

## **Water-related impacts of climate change:**

### **A statement of Auckland Council's current role and direction**

Develop long-term solutions and improve Auckland's ability to manage and respond to the water-related impacts of climate change

#### **More extreme weather events from climate change, resulting in water-related impacts of climate change in some Auckland places**

The Auckland Plan 2050 sets the overall direction for Auckland identifying that “more extreme weather events, as a result of climate change, mean that at times there will be too much water in some places.

Parts of Auckland may experience flooding and coastal inundation. Auckland needs to proactively adapt to this changing water future, develop long-term solutions and improve our ability to manage and respond to the water-related impacts of climate change.”

#### **What are water-related impacts of climate change?**

Threats from water-related hazards can include such events as intense storms, coastal erosion, coastal inundation, sea level rise and local and regional floods.

10 March 2022, Version 1.0



# Why do we need to state our current role and direction?

The current role and direction provide clarity about council's: leadership role as a unitary authority, the future uncertainties that exist, and the long-term focus on a consistent and equitable approach to risks and water-events related to

## Climate change is here

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan indicates that Auckland is likely to experience stronger ex-tropical cyclones, extreme rainfall events and ongoing sea level rise.

As Auckland is surrounded and, at times, covered by water, these climate changes increase risk of dangers from adverse water events such as floods, coastal inundation, and erosion.

Many of these issues are identifiable and Auckland Council has prepared detailed risk assessments and response planning. Despite this work, significant unexpected events may occur. Climate change information is constantly evolving, and high levels of uncertainty exist over the long-term.

Understand that uncertainties exist about climate change induced water-related risks, but decisions can't always wait until uncertainties are reduced.

## The current system is reactionary

Many current government practices are not flexible to the constantly shifting nature of climate change.

To avoid making decisions which are fixed and immovable, the council supports strategies which are precautionary and have long-term adaptive pathways. These pathways are time and event dependent.

This method reduces putting off costs to future generations, prevents uninformed ad-hoc decision making and increases resilience for Aucklanders.

Keep the focus on Auckland's long-term future without locking us into unsustainable commitments.

## There is confusion over roles

Public engagement from past adverse water events shows there is confusion about the roles and responsibilities of public and private interests. There is varying levels of public confidence in response to weather events such as flooding.

Improving understanding and alignment of roles and responsibilities between central and local government, insurers, social service providers and private individuals provides certainty and increases confidence.

Provide clarity on Auckland Council's leadership role as a unitary authority in response to climate change induced water-related events.

## Guidance is needed in the short-term

The positions affirm the council's status quo direction until other public policy decisions are made. Clearly articulating Auckland Council's current approach better prepares the council and Aucklanders for when adverse water events occur.

These directions guide public policy advice and decision-making in the short term. And ensure a consistent, planned, and equitable response is taken to climate change water-related risks and events while we are developing dynamic adaptive pathways.

Affirm that Auckland Council takes a consistent, planned, and equitable response to climate change induced water-related risks and events.

# What Māori Values does the current role and direction contribute to?

The Schedule of Issues of Significance 2021-2025 is a statutory document prepared by the Independent Māori Statutory Board to promote and advocate to Auckland Council for and on behalf of Māori in Tāmaki Makaurau.

Auckland Council's current role and direction to respond to the water-related impacts of climate change contributes specifically to three key values, issues and actions of the Schedule of Issues of Significance 2021-2025:

**Whanaungatanga** / Develop Vibrant Communities /Marae Development, Access to infrastructure services / support Māori communities to adapt to climate change effects / ensure that infrastructure in Māori communities is made more resilient to the effects of climate change

**Wairuatanga** / Promote Distinctive Identity / Cultural and Spiritual Connection / marae are climate change ready and prepared to adapt to the effects of climate change

**Kaitiakitanga** / Ensure Sustainable Futures / Environmental Resilience, Protection and Management/ work in partnership with Māori on resourcing and support for Māori communities to plan for and adapt to climate change effects

# How is council already planning for a changing water future?

Auckland Council has a range of plans and activities that respond to a changing water future and water-related risks and impacts of climate change

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

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan provides a long-term approach to the impacts and changes under the current emissions pathway, including:

- developing long-term, strategic approaches to change that keep options open (dynamic adaptive policy pathways)
- focusing on those impacted the most through community and business engagement and empowerment
- ensuring climate change is a key consideration in decisions that have the potential to lock the council into poor resilience outcomes in the long-term
- addressing immediate, known risks that are affecting Aucklanders today.

## The Auckland Water Strategy (seeking adoption)

The Auckland Water Strategy sets a vision for Auckland's waters and provides strategic direction to mitigate and adapt to climate change impacts by:

- reducing exposure to water-related natural hazard risk over time
- avoiding enabling further development in water-related natural hazard areas in all plan change processes and ensure regulations take a precautionary and risk-based approach
- empowering Aucklanders to shape decisions about our changing water future and to work together to be resilient to the impacts of extreme water-related events.

## Other council plans and activities incorporate climate change adaptation

- CCO statements of intent
- Auckland Plan monitoring
- Auckland Unitary Plan
- Coastal Management Plans
- Natural Hazard Risk Management Action Plan
- Long-term Plan 2021-2031
- Asset Management Plans
- Open Space Provision Policy 2016
- Structure plans and area plans
- Stormwater Bylaw 2015
- Auckland Design Manual
- Infrastructure and development strategies.

## Central government legislation reform

Central government plans to formally introduce the Three Waters Reform Programme and to repeal and replace the Resource Management Act 1991 with a Climate Adaptation Act, amongst others, in 2022. These changes focus on building resilience to natural hazards, adapting to the impacts of climate change, and addressing complex issues with managed retreat. Auckland Council will be impacted by these legislative changes.

# How is council already planning for a changing water future?

Climate change, insurance limitations, public behaviour and expectations, constraints and lack of government guidance are all factors contributing to Auckland's water vulnerability

## Climate change

- has increased the risk to communities from adverse water events, some more than others
- has impacts where mitigation is unaffordable for the council, e.g., beyond capability to protect every house from adverse water hazard
- is going to increase adverse weather events in frequency and scale over time, which will continue to put strain on response
- has many uncertainties in timing, especially at the local level.

## Moral hazard behaviour

Moral hazard behaviour can occur when safety nets motivate individuals to take on more risk than they would otherwise. When we expect compensation for any losses that materialise from increased risk, someone in the future will bear those impacts. As an example, moral hazard behaviour exists when someone buys a beachfront property without preparing for sea-level rise since it is expected someone else will pay if it is damaged or destroyed.

In the absence of a scheme with clear rules that supports risk reduction, people will expect governments to put things right after damage has happened and to fund hard protections, such as a seawall. This will exacerbate risk exposure (e.g., through continued development in vulnerable locations) and cost more money to the council and communities over time. Short-term thinking will create greater exposure to future climate-change risk, making the problem worse in the long term.

## Limitations of insurance

Insurance:

- may withdraw from cover leaving individuals and the government to reactionary measures
- may not be affordable in the future as losses incurred become more frequent and significant
- usually have annual renewals and can withdraw quickly if no longer viable
- may not be able to cover sea-level rise as the damage is expected to occur
- such as EQC coverage, is limited to storm and flooding damage to land only.

## Avoiding a future where Auckland is vulnerable to the hazards of water-related impacts of climate change

There are many current factors which make Auckland increasingly vulnerable to the impacts of too much water. Failure to recognise these factors can lead to a future Auckland which:

- lacks community preparedness and resilience for continued water-related impacts of climate change events
- has increased social disruption both in frequency and scale
- makes ad-hoc decisions which may create precedents that are unsustainable over time
- puts off increasing costs to future generations
- has uninsured homes, including equity disparity between those who can afford to mitigate climate changes and those who cannot
- puts low public trust and confidence in council's ability to adapt, manage and respond to the impacts of climate changed related water- events
- enables individual behaviour which places the bulk of the action on future generations who have less time to effectively respond
- tries to mitigate effects on communities primarily through hard protections and the costly retrofit of existing infrastructure.

# Further factors increasing Auckland’s vulnerability to water-related impacts of climate change

## Public assumptions and expectations

Some Aucklanders:

- are not aware of current and increasing climate change related water risks
- ignore or underestimate risk from adverse water events
- purchased properties when climate change risk was a less widely acknowledged issue
- assume homes are built in safe or minimal risk areas
- assume building consent approval infers liability on the council in the event of adverse water events, when generally, it does not
- have strong interest in the short-term which tends to favour land-use consents and investment in hard defensive and protective measures
- expect that the council or the government will invest in structured defences
- rely on effective private insurance being available for life and assets
- see the council and government as insurers of last resort.

## Constraints on local government

Local governments:

- have limited funding and financing tools compared with central government and are not able to afford community expectations
- face a situation where either allowing or limiting development on at-risk land might result in litigation
- are vulnerable to significant criticism if properties are damaged or have risk to life and injury
- face pressure both to manage property owners’ interest to invest in hard defences against adverse water events as well as community pressures to retreat from at-risk locations
- own a large amount of infrastructure at risk from flooding, erosion and sea-level rise (including landfills which would have environmental consequences if inundated)
- choose to provide infrastructure services and must provide for the resilience of these assets
- operate in a system which focuses heavily on response and recovery rather than reducing risk
- have no clearly defined model for how to manage retreat, who should pay for it, and where responsibility lies between insurers, private property owners and local and central government
- must adhere to national policy statements which do not always align on how to consider or prioritise climate change adaptation
- can inadvertently enable *moral hazard behaviour* by not clearly addressing community expectations.

## Lack of central government guidance

Central government:

- has gaps in legislation due to unanticipated risks
- has passed down a steady stream of new standards, regulations, and requirements for climate change adaptation investment without financial resources to cover their costs
- has not provided guidance on how to apportion the cost of coastal protective measures and managed retreat responses in line with Local Government Act funding source requirements for public and private benefits.

# What is Auckland Council's role<sup>1</sup> to respond to the risks of adverse water events?

Auckland Council as a unitary authority has a leadership role and responsibilities as a regulator, emergency responder, information and service provider, landowner, and advocate

## As a regulator, the council must:

- identify, monitor, collect, assess, disclose, and maintain information on flooding, records of river flows, lake levels, rainfalls, and past floods
  - ❖ *Challenges* – Information is constantly evolving with climate change and mapping is not fool proof. There are also constraints on funding, and it is unclear who the authority of information is. There is also no guidance on equitable sharing of information including the appropriate time to disclose information, to whom, in what way and how frequently.
- manage land use (Auckland Unitary Plan) using flood risk projections with a 100-year timeframe to enable building in flood plains if risks are mitigated and consented
  - ❖ *Challenges* – There is no finite threshold of tolerance for mitigation of flood risk. Resource consents are assessed and approved on a case-by-case basis.
- refuse a building consent if land on which the building is to be constructed is subject to natural hazards (such as from water-related impacts of climate change), or the building work is likely to accelerate, worsen or result in a natural hazard on that land unless the council is satisfied that adequate provision has been put in place to protect the property
  - ❖ *Challenges* – Cumulative effects of land use and new development on climate change related water risk are difficult to measure and can be difficult to provide evidence to mitigate impacts on a cumulative basis within a catchment i.e., stormwater as well as whether the extent that “adequate provisions” are satisfactory.
  - ❖ *Constraint* - Council is not always the final decision-maker about where development can occur. The courts and others make decisions that can limit our ability to keep development and people away from hazards.
- respond after a flooding event to assess if a property and building is unsanitary or dangerous
- act in accordance with and have regard to national policy statements, such as the NZ Coastal Policy Statement, which says to:
  - locate new developments away from areas prone to coastal hazards and to consider responses including managed retreat for existing developments in this situation
  - promote and identify long-term sustainable risk-reduction approaches, including good environmental design to mitigate climate change related water risk or relocation or removal of existing development or structures at risk
  - prioritise natural defences (e.g., wetlands, coastal vegetation, dunes) and their protection, restoration, and enhancement over hard protection structures.

## As a local government, the council must:

- enable democratic, local decision-making and action by communities
- promote the social, economic, environmental, and cultural well-being of communities in the present and for the future.

## As an emergency responder, the council must:

- plan and provide for civil defence emergency management within its district across the areas of reduction, readiness, response and recovery including modelling climate change induced water hazards to issue warnings (Auckland Emergency Management).

## As a responsible public landowner, the council must:

- adhere to the same legislation as private property owners
- avoid undertaking actions that increase risk of natural hazards
- act consistently with laws and obligations that council lands in general are subject to, such as the Reserves Act

## As an infrastructure provider, the council must:

- make appropriate financial provisions for natural hazards risks to infrastructure and assets
- provide for the resilience of infrastructure assets by identifying and managing risks relating to natural hazards.

## As a service provider the council can:

- what services to provide, who benefits and who pays for those services, particularly if intervention and funding show community outcomes and a clear distribution between public benefit and private benefit as well as intergenerational wellbeing across costs and benefits
- to invest in community protection from water-related impacts of climate change and where necessary to enable the development and redevelopment of land in the region.

## As an advocate the council can:

- ask central government for increased certainty about how they will contribute to risk mitigation of their infrastructure, national funding to mitigate hazards and support recovery after events, scientific information provision for national consistency, and national guidance to adapt to climate change and the water-related impacts of climate change
- identify when national policy statements do not align with each other or local circumstances to avoid competing objectives between increasing urban density and adapting to climate change related water hazard
- advocate for better ability to consider the evidence of cumulative effects of climate change related water impacts such as stormwater from developments within a catchment.

<sup>1</sup> Statutory requirements are included, amongst others, in the Resource Management Act 1991, Local Government Act 2002, and Building Act 2004

# What is the current council approach to respond to the risks from water-related impacts of climate change?

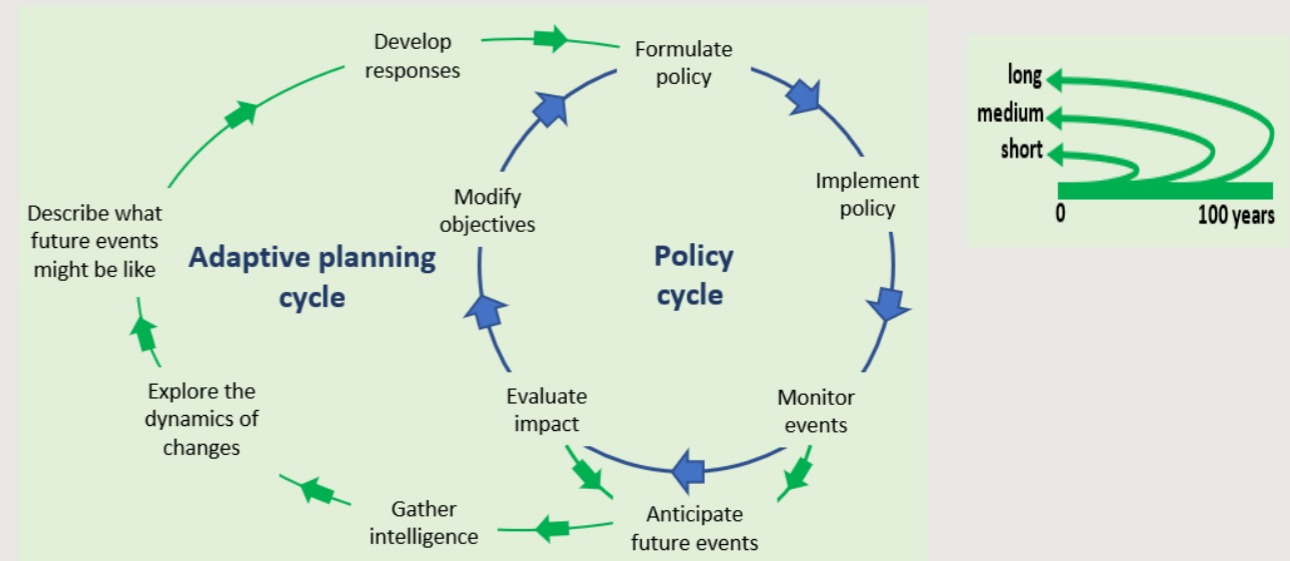
**Direction:** The council is committed to long-term solutions that improve our ability to respond to the water-related impacts of climate change

There are no easy choices, and it is increasingly difficult to provide certainty about what will occur, when and how we will need to adapt over the long-term. The council will use *adaptive pathways* which keep future options flexible, as we plan long-term solutions, to adapt to a changing climate future. This method uses social and cultural change as well as science, and water-related impacts of climate change risk analysis to map long-term pathways so Aucklanders know what change is required and what triggers will direct the timing and certainty of change.

- The council is committed to sustaining its leadership on community risk mitigation and as a water-related impacts of climate change responder. We will use 100-year risk-based decision-making pathways which set out current actions and long-term options to avoid short-term thinking and reactionary approaches. The focus is to reduce future risk and increase resilience. It recognises that there are no easy choices, and decisions will need to be made with imperfect information about risks, what can be done, when, by whom and at what cost.
- The council will embed mātauranga Māori approaches within its adaptive pathway including ways to support Māori communities to respond to climate change effects.
- The council will embed a risk-based decision-making process that provides guidance on trigger points for change, regulation, and planning, so people know what change is required and can prepare.
- Institutional and legislative schemes need to move from their current focus on recovery after an event towards reducing the risk before an event. Such schemes need to resist the tendency to continue along current pathways that rely on hard structures to protect new and existing land use. The council will use anticipatory and flexible decision tools and promote actions that reduce long-term costs.

## What are Dynamic Adaptive Planning Pathways?

This approach identifies ways forward despite uncertainty, while remaining responsive and flexible to change. A range of responses to climate change are tested against possible future scenarios. Pathways are mapped that will best manage, reduce or avoid risk. A plan is developed, with short-term actions and long-term options, and includes pre-defined points (triggers) where decisions can be revisited.



## How this direction contributes to avoiding a vulnerable Auckland

- Prevents ad-hoc decision-making and sustains leadership over long-term horizons by providing long-term pathways that focusses on making the right decisions at the right time.
- Clearly communicates costs for the future and plans for when they happen. This method guards and preserves collective intergenerational wellbeing and avoids leaving an increasingly unpredictable environment for the next generation.

Allows the council to constantly evolve and adapt to new information with a range of responses and actions.



## Direction: The council is fulfilling its leadership role as a unitary authority, alongside the shared responsibility between the government and Aucklanders to respond to the water-related impacts of climate change

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The council, government, communities, and individuals all have a role to play in adapting to the risks from water-related impacts of climate change. We have a shared responsibility to mitigate the impacts of climate change based on the information available and the risk to human safety and property. Auckland Council will continue to fulfil its leadership role as a unitary authority as a regulator, emergency responder, information and service provider, landowner, and advocate.

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- The council has a core responsibility as a regulator to plan and manage the use of land and buildings based on the best available risk data at the time.
- Reducing risk sits with central government, local government, communities, and individuals. All parties have a role to play in adapting to the risks from water-related impacts of climate change. No one party can take on the role of adaptation and response to the future scale of the water-related risk on their own.
- Auckland Council's ability to act, like that of all Aucklanders, is constrained by changing information on climate impacts regarding adverse water events and the costs associated with adaptation on a regional scale.
- Aucklanders and the council as a landowner are responsible for their own property and have choices about the risks and mitigations they take. Auckland Council needs to be able to control development in at-risk areas, allowing individuals to take on an appropriate level of risk but potentially preventing development in areas of excessive risk. Adverse risks to people, property and the environment should be avoided or mitigated to the extent practicable.
- Communities play a significant role in the societal shifts required to adapt to the complex issue of climate change and need to influence tolerance to risk. Auckland Council will work with communities to identify regional and local solutions to minimise social disruption and conflict in communities from climate change by providing long-term planning needed for generation-scale change.

### *How this direction contributes to avoiding a vulnerable Auckland*

- Empowers individuals and communities to have a role and responsibility to better understand risks now and in the future and make decisions based on the risk. This plays a useful role in moderating future climate risk exposure and long-term adaptation costs. Any risk reduction relies on individual and community approach to understanding their tolerance to risk.
- Provides a clear signal to individuals that they need to consider risks when purchasing property and to look at options to reduce the water-related impacts of climate change has on their property, such as property improvements.
- Ensures that communities are involved in identifying risks and solutions that are consistent with the likelihood of the risk, magnitude of the consequences, community appetite for risk, and ability to cope with risk and resilience. This will enable community preparedness and resilience for continued climate change water eventualities.

## Direction: The council follows a financially prudent and equitable approach to the investment of public funds to respond to the water-related impacts of climate change

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Costs are shared by affected and responsible parties. If the council chooses to intervene as a service and infrastructure provider, spending of public funds must be prudent and equitable across Auckland and across generations based on public, private, and intergenerational benefit, and impact on social, cultural, economic and environmental wellbeing.

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- The council needs to be able to plan and undertake long-term actions in a financially prudent and equitable manner particularly for those communities most vulnerable to climate change. This includes making sure future investment is equitable in across Auckland communities and across generations.
- Actions and services that the council could choose to deliver need to be community-based and are required to consider public, private, and intergenerational cost, benefit and impact on social, cultural, economic and environmental wellbeing. People, property, and assets already exist in areas at risk to water-related impacts of climate change. The costs of addressing all these risks are above any one party's ability to pay. The council cannot safeguard all properties from all water-related hazards.
- The council is not an insurer of first or last resort. Local government is not responsible for compensating private losses in ordinary circumstances, such as buying houses, land or providing home improvements. The council does at times provide relief funds for events and central government has existing social and financial support mechanisms. Private insurance is available and residential land can be covered by EQC from flooding. While insurance can sometimes be costly, premiums reflect real risks.

### *How this direction contributes to avoiding a vulnerable Auckland*

- Helps manage and reduce the moral hazard, (when safety nets motivate individuals to take on more risk than they would otherwise, because they expect compensation for any loss) by placing conditions on publicly funded support which are based on public, private, and intergenerational benefit and impact.
- Clarifies that the council's role is not as an insurer. As a public agency the council will face pressure to fill the insurance gap. This approach reduces risky decisions individuals may make if they assume the council and government will always compensate losses from water-related impacts of climate change.
- Manages property owner assumptions that the council will always remediate adverse water damage, avoiding incentives for short-term thinking and putting off costs to others. Impacts of risk extend beyond those who choose to accept the risk, such as developers passing on risk to unknowing renters and future generations, where some communities will end up facing a disproportionate level of risk.
- Ensures that public funds do not become private wealth. Property at risk from adverse climate-change events is a large component of overall wealth for many Aucklanders. Other forms of wealth, such as financial wealth, are held at a private owner's risk. This approach reduces inequity as it avoids advantaging Aucklanders who hold their wealth in property.

# How is the current council approach applied?

The current role and direction can be used to provide advice to elected decision-makers when considering future public policy and for specific place-based response to a climate change related water event, like Piha flooding in 2018.

This document can be used to provide clear messages to the public on the council's current role and direction when responding to the water-related impacts of climate change.

## Place-based scenario

