramps, picnic areas, walking paths, playgrounds and changing rooms, boating facilities and picnic areas are provided for at most of these beaches.

The beaches within this area are also home to several marine clubs such as the Howick Sailing Club, Sea Scouts and the Shelly Park Cruising Club. Additionally, the area includes three creeks: Mangemangeroa, Tūranga and Waikopua, which are primarily used for private boat moorings and also offer scenic walking paths.

Some key coastal parks and beaches include the following (non-exhaustive list):

- Bleakhouse Road Promontory Reserve
- Bramley Drive Reserve Beach
- Browns Avenue Playground
- Bucklands Beach esplanade (includes Little Bucklands, Granger Point Bucklands Beach)
- Bucklands Beach and Reserve
- Burswood Park
- Chisbury Terrace Reserve
- Cockle Bay Domain
- Cockle Bay Reserve
- Compass Point Reserve
- Corta Bella Place Reserve
- Eastern Beach Reserve (including Eastern Beach Playground Park and Eastern Beach Caravan Park)
- Edgewater Drive Esplanade Reserve
- Ennis Avenue Reserve (closed landfill)
- Farmer Cove Reserve
- Fortyfoot Park
- Frank Nobilo reserve (Pebble Beach Pl Res)
- Frank Nobilo Esplanade Reserve
- Fremantle Place Esplanade Reserve
- Glenoaks Reserve
- Half-moon Bay Beach
- Hayley Lane Reserve
- Highbrook Park
- Hope Farm Avenue Esplanade
- Howick Beach Reserve
- Little Bucklands Beach
- Macleans Park
- Mangemangeroa Reserve
- Mattson Road Esplanade Reserve
- Mellons Bay Park
- Mellons Bay Bush Reserve
- Millen Avenue Esplanade Reserve (closed landfill)
- Musick Point Esplanade Reserve
- Pakuranga Country Club Esplanade
- Pandora Park Playground
- Pōhutukawa Park
- Raewyn Place Esplanade Reserve
- Riverina Place Esplanade Reserve (closed landfill)
- Riverhills Park sports fields (closed landfill)
- Rogers Park
- Rotary Reserve
- Star of the Sea Reserve
- Stonedon Drive Esplanade Reserve
- The Sandspit Reserve
- Trugood Esp Reserve
- Tāmaki Bay Drive Reserve (closed landfill)
- Te Naupata Reserve
- Tiraumea Drive Reserve (closed landfill)
- Waikitiroa Reserve
- Wakaaranga Creek Reserve
- Wharf Road Reserve
- Whitford Domain
- Whitford Village Green
- William Bryan Drive Reserve
- Wikitoria Reserve

Water Infrastructure

As a more urbanised area of the Auckland region, the Highbrook to Whitford 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 Units 1, 2, 3, and 7.

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 but are not limited to:

- Belmere Rise
- Bramley Drive pump station
- Burswood Drive pump station
- Cockle Bay pump station
- Cryers Road pump station
- Edgewater Drive pump station
- Half Moon Bay Marina pump station
- Highbrook Park pump station
- Howick pump station
- Grange Point pump station
- Fremantle Place pump station
- Manor Park pump station
- Pōhutukawa Ave pump station
- Pump stations located in Pakuranga Road, Pakuranga North and Pakuranga South
- The Parade pump station
- Storage tanks at Mellons Bay and Granger Point Sandspit Road pump station (Shelly Beach)
- Stonedon Drive pump station
- Tāmaki Bay Drive pump station

Stormwater assets include piped networks, stormwater management devices such as ponds and the management of watercourses which discharge to the coast. In addition to the piped infrastructure listed above, numerous stormwater outfalls are located at coast, with some of the more significant outfalls located at Bucklands Beach, Eastern Beach, Mellons Bay and Howick. Streams at Eastern Beach and Cockle Bay have been modified with stream training walls at the beach outlet to help mitigate erosion.

Facilities and structures

The Highbrook to Whitford coastline includes a range of key facilities and infrastructure near to the coast. This includes facilities and assets that support social activities, interactions, and wellbeing within the community. Understanding the role of infrastructure within this area will enable them to be better protected by asset owners.

A non-exhaustive list of key facilities and structures are listed below, noting some of these facilities are tenant-owned buildings on community ground leases, and this also includes closed landfills within the area.

- Anchorage Park Community House
- Ara Tai Marina Fitness Howick Coastguard
- Bucklands and Eastern Beach War Memorial Hall
- Cockle Bay Scouts
- Farm Cove Trust Sailing Club
- Howick Sailing Club (tenant owned)
- Highbrook Water Sports Facility (tenant owned)
- Nixon Park Hall (centre)
- Numerous toilet blocks and changing blocks in reserves
- Riverhills Park sports fields
- Shelly Park Cruising Club facilities
- Whitford Community Hall
- Windross House

Roads and access

The SAP area is less well serviced by bus routes than typical urbanised areas of Auckland, and there are no direct bus routes to some of the key beaches. Several arterial routes including (but not limited to) Pakuranga Road, Bleakhouse Road and Bucklands Beach Road provide access to the coastal areas and wider SAP area, and parking is available at all main beaches. SH1 also transverses sections of the Highbrook to Whitford coast, a critical transport route connecting to numerous arterial roads which provide access to the coast and coastal communities.

A high-level overview of key road connections providing access to the coast within the Highbrook to Whitford SAP is as follows, noting that this is not an exhaustive list:

- Bairds Road
- Beach Road
- Botany Road
- Bramley Drive
- Burswood Drive
- Cascades Road
- Clovelly Road
- Churchill Road
- East Tāmaki Road
- Fisher Parade
- Gilbert Road
- Gossamer Road
- Granger Road
- Helebys Road
- Lady Fisher Place
- Mellons Bay Road
- Pah Road
- Pakuranga Road
- Paparoa Road
- Prince Regent Drive
- Rangitoto View Road
- Riverina Place
- Shelley Beach Parade
- Somerville Road
- State Highway 1
- The Esplanade (Eastern Beach)
- The Parade (Little Bucklands Beach and Bucklands Beach)
- Ti Rakau Drive
- Turanga Creek Road
- Wades Road
- Waiouru Road
- Whitford-Maraetai Road

Access to the coast

As indicated in the section above, the Highbrook to Whitford SAP area features diverse coastal environments, creeks and beaches. There are several ways of accessing beaches and coastal amenities throughout this SAP area. In general, the coast is more easily accessible in Units 4-7, and less accessible in Units 8 and 9 where there are fewer beaches and the surrounding areas become more rural in nature.

Noting that this is not an exhaustive list, key points of access to the coast via paths and walking trails include:

- Bramley Reserve Walkway
- Bucklands Beach to Half Moon Bay Walkway
- Bucklands Domain and Rogers Park walking track
- Clovelly Road Walkway
- Cockle Bay Walkway
- Compass Point Walkway
- Golflands Loop Path
- Macleans Park Walkway
- Mangemangeroa Kōwhai Path
- Mangemangeroa Shelly Park Beach Path
- Mangemangeroa Rotary Loop Path
- Musick Point Path
- Pakuranga Creek, and Highbrook Park pathways
- Pakuranga Rotary Reserve Walkway
- Pōhutukawa Avenue Path (pedestrian access to private properties)
- The Eastern Beach Path
- Tūranga Creek Path
- Wakaaranga Creek Reserve Walkway
- Whitford Path

Harbour access

The Highbrook to Whitford SAP 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. 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. It is also important to note here that the Half Moon Bay Marina is located within this SAP.

Water access is provided through the following boat ramps/ coastal infrastructure (non-exhaustive list):

- Ara Tai Esplanade Reserve boat ramp(s)
- Bramley Drive Reserve boat ramp(s)
- Bucklands Beach boat ramp
- Cockle Bay boat ramp
- Dayspring Way Esplanade Reserve wharf
- Eastern Beach boat ramp
- Granger Point boat ramp and boat haul-out facilities
- Half Moon Bay all-tide boat ramps
- Howick Beach boat ramp(s)
- Highbrook Watersports Park (boat ramp and pontoons)
- Millen Ave Esplanade Reserve (kayak landing)
- Strathfield Lane Esplanade Reserve jetty (boat club)
- The Sandspit slipway (boat club)
- Tiraumea Reserve (small vessel launching facilities)
- Whitford Wharf Road Reserve boat ramp

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 Highbrook to Whitford 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 Highbrook to Whitford 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 Highbrook to Whitford SAP, iwi groups who have an interest in this SAP area 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 Interim Mana Whenua Kaitiaki Forum. In no particular order of relevance, those who whakapapa to the area and/or have expressed an interest in the Highbrook to Whitford SAP kaupapa include:

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

Throughout the engagement process, Auckland Council has been working with respective iwi representatives to provide individual iwi authored 'Cultural Statements' and/or cultural commentary to inform the understanding of specific and wider cultural values, interests and associations with the coastal environment and the adjoining whenua and to guide the selection of adaptation approaches for each of the stretches set out within this SAP.

It is critical to note that each iwi is the kaitiaki (guardian) of 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 the site-focused concept/detailed design and development processes. This will take place through direct engagement with each iwi group as part of the implementation of this SAP, noting that it is fundamental that a partnership approach is applied to coastal management within each specific coastal stretch. Failure to do so has the potential to result in significant adverse cultural impacts.

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 Highbrook to Whitford 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 principles 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 Highbrook to Whitford SAP.

Ngāi Tai ki Tāmaki

The rohe boundary of Ngāi Tai ki Tāmaki includes the area to which this SAP applies to being Highbrook to Whitford SAP, noting this coastline of high cultural value and significance to Ngāi Tai ki Tāmaki, featuring Te Naupata (Musick Point)[2]. The commentary included below outlines the aspiration and processes for fostering meaningful engagement with Ngāi Tai ki Tāmaki as the SAP

[2] https://www.govt.nz/assets/Documents/OTS/Ngai-Tai-ki-Tamaki/Ngai-Tai-ki-Tamaki-Documents-Schedule-Nov-2015.pdf

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; a statement in response to the SAP programme is anticipated. The intention is that this statement will set out 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 interests of the Marutūāhu confederation as set out in the Marutūāhu Collective Deed of Settlement Summary[3], the SAP team will continue to work collaboratively with the Marutūāhu collective to reflect this statement across the regional SAP Programme. 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 Pāoa

The SAP team is currently working with Ngāti Pāoa on various SAP plans within their rohe, including through the development of the Waiheke and Ōrākei to Tahuna Torea, with the aim of gathering Ngāti Pāoa feedback on the SAP programme and the individual plans. This ongoing partnership has extended to the development of the Highbrook to Whitford SAP, noting that Ngāti Pāoa has expressed interest in specific aspects of the Highbrook to Whitford 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 Pāoa for input into the implementation of the SAPs for the Highbrook to Whitford area and other SAPs of interest within their rohe.

Ngāti Tamaterā

The SAP team is currently working with Ngāti Tamaterā on various SAP plans within their rohe, 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 Highbrook to Whitford SAP, noting that Ngāti Tamaterā has expressed interest in specific aspects of the 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 Tamaterā for input into

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

the implementation of the SAPs for the Highbrook to Whitford area and other SAPs of interest within their rohe.

Ngaati Whanaunga

Over the course of the SAP programme, the SAP team had the opportunity to work with kaitiaki representatives from Ngaati Whanaunga through the development of various SAPs. Over the 2024 - 2025 calendar year the SAP team has continued to work 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.

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.

> Whakatauakii 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 awa[4] 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:

[4] 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.

  - To enhance coastal and marine habitats: regeneration of wetlands, use of mangroves as nature-based solutions and recognize their role in ecosystem services.
- 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[5Error! Bookmark not defined.]. Further to the principles above, Ngaati Whanaunga s eek to be included in any decision-making as part of the SAP kaupapa.

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 Highbrook to Whitford hold great significance to Ngāti Maru. In Tāmaki, Ngāti Maru along with other the Marutuahu 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. Ngāti Maru history has that 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.

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 Highbrook to Whitford SAP, noting that Te Patukirikiri has expressed interest in specific aspects of the SAP that relate to their rohe.

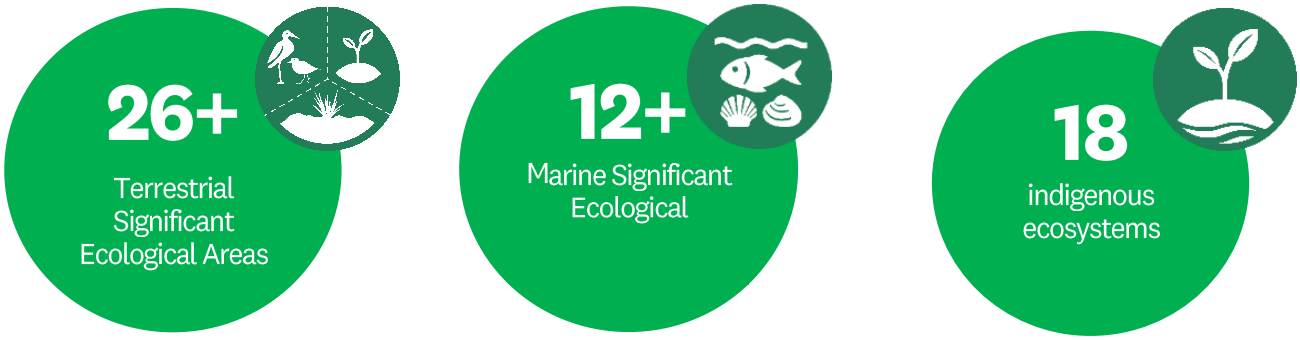
Multiple hui have been undertaken and a cultural statement in response to the SAP programme is anticipated. The SAP team will continue to work collaboratively with Te Patukirikiri to have input into the implementation of the SAPs for the Highbrook to Whitford area and other SAPs of interest within their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

Reflecting on the above, this section of the report serves as a "holding statement" for Te Patukirikiri.

---

[5] 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.

3.4 Ecological context



Ecosystems and significant ecological areas

The Highbrook to Whitford area includes a relatively open coastline within the Hauraki Gulf and, importantly, the Whitford Embayment and associated mangrove-lined estuaries namely, the Tūranga, Waikopua and Mangemangeroa creeks. Despite being located close to the city centre, this area provides habitat for an assortment of animal and plant communities. Large shellbanks support various coastal birds, including native species such as the Caspian tern and several migratory waders.

Numerous marine species (e.g. hammerhead shark, thresher shark and white pointer sharks) are all likely to be present in the Whitford Embayment (Tonkin + Taylor Limited, 2022). Smaller marine fish species have also been observed (iNaturalist, n.d.), noting several native freshwater fish species have been recorded in the wider catchment, including inanga and longfin eel, reflecting the diversity of the coastal environment and the habitats supported in this SAP area.

There are also several small motu within the embayment and creeks, including Wade Island. The area comprises coastal cliffs, sandy beaches and intertidal rocky reefs as well as sheltered estuarine creeks within the Whitford Embayment. Key coastal management issues include coastal erosion of exposed beaches and cliffs, as well as inundation during king tides and storm surge of lower-lying areas.

There are 18 indigenous ecosystem types that cover this SAP area's boundaries. 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 (SEAs) 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 Highbrook to Whitford SAP area is reflected in several national and regional policy documents and more specifically, local board plans for the two local boards across this SAP area.

Unit	Summary of ecological features and values
1	Unit 1 includes the southern section of Pakuranga Creek which is lined by mangrove forest and scrub. • Pakuranga Creek was once recognised as a feeding and roosting site for hundreds of wader species (Easton & Ansen, 2009) but has since been lost (potentially due to human disturbance) according to Lee (2019).
2	Unit 2 includes the northern section of Pakuranga Creek, lined by mangrove forest and scrub. • A small area of regenerating broadleaved scrub is located adjacent to the Elm Park sports field.
3	Unit 3 includes **Wakaaranga Creek** and associated Council-owned reserves. • There is an important intertidal bank called the 'Tāmaki East Bank' which acts as a feeding ground for hundreds of wading birds. • There are also significant mangrove, saltmarsh and salt meadow sequences present in this creek.
4	Unit 4 is characterised by coastal cliffs, intertidal rocky reef, and sandy beaches. • Small remnant patches of coastal broadleaved forest dominated by pōhutukawa and scheduled as SEA-Terrestrial are found along the cliffs between **Te Naupata / Musick Point Esplanade Reserve and Eastern Beach**. The reserve at Te Naupata / Musick Point contains several regionally threatened vascular plant species (A. Jamieson, pers. comms, 2024). • The intertidal reef at the toe of the coastal cliffs is also as a marine SEA as it consists of rocky intertidal marine habitat dominated by common marine invertebrates. The reef and small stony beaches also support coastal shorebirds including variable oystercatcher and pied shag (iNaturalist, n.d.). • **Macleans Park** contains an SEA with regenerating kānuka scrub along the riparian margins of Macleans Stream discharging as a small river mouth at Eastern Beach. Notably there are chenier plains (naturally uncommon ecosystem) that flood frequently in this location. • The beach and adjacent grassed reserves support common coastal shorebirds including red-billed gull, black-backed gulls and variable oystercatcher.
5	Unit 5 encompasses Bleakhouse Road Promontory Reserve to the northern section of Marine Parade Esplanade Reserve (including Glenoaks Reserve and Mellons Bay Reserve). • This unit is characterized by eroding coastal cliffs, small sandy beaches, and intertidal rocky reefs. The cliff tops are largely vegetated with aging pines and mixed native-exotic shrubs as well as common pest plants, e.g. Agapanthus and tree privet. The small areas of sandy beach are colonized with low abundance cockles and support a degraded marine invertebrate community. • Small remnant patches of coastal broadleaved forest are located on the cliffs at Mellons Bay Reserve which is scheduled as an SEA. These patches support a common range of non-threated native and introduced passerine birds.
6	Unit 6 encompasses the southern section of Marine Parade Esplanade Reserve to Waikiteroa Reserve. • **Marine Parade Esplanade** (southern portion) comprises eroding coastal cliffs with mixed native-exotic trees including pōhutukawa which is scheduled as SEA. Small remnants of coastal broadleaved forest are also present. • **Howick Beach** is a small, moderately sheltered beach facing the northeast. There is an extensive intertidal rock platform located on the western end of the beach which has been the subject of several marine fauna studies (e.g. Wood, 1962; Morley, Hayward, & White, 2001). Red-billed and black-backed gulls commonly forage at low-tide at the Paparoa Stream mouth while variable oystercatcher and grey-faced heron are occasionally present in the summer months. Grey-faced heron have been known to next in the overhanging pōhutukawa trees (C. Webb, pers observation).

7	The intertidal habitat at **Cockle Bay** is utilised by a variety of shorebirds, including the South Island pied oystercatcher and variable oystercatcher. • The series of reserves situated on the west-facing slopes of **Mangemangeroa Creek** encompass patches of coastal broadleaved forest and regenerating native forest dominated by mānuka and kanuka. • A large range of native and exotic avifauna species utilise these reserves and **Shelly Beach sandspit** (Howick Local Board, 2019). Species that frequent the sandspit area include New Zealand dotterel, South Island pied oystercatcher and various gull species (iNaturalist, n.d.). • Mangrove forest dominates the upper and lower reaches of Mangemangeroa Creek. Large areas of mudflat are found in the lower reaches of the creek and at Cockle Bay. • The gradient from saline vegetation into terrestrial vegetation at Mangemangeroa Creek is recognised as a regionally important sequence and one of the only remaining areas of coastal shrubland and forest on coastal sediments in the ecological district. The saline vegetation provides high quality habitat for cryptic coastal fringe birds.
8	This unit comprises **Tūranga Creek** and the extensive rural area that surrounds it that is punctuated by small areas of remnant vegetation. Tūranga Creek is the largest estuarine habitat, including its mangrove shrubland ecosystems, in the Hunua Ecological District. • A proportionately large area of kauri, podocarp, broadleaved forest occurs to the west of the town centre of Whitford. • There is a small flaxland to the east of the Mangemangeroa Creek and on Tahoramaurea Island (one of the islands located in the channel of Tūranga Creek). • An important shellbank is located adjacent to the **Whitford Beach - Tūranga Creek Conservation Reserve** which is used as a high-tide roost by a variety of coastal bird species, including SIPO and tūturiwhatu / New Zealand dotterel.
9	**Waikopua Creek** is characterised by areas of sea rush, oioi salt marsh. • There are two large shellbanks (approximately 0.8 ha in total) at the Waikopua Creek mouth (Tonkin & Taylor, 2022). A variety of coastal birds, including several threatened species, utilise the wider intertidal habitat available within this area. Caspian tern have been found feeding and roosting on the Waikopua shellbanks (Tonkin & Taylor, 2022). • Small remnants of podocarp forest are situated on the eastern slopes of Waikopua Creek. • Coastal cliffs dominated by pōhutukawa occur along the eastern side of the Whitford embayment mouth, adjacent to the Formosa Golf Course.

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, dune 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). More information on can be found in *Volume 1: Understanding the Shoreline Adaptation Plans*.

Recognising the microcosm of ecosystems lining the Highbrook to Whitford SAP coastline, opportunities for nature-based solutions will be factored into decision making. In the context of shoreline adaptation planning and potential consenting process, the following ecological objectives merit consideration:

- Maintaining and enhancing indigenous vegetation and ecological corridors to support the retention and preferably, restoration of coastal forest, contributing to the adaptive capacity of fragmented coastal vegetation and associated fauna.
- Minimising impacts on threatened and at-risk native fauna and the habitats that such species rely on (e.g. roosting sites for shorebirds, wetland birds such as banded rail, freshwater fish). Mangrove management for shorebirds may need to be balanced against the benefits that they provide in buffering the coastline and providing habitat for coastal wetland birds like banded rail.
- Incorporation of marine habitat features with coastal structures where possible, noting that degraded intertidal reefs are a common feature in the Highbrook to Whitford area, often impacted by coastal structures like seawalls and boat ramps. Incorporating artificial reef blocks and the like into adaptation strategies may help mitigate/ offset potential impacts.

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 and protection, particularly for Unit 8, noting that upper reaches of the Mangemangeroa Creek and on Tahoramaurea Island have identified ecological values.
- Riparian planting (i.e. around watercourses such as Tūranga Creek) and the retention and restoration of coastal vegetation, applicable to all units where there are areas of coastal cliffs or coastal forest remnants, particularly on the western side of Whitford embayment.
- Restoration and protection of vulnerable and uncommon coastal ecosystems where possible, noting that potential areas could include the shell-barrier beaches at Shelley Park sandpit, the Whitford Beach-Tūranga Creek Conservation Reserve and on both sides of the mouth of Waikopua Creek, as well as the areas of salt marsh within Waikopua Creek.
- Green-grey infrastructure opportunities for all units, noting the benefit of ecological enhancement for both coastal and marine habitats via the addition of ecological features on coastal structures where possible.
- Protection and enhancement of high-tide bird roosts, particularly around Shelley Park sandspit and areas with shellbanks. This could involve building up the shellbanks to maintain them above Mean Water High Springs (MWHS) and mangrove management.
- Provision of nesting trees for shorebird colonies - potential areas (with a lack of appropriate nesting vegetation) include the Whitford Beach-Tūranga Creek Conservation Reserve and the grassed area behind the Waikopua Creek shellbanks.
- Restoration of motu within the Whitford embayment - there are several islands within Tūranga and Waikopua creeks that are co-managed and require restoration and renewed access. There are important indigenous ecosystems present on these islands including, regenerating mānuka dominated scrub and a flaxland wetland.

3.5 Social and policy context

The social (and policy) context provides a foundation 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

At the time of the 2018 Census, over 17,500 people lived in the Highbrook to Whitford SAP area, with a higher population density between Eastern Beach and Shelly Park on the western side of the SAP, with the more rural and less populated community of Whitford to the east. The median age is between 50 -54, with range of ethnicities, including European, Māori, Pacific Peoples, Asian, Middle Eastern, Latin American, and African.

Small town centres are located in most units and provide amenities and services for the surrounding communities. The coastal communities of Half Moon Bay, Farmcove, Bucklands Beach, Mellons Bay, Cockle Bay, Shelly Park, Pine Harbour and Beachlands. Howick, Whitford and sections of Pakuranga would make up the larger of town centres within this SAP area.

Community groups and organisations

There are several community groups and organisations that actively use Council-owned assets and/or land within the Highbrook to Whitford SAP area, particularly along the coastline. The highest concentration of community groups are organisations located within Howick, Cockle Beach, Buckland and Eastern beach areas. They include sporting clubs, girl guiding and scout groups, neighbourhood/ratepayer groups, community trusts, Lion Groups, and conservation groups.

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

- Bucklands Beach AFC
- Bucklands Beach Bowling Club
- Bucklands Beach combined probus
- Bucklands Beach Tennis Club
- Bucklands Beach Sea Scout Group
- Bucklands Beach Toyakwai Karate Club
- Bucklands Beach Yacht Club
- Bucklands & Eastern Beaches Ratepayers and Residents' Assn
- Cockle Bay Scout Group
- Gecko NZ Trust
- Howick Bowling Club
- Lions Club Howick
- Formosa Golf Club
- Friends of Cockle Bay Domain
- Half Moon Bay Residents and Ratepayers Association
- Howick Golf Club
- Howick East Combined Probus Club
- Howick Sailing Club
- Sowers Trust
- Sunnyhills Tennis Club
- Tāmaki Estuary Environmental Forum
- Tāmaki Estuary Protection Society
- The Rotary Club of Half Moon Bay
- Whitford Community Charitable Trust
- Whitford Estuaries Conservation Society

- City of Sails Rock 'N' Roll Revival Club
- Cockle Bay Residents and Ratepayers Association
- Howick Village Association
- Howick Youth Council
- Pakuranga Sailing Club
- Shelly Beach Community Group
- Shelly Park Cruising Club
- Whitford, Kawakawa & Maraetai Community Group
- Whitford Park Golf Club
- Whitford Tennis Club
- Whitford Village Community Page

Each of these organisations have their own values and serve a unique function in the community. Any future 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 ongoing community engagement.

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 Highbrook to Whitford 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):

- Franklin Local Board Plan 2023 (Auckland Council, 2023)
- Howick Heritage Plan 2016 (Auckland Council, 2016a)
- Howick Local Board Plan 2023 (Auckland Council , 2023b)
- Howick Urban Ngahere Action Plan 2021 (Auckland Council , 2021a)
- Howick Village Centre Plan 2017 (Auckland Council , 2017)
- Pakuranga Town Centre Masterplan 2015 (Auckland Council , 2015)
- Pōhutukawa Coast Trails Plan 2017 (Auckland Council , 2017)
- Tāmaki Makaurau Recovery Plan (Auckland Council, 2024).

There are two local boards within the SAP area: Howick and Franklin. Both boards have several aspirations for future development across the Highbrook to Whitford SAP area, including:

- Celebrating the history of the area, weaving Māori culture and language into public spaces, and ensuring sustainable measures to manage coastal erosion and inundation are planned.
- Supporting community aspirations for greater tree canopy cover and improved water quality, as well as improved public transport services, particularly to Pine Harbour.
- Integrating water-sensitive stormwater design into streetscape upgrades, support stream and biodiversity restoration, promote community gardens.
- Continue restoration of rivers/streams, pest control and biodiversity regeneration via initiatives like predator-free Franklin, Papakura Stream restoration, and community planting through Te Korowai work.
- Encourage waste-reduction initiatives and community-led environmental restoration.
- Support youth-focused initiatives such as youth influencer programmes and encourage community-led delivery of events and resilience planning.

- Advocate for road network improvements, commuter safety, and alternative freight routes to reduce truck traffic through residential zones (especially around Pukekohe), in collaboration with Waka Kotahi through the Supporting Growth Programme.
- Implement the Local Emergency Readiness and Response Plan in partnership with Auckland Emergency Management to help residents and communities prepare for climate-driven hazards, informed by lessons from Cyclone Gabrielle and Auckland floods 2023.
- Development of a local, community-led climate action plan and supporting pest-free programmes.
- Working with communities to restore sensitive ecological areas, improve local water quality and clean up the environment.

Both the Howick and Franklin Local Boards have noted in their 2023 Local Board Plans that maintaining service levels in correlation with population growth will be challenging, particularly considering projected constrained funding. Additionally, the Franklin Local Board recognises that the impacts of climate change will be felt on growing populations across their respective parts of the coast, and isolated rural communities will be vulnerable. Both boards note that climate mitigation and adaptation to develop resilience will be essential, with plans and aspirations to work with local communities to develop climate action plans in a way that supports the natural environment and community needs.

Community use

This section provides an overview of the key land uses within the Highbrook to Whitford 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.

The Highbrook to Whitford area is characterised by low-density residential and rural lifestyle living. In general, the western side of the SAP area contains more low-density residential suburbs, while the eastern side is made up of larger, rural land blocks with lower density living.

Several neighbourhood centres are situated within this SAP, such as Bucklands Beach, Mellons Bay, Cockle Bay, Shelly Park, Whitford, Pine Harbour and Beachlands, Farmcove, Half Moon Bay and Sunny Hills and Pakuranga. Services and amenities are less easily accessible in the rural portions of the SAP area, but Whitford Village centre provides some shops and community facilities such as a community hall and park.

The Highbrook to Whitford area has three creeks: Mangemangeroa, Tūranga, and Waikopua (Auckland Council, 2024c). These creeks tend not to be used for swimming but they offer boat moorings and walking paths. Near these creeks, the Whitford Path and Mangemangeroa Shelly Park Beach Path provide connections between residential areas and various coastal points. The northern coastline beyond Tūranga Creek Path is primarily private farmland and houses the Formosa Golf Resort, restricting public access. (Auckland Council , 2024d)

Key social infrastructure within the Highbrook to Whitford area includes but is not limited to:

- Educational facilities, including colleges/ high schools, early learning centres and primary and intermediates

- Medical centres, police stations, coast guard, churches and several general practitioners, Howick Golf Club
- Cafes, shops, neighbourhood centres and town centres with various amenities
- Formosa Auckland Golf Resort which is a premier golf destination located in Beachlands. It features an 18-hole championship golf course and a range of amenities including tennis courts, conference facilities, luxury accommodations, and fine dining. It is also used as a venue for weddings, corporate events, and social gatherings. (Formosa Golf Resort , n.d).

Community buildings / assets

The Highbrook to Whitford SAP 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.

As discussed in prior sections, the Highbrook to Whitford SAP 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. While not all of these amenities are owned or managed by Auckland Council, they play a role in supporting social activities and emergency responses in the area.

A non-exhaustive list is included below:

- Bucklands Beach & Eastern Beach War Memorial Hall
- Bucklands Beach Bowling Club
- Bucklands Beach Sea Scout Group
- Bucklands Beach Yacht Club
- Fencibles United AFC
- Koru Tennis Club
- Howick Coast Guard
- Howick Golf Club
- Pakuranga Rugby Club
- Pakuranga Sailing Club
- Snakes and Ladders playground
- Shelly Park Cruising Club

Emergency services, facilities or key infrastructure

In terms of significant growth or major infrastructure projects in this area, the greater Pakuranga area has been identified in the Auckland Plan 2050 as a key growth area over the 2018-2028 period. Also of note is private Plan Change 88 (known as the Beachlands South Plan Change), which has been approved and is now operative (noting that the decision to approve the plan took place in April 2024). This plan change has enabled the rezoning of approximately 307 ha of land south of the Beachlands township to a mix of residential, commercial, and open space uses (see Figure 3-1). This paves the way for significant urban development in the area, including housing and associated amenities.

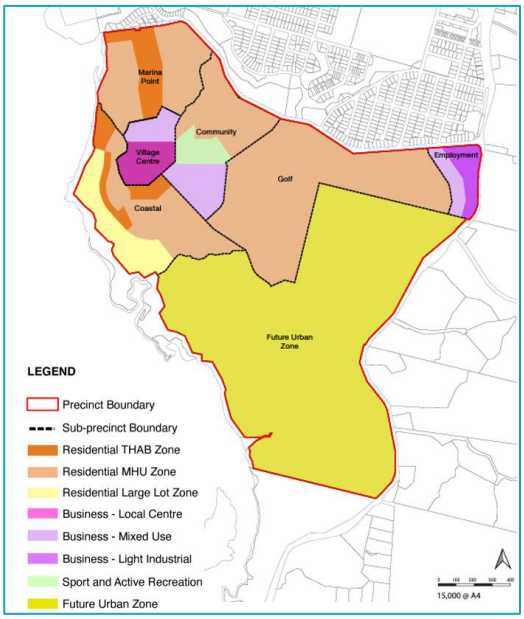


Figure 3-1: Plan Change 88 – Plan Change AUP Zoning Map. Source: https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/Pages/details.aspx?UnitaryPlanId=187

Another key consideration for the Highbrook to Whitford coastline is Watercare's 2041 Asset Management Plan that accounts for the possibility of an 'augmentation' to the Beachlands sewer, should the population exceed the local plant's capacity for 14,000 people. This is not identified within current long-term planning documents.

Auckland Council is currently investigating and assessing technical options to improve and future-proof infrastructure within the Whitford area (Auckland Council, 2024). Subject to funding, physical works for the Whitford water quality improvement project are anticipated to commence in 2024/2025 (Auckland Council, 2024).

The identification of the Whitford Bypass (connecting the Whitford-Maraetai Road / Trig Road intersection to the Saleyard Road / Sandstone Road / Whitford Park Road roundabout) is also a relevant future roading connection supporting resilience in roading connections for eastern areas (Beachlands) this is relevant to the criticality of roading connections for units 8 and 9.

Adaptation strategies in Volume 3 may be reviewed as future development occurs, including investment and development of infrastructure such as roading and water networks.

Landscape features and character

This area includes Outstanding Natural Features (ONFs) and Landscapes (ONLs) in the coastal environment. These areas contribute to the natural character of the coastal environment and are identified under the AUP:OP. Listed below are locations designated as ONFs or landscapes. These may hold significant community and regional values associated with their preservation and appreciation (Auckland Council, 2016). Within the Highbrook to Whitford SAP, these areas are:

- Musick Point cannon-ball concretions (Unit 5) - ONF
- Eastern Beach anticline (Unit 5) – ONF
- Mangemangeroa Creek Escarpment (Unit 7) – ONL.

The Highbrook to Whitford area is home to numerous heritage sites of significant historical value. One notable location is ‘White Ford,’ a historic place listed as a Category A site, recognised for its outstanding significance well beyond its immediate environment (Auckland Council, 2016).

There are 14 sites designated as Category B heritage sites, understood to have considerable significance to the locality or a larger geographic area (Auckland Council, 2016). Among these are the Musick Point historic landscape and Memorial Building, Broomfield's Cottage, Granger's Brickworks, and several pillboxes.

3.6 Community Feedback

Community engagement throughout the SAP development process has been extensive 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 Highbrook to Whitford SAP ran in parallel to the development of the Tāmaki Estuary 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 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: Tāmaki 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, approx. 95 comments were received via the digital platform Social Pinpoint, whilst approximately 124 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 (initially developed based on changing coastal hazardscapes and input from asset owners and infrastructure providers, and local iwi and communities), ran 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 summarised 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 several 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 Highbrook to Whitford SAP area, closely followed by those who visit the coast from the wider Auckland area.
- Gender: A slightly higher percentage of males than females responded to the Have your Say survey on 'Ak Have Your Say'
- Ethnicity: A significant portion in this area say the ethnic group they belong to is Pākehā /NZ European, followed by those whole selected "other European" and "other"
- Age Group: Of those who engaged in digital feedback, most respondents were aged 35- 44, 45-64 or 65+, followed by those aged between 15- 34.

Community Discussions

In addition to digital engagement platforms and in-person events, feedback was also received via submissions sent to the SAP email inbox. These submissions were primarily from individuals, community groups and organisations (Tāmaki Estuary Protection Society, Tāmaki Estuary Environmental Forum, NZ Motor Caravan Association, Whitford Residents and Ratepayers' Association) providing a response and several more 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 (i.e. Coastal Hazards 101 deep dive, presentations with the Auckland East Society and the Tāmaki Estuary Environmental Forum). Engagement with key community groups

included a boat ride around the Tāmaki Estuary with staff from the SAP Team and the Tāmaki Estuary Environmental Forum.

Local Board Views:

During development of the Highbrook to Whitford SAP, the Howick and Franklin Local Board highlighted the following issues/ matters (non – exhaustive list):

- Concern over roading networks (i.e. Whitford to Maraetai Road) and the need for ongoing maintenance/ protection of key connections
- Sedimentation and erosion of the coastline around the Tāmaki Estuary leading to a decline in water quality and biodiversity
- Water-based activities: supporting opportunities for water-based sports and boat launching (i.e. dragon boating).

Community uses/ values

During the period of community feedback, respondents were asked, '*when thinking about the coastal areas they use in the Highbrook to Whitford area, which values matter the most to them'*. The most popular values centred around "recreation and amenity (e.g. general enjoyment of being at the coast, swimming, water sports), closely followed by 'ecosystem health values (e.g. coastal habitats and biodiversity, fauna and flora)'.

Access to the coast (e.g. via boat ramps, wharves and jetties) and natural landscapes and a 'sense of connection' to the coast was also a common theme in community feedback.

Uses, access and frequency

Most respondents said they most often go to the coast using a private vehicle, closely followed by cycling or walking. It was noted that most people visit the coast once or twice a week, with slightly less visiting daily or most days.

When it came to beaches visited, most respondents visited Eastern Beach the most, closely followed by Howick Beach and Cockle Bay. The most popular parks appeared to be Eastern Beach Esplanade and Musick Point, as well as Cockle Bay Reserve, Mellons Bay Reserve and Marine Parade Esplanade Reserve.

Activities – Highbrook to Whitford

Activities enjoyed were quite varied across the various units within the Highbrook to Whitford 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 on the foreshore of the coast
- Passive water-based sport, e.g. swimming, fishing, sailing
- In addition to the above, horse riding was commented as a popular activity, along with cycling along the coast (bridle paths), noting that coastal walkways and paths were highlighted in feedback as being highly valued by locals and visitors alike.

Community cultural values / comments

Responses highlighted:

- A strong cultural connection to the land and coastline, particularly at historically significant sites such as Te Naupata. The area reflects the deep roots of Māori use, with appreciation expressed for educational plaques that explain traditional uses of native plants.
- Acknowledging mana whenua as guardians of the area, with community support for ongoing planting and conservation initiatives.
- That the coastal landscape is valued not only for its natural beauty but also for its spiritual and cultural importance, reinforcing the need to preserve and protect these spaces for future generations.

Community values of ecosystems and impacts of climate change

Reoccurring themes across the Highbrook to Whitford coastline included:

- Conservation is seen as a top priority, particularly in safeguarding native flora and fauna. The coastal and freshwater wetlands, along with bird roosting areas, are recognised as ecologically significant. With bird species observed locally, the area is valued by bird watchers and nature enthusiasts alike, and is considered one of the best bird watching sites in East Auckland.
- Concerns have been raised about the effects of erosion, sediment runoff, and habitat degradation. There is a strong call for sustainable, nature-based approaches to better manage coastal hazards and maintain the ecological integrity of the environment. Sedimentation around the wider Tāmaki Estuary was a key concern from both the Howick Local Board and Tāmaki Estuary Environmental Forum.
- The environmental value of the coastline is appreciated for its biodiversity, tranquillity, and recreational opportunities, including walking, horse riding, and wildlife observation. Community members expressed a desire to ensure these natural assets are protected for future generations and continue to serve as a shared resource for both locals and visitors.
- Feedback also underscored the importance of improving water quality and addressing the impacts of development on fragile coastal ecosystems. This includes calls for enhanced infrastructure maintenance, such as walkways and seawalls, to improve safety and resilience in the face of environmental pressures.
- Community feedback also highlighted perceived environmental degradation along the coast, with some comments highlighting the local environment as under pressure from pollution, invasive species, declining water quality, and the loss of coastal vegetation. Community observations in turn highlighted the spread of mangroves, accumulation of mud, and increasing cliff instability as indicators of environmental decline.

Community experience of hazards / concerns

Coastal erosion was the most common concern cited by respondents across the SAP area. 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 high concern along headlands and beaches such as Howick Beach, Eastern Beach, Musick Point, Cockle Bay Beach, and Shelly Park. Landslips have been observed following storm events, in some cases threatening residential properties. Community feedback highlighted the need for the establishment of buffer zones to reduce erosion risks and protect both private property and the coastal environment, with some concern regarding seawalls/ coastal protection structures deteriorating or being ineffective.
- Ongoing development is contributing to sediment runoff, which is leading to the accumulation of sediment along beaches and the degradation of sensitive coastal ecosystems. These changes increase the risk of habitat loss and flooding, prompting concern about the long-term environmental impacts of unmanaged development.
- The combined effects of erosion, sedimentation, and intensifying land use are contributing to a noticeable increase in coastal instability. Residents have expressed alarm at the frequency and severity of landslips, reinforcing the need for proactive, sustainable coastal management strategies.
- In addition to physical degradation, there are persistent concerns about litter and pollution in the coastal environment.
- Feedback also highlighted issues with local roads, including sinking sections and potholes caused by heavy traffic, indicating a need for improved road maintenance.

Community values and aspirations

Values for the future

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

- Key public infrastructure, including walkways, stormwater systems, and coastal amenities are seen to be in poor condition. Calls for better maintenance of coastal infrastructure (i.e. around Howick) and walkways, the enhancement of cycling paths, and protection of the marine environment for future generations was a key theme.
- There was a strong call for sustainable, nature-based solutions, to address coastal erosion in a way that respects the natural landscape. Community feedback also reflected opposition to harsh or visually intrusive measures such as concrete barriers and mesh netting. Instead, there is a clear emphasis on preserving natural habitats and tackling environmental concerns such as seaweed accumulation and invasive pest species.

- Calls for stricter regulation, enhanced monitoring, and ecosystem-based management to protect the long-term health of coastal and marine biodiversity, with a focus on reducing/ mitigating sediment runoff in waterways.
- Support for community education around coastal erosion processes, with access to the latest technical information and studies.
- A mixed/ strong opposition to further high-density housing and large-scale development, with a need to preserve the area's unique character and identity, calling for greater restraint in issuing building consents to ensure future growth aligns with the existing character and natural landscapes.
- Advocating for increased conservation and education about the ecological value of mangroves, noting there is mixed view on mangroves across the Highbrook to Whitford coastline.
- Investing in resilient infrastructure such as seawalls and effective flood management while supporting ecological preservation (e.g. around the Turanga Creek and Whitford coastlines). Feedback calls for a balanced approach that protects key community assets and natural biodiversity, recognising the need to adapt to, rather than fight, the changing environment.
- Maintaining public spaces, such as parks, walkways, and facilities, to keep them accessible and enjoyable for everyone. The need to upgrade and maintain walkways was strongly emphasized in feedback, with particular attention to accessibility for elderly and disabled users.
- Suggestions on resilient infrastructure design, including elevating paths to prevent flooding and improving surface quality for safer, easier use.
- Future and additional connections to existing pathways where possible to support community access along and to the coast.
- Maintaining coastal walkways in the Whitford area was highlighted by the Whitford Residents and Ratepayers' Association, noting a strong advocacy to maintain existing walkways and require developers to provide new formed coastal paths where applicable—such as in Beachlands South (Plan Change 88). Additionally, feedback advocated for Council to enable the creation of new low-maintenance access routes across esplanade reserves as they become available for public use, e.g. on Broomfields Peninsula.
- Acknowledge and work in partnership with community groups engaged in restoration activities, as well as community-led adaptation initiatives.

Aspirations for the future

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

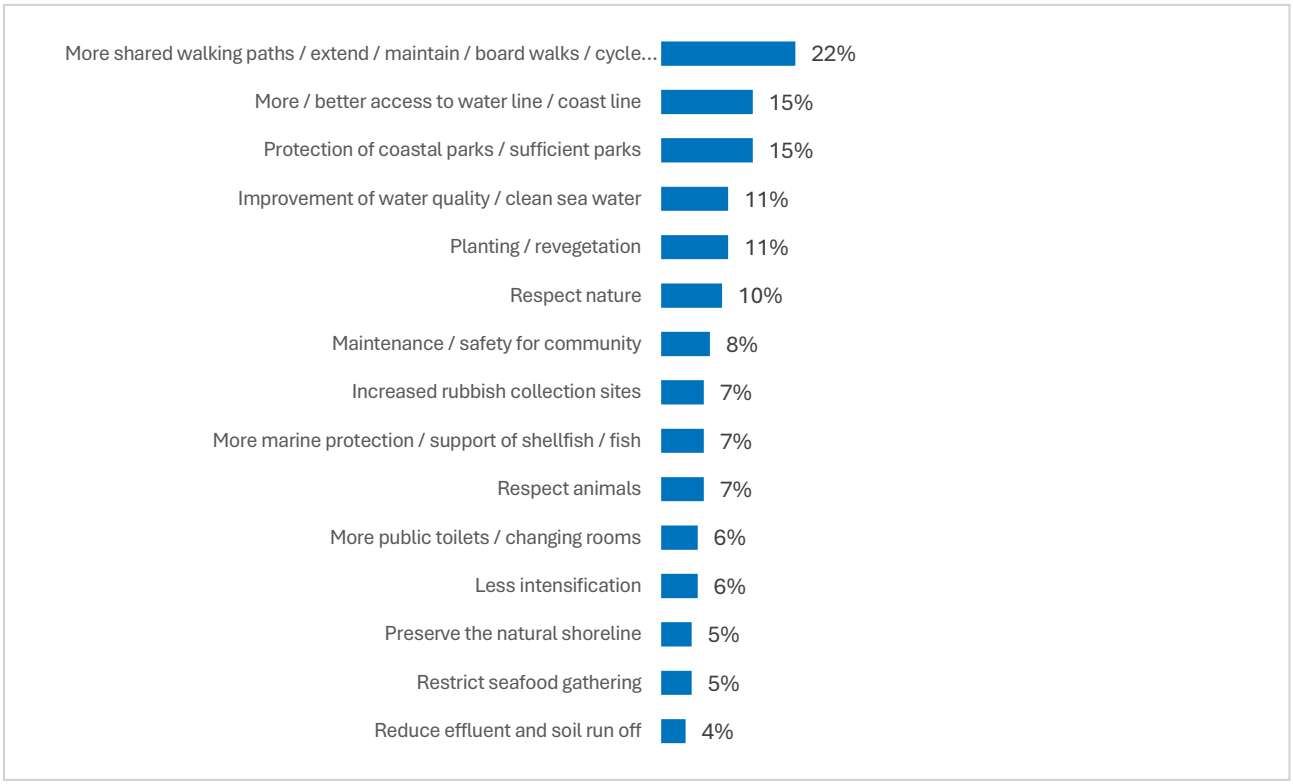


Figure 2: Responses to: Do you have any aspirations for access, facilities or uses at the coast in the Highbrook to Whitford SAP area in the future?. (Sample = 71) Source: AK Have Your Say Highbrook to Whitford

Community objectives for the Highbrook to Whitford 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	• Work to maintain and enhance public access to and along the coastline through well-designed, resilient, and inclusive infrastructure—such as walkways, parks, and facilities—that supports community wellbeing, environmental stewardship, and connectivity, while partnering with local groups to deliver restoration and adaptation outcomes.
Social and Cultural	• Ensure iwi, communities, and stakeholders are central to leading conversations, assessing options, and making decisions around coastal adaptation—supported by education and knowledge-sharing on coastal hazards to build collective understanding and resilience. • Develop locally relevant signals and triggers for change that support proactive and adaptive decision-making in response to sea-level rise and coastal change—underpinned by robust regulation, enhanced environmental monitoring, and ecosystem-based management approaches that protect coastal and marine biodiversity.

Responding to risk	• Risk to critical transport networks, valued coastal walkway and access points is proactively addressed to minimise the loss of access for communities during and following hazard events. • Work to mitigate and mange coastal erosion, flooding, and sedimentation impacts through proactive, sustainable, and community-informed coastal management approaches that protect natural environments, public infrastructure, and private property—while supporting long-term resilience to climate change and development pressures.
Environmental	• Protect and enhance the natural character, ecological integrity, and biodiversity of the Highbrook to Whitford coastline by promoting sustainable, nature-based solutions to coastal management, mitigating the impact of coastal squeeze and supporting important habitats (i.e. bird roosts). • Support the restoration and long-term resilience of habitats and water quality; and ensuring continued access for low-impact recreation and cultural connection, now and for future generations.

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:

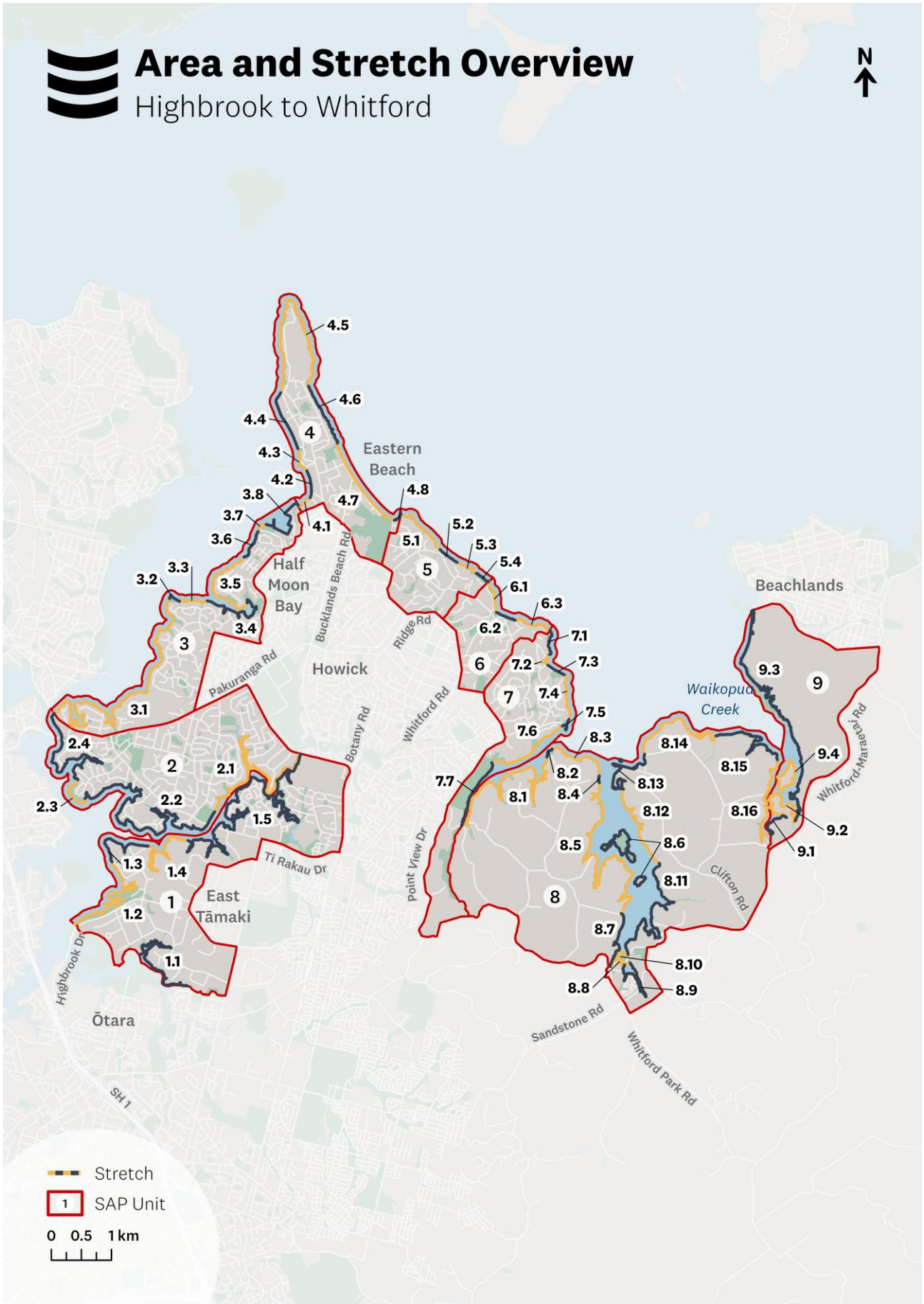
- Low (climate) change – sea-level rise
- Moderate (climate) change – sea-level rise
- High (climate) change – sea-level rise.

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**


Area and Stretch Overview
Highbrook to Whitford
N
Eastern Beach
Half Moon Bay
Howick
East Tāmaki
Beachlands
Waikopua Creek
Ōtara
Bucklands Beach Rd
Ridge Rd
Pakuranga Rd
Botany Rd
Whitford Rd
Ti Rakau Dr
Point View Dr
Clifton Rd
Whitford-Maraetai Rd
Sandstone Rd
Whitford Park Rd
Highbrook Dr
SH 1
Stretch
SAP Unit
0 0.5 1 km

Units	Stretches	Low	Moderate	High
1: Highbrook	1.1 Ōtara Creek to Highbrook Drive Bridge	Maintain	Maintain	Maintain
	1.2: Highbrook Drive to Lady Fisher Place	Maintain	Maintain	Adaptation Priority
	1.3: Lady Fisher Place to Waiouru Road (east)	Maintain	Maintain	Maintain
	1.4: Waiouru Road to Stonedon Drive Esplanade Reserve	No action	No action	No action
	1.5 Stonedon Drive Esplanade Reserve to Pakuranga Country Club Golf Course	Maintain	Maintain	Maintain
2: Pakuranga	2.1: Pakuranga Country Club Golf Course to north of Riverhills Park	No action	No action	No action
	2.2: Riverhills Park to Tiraumea Reserve South	No action	Maintain	Maintain
	2.3 Tiraumea Reserve	Maintain	Maintain	Maintain
	2.4: Tiraumea Reserve to Lagoon Drive	No action	No action	No action
3: Farm cove (Panmure Bridge to Half Moon Bay)	3.1: Lagoon Drive Bridge to Pakuranga Sailing club (Rotary Walkway)	Protect	Adaptation Priority	Adaptation Priority
	3.2: Bramly Drive Reserve	Maintain	Adaptation Priority	Adaptation Priority
	3.3: Farm Cove (Rotary walkway to Belmere Rise)	Protect	Adaptation Priority	Adaptation Priority
	3.4 Upper Waka Aranga Creek	Maintain	Maintain	Adaptation Priority
	3.5 : Curacao Pl Esplanade Reserve to Falstaff Pl Esplanade	No action	No action	No action
	3.6 Falstaff Pl Reserve to Compass Pl Reserve	Maintain	Maintain	Maintain
	3.7 Half Moon Bay Ferry Terminal	Protect	Protect	Protect
	3.8 Half Moon Bay private marina	No action	No action	No action
4: Half Moon Bay to Eastern beach (Te Naupata / Musick Point)	4.1 Half Moon Bay Marina to Te Akau Crescent	Maintain	Maintain	Adaptation Priority
	4.2 Little Bucklands Beach	Protect	Adaptation Priority	Adaptation Priority
	4.3 Granger Point and southern Bucklands Beach	Protect	Protect	Adaptation Priority
	4.4 Bucklands Beach	Protect	Adaptation Priority	Adaptation Priority

Units	Stretches	Low	Moderate	High
	4.5 Te Naupata / Musick Point	Maintain	Maintain	Adaptation Priority
	4.6 Clovelly Road to Rogers Park	No action	No action	No action
	4.7 Eastern Beach	Maintain	Adaptation Priority	Adaptation Priority
	4.8 Bleakhouse Road Promontory Reserve	No action	No action	No action
5: Mellons Bay	5.1 Oliver Twist Avenue to Mellons Bay Beach	No action	No action	No action
	5.2 Mellons Bay	Protect	Adaptation Priority	Adaptation Priority
	5.3 Mellons Bay south & eastern cliffs (private)	No action	No action	No action
	5.4 Marine Parade Reserve	No action	No action	Adaptation Priority
6: Howick	6.1: Marine Parade Reserve to Howick Beach	No action	Adaptation Priority	Adaptation Priority
	6.2: Waipaparoa / Howick Beach	Protect	Adaptation Priority	Adaptation Priority
	6.3: Howick East	No action	No action	No action
7: Cockle Bay to Mangemangeroa Creek	7.1: Waikiteroa to Cockle Bay	No action	No action	No action
	7.2 Cockle Bay North (stream)	Protect	Adaptation Priority	Adaptation Priority
	7.3: Cockle Bay Beach	Maintain	Adaptation Priority	Adaptation Priority
	7.4: Pah Road to Shelly Park	No action	No action	No action
	7.5: Shelly Park Beach (The Sandspit)	Maintain	Adaptation Priority	Adaptation Priority
	7.6: Pohutukawa Avenue Esplanade Reserve	Maintain	Adaptation Priority	Adaptation Priority
	7.7 Mangemangeroa Reserve	Maintain	Maintain	Maintain
8: Whitford	8.1: Mangemangeroa Bridge to Broomfields Point Reserve	No action	No action	No action
	8.2: Broomfields Point Reserve	Maintain	Maintain	Maintain
	8.3: Strathfield Lane Esplanade Reserve (north)	No action	No action	No action

Units	Stretches	Low	Moderate	High
	8.4: Strathfield Lane	Maintain	Maintain	Maintain
	8.5 : Strathfield Lane Esplanade (south) to Wades Road	No action	No action	No action
	8.6: Tūranga Creek Islands	No action	No action	No action
	8.7: Whitford Path (Wades road to Whitford road	Maintain	Maintain	Maintain
	8.8 Whitford Village	Protect	Protect	Protect
	8.9 Whitford South	Maintain	Maintain	Maintain
	8.10: Pohutukawa Park	Protect	Protect	Adaptation Priority
	8.11 Whitford Village green to Potts Road	No action	No action	No action
	8.12 Potts Road Esplanade Reserve	Maintain	Maintain	Adaptation Priority
	8.13: Whitford Beach & North (road connection)	Maintain	Adaptation Priority	Adaptation Priority
	8.14: Clifton Road Esplanade Reserve	No action	No action	No action
	8.15: Porterfield Road Esplanade Reserve North	Maintain	Adaptation Priority	Adaptation Priority
	8.16 Porterfield Esplanade Reserve South to Henson Road	Maintain	Maintain	Maintain
9: Whitford east to Pine Harbour	9.1: Henson Road to Whitford Maraetai Road	No action	No action	No action
	9.2: Whitford Maraetai Road	Maintain	Maintain	Maintain
	9.3 Whitford Road & Whitford East	No action	No action	No action
	9.4: Waikopua Creek Islands	No action	No action	No action

5 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 Highbrook to Whitford SAP area will be considered in implementation to inform signals triggers and thresholds. The use of nature-based solutions and ecological enhancement opportunities have been identified as of interest to local communities and local boards across this coastline, noting further exploration of opportunities should be considered and supported in implementation pathways. A more detailed discussion regarding implementation of the SAP Programme can be found in Volume 1.

6 References & Bibliography

Auckland Council. (2024). *Regional Parks Management Plan 2022* *https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/parks-sports-outdoor-plans/regional-parks-management-plans/Pages/regional-parks-management-plan-2022.aspx*

Auckland Council. (2017). *Coastal Management Framework for the Auckland Region.* *https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/Documents/coastal-management-framework-2017.pdf*

Auckland Council. (2023, December 8). *Auckland Unitary Plan Operative in Part.* Retrieved January 31, 2024, from https://unitaryplan.aucklandcouncil.govt.nz/Pages/Plan/Book.aspx?exhibit=AucklandUnitaryPlan_Print

Bishop, C., & Landers, T. (2019). *Climate change risk assessment for terrestrial species and ecosystems in the Auckland Region.* Auckland Council Research and Evaluation Unit (RIMU) and Chief Sustainability Office. https://knowledgeauckland.org.nz/media/hy1hicvy/tr2019-014-climate-change-risk-terrestrial-species-ecosystems-auckland-final.pdf

Carpenter, N., Roberts, R., & Klinac, P. (2020). *Auckland's exposure to coastal inundation by storm-tides and waves.* Auckland Council. https://knowledgeauckland.org.nz/media/2070/tr2020-024-auckland-s-exposure-to-coastal-inundation-by-storm-tides-and-waves.pdf

Foley, M. M., & Carbines, M. (2019). *Climate change risk assessment for Auckland's marine and freshwater ecosystems.* Auckland Council Research and Evaluation Unit (RIMU) and Chief Sustainability Office. https://knowledgeauckland.org.nz/media/1083/tr2019-015-climate-change-risk-marine-freshwater-final.pdf

iNaturalist. (n.d.). *iNaturalist Observations.* Retrieved January 31, 2024, from *https://www.inaturalist.org/observations*

Singers, N., Osborne, B., Lovegrove, T., Jamieson, A., Boow, J., Sawyer , J., Hill, K., Andrews, J., Hill, S., & Webb, C. (2017). *Indigenous terrestrial and wetland ecosystems of Auckland.* Auckland Council. https://knowledgeauckland.org.nz/media/1399/indigenous-terrestrial-and-wetland-ecosystems-of-auckland-web-print-mar-2017.pdf

Statistics New Zealand (2018). Census Data. https://www.stats.govt.nz/topics/census

The Reserves Act 1977. (2019). https://www.legislation.govt.nz/act/public/1977/0066/latest/DLM444305.html

The Local Government Act 2002. (2019). https://www.legislation.govt.nz/act/public/2002/0084/latest/DLM170873.html

Tonkin and Taylor, 2018, Bucklands Bach, Little Bucklands and Cockle Bay Erosion issues and options analysis. Accessed August 2025 Agenda of Howick Local Board - 18 February 2019