



NOTICE OF MEETING

Notice is hereby given of the Extraordinary Meeting of the Performance, Policy and Partnerships Committee to be held in the Council Chamber, First Floor, Civic Administration Building, 101 Esk Street, Invercargill on Tuesday 24 May 2022 at the conclusion of the Meeting of the Invercargill City Council

Cr D J Ludlow (Chair)
Cr R R Amundsen (Deputy Chair)
His Worship the Mayor, Sir T R Shadbolt
Cr R L Abbott
Cr A J Arnold
Cr W S Clark
Cr A H Crackett
Cr P W Kett
Cr G D Lewis
Cr M Lush
Cr I R Pottinger
Cr N D Skelt
Cr L F Soper
Ms E Cook – Māngai – Waihōpai
Mrs P Coote – Kaikaunihera Māori – Awarua

CLARE HADLEY
CHIEF EXECUTIVE

Extraordinary Performance, Policy and Partnerships Committee Agenda - Public

24 May 2022

Agenda Topic	Page
1. Apologies	
2. Declaration of Interest	
1. Members are reminded of the need to stand aside from decision-making when a conflict arises between their role as an elected representative and any private or other external interest they might have.	
2. Elected members are reminded to update their register of interests as soon as practicable, including amending the register at this meeting if necessary.	
3. Minor Late Item	
3.1 Conflict Advice	
The reason that the item is not in the agenda: The report was not ready at the time of the publication of the agenda.	
The reason why the discussion of the item cannot be delayed: Matters can be progressed in a timely manner.	
4. Major Late Item	
4.1 Proposed Regional Submission - National Adaptation Plan Consultation	
The reason that the item is not in the agenda: The report was not ready at the time of the publication of the agenda.	
The reason why the discussion of the item cannot be delayed: Matters can be progressed in a timely manner.	
5. Regional Submission to Consultation on Draft National Adaptation Plan (A3914981)	4
5.1 Appendix 1 - Draft National Adaptation Plan (A3915580)	6
6. Proposed Regional Submission - National Adaptation Plan Consultation (To be Tabled)	
7. Conflict Advice	
8. Annual Plan 2022/2023 Deliberations (A3902334)	152
8.1 Appendix 1 - Annual Plan 2022/2023 Consultation Document (A3847758)	172
8.2 Appendix 2 - Financial Strategy (A3915737)	200
8.3 Appendix 3 - Revenue and Finance Policy (A3275564)	216
8.4 Appendix 4 -Te Unua Options Report (A3829805)	223

9. [Conflict Advice \(A3916861\)](#)

237

REGIONAL SUBMISSION TO CONSULTATION ON DRAFT NATIONAL ADAPTATION PLAN

To:	Performance, Policy and Partnerships Committee
Meeting Date:	Tuesday 24 May 2022
From:	Rhiannon Suter, Manager – Strategy and Policy
Approved:	Michael Day - Group Manager - Finance and Assurance
Approved Date:	Thursday 19 May 2022
Open Agenda:	Yes

Purpose and Summary

This report provides the committee the opportunity to consider the National Adaptation Plan and whether Council wishes to be part of the planned regional submission.

Recommendations

That the Performance, Policy and Partnerships Committee:

1. Receive the report "Regional Submission to Consultation on Draft National Adaptation Plan".
2. Note the draft National Adaptation Plan which is out for consultation (A3915580).
3. Note a draft of the proposed regional submission on the draft plan will be tabled at the meeting for discussion.
4. Confirm Council wishes to be included in the regional submission.

Background

Te Kāwanatanga o Aotearoa, The Ministry for the Environment, is consulting on the Draft National Adaptation Plan which is intended to guide how New Zealand will adapt to climate change.

The draft plan was released on 6 May 2022 and submissions are due on 3 June 2022.

Officers have been working with Environment Southland, Southland District Council and Gore District Council on a proposed regional submission.

As a result of the consultation timeframes it has not been possible to provide the draft submission for consideration – Instead it will be tabled at the meeting.

Issues

The draft plan covers:

- System wide actions
- Natural environment
- Homes, buildings and places
- Infrastructure
- Communities
- Economy and financial system
- Research strategy
- Monitoring and reporting

It notes in many places the shared responsibilities which Local Government will have in delivering on this plan.

One aspect the planned submission will focus on is requesting more information for what these processes will look like and how the costs will be met.

Next Steps

The regional submission will be finalised and submitted by Environment Southland on behalf of the region.

Attachments

1. Draft National Adaptation Plan (A3915580).



Te mahere urutaunga ā-motu (tuhinga hukihuki) Draft national adaptation plan

Disclaimer

The information in this publication is, according to the Ministry for the Environment's best efforts, accurate at the time of publication. The Ministry will make every reasonable effort to keep it current and accurate. However, users of this publication are advised of the following.

- The information does not alter the laws of New Zealand, other official guidelines, or requirements.
- It does not constitute legal advice, and users should take specific advice from qualified professionals before taking any action based on information in this publication.
- The Ministry does not accept any responsibility or liability whatsoever whether in contract, tort, equity, or otherwise for any action taken as a result of reading, or reliance placed on this publication because of having read any part, or all, of the information in this publication or for any error, or inadequacy, deficiency, flaw in, or omission from the information in this publication.
- All references to websites, organisations or people not within the Ministry are for convenience only and should not be taken as endorsement of those websites or information contained in those websites nor of organisations or people referred to.

This document may be cited as: Ministry for the Environment. 2022. *Draft national adaptation plan*. Wellington: Ministry for the Environment.

Published in April 2022 by the
Ministry for the Environment
Manatū Mō Te Taiao
PO Box 10362, Wellington 6143, New Zealand

ISBN: 978-1-99-102525-8 (online)

Publication number: ME 1638

© Crown copyright New Zealand 2022

This document is available on the Ministry for the Environment website: www.mfe.govt.nz.

Contents

Building a climate-resilient Aotearoa – together	6
Aotearoa New Zealand’s first national adaptation plan will enable New Zealanders to build resilience and adapt	7
Our climate reality: why we need to adapt to the impacts of climate change	8
This plan is the first step in a long-term adaptation strategy and process	11
Our first national adaptation plan will enable New Zealanders to build resilience and adapt	13
System-wide actions	25
Why we need to take action	25
What we want to achieve	25
How we will get there	26
How we will get there	30
How we will get there	38
Natural environment	43
Why we need to take action	43
What we want to achieve	44
How we will get there	45
Actions across other outcome areas also build the resilience of the natural environment	51
Homes, buildings and places	53
Why we need to take action	53
What we want to achieve	55
How we will get there	56
Actions across other outcome areas also contribute to resilient homes, buildings and places	60
Infrastructure	63
Why we need to take action	63
What we want to achieve	64
How we will get there	65
Working together	65
Actions across other outcome areas also contribute to resilient infrastructure	70
Communities	74
Why we need to take action	74
What we want to achieve	77

How we will get there	78
Actions across other outcome areas also contribute to resilient communities	81
Economy and financial system	84
Why we need to take action	84
What we want to achieve	87
How we will get there	88
Actions across other outcome areas also contribute to a resilient economy and financial system	98
Research strategy	102
Why we need to take action	102
Research themes	103
Research priorities	105
Implementation timeframes	106
Monitoring and reporting	107
Appendix 1: Glossary	109
Appendix 2: Climate risks this first plan addresses	120
Appendix 3: Action details	123
Appendix 4: Roles and responsibilities for adaptation	144
References	146

Tables

Table 1:	The 10 most significant risks New Zealand will face from climate change 2020–26	10
Table 2:	Principles of the national adaptation plan	16
Table 3:	Programme of adaptation guidance	35
Table 4:	Horizontal infrastructure governance	65

Figures

Figure 1:	Projected impact of climate change on New Zealand	9
Figure 2:	How adaptation action is integrated across the Paris Agreement, the 2030 Agenda and the Sendai Framework	12
Figure 3:	New Zealand’s adaptation strategy	13
Figure 4:	Rauora: a climate change framework	20
Figure 5:	New Zealand’s adaptation process over time	22
Figure 6:	Definition of infrastructure	64
Figure 7:	The seven economic risks and their cascading impact across the economy	85
Figure 8:	The monitoring, evaluating and reporting process for adaptation action	107

Building a climate-resilient Aotearoa – together

As I write this, residents in Gisborne are being evacuated from their homes while rivers overflow after persistent heavy rain. Aotearoa New Zealand has always had dramatic weather. But floods such as those in Tairāwhiti, storms such as those experienced recently in Westport and droughts such as those experienced, well, just about everywhere are becoming both more severe and more frequent. More lives and livelihoods are on the line. The outlook is especially troubling, considering the potential for disproportionate effects on Māori, people with disabilities, low-income families and rural communities.

So as the image of tomorrow becomes clearer and more certain, a purely reactive approach to climate impacts becomes ever less credible. Instead, we need to plan and we need to prepare. For too long we have pushed climate adaptation to the back of the cupboard. Now is the time for a real step-change in our approach. Because the sooner we start, the more effective our efforts will be.

This document is the draft of New Zealand's first national adaptation plan. It brings together in one place the Government's current efforts to help to build our climate resilience. And it sets out a proposed future work programme, indicating our priorities for the next six years. The actions in this plan are intended to drive a significant, long-term shift in our policy and institutional frameworks. And they will result in better information about what our future climate will look like, enabling better decisions about our response.

Of course, we mustn't lose sight of the urgent need to lower our emissions. Because the severity with which we will experience climate change can be lessened if we do all we can to limit warming. With that in mind, we will also soon release New Zealand's first emissions reduction plan. But we know some climate impacts are locked in. And we know those impacts will be felt differently by different people and in different regions.

Central government will not bear every risk and cost of climate change, including climate change adaptation. Risk and cost will fall across different parts of society, including asset or property owners, their insurance companies, their banks, local government and central government. The Government has choices about the role it plays and how it influences the way these costs and risks fall. Care will need to be taken to manage any perverse or unintended outcomes such as moral hazard (that is, inappropriate incentives to continue developing in at-risk areas).

The Government needs your feedback on its plans. In particular, we want to hear about how climate change is already affecting you, the potential impacts you are concerned about, the actions you are already taking and what other actions are needed. Read the [Adapt and thrive: Building a climate-resilient New Zealand consultation document](#), which also sets out proposals for managed retreat and flood insurance.



Hon James Shaw
Minister of Climate Change

Aotearoa New Zealand's first national adaptation plan will enable New Zealanders to build resilience and adapt

This is New Zealand's first national adaptation plan. It's a very important milestone in the journey of every New Zealander to resilience and adaptation. It sits alongside the emissions reduction plan and together they lay out New Zealand's overall response to climate change so that we can transition to a low-emissions, climate-resilient future.

With this plan, for the first time as a nation we can see in one place what is being done already to adapt and proposals for what to do in the future. Actions within this plan will mean all levels of government, sectors and communities and all New Zealanders better understand the top-priority risks and act to address them.

We have a clear picture of the top-priority risks from the first National Climate Change Risk Assessment released in 2020. These include risks to coastal ecosystems, community wellbeing, potable water supplies, and buildings. This plan addresses those risks. We need systems, practices and tools that are set up to consider risk and uncertainty.

New Zealanders are already feeling the impacts of climate change. These impacts affect people and communities differently because they have varying degrees of exposure, or different capacity to prepare for and respond to climate impacts. We need to understand these different vulnerabilities to enable future actions to be targeted to support those most vulnerable to the impacts of climate change.

More change will come and impacts will increase, disrupting nature and society, affecting people's health and wellbeing and damaging livelihoods. We need to change how we do things so we can thrive in a climate that that continues to change.

Past emissions have already changed our climate and will continue to do so in years to come. How much more change and how fast change will happen depend on every country's contribution to reduce global emissions.

We need to build on action that people are taking already. By preparing and working together, we can build a New Zealand that is resilient and ready to thrive in a changing climate.



Vicky Robertson
Chair, Climate Change Chief Executives' Board

Our climate reality: why we need to adapt to the impacts of climate change

In the past 100 years, our climate has warmed by 1.1 degrees Celsius. Aotearoa New Zealand is experiencing more hot days and fewer cold days; 2016 was the warmest year on record.

Sea-level rise is continuing at a rate of 2.4 millimetres each year. This poses a distinctive and severe adaptation challenge as we must deal with slow onset changes alongside increased frequency and magnitude of extreme sea-level events.

Coastal erosion and flooding can damage people's homes as well as roads and other infrastructure, affecting access to coastal areas. Rising sea levels also threaten coastal ecosystems and existing three waters infrastructure.

Extreme weather events, such as storms, heatwaves and heavy rainfall, are likely to be more frequent and intense. Extreme rainfall events are expected to occur more everywhere in the country, particularly in Northland due to a projected increase in the number of ex-tropical cyclones.

The number of **frost and snow** days are projected to decrease, while dry days increase for much of the North Island and for some parts of the South Island.

Changes in temperature and seasonality will have implications for agriculture and horticulture, and will affect where certain crops, such as kiwifruit, can be grown. Changes to the number of snow days will affect skiing and other snow activities, impacting the tourism industry.

Drought is projected to increase in frequency and severity, particularly along the eastern side of the Southern Alps. Increased drought puts pressure on our multiple uses of freshwater – for reliably accessible drinking water, electricity generation and many forms of recreation from swimming to fishing. It also makes New Zealand's agriculture sector particularly vulnerable to declining crop yields and pasture growth.

Projections indicate we will have stronger **north-easterly airflows** in summer and, particularly in the south of the South Island, stronger westerlies in winter. This has implications for rainfall patterns, with increased summer rainfall projected for the north-east of the North Island and increased winter rainfall for the West Coast of the South Island.

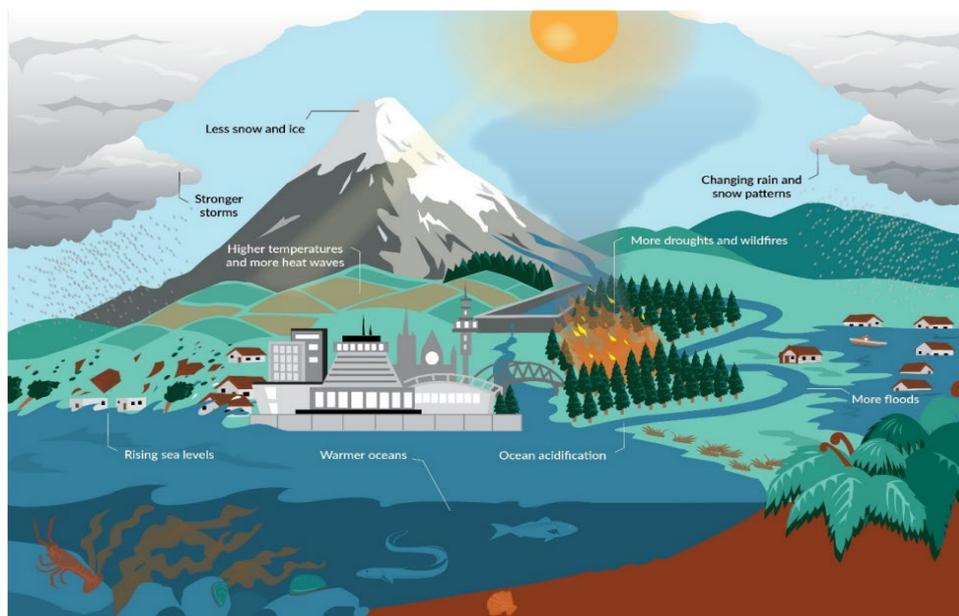
Wildfire risk is projected to increase in many areas towards the end of the century, due to higher temperatures and wind speeds, and lower rainfall and relative humidity.

Although no one yet knows how precise these projections are, particularly about conditions towards the end of the century, they present plausible futures resulting from climate change under a range of scenarios¹ for global emission reductions. How much change will happen and how fast will vary.

¹ The Representative Concentration Pathways (RCPs) are greenhouse gas concentration scenarios the International Panel for Climate Change adopted for its Fifth Assessment Report. They describe four alternative futures, in which possible scenarios of human activities result in different concentrations of greenhouse gases in the atmosphere.

Figure 1 illustrates the range of changes that projections indicate we will face as a result of climate change.

Figure 1: Projected impact of climate change on New Zealand



Adaptation

In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects (IPCC, 2018).

We have a clear picture of the priority risks New Zealand faces from climate change to 2026

The actions in this plan are focused on addressing the 43 priority risks New Zealand faces from the impact of climate change from 2020–26. These priority risks were set out in the National Climate Change Risk Assessment (NCCRA) published in 2020 (Ministry for the Environment, 2020) Table 1 highlights the 10 most significant risks.

This national adaptation plan sets out how New Zealand will address those risks. Actions in this plan will help to address all 43 risks and the risk to the telecommunications network.

How our current risk management system works

New Zealand faces some of the greatest natural hazard risks of any country in the world. Climate change will increase the severity and frequency of some natural hazards, and present new risks associated with slow-onset, gradual changes.

The current approach to risk management in New Zealand is about identifying and monitoring risks to our wellbeing, taking action to reduce our existing levels of risk, minimising the amount of new risk we create, and ensuring everyone has the information and tools they need to make informed decisions.

New Zealanders face a considerable amount of risk in our society due to the hazards we are exposed to, and the vulnerability of people, assets, and services to impacts. It is important for us to try to reduce existing risk so the chances of disaster are reduced, and/or the impacts are reduced when events occur. We also need to recognise how we can inadvertently add to risk through poor development choices, including land-use and building choices. Planning for resilience at the outset of new projects is by far the cheapest and easiest time to minimise risk and has the potential to significantly reduce disaster costs in the future.

A key feature of our risk management system is that everyone has responsibilities to manage their own risks, as far as possible. Central government does not bear all the risks and costs. Risk and costs are shared between asset or property owners, their insurance companies, their banks, local government and central government. This will continue to be important as New Zealand takes action to become more resilient.

Table 1: The 10 most significant risks New Zealand will face from climate change 2020–26

Natural	Human	Economy	Built	Governance
Risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea-level rise and extreme weather events.	Risks to social cohesion and community wellbeing from displacement of individuals, families and communities due to climate change impacts. *	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	Risks to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise. *	Risks of maladaptation across all domains due to the application of practices, processes and tools that do not account for uncertainty and change over long timeframes.
Risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.	Risks of exacerbating existing inequities and creating new and additional inequities due to differential distribution of climate change impacts. *	Risks to the financial system from instability due to extreme weather events and ongoing, gradual changes.	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise. *	Risks that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for climate change adaptation.

* The risk has disproportionate impacts on Māori.

Source: National Climate Change Risk Assessment for Aotearoa New Zealand

These impacts affect all New Zealanders – but some New Zealanders may be more affected and less able to respond

Māori as tangata whenua are particularly sensitive to climate impacts on the natural environment for social, economic, cultural and spiritual reasons. Many Māori depend on primary industries for their livelihoods. In some places, climate change may alter patterns of use of mahinga kai (food-gathering sites) or rongoā crops (medicinal plants), and coastal impacts could disrupt access to marae or wāhi tapu (sacred sites).

Different groups experience extreme events and disaster responses differently. Older people may be more reluctant to evacuate their homes after weather events and suffer from the loss of cultural and social networks. Ethnic minorities are more vulnerable in disaster responses due to language and integration barriers.

If communities need to shift, low-income groups have less choice on where to relocate and are less able to move elsewhere. Mobility-compromised and disabled people have specific needs that can be overlooked when decisions are made around new community locations and accessible housing.

Some groups feel the psychological and physical impacts of climate change disproportionately more than others. Young people and children are more prone to psychological impacts from extreme events, while women are more vulnerable to incidents of domestic violence, which can increase in times of disaster. Farming and rural communities are vulnerable to mental health problems that could arise due to the effect of climate change on livelihoods.

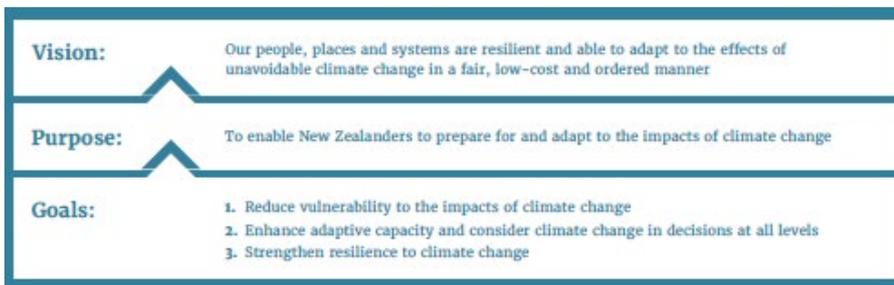
Those with poorer health outcomes than the general population, such as Māori and Pacific people, children and older people, may also physically suffer more from increased heat and disease. New Zealanders are already experiencing the impacts of climate change. As the impacts increase, there is a risk that existing vulnerabilities will deepen.

This plan is the first step in a long-term adaptation strategy and process

Our long-term adaptation strategy is focused on managing the uncertainty that comes with climate change

As our climate continues to change, the impacts and risks we face will also evolve. To manage the uncertainty about the extent of change, this first national adaptation plan sets a long-term vision and high-level goals for adaptation action. This plan is the first step on the pathway towards meeting the following vision and goals for a climate-resilient New Zealand.

A common vision, purpose and goals



These climate adaptation goals are long term, extending beyond the life of this first plan. The intention is to keep the broad focus of each goal consistent in future national adaptation plans, although the specific areas for action within each future plan are likely to change.

Reducing vulnerability to the impacts of climate change means the focus is on the most immediate climate risks and impacts and on strengthening the emergency management system.

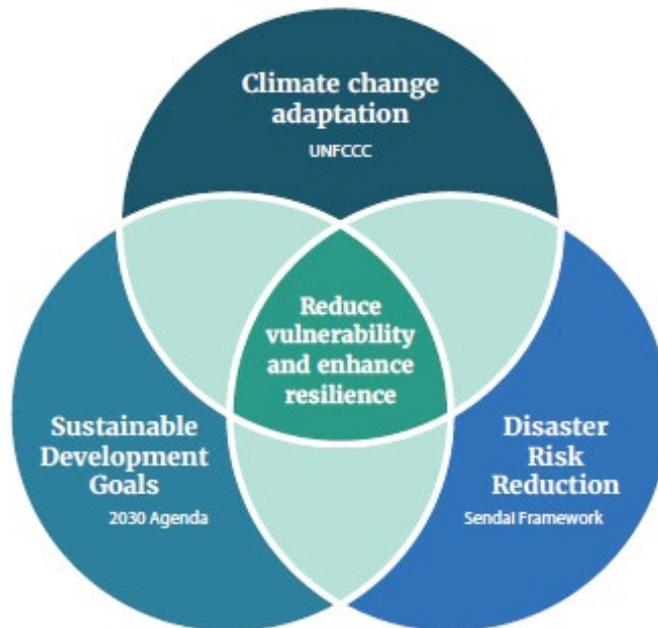
Enhancing adaptive capacity and considering climate change in decisions at all levels means the focus is on people and enabling action across all sectors and communities.

Strengthening resilience also means thinking long term about the system-wide changes that are needed and what we need to do to lay the groundwork now for further action in the future.

The goals are consistent with the Global Goal on Adaptation that was established under the Paris Agreement.

New Zealand is also signatory to several international agreements that support action to reduce vulnerability and enhance resilience. These include the Sendai Framework for Disaster Risk Reduction and the 2030 Agenda for Sustainable Development, as well as agreements under the United Nations Framework Convention on Climate Change (UNFCCC) process, including the Paris Agreement (figure 2).

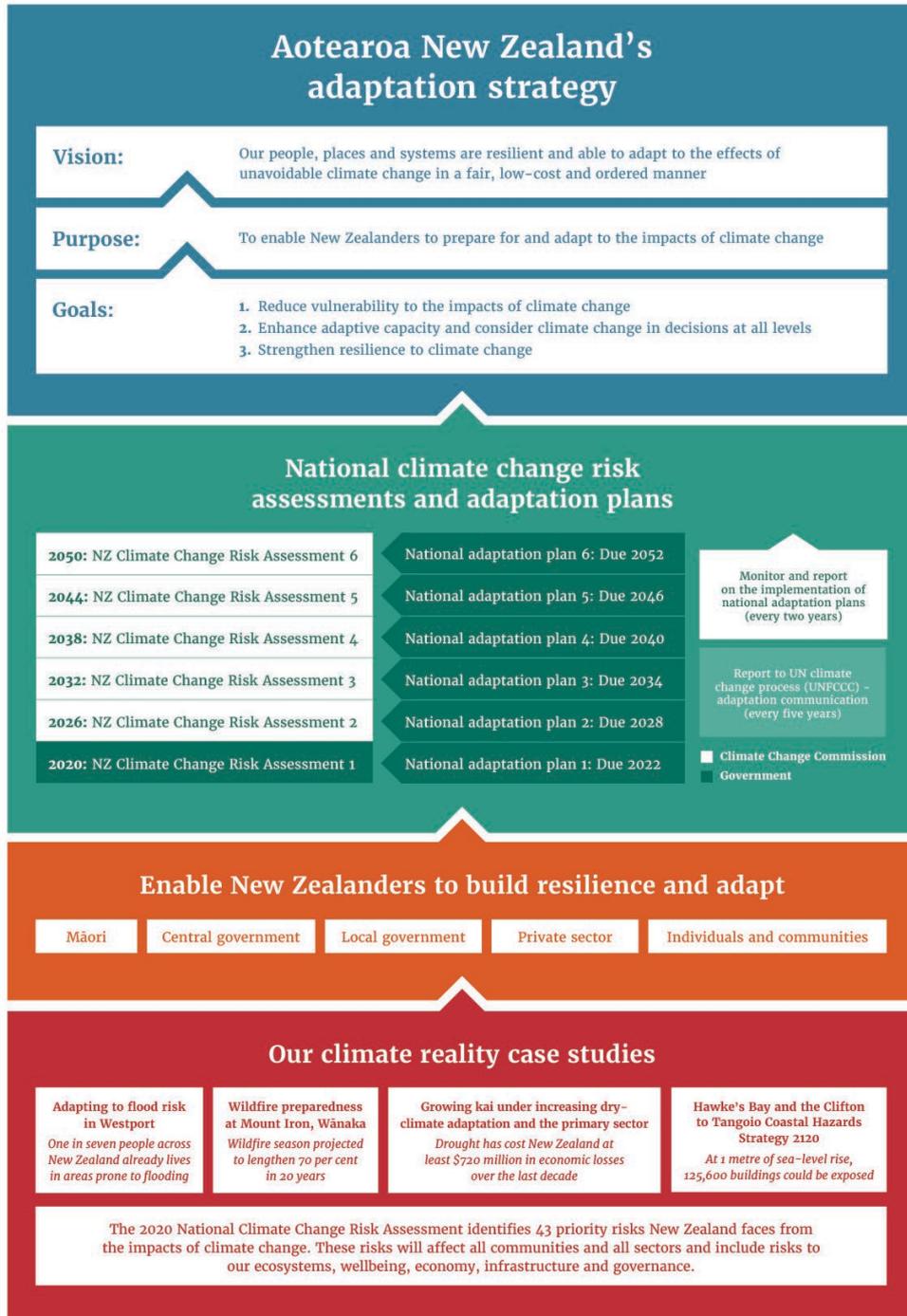
Figure 2: How adaptation action is integrated across the Paris Agreement, the 2030 Agenda and the Sendai Framework



Our first national adaptation plan will enable New Zealanders to build resilience and adapt

This is a Government-led plan for all New Zealanders. All New Zealanders have a role to play in understanding climate risks and building resilience to the effects of climate change. The strategy map below contains both the Government’s long-term direction for adaptation action and the objectives for the first national adaptation plan.

Figure 3: New Zealand’s adaptation strategy



2022 National adaptation plan 1

This national adaptation plan will:

1. Reform institutions to be fit for a changing climate
2. Provide data, information and guidance to enable everyone to assess and reduce their own climate risks
3. Embed climate resilience across government strategies and policies

Outcome areas and objectives

Natural environment	Homes, buildings and places	Infrastructure	Communities	Economy and financial system
Ecosystems which are healthy and connected, and where biodiversity is thriving	Homes and buildings are climate resilient and meet social and cultural needs	Reduce the vulnerability of assets exposed to climate change	Enable communities to adapt	Sectors, businesses and regional economies can adapt; participants can identify risks and take action
Robust biosecurity reduces the risk of new pests and diseases spreading	New and existing places are planned and managed to minimise risks to communities from climate change	Ensure all new infrastructure is fit for a changing climate	Support vulnerable people and communities	A resilient financial system underpins economic stability and growth; participants can identify, disclose and manage climate risks
Support working with nature to build resilience	Māori connections to whenua and places of cultural value are strengthened through partnerships	Use renewal programmes to improve adaptive capacity	Support communities when they are disrupted or displaced	
	Threats to cultural heritage arising from climate change are understood and impacts minimised		The health sector is prepared and can support vulnerable communities affected by climate change	

System-wide outcome areas and objectives

Legislation and institutional arrangements are fit for purpose and provide clear roles and responsibilities	Robust information about climate risks and adaptation solutions is accessible to all	Tools, guidance and methodologies enhance our ability to adapt	Unlocking investment in climate resilience
---	--	--	--

Action plans: prioritising and focusing action to address risks

This first national adaptation plan brings together existing actions and proposed future work into a multi-year work programme. The actions within this plan are what central government will do to enable all levels of government, sectors and communities and all New Zealanders to better understand the risks of climate change and take action to address them.

Adaptation planning requires a flexible approach that can accommodate change but keep us moving in the right direction. Inevitably, actions in the later years of this plan are less clearly defined. Over time, decisions will be made on which proposals to progress and when, or if something else is needed, and will need to be firmed up as the results of earlier actions become clear.

New Zealand's first national adaptation plan has three focus areas

Focus area one: Reform institutions to be fit for a changing climate

New Zealand already has systems and institutions in place to plan for and respond to natural hazard risks or manage natural resources and infrastructure. Yet these were designed for a climate of the past. They need to better reflect the greater and changing climate impacts we face.

Actions in this plan will reset New Zealand's most critical planning and response systems to deliver climate resilience. These changes will be designed so that today's decisions about how we manage our resources consider the future climate. By doing this now, New Zealand will have the right foundation in place to address climate risks. For actions relating to this focus area, see [Reform institutions to be fit for a changing climate](#) in the section about systems-wide actions.

Focus area two: Provide data, information, tools and guidance to allow everyone to assess and reduce their own climate risks

All New Zealanders will need to adapt to the impacts of climate change. The first step is for you to understand and assess the risks you face.

Actions in this plan will make it easier to access up-to-date information and guidance on climate risk that you can use to assess what future climate changes are most important for where you are and how you live. For actions relating to this focus area, see [Provide data, information, tools and guidance to allow everyone to assess and reduce their own climate risks](#) in the section about systems-wide actions.

Focus area three: Embed climate resilience across government strategies and policies

Adapting to climate impacts requires widespread change.

Actions in this plan will embed the consideration of existing and future climate risk in all government strategies and proposals, so that adaptation becomes a mainstream part of government policy. The sections about each outcome area give details of actions relating to this focus area.

Working together for a climate-resilient New Zealand

Collaboration is vital for effective adaptation as climate change affects us all. We all have a role to play in building a more climate-resilient New Zealand.

As a nation, we all know about the risks from earthquakes and play our part in preparing for them.

As an economy based heavily on the natural environment, we also have well-established ways of preparing for severe weather events. Most hazard events occur at the local or regional scale. That is why New Zealand’s hazard risk management and emergency planning frameworks place a strong emphasis on local initiatives for risk reduction. We are a resilient and innovative country. To be resilient in our response to a changing climate, we need to work together to understand and prepare for the changes that can affect us.

Table 2 lists the principles that the Government has set for the first national adaptation plan. These outline the kind of changes we need to make to the way we manage risk.

Table 2: Principles of the national adaptation plan

Principles for adaptation action	
Principles for including actions in the plan	1. Be proactive: Anticipate change and take practical steps to adapt.
	2. Think long term: Take an intergenerational perspective that spans political, planning and financial cycles, to plan for a changing climate.
	3. Maximise co-benefits: Use adaptations that achieve complementary goals while avoiding maladaptation.
	4. Promote equity: Prioritise helping the people, places and infrastructure that are most vulnerable to climate impacts, while building adaptive capacity for all.
Principles for implementing actions	1. Collaborate: Adapt in partnership with iwi, hapū, Māori and all New Zealanders – ara whakamua.
	2. Adjust as we go: Design actions and decisions to be revisited and adjusted as circumstances change.
	3. Mainstream adaptation: Embed climate resilience as a core consideration in all decision making.
	4. Make well-informed decisions: Use the best available evidence, including science, data, local knowledge and mātauranga Māori.
	5. Work with nature: policies, planning and regulation should protect enhance and restore nature and that any impacts on nature should be mitigated as much as possible.
	6. Adapt locally: Enable communities to prepare for the unique risks and opportunities they face, and tailor intervention to the local situation.

Enabling adaptation – leading roles

Climate change will affect all New Zealanders. Everyone needs to assess and manage their risk, and consider what climate change might mean for them.

The government cannot bear all of the risks and costs. We will have to work out how these can be shared across a range of different groups.

New Zealand has a well-established system of natural hazard risk management and reduction. Climate change increases the risks we face from many natural hazards. There are existing roles and responsibilities to prepare for and manage these risks remain.

Local government (city, regional, district and unitary councils) is on the front line in preparing for and dealing with climate impacts and risks. Local authorities have statutory responsibilities to make key decisions on how to use and manage land and other natural resources to avoid or mitigate impacts of natural hazards. This includes responsibilities to plan for and invest in improving community resilience. They also own a significant amount of assets, including infrastructure and forests, that are at risk from the impacts of climate change.

For most people, local authorities are the government bodies that are closest to their communities and represent local views. Examples of this connection include the role of local authorities in land-use planning, water resources, three waters services, flood risk management, biodiversity and biosecurity, roading and emergency management. Local government enhances community resilience through public education and local planning processes. Many councils are already addressing the impacts of climate change and proactively integrating climate risk into current and future planning.

Iwi/Māori All the NCCRA risks are relevant to Māori as tāngata whenua (people of the land) and kaitiaki (guardians) of their ancestral and cultural landscape. Some risks may disproportionately affect certain whānau, hapū and iwi, as well as Māori interests, values, practices and wellbeing.

Te Tiriti o Waitangi obliges the Government and Māori to make decisions together in a way that balances kāwanatanga (the Government's right to govern) with rangatiratanga (the Māori right to make decisions for Māori). The NCCRA recognises the Government's responsibility to give effect to Te Tiriti principles.

The private sector has a significant role in:

- strengthening its resilience to future risks
- directing investment in adaptation, which can strengthen the resilience of infrastructure, production systems and supply chains. Good risk management practice includes understanding and developing strategies to manage these risks. Businesses may also identify economic opportunities from better managing their climate risks, such as benefitting from new technologies and markets.

Banks and insurers in particular may be exposed to climate risk through their mortgage portfolios and liabilities. By investing in resilience measures or supporting customers to do the same, banks and insurers can reduce their exposure. They also have the potential to support others to fund adaptation actions, through loans or 'build back better' post-event payments.

Individuals and communities have a role because climate change is increasingly affecting daily life. Impacts include rising costs due to disruptions in supply chains as a result of climate impacts, power cuts due to extreme weather events, or the need to evacuate homes due to flooding or fires.

Communities and individuals need to be involved in decisions on adaptation where they will directly feel the effects. Knowledge and data on climate impacts and risk will help them to make informed choices about responding to climate change, so they can prepare for the impacts and manage risks.

The research and scientific community needs to contribute because adaptation decisions at all levels should be based on the best available science. Producing that science and making it accessible to address climate risk – by reducing vulnerability, building adaptive capacity and increasing long-term resilience – is a cornerstone of advancing New Zealand’s adaptation action.

Central government has a key role in enabling climate-change adaptation across all communities, sectors and regions of New Zealand.

The Government provides leadership and direction on adaptation through coherent governance and institutional arrangements, and by administering and informing climate policy. It uses legislation, funding and regulation to do this.

The policies that Central government set influences the choices of others. This can involve providing information and data not otherwise available or setting regulations for land use, building standards and insurance. Climate policy is a whole-of-government approach, in which each department or agency has a part to play.

Central government also manages the risks to its own assets and infrastructure. This includes schools, hospitals, police stations, and prisons as well as services, for example conservation and biosecurity.

For a more detailed explanation of these roles and responsibilities, see appendix 4.

Case study: Climate Leaders Coalition

In many areas, the New Zealand private sector is already taking action to manage risks from climate change. One example is the Climate Leaders Coalition (the Coalition).

The Coalition brings together more than 100 chief executives from various industries who have committed their organisations to taking voluntary action on climate change. The Coalition’s mission is to respond to climate change through collective, transparent and meaningful climate action. For 2022, one of the Coalition’s focus areas is climate-change adaptation. This means understanding the climate risks businesses will face and planning for these to help build resilience in these organisations.

In 2021, close to a third of the Coalition’s signatories assessed and disclosed their climate risks, and more than half are working to disclose soon. Among the signatories, 80 per cent are already considering climate risks in their investments and planning. The Task Force on Climate-related Financial Disclosures framework is signatories’ preferred approach to assessing climate change risks, and more than a third are either fully or partially compliant with it (as at April 2021).

By making the consideration and management of climate risk part of their operations, as well as reducing emissions, businesses are planning now for the future.

Working in partnership and recognising the indigenous worldview

In developing this plan, the Government acknowledges an indigenous worldview of climate change.

The **Rauora framework**, published separately from this national adaptation plan, brings together Māori values and principles into an indigenous worldview of climate change. The framework is a foundation from which iwi, hapū and whānau can apply their own mātauranga-a-iwi (knowledge with an iwi-specific base).

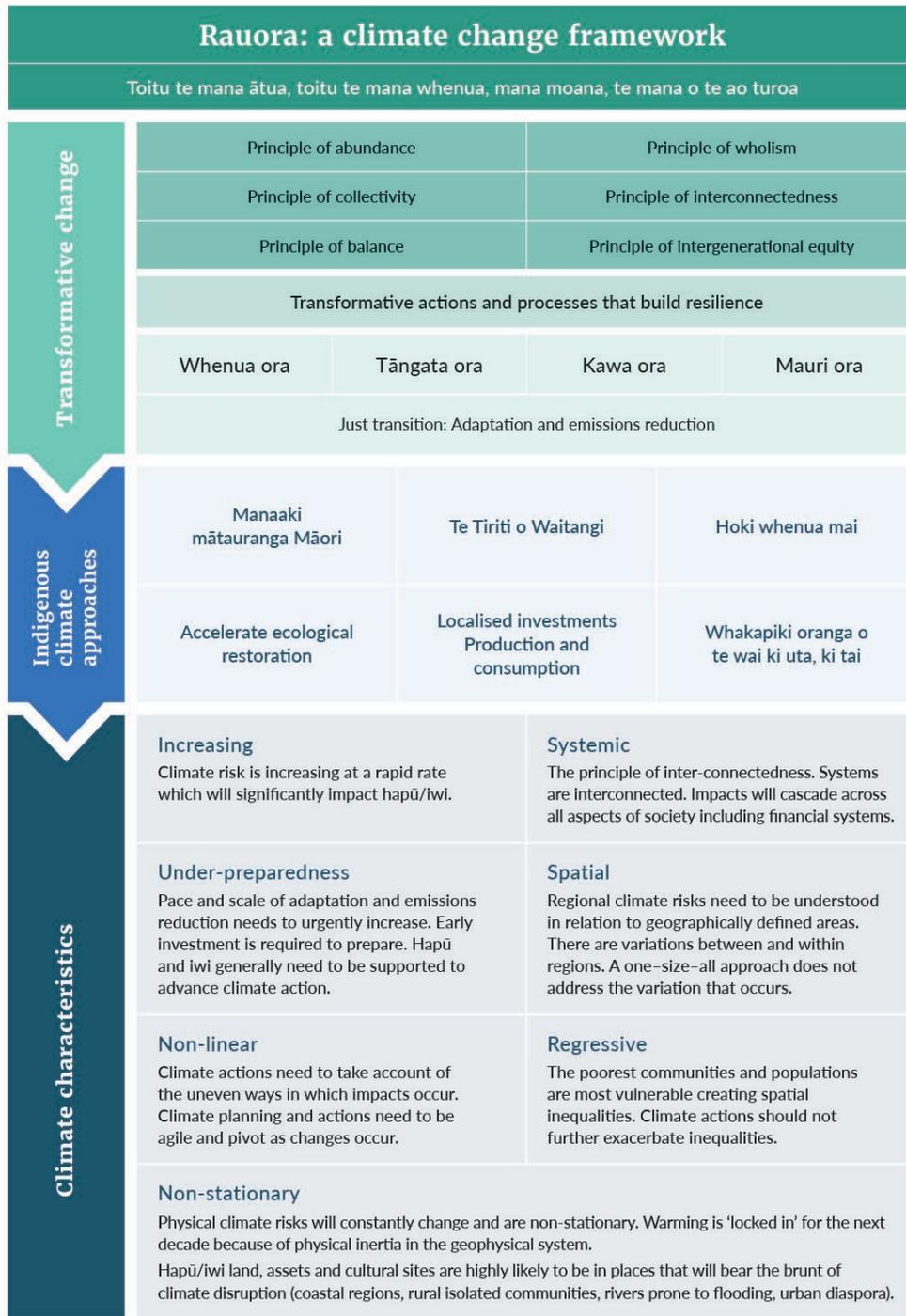
For the Crown, the framework acknowledges that its Tiriti partners have a worldview that sits outside Western interpretations, and that the Government has commitments to uphold.

The Rauora framework (figure 4) is a holistic approach to climate change, where enduring and unbroken relations between Papatūānuku (earth mother) and Ranginui (sky father) and beyond inform the relationships among us, with others and with the environment. The enactment of these relationships (whakapapa) through tiers and intersections are associated with mana, tapu and noa.

As a government plan, the national adaptation plan draws on key concepts of the Rauora framework. Notably, the framework supports and promotes transformative approaches, resilience building and the development of supporting measures.

The notion of whenua ora, tāngata ora, mauri ora recognises that the land, people and associated life forces are interconnected. In this way, a well land is a well people and so too are the life forces of these components of the world. The notion of kaitiakitanga is implicit within this approach, where Māori continue to strengthen their stewardship role within the environmental space.

Figure 4: Rauora: a climate change framework



Case study: Ngaa Rauru Kiihahi Climate Change Strategy

Climate action for Ngaa Rauru Kiihahi, a small iwi in south Taranaki, is encapsulated in their recent climate change strategy. The iwi and the Ministry for the Environment co-developed this strategy as a case study in understanding the complexities of climate change for small post settlement governance entities.

The strategy is entitled *Ka mate kaainga tahi, ka ora kaainga rua: When a place of abode retires, another as prepared emerges*. This whakatauaakii (proverb) refers to values from the iwi's own ancestral pathways – preparedness, agility, resilience and future thinking – that ensure safety and survival.

Preparing a second place of abode sits within a broader context – that extreme weather conditions and projected flooding patterns will affect marae, communities, hapuu, culturally significant assets and businesses. Climate change is viewed as a phenomenon that will impact every facet of their lives. The strategy, then, is more than an environmental plan; it extends to include social, economic, ecological and cultural implications.

“We have a responsibility, whaanau, hapuu, marae and the iwi, to ensure that we are still here in 1,000 years’ time.” (Mike Neho, Tumu Whakarae, iwi chair, Ngaa Rauru Kiihahi)

The strategy is informed by a Ngaa Rauru Kiihahi conceptual framework known as Te Kawa Ora, which promotes a balance between all things. The environment is viewed as an extension of iwi through whakapapa (genealogy). To this end, relationships within the iwi and externally with others, including the environment, are viewed as fundamental to the approach. Importantly, the strategy challenges the iwi to (re)harness their own tikanga, kawa and maatauranga-a-iwi to advance climate action. Developments include their papakaainga, partnerships within the energy sector, land purchases for new businesses, expansion of alternative food sources and the regeneration of local flora and fauna.

Partnerships and alliances, capability and capacity building, and planning, implementation, research and evaluation are the key cornerstones to this strategy. All are built on a foundation of Ngaa Raurutanga.

Adapting to climate change is a process

As our climate is changing, we need to assess climate risks using long timeframes and plan accordingly. Then we must repeat this cycle, regularly. New Zealand's climate-change adaptation process is based on four components. Figure 5 illustrates what this process looks like over time.

Figure 5: New Zealand's adaptation process over time



How to use this document

Actions within this plan focus on six **outcome areas**:

- system-wide actions
- natural environment
- homes, buildings and places
- infrastructure
- communities
- economy and financial system.

Objectives: Each outcome area has a set of objectives to address the risks for that area.

Actions: Each objective has one or more actions to achieve that objective. Some actions are system-wide, because climate risks are interconnected and affect the broader systems of our society. The critical and supporting actions are committed. Other actions are proposals for a future work programme. These reflect current thinking about what will be needed in future, but what they look like or whether they need to go ahead will depend on future funding and/or policy decisions, including decisions to be made in future Budgets.

General questions

1. Climate change is already impacting New Zealanders. Some examples include extreme weather events such as storms, heatwaves and heavy rainfall which affects lives, livelihoods, health and wellbeing, ecosystems and species, economic, social and cultural assets, services (including ecosystem services) and infrastructure. How is climate change impacting you? This could be within your community and/or hapū and iwi, and/or your business/organisation, and/or your region.

2. The national adaptation plan focuses on three key areas. Please indicate which area is most important for you (tick box).
 - focus area one: reform institutions to be fit for a changing climate. This means updating the legislative settings so that those who are responsible for preparing for and reducing exposure to changing climate risk will be better equipped.
 - focus area two: provide data, information and guidance to enable everyone to assess and reduce their own climate risks. This means that all New Zealanders will have access to information about the climate risks that are relevant to them
 - focus area three: embed climate resilience across government strategies and policies. This means that Government agencies will be considering climate risks in their strategies and proposals.
 - other? Please explain.

3. We all have a role to play in building resilience to climate change, but some New Zealanders may be more affected and less able to respond. There is a risk that climate change could exacerbate existing inequities for different groups in society. [Appendix 3](#) sets out the full list of actions in this national adaptation plan.
 - a. What are the key actions that are essential to help you adapt? Please list them.

 - b. Which actions do you consider to be most urgent? Please list them.

 - c. Are there any actions that would help ensure that existing inequities are not exacerbated? Please list them.

 - d. Are there any actions not included in this draft national adaptation plan that would enable you to assess your risk and help you adapt?

4. Central government cannot bear all the risks and costs of adaptation. What role do you think asset owners, banks and insurers, the private sector, local government and central government should play in:
 - a. improving resilience to the future impacts of climate change?
 - b. sharing the costs of adaptation?

5. The National Climate Change Risk Assessment recognised that there may be economic opportunities in adapting to a changing climate.
 - a. What opportunities do you think could exist for your community or sector?
 - b. What role could central government play in harnessing those opportunities?

System-wide actions

In this section:

- [Why we need to take action](#)
- [What we want to achieve](#)
- How we will get there: [Focus area one: Reform institutions to be fit for a changing climate](#)
- How we will get there: [Focus area two: Provide data, information, tools and guidance to allow everyone to assess and reduce their own climate risks](#)
- How we will get there: [Focus area three: Embed climate resilience across government strategies and policies](#)

Why we need to take action

Our current systems and institutions – the legislation, tools and practices that we use to understand climate risk and to prepare for and respond to it – were designed for a more stable climate. The National Climate Change Risk Assessment (NCCRA) highlighted that:

- regulatory frameworks and institutions do not always account for changing risks
- there is a lack of statutory and policy alignment, a lack of coordination across government and with sectors, and climate information is scattered, and can be inconsistent and expensive
- there are limited tools and guidance on how to make decisions under conditions of uncertainty, such as the uncertainty associated with projections of future climate.

In 2018, the Climate Change Adaptation Technical Working Group (Working Group) made a series of recommendations to the Government. Some of these are now in place, such as the legislative framework that this national adaptation plan is part of.

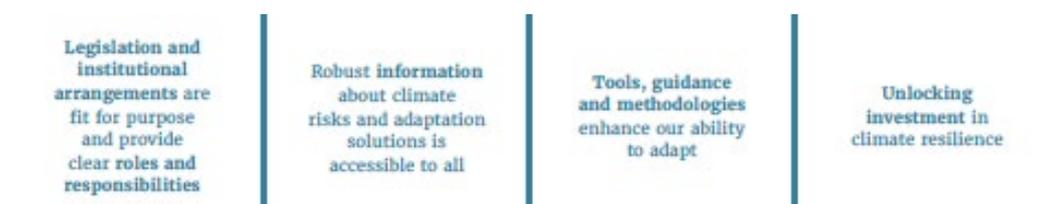
The Working Group also identified three characteristics that need to be in place across the system for Aotearoa New Zealand to adapt effectively:

- being informed about how the climate is changing and what this means for New Zealanders
- being organised, with a common goal, a planned approach, appropriate tools and clear roles and responsibilities
- taking dynamic action to proactively reduce exposure and vulnerability to the social, cultural, environmental and economic consequences of climate change.

What we want to achieve

Putting the right frameworks and settings in place and enabling everyone to assess and manage their own risks will establish the foundation for adaptation action in this first national adaptation plan.

The Government has set the following system-wide objectives for the first national adaptation plan



The actions that follow are designed to achieve these objectives. They also address the **governance risks** in the NCCRA, in particular the risks that:

- maladaptation will occur across all domains because they use practices, processes and tools that do not account for uncertainty and change over long timeframes
- climate change impacts across all domains will be made worse because current institutional arrangements are not fit for climate change adaptation.

Building climate resilience in diverse contexts requires a fresh approach to governance (Intergovernmental Panel on Climate Change, 2022).

What is governance?

Governance is about addressing collective issues, such as climate change. The NCCRA defines governance as: “the governing architecture and processes of interaction and decision making that exist in and between governments, economic and social institutions”.

Governance permeates all aspects of New Zealand, from Te Tiriti partnership between Māori and the Crown to the relationship between local government and communities, and from the economy to the built environment to natural ecosystems.

How we will get there

Focus area one: Reform institutions to be fit for a changing climate

Legislation and institutions are fit for purpose and provide clear roles and responsibilities

Extensive reforms to address system-wide challenges are already underway, including for resource management, three waters and emergency management.

These reforms will clarify roles and responsibilities, especially for local government and communities, and require long-term proactive planning that considers climate impacts and evolving and dynamic risks. Having clearer roles and responsibilities will also clarify the best way to share risks and costs across these groups.

These reforms underpin action to address all 10 of the most significant risks identified in the NCCRA.

Local government plays a central role in managing natural hazard risks, which the impacts of climate change are making worse.

A core function of councils under the Resource Management Act 1991 is to avoid or mitigate natural hazards, and councils must have particular regard to the effects of climate change when making decisions.

Councils also have responsibilities for civil defence and emergency management.

Local government provides a critical link between climate change adaptation policy and communities. It makes this link through its planning and emergency management functions and community engagements.

Critical actions

Reform the resource management system

Timeframe: Year 1 (2022/23) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective SW1 – **Status:** Current

In early 2021 the Government announced its intention to repeal the Resource Management Act 1991 and replace it with a Natural and Built Environments Act, a Strategic Planning Act and a Climate Adaptation Act. For more information on the proposed new Acts, see [Resource management system reform](#).

The Government's objectives for resource management reform include better preparation for adaptation and risks from natural hazards, and better mitigation of emissions contributing to climate change.

Resource management reform will play an essential role in supporting the resilience of homes, buildings and places, by encouraging planning for future growth and development in the right places and not in areas prone to climate-related hazards. The changes will require local government, central government, and iwi/Māori and communities to work together to plan how areas will adapt. The reform will provide tools to stop increasing exposure in areas of high or increasing risk and facilitate the retreat of communities, homes and infrastructure where risks are intolerable.

Among the changes that should enable long-term adaptation are:

- a National Planning Framework: strategic direction and guidance on how to achieve the climate outcomes in the Natural and Built Environments Act
- clear signalling or initiation of adaptation responses, including retreat through regional spatial strategies that identify risk zones and areas where adaptation may be necessary
- powers and processes to address ownership of property that is retreated from in the Climate Adaptation Act (or Natural and Built Environments Act)
- more comprehensive support for implementation.
- in 2023 we expect the Natural and Built Environments Act and the Strategic Planning Act to be passed.

Pass legislation to support managed retreat

Timeframe: Years 1–3 (2022–25) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change – **Primarily supports:** Objective SW1 – **Status:** Current

We will develop legislation to address complex technical, legal and financial issues associated with managed retreat as described by the Resource Management Review Panel. Managed retreat is an approach to reduce or eliminate exposure to intolerable risk, which enables people to strategically relocate assets, activities, and sites of cultural significance (to Māori and non-Māori) away from areas at risk from climate change and natural hazards within a planned period of time. This legislation is being progressed through the [development of the Climate Adaptation Act](#).

The government is expecting to introduce the Climate Adaptation Bill by the end of 2023, setting out the managed retreat framework.

Reform institutional arrangements for water services

Timeframe: Years 1–2 (2022–24) – **Lead agency:** DIA – **Relevant portfolio:** Local Government – **Primarily supports:** Objective SW1 – **Status:** Current

We will create new water entities that will work with councils and communities to deliver better health and wellbeing outcomes for our communities and protect our environment for generations to come. The NCCRA identifies risk to potable water as the most urgent risk from climate change. We are considering how the proposed new entities will manage climate risk. The reforms will bring a more consistent approach and more certainty about who makes decisions.

By July 2024, water services entities are established.

Modernise the emergency management system

Timeframe: Years 1–6 (2022–28) – **Lead agency:** NEMA – **Relevant portfolio:** Emergency Management – **Primarily supports:** Objective SW1 – **Status:** Current

We plan to modernise emergency management, including through legislative reforms, clearer roles and responsibilities and a strengthened partnership with Māori. This work seeks to improve the regulatory framework which underpins emergency management in New Zealand. This will also sharpen the focus on disproportionately impacted groups by strengthening community resilience to achieve more equitable outcomes.

By August 2024, there will be adoption of new EM legislation and improved guidance provided across the emergency management system.

The future for Local Government Review

Timeframe: Year 1 (2022/23) – **Lead agency:** DIA – **Relevant portfolio:** Local Government – **Primarily supports:** Objective SW1 – **Status:** Current

In 2021 the Minister of Local Government started an independent review into the future for local government.

Adaptation will bring new challenges and opportunities to local governance. We need to ensure the system of local government is equipped for agile, sustainable and anticipatory

decision making and implementation. The Review is likely to include recommendations on what local government does, how it does it and how it pays for it.

In April 2023, the Local Government Review Panel will provide the Minister with recommendations for improving the local governance system. Following this, the Government will decide how to respond to the Review's recommendations.

Supporting actions

Establish a foundation to work with Māori on climate actions

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change – **Primarily supports:** Objective SW1 – **Status:** Current

A platform will be developed to be a foundation for an equitable transition for Māori. It will deliver mechanisms for Māori to actively participate in policy design, tangata Māori climate actions, and support iwi/Māori to develop climate strategies and action plans for adaptation and mitigation. The platform will be built on three focus areas.

- Partnership and representation. To uphold Te Tiriti and establish a constructive relationship with Māori, the platform will enable strategic input from Māori and more equitable governance arrangements over the emissions reduction plan and the national adaptation plan.
 - Strategy and alignment. To support a Māori-led transition and elevate te ao Māori within the climate response, Māori will have support to define, measure and implement a national Māori climate strategy and action plan.
 - Community activation. Funding will support kaupapa Māori, tangata Māori actions and solutions for the climate emergency.
-

Set national direction on natural hazard risk management and climate adaptation through the National Planning Framework

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective SW1 – **Status:** Current

The National Planning Framework will set clear direction for local authorities to guide them in how to achieve the climate resilience outcomes in the Natural and Built Environments Act. This will set out methods and requirements for planning for natural hazards and considering future climate risks. This direction will be integrated with direction on other outcomes across the natural and built domains.

Implement the National Disaster Resilience Strategy

Timeframe: Years 1–6 (2022–28) – **Lead agency:** NEMA – **Relevant portfolio:** Emergency Management – **Primarily supports:** Objective SW1 – **Status:** Current

We will design a pathway to give effect to the National Disaster Resilience Strategy's vision, goals and objectives. The Strategy's vision is for a disaster-resilient nation that acts proactively to manage risks and build resilience in a way that contributes to the wellbeing and prosperity of all New Zealanders.

Develop the emergency management workforce

Timeframe: Years 1–6 (2022–28) – **Lead agency:** NEMA – **Relevant portfolio:** Emergency Management
– **Primarily supports:** Objective SW1 – **Status:** Current

Work is ongoing to expand the operational capacity and capability of the emergency management workforce at the national, regional and local levels. This will better position New Zealand to address the increased frequency and severity of natural hazards.

Establish central government oversight and coordination for implementing the national adaptation plan

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change –
Primarily supports: Objective SW1 – **Status:** Current

This will provide transparency of implementation of the national adaptation plan across government, improve coordination within central government, and enable accountability.

How we will get there

Focus area two: Provide data, information, tools and guidance to enable everyone to assess and reduce their own climate risks

Robust information about climate risks and adaptation solutions are accessible to all

We already have a significant amount of information on how the climate is expected to change in New Zealand, and the consequences of those changes.

However, the way it is collected and managed is inconsistent across the system, and it can be hard to find and use. We also need datasets that better respond to iwi, hapū and Māori needs for information.

With access to up-to-date and relevant information about climate risks, people can better assess and reduce their own climate risk and develop adaptation solutions.

Data need to be combined to provide meaningful risk information in different contexts.

Climate data include current and expected biophysical changes such as changes to temperature, sea level and precipitation. With geospatial data, it is possible to map current and projected impacts and build baselines for long-term analysis – such as light detection and ranging (LIDAR), Earth observations, and topographic and geographic data.

When combined, these data can help to generate modelling and scenario-planning tools tailored to the needs of different users. With those tools, users can then assess climate consequences in areas such as health, employment, food security, tourism, businesses, and terrestrial and freshwater ecosystems.

Tools, guidance and methodologies enhance our ability to adapt

We will never have perfect information on climate change until it is too late to act. Managing risk means we need to make decisions despite uncertainty and consider the worst-possible outcome to prepare as well as we can. We need more than just good information to effectively assess risk and take appropriate action.

When we have the right tools, guidance and methodologies, we can use information to manage climate risks, while allowing for uncertainty when planning for future risk. This includes arranging for finance, which is a key tool for enabling adaptation.

Unlocking investment in climate resilience

Early investment from all actors can help, in many cases, to avoid significant losses and to increase our climate resilience. Central government has an important role in encouraging other actors to manage their risks, and ensuring the right incentives are in place.

The cross-cutting actions in focus area two support this objective. Having clarity on the Government's long-term strategy for adaptation, ongoing system reform, and roles and responsibilities across the system will be the critical foundation for high-value investment. Better data and information can support decisions on where and when to invest in adaptation actions that offer the best value.

However, in some cases affordability, access to finance or other market barriers may prevent timely, cost-effective action.

By the end of 2024, as system reforms are completed and New Zealanders have better information about how to manage their climate risks, the Government will consider the need for further tools or guidance, funding and investment mechanisms to catalyse investment in resilience.

Realising the benefits of climate investment

There are several groups who each have responsibilities for adaptation. They bear costs and risks from climate change, and will therefore benefit from investment in adaptation. For example:

- Asset owners, such as homeowners and business owners, can buy insurance to transfer risk. Outside of their insurance coverage, they ultimately bear the costs of any loss or damage to their assets. Equally, they receive the benefits from investing in risk reduction, such as an increase in asset value.
- Banks and insurers may be exposed to climate risk through their mortgage portfolios and liabilities (see Economy and Financial Systems Chapter). By investing in resilience measures and supporting customers to do the same, banks and insurers can reduce their exposure, and therefore reduce potential losses.
- The private sector will likely face physical and transition challenges from climate change. Businesses may also find economic opportunities from better managing their climate risks, such as benefitting from new technologies and markets. Investment in resilience can reduce their risks and create new opportunities.
- Local government currently has a significant role in managing climate risks. Improved resilience can reduce the costs of new and improved infrastructure, support the ability of communities to pay rates, and reduce the likelihood of high-cost interventions like managed retreat.

- Central government provides post-disaster relief funding through mechanisms like the Earthquake Commission and NEMA. It also provides support for vulnerable individuals through the welfare system. Increased resilience across the country can help the Government to manage those costs, as well as the costs of maintaining its own assets and infrastructure, such as schools, hospitals, police stations, and prisons.

The benefits of greater resilience will be shared across society, so the cost should be shared equitably too.

Case study: Wellington uses its digital twin to present climate adaptation

A digital twin is a visual representation that looks and behaves like the real world; it can be used to improve decision making. As humans mostly process information visually, the digital twin helps people understand how a location works, how it will fare as the climate changes and what the outcomes of policy decisions will be.

Wellington City Council has developed a digital twin that functions as an interactive, hyper-realistic virtual model of the capital. Built from a wide range of data sources – including GIS maps and city-wide sensors – it can be used to display the past, present and future city.

The Council is now using this digital twin to co-design climate change adaptation solutions with Wellingtonians. The technology will connect mātauranga Māori, city planning data, climate science and community values with council decision-making processes, to allow the Council to make adaptation decisions in line with community priorities.

The project will communicate the complexities of climate impacts and adaptation planning in an accessible way. The approach encourages participation as decision makers and other Wellingtonians will be able to clearly understand local climate change impacts.

Because using the digital twin and its code will be free, the project will empower indigenous communities, businesses and organisations in Wellington to adapt together.

Critical actions

Provide access to the latest climate projections data

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MBIE – **Relevant portfolio:** Building and Construction – **Primarily supports:** Objective SW2 – **Status:** Current

The National Institute of Water and Atmospheric Research (NIWA) Projections Project is working to make the global climate projections from the most recent Intergovernmental Panel on Climate Change (IPCC) report (AR6 – WG1) more applicable to New Zealand. This will provide New Zealanders with the regional and local climate projections data they need to assess future climate risk and make adaptation decisions.

By June 2024, national climate projection datasets for New Zealand are made available and deliver a product that enables end-users to appropriately measure climate change risk.

Design and develop an Adaptation Information Portal

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change – **Primarily supports:** Objective SW2 – **Status:** Current

The Adaptation Information Portal will be a national hub of all available climate data and information. One aspect of the portal will be to collate information, including mātauranga Māori (where appropriate), for iwi/Māori climate decisions. New Zealanders will be able to understand and assess their climate risk, find solutions and share best practices.

The design of the portal will carefully consider other related initiatives, such as the Earthquake Commission’s (EQC’s) Risk and Resilience Portal (which will provide public information on natural hazard risk – including natural hazards exacerbated by climate change). The Ministry for the Environment (MfE) will work with EQC on a joint approach to making more natural hazard and climate data available to the public in an aligned and consistent way.

By the end of 2023, a design scope and delivery plan will be complete and user needs defined.

Complete case study to explore co-investment for flood protection

Timeframe: Years 1 (2022) – **Lead agency:** DIA – **Relevant portfolio:** Local Government – **Primarily supports:** objective SW2 – **Status:** current

DIA are working with NEMA, the West Coast Regional Council, the Buller District Council and local iwi to explore options to increase flood resilience in Westport. This case study will focus on the funding and financing challenges facing small local authorities and vulnerable communities in funding flood risk management. It will also highlight the challenges of repeat flood events and the impacts of climate change on an existing community located on a flood plain which has limited flood defences in place. The current situation in Westport is described below.

By June 2022, Ministers will receive a strategic business case from Buller District Council and West Coast Regional Council on a package of flood resilience options to reduce flood risk in Westport.

Case study: Adapting to flood risk in Westport – investing in flood resilience

Westport will need to adapt to a changing climate

The Westport community is facing significant challenges in adapting to the effects of flooding and climate change. Severe flooding in July 2021 and February 2022 caused widespread damage to homes and infrastructure, and the Buller District Council required central-government funding to help with the recovery.

The July 2021 event was the largest direct measurement of a river flow ever recorded in New Zealand. It flooded over 400 houses, incurred insurance costs of around NZ\$56 million, and made it necessary to develop an area for temporary housing for those who could not return to their homes.

Modelling suggests the Westport community is at high risk of future flooding – with climate change expected to increase the frequency and severity of these events. The repeat flooding events have heightened community concerns about the need to reduce flood risk and protect assets and livelihoods.

Investing in risk reduction is key to building Westport's climate resilience

An important adaptation action is investing more in flood risk reduction; for every NZ\$1 invested in flood protection schemes, there can be at least a NZ\$6 return on investment. A number of risk reduction initiatives are underway locally – the West Coast Regional Council is developing a flood protection scheme; the combined district plan (Te Tai o Poutini Plan) proposes rezoning land to residential in less flood-prone areas together with minimum floor heights; and a local-level climate risk assessment and climate adaptation plan for the Buller District has been initiated.

But the community faces some significant challenges

Adaptation is complex and can be expensive. Local ability to fund adaptation and flood protection is likely to be a challenge, as many among the population have very low incomes, as measured by the socio-economic deprivation index. Meeting these costs may be beyond the financial capacity of the ratepayers and councils.

New funding and financing models could share costs more equitably

Central government (through the Department of Internal Affairs (DIA) and the National Emergency Management Agency (NEMA)) is partnering with local councils and iwi to explore new funding and financing models for co-investing in flood risk reduction and climate adaptation for the Westport community. This work includes looking at how costs could be more equitably shared between central and local government, and between the community, private sector and other asset owners.

Importance of case studies

Undertaking climate adaptation case studies or pilot projects can provide significant lessons and benefits for other communities and councils facing similar adaptation challenges around New Zealand. Case studies bring climate change challenges to life by demonstrating what increased sea levels and more frequent and intense flood events mean for existing settlements. They demonstrate the need for a spectrum of risk reduction options to be considered and refined according to a set of evaluation criteria agreed locally. Some options might not be technically feasible, and others might not be affordable or acceptable to local communities. The importance of sequencing and interdependence of options can also be highlighted through the case studies – with some actions being short-term and others, particularly those relating to land use planning (eg relocation or retreat) requiring longer-term solutions when appropriate regulatory mechanisms are in place.

Most of all, adaptation case studies will provide an opportunity to engage with local communities on climate change issues – to better understand climate change impacts and when they will happen, to identify possible mitigation actions and estimated costs, and to work through how risk reduction actions might be funded. Case studies can also highlight how wider central government policy initiatives and reforms will play out locally to achieve better adaptation outcomes.

Deliver a rolling programme of targeted guidance

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change – **Primarily supports:** Objective SW3 – **Status:** Current/proposed

Roll out a programme of non-statutory guidance to enable decision makers to assess and plan to manage climate-related risks (see table 3). Some of this guidance could also support regulatory requirements to be developed through the National Planning Framework.

Table 3: Programme of adaptation guidance

Guidance document	Timeframe (year)		
	1–2	3–4	5–6
<p><i>Promote the use of the New Zealand Climate Change Projections guidance</i> A climate impacts update for New Zealand that highlights changes from the AR6 IPCC² report enables stakeholders to assess quickly where changes to their risk management plans may need to account for the latest science.</p>			
<p><i>Produce adaptation guidance for central government policy makers</i> A methodology for central government to ensure they consider adaptation in new policy and services to avoid increase exposure or vulnerability to climate impacts.</p>			
<p><i>Produce guidance for dynamic adaptive pathways planning (DAPP)</i> A guide for central and local government on how to plan for adaptation in a context of uncertain climate futures.</p>			
<p><i>Produce guidance on using different socio-economic scenarios for adaptation planning</i> Assists central/local government and businesses to consider future socio-economic scenarios when assessing climate risks and planning how to manage them.</p>			
<p><i>Regularly update adaptation guidance for local government</i> Supports local government to consider adaptation in planning and decisions.</p>			
<p><i>Produce guidance on integrating mātauranga Māori into adaptive planning and working with mana whenua</i> This will help central and local government effectively engage with iwi/Māori when managing risk and planning for adaptation.</p>			
<p><i>Produce guidance for preparing adaptation plans</i> This will enable different audiences, sectors and levels of government to produce their own adaptation plans, using a standard approach to planning under conditions of uncertainty in projections of future climate.</p>			
<p><i>Regularly update the guide to local climate change risk assessments</i> This guide sets out a step-by-step process for local risk assessments. It will be updated on a six-yearly cycle following the release of each NCCRA, and supports local government to conduct their own assessments, to better understand the risks their regions face.</p>			

² IPCC. 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

Supporting actions

Complete the Data Investment Plan project

Timeframe: Years 1–6 (2022–28) – **Lead agency:** Stats NZ – **Relevant portfolio:** Statistics – **Primarily supports:** Objective SW2 – **Status:** Current

The project recently completed a stocktake of essential datasets across central government and prioritised data gaps for investment. Climate data gaps may be filled by acquiring new data or making existing data fit for purpose.

Develop Future Pathways for the Research, Science and Innovation System programme

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MBIE – **Relevant portfolio:** Research, Science and Innovation – **Primarily supports:** Objective SW2 – **Status:** Current

The Future Pathways for the research, science and innovation System programme will position the system for the future. This includes focusing resources on national goals, such as climate change, and addressing other issues facing the research system, such how best to honour Te Tiriti obligations, system funding and incentives, workforce and institutional design.

Improve how science, data and knowledge is used to inform emergency management

Timeframe: Years 1–6 (2022–28) – **Lead agency:** NEMA – **Relevant portfolio:** Emergency Management – **Primarily supports:** Objective SW2 – **Status:** Current

NEMA's 2021 Science Strategy will be used to create a framework for scientific engagement, promotion and influence for risk reduction, readiness, response and recovery. Research, data, mātauranga Māori, local knowledge and technical expertise will inform strategic decisions on emergency management and explore practical interventions to improve disaster resilience.

Future work programme proposals

Develop 3D coastal mapping

Timeframe: Years 1–2 (2022–24) – **Lead agency:** LINZ – **Relevant portfolio:** Land Information – **Primarily supports:** Objective SW2 – **Status:** Proposed

Coastal mapping comprises detailed 3D mapping of the coastal zone and the upgrade and addition of Global Navigation Satellite System (GNSS) sites in the coastal zone to assess the impacts of sea-level rise and model the impacts of tsunamis and storm surges on communities, infrastructure and biodiversity.

Implement the programme: Climate Crisis - Defence Readiness and Response

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MOD – **Relevant portfolio:** Defence – **Primarily supports:** Objective SW2 – **Status:** Proposed

This Defence assessment explores the links between climate change and security, and how climate change will be a driver for future Defence Force operations. It identifies actions Defence can take as part of a broader government programme on climate change and sustainability. It underscores the importance of working with and learning from our Pacific partners, to understand and respond to intensifying climate impacts.

Produce new tools and guidance specific to mātauranga Māori and mātauranga indicators

Timeframe: Years 3–4 (2024–26) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change –
Primarily supports: Objective SW2 – **Status:** Proposed

These resources will be developed in partnership with iwi/Māori, to assist iwi/Māori to take action in their communities and to inform decisions. This action will provide targeted guidance on planning in uncertain conditions.

Produce guidance and tools for monitoring and evaluating the impact of adaptation initiatives

Timeframe: Year 3 (2024/25) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change –
Primarily supports: Objective SW2 – **Status:** Proposed

This will help ensure that adaptation actions effectively increase our resilience and manage the risks we face. Monitoring is essential to an effective plan, and this guidance will help users identify signals that an action is no longer meeting its objectives.

Produce an adaptation professional development programme for key practitioners

Timeframe: Years 4–5 (2025–27) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change –
Primarily supports: Objective SW2 – **Status:** Proposed

This will target building capability and will help to diffuse new tools and guidance among different audiences. It will encourage uptake and effective use by practitioners.

Explore definitional tools to support greater investment

Timeframe: Years 1–3 (2022–25) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change –
Primarily supports: Objective SW2 – **Status:** Proposed

This will explore the potential benefits of a 'green' taxonomy to identify a common definition of climate positive investments. This could help support and guide businesses investing in both adaptation and mitigation to protect against greenwash and – if aligned with international best practice – could support greater international investment in New Zealand's climate-resilient projects.

Explore additional interventions to mobilise investment

Timeframe: Years 3–5 (2024–27) – **Lead agency:** MfE – **Relevant portfolio:** Climate Change –
Primarily supports: Objective SW2 – **Status:** Proposed

The Government intends to review the national adaptation plan in years 2 and 4 to assess progress and gaps. Alongside this, the Government will consider what further steps may be needed to support investment in resilience.

Case study: Hawke's Bay and the Clifton to Tangoio Coastal Hazards Strategy 2120

Coastal communities around New Zealand are increasingly affected by hazards like coastal inundation (flooding by the sea) and coastal erosion. The Hawke's Bay region is considered to have one of the highest levels of coastal risk exposure. Natural disasters, storms, coastal erosion and inundation along the region's 353-kilometre coastline continue to damage property and threaten people's safety and wellbeing.

In developing the Clifton to Tangoio Coastal Hazards Strategy 2120, the Hawke's Bay Regional Council, Hastings District Council and Napier City Council have worked with local iwi and coastal community representatives to take a proactive, locally led approach to identifying and responding to coastal hazards over the next 100 years. It has been an opportunity for councils to work together on a complex cross-boundary issue to address ongoing community concerns.

The strategy identifies coastline areas that may be affected by coastal hazards over the short- to long-term, and the risks to public and private property, cultural sites and areas, recreation and infrastructure services. It uses the dynamic adaptive pathways planning (DAPP) framework, which presents adaptation solutions as one option in a series of future pathways.

Further work is needed to answer fundamental questions about how to share costs of proposed adaptation solutions, and where to allocate the roles and responsibilities for implementing the strategy.

How we will get there

Focus area three: Embed climate resilience across government strategies and policies

To adapt to the future impacts of climate change, we will need to make adjustments to how we do things in every aspect of the way we live our lives.

The national adaptation plan is a whole-of-government action plan. The sections that follow set out how the Government will adapt our work programmes to embed climate risk in our approach to them.

Many of the actions that this plan describes are interrelated and will help to address multiple risks. This reflects the interconnected nature of climate issues. It also underscores the importance of taking a flexible approach to the future work programme.

These action plans have been designed to follow an iterative process, which involves developing plans, implementing them, assessing progress and updating the plans to make them fit for the new context. This reflects adaptive planning in action.

Te Tiriti principles

The outcomes and actions in this area reflect Te Tiriti principles of partnership, protection and participation.

- Iwi/Māori interests are not disproportionately harmed impacted and/or inequities exacerbated. This includes impacts on Māori cultural heritage sites, their land and associated cultural and spiritual connections; and the role of Māori as kaitiaki.
- Iwi/Māori and the Crown will work together to build a more resilient New Zealand by adapting early to reduce climate risks in sectors most vulnerable to near-term or significant change. In particular, this work will focus on:
 - developing mātauranga Māori indicators across the environment
 - public housing – joint urban design and construction projects and the use of Māori design principles
 - Iwi/Māori working alongside government to reduce vulnerability of their communities, to strengthen resilience and to ensure participation across transport, business, community, lifeline services, remediation of landfills, and in times of emergency
 - Iwi/Māori realising their economic aspirations through innovation and by Māori businesses assessing climate risks and capitalising on climate-resilient opportunities.

Critical actions

Public investment in climate change initiatives

Timeframe: Years 1–6 (2022–28) – **Lead agency:** Treasury – **Relevant portfolio:** Finance – **Primarily supports:** Objective SW3 – **Status:** Current

The government is supporting climate change objectives through its approach to the public finance system. This includes the establishment of the Climate Emergency Response Fund (CERF) and our Sovereign Green Bond (Green Bond) programme.

In 2021, the Government established the CERF with an initial \$4.5 billion down payment, funded with cash proceeds from the New Zealand Emissions Trading Scheme (NZ ETS).

Government agencies can submit bids to the CERF, primarily through the annual Budget process, to access funding to support climate change initiatives.

In Budget 2022 the CERF was focused on the Emissions Reduction Plan, but for future Budgets the Government may consider extending the scope of the CERF to fund measures to support adaptation to the changing climate.

In November 2021 the Government announced plans to issue Sovereign Green Bonds (Green Bonds) from 2022 onwards. Green Bonds provide financing for low-emission or environmental projects. Money raised from the Green Bonds will be used to support projects that help reach our climate objectives. Subject to market conditions and progress of establishment activity, final details of the Green Bond programme will be announced mid 2022 and then Green Bonds will be issued in late 2022.

Ongoing regulatory stewardship

Timeframe: Years 1–6 (2022–28) – **Lead agencies:** All – **Relevant portfolios:** All – **primarily supports:** Objective SW3 – **Status:** Current

A regulatory system is a set of formal and informal rules, norms and sanctions. Examples include the regulations for labour markets, commerce and financial markets, and building and construction codes.

Regulatory stewardship is the process of government agencies governing and monitoring these systems.³ It also requires robust analysis of any changes so that these systems remain fit for purpose. This creates an opportunity to consider climate change as part of routine updates to regulations.

System-wide actions questions

6. Do you agree with the objectives in this chapter?

- Yes
- No
- Partially

Please explain your answer.

7. What else should guide the whole-of-government approach to help New Zealand adapt and build resilience to a changing climate?

8. Do you agree that the new tools, guidance and methodologies set out in this chapter will be useful for you, your community and/or iwi and hapū, business or organisation to assess climate risks and plan for adaptation?

- Yes
- No
- Partially

Please explain your answer.

9. Are there other actions central government should consider to:

a. enable you to access and understand the information you need to adapt to climate change?

- Yes
- No
- Unsure

³ Section 32(1)(d) of the State Sector Act 1988 makes departmental chief executives responsible for the stewardship of the legislation administered by their agencies.

Please explain your answer.

- b. provide further tools, guidance and methodologies to assist you to adapt to climate change?

- Yes
 No
 Unsure

Please explain your answer.

- c. remove barriers to greater investment in climate resilience?

- Yes
 No
 Unsure

Please explain your answer.

- d. support local planning and risk reduction measures while the resource management and emergency management system reforms progress?

- Yes
 No
 Unsure

Please explain your answer.

10. What actions do you think will have the most widespread and long-term benefit for New Zealand?

11. Are there additional actions that would strengthen climate resilience?

- Yes
 No
 Unsure

Please explain your answer.

12. There are several Government reform programmes underway that can address some barriers to adaptation, including the Resource Management (RM) reform. Are there any additional actions that we could include in the national adaptation plan that would help to address barriers in the short-term before we transition to a new resource management system?

13. In addition to clarifying roles and providing data, information, tools and guidance, how can central government unlock greater investment in resilience?

a. Would a taxonomy of 'green activities' for New Zealand help to unlock investment for climate resilience?

- Yes
- No
- Unsure

Please explain your answer.

Natural environment

In this section:

- [Why we need to take action](#)
- [What we want to achieve](#)
- [How we will get there](#)
- [Actions across other outcome areas also build the resilience of the natural environment](#)

Why we need to take action

The natural environment encompasses indigenous and non-indigenous species in natural and modified terrestrial, freshwater and marine environments. It includes all ecosystems in environments from the mountains, lakes and rivers to native forests, coasts, oceans and farmlands.

Due to our geographical isolation, many of Aotearoa New Zealand's indigenous plants and wildlife exist nowhere else on Earth: we have a unique diversity of species.

Our taonga species and ecosystems⁴ make a significant contribution to global biodiversity and underpin the way we are seen worldwide. Internationally, the biodiversity crisis and the climate crisis have been acknowledged to be closely linked.

All aspects of life in New Zealand rely on a thriving natural environment. It is essential for our physical and mental health, food and water security, culture and economy. The natural environment contributes to climate resilience by buffering climate impacts, improving wellbeing and sequestering carbon.

These linkages are acknowledged in Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020.⁵

From the perspective of te ao Māori, the natural environment is interconnected through genealogical links to all facets of the environment, including Papatūānuku (earth mother), Ranginui (sky father), Tāne mahuta (forests), Tangaroa (sea) and other cultural domains. When the environment is unwell, this affects our health and wellbeing.

Climate change puts pressure on our coastal ecosystems

New Zealand's coastal ecosystems and species are vulnerable to gradual and extreme changes in climate. Sea-level rise puts pressure on coastal ecosystems and forces them to move inland where possible.

Subdivisions and urban development reduce the availability of sites for landward migration by ecosystems and species as sea levels rise, and cause bird habitat loss.

⁴ Endemic to New Zealand are unique species of bat, frog and insect, ancient tuatara, flightless birds and beech forests.

⁵ www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy

Although coastal ecosystems tend to adapt well to the natural hazards they are exposed to, the increase in frequency and intensity of climate events gives them less time to recover.

Reducing human pressures and planning for ecosystem corridors are the best ways to enable coastal ecosystems to respond to climate change.

Climate change aids the spread of pests and diseases

Our natural systems are already under pressure from exotic pests and diseases, which threaten indigenous biodiversity and species crucial to trade. Climate change increases the chance of established pests spreading further, growing faster and having greater impacts. It also increases the risk of new invasive pests and diseases becoming established.

By strengthening our biosecurity system, we will be able to identify and manage the risks from new and established pests early. Identifying areas and species vulnerable to shifts in pest distribution will also help manage this risk.

Loss of resilience in natural systems will have far-reaching impacts on iwi/Māori

Climate risks in the natural environment affect Māori cultural, economic and spiritual wellbeing. Climate change will affect culture and customs relating to mahinga kai (food-gathering sites) and urupā (burial grounds), as well as economic opportunities through cascading impacts on tourism and agriculture. The loss of vulnerable species and ecosystems will disturb relationships Māori have with these living taonga.

Case study: Queensland fruit fly

In future, climate change is likely to create conditions that enable the Queensland fruit fly (Q-fly) to establish in New Zealand. This insect pest can cause serious harm, making over 100 types of fruits and vegetables inedible, and is seen as one of the most significant biosecurity threats to New Zealand's horticultural industries.

In 2015, a breeding population of Q-fly was detected in Auckland. The ongoing network of surveillance traps (since 1986) has proven effective in detecting Q-fly early in New Zealand, enabling a quick and immediate response to minimise the impacts on our environment and trade. About 7,900 traps in the national surveillance network are placed throughout the country, in locations where there is a high risk that Q-fly will enter and become established. A Q-fly population has not re-established since this initiative began.

This case study shows how important ongoing research is in providing information on how to conduct surveillance programmes (including climate considerations) that will inform future decision making.

What we want to achieve

Climate-resilient ecosystems are healthy and diverse.

The natural environment has high ecological integrity because human-induced pressure has eased and restoration efforts have been successful. It also has room to move across landscapes as the climate changes. By understanding the impacts of these changes and reducing pressures, we give ecosystems more time to adjust to new climate threats.

When ecosystems are healthy, they can provide a range of benefits that enrich our quality of life. Nature-based solutions buffer against climate impacts, while also fostering wellbeing, sequestering carbon and increasing biodiversity.

When we have ecosystems that are healthy and connected, and where biodiversity is thriving (**objective NE1**), that means:

- biodiversity, ecosystems and dynamic land and sea environments are strengthened
- ecosystem health improves, ecosystems and species have room to move, and human pressures reduced
- the natural environment can best to respond to climate impacts if it is intact and connected. Its natural diversity, and its ecological and physical processes, are supported and enhanced.

Robust biosecurity reduces the risk of new pests and diseases spreading (**objective NE2**). This means:

- plants and animals are more resilient, through the control of invasive pests and diseases, and the risk of these establishing and spreading is reduced.

Support for working with nature to build climate resilience (**objective NE3**) means:

- restoring and protecting indigenous ecosystems, identifying sites that need buffers against climate risks and supporting communities in understanding nature-based solution as a choice for adaptation.

The actions that follow are designed to achieve these objectives and address the **natural environment risks** in the National Climate Change Risk Assessment (NCCRA). In particular, they address the risks to:

- risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea-level rise and extreme weather events
- risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.

How we will get there

Critical actions

Implement the DOC Climate Change Adaptation Action Plan

Timeframe: Years 1–4 (2022–25) – **Lead agency:** DOC – **Relevant portfolio:** Conservation – **Primarily supports:** Objective NE1 – **Status:** Current

The Department of Conservation's (DOC's) Climate Change Adaptation Action Plan (CCAAP) sets out a medium-term action plan which aims to implement suitable adaptation actions. It applies to conservation land and New Zealand's coastal areas, public conservation land, marine protected areas and threatened native species and systems.

The plan aims to assess ecosystem and species vulnerability to climate impacts, and the adaptation actions that should occur to enhance their resilience. Possible adaptation actions include translocating climate vulnerable species or pest control to improve the resilience of native ecosystems.

By 2024, a reporting framework on the implementation of the CCAAP will be in place. DOC adaptation work progress against the framework will be reported on.

Implement the proposed National Policy Statement on Indigenous Biodiversity

Timeframe: Years 1–6 (2022–28) – **Lead agencies:** MfE, DOC – **Relevant portfolios:** Environment; Conservation – **Primarily supports:** Objective NE1 – **Status:** Current

The regulatory arm of Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020 is the National Policy Statement for Indigenous Biodiversity (NPS IB), which is currently under development.

Through the NPS IB, councils and landowners must consider creating ecological corridors in response to climate change.

Protections for indigenous biodiversity will be transitioned into the resource management reform in 2023. This will be a new opportunity to bring in specific adaptation policies for biodiversity and ecosystem conservation across New Zealand.

By August 2024, the National Policy Statement for Indigenous Biodiversity is ratified and implementation has begun.

Implement the Water Availability and Security programme

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI (MfE support) – **Relevant portfolio:** Agriculture – **Primarily supports:** Objective NE1 – **Status:** Current

As climate change increases water variability across the country, the availability of freshwater is of key concern to the primary sector and rural communities. The Water Availability and Security programme will help restore and maintain the health of waterways, taking its lead from the National Policy Statement on Freshwater Management 6.

It will help primary sector businesses and rural communities adapt to increasingly variable natural water availability through a range of complementary activities to both reduce demand and make best use of available water.

By 2024, the Ministry for Primary Industries (MPI) will form a permanent team and commence addressing issues of water availability and security within our primary sectors and rural communities.

This work will include partnering with Māori, communities and other impacted sectors to deliver multi-purpose, multi-benefit solutions.

Deliver a collection of actions run by Biosecurity New Zealand

The following actions address risks to indigenous ecosystems and species that result from the greater spread, survival and establishment of invasive species. They also help build climate resilience of ecosystems generally.

⁶ Ministry for the Environment. 2020. *National policy statement for freshwater management*. Wellington: Ministry for the Environment.

Biosecurity actions for climate adaptation	Timeframe (year)		
	1-2	3-4	5-6
<p><i>Pilot the on-farm biosecurity programme</i></p> <p>Timeframe: Years 1-2 (2023-24) – Lead agency: MPI – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>This programme aims to improve biosecurity outcomes on dairy, sheep and beef farms and create a more resilient biosecurity system. It is responsible for developing and implementing an action plan to overcome barriers and increase voluntary on-farm biosecurity practices.</p>			
<p><i>Invest in strengthening border biosecurity</i></p> <p>Timeframe: Years 1-6 (2022-2028) – Lead agency: MPI/NZ Customs – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>Two significant projects (Sea Cargo Programme and Mail Pathways Project) by Biosecurity New Zealand will improve our ability to address the biosecurity risk from mail and sea cargo pathways. These projects will protect biodiversity through identifying pest species that arrive through our international borders.</p> <p>This initiative will allow MPI to fund one real-time tomography (RTT) 3D scanner and two other technology solutions, artificial intelligence algorithms and advanced data systems to screen incoming mail and parcels for biosecurity risks.</p>			
<p><i>Continue the Freshwater Biosecurity Partnership Programme</i></p> <p>Timeframe: Years 1-6 (2022-28) – Lead agency: MPI – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>MPI leads the Freshwater Biosecurity Partnership Programme in partnership with the Department of Conservation, Fish and Game NZ, specific Māori entities, regional councils, Land Information New Zealand and various industry groups including Genesis Energy and Meridian Energy. The vision of the Programme is to take a collaborative action to protect New Zealand’s freshwater from the impacts of freshwater pests.</p> <p>Focus areas for the partnership include:</p> <ul style="list-style-type: none"> • Increasing knowledge of freshwater domestic pathways of spread and development of new detection and control tools • Maintaining systems and processes to support effective and co-ordinated operational delivery • Effective engagement and use of behavioural change tools including the Check Clean Dry campaign - a national social marketing campaign aimed at preventing the spread of freshwater pests. <p>Effective early detection and control tools will become even more important in a changing climate where more waterways could become suitable for freshwater pests. Better information about the distribution of freshwater pests will allow the CCD to be targeted to the highest risk locations/pathways/activities.</p>			
<p><i>Prevent the spread of wilding conifers, and contain or eradicate established areas of wilding conifers by 2030</i></p> <p>Timeframe: Years 1-6 (2022-28) – Lead agency: MPI – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>Established in 2016, this programme ensures a collaborative, coordinated and effective national approach to wilding conifers. This reduces fire risk arising from dense forests without appropriate fire breaks, improves water availability (including for hydro), prevents the loss of land from production, and preserves biodiversity of indigenous ecosystems.</p>			

Biosecurity actions for climate adaptation	Timeframe (year)		
	1–2	3–4	5–6
<p><i>Continue the National Interest Pest Responses (NIPR) programme</i></p> <p>Timeframe: Years 1–6 (2022–28) – Lead agency: MPI – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>Nine harmful weeds are managed under the NIPR programme. These pests could cause serious harm to New Zealand's environment and economy if they are allowed to spread.</p>			
<p><i>Investment in plant health and environment capability</i></p> <p>Timeframe: Years 1–6 (2022–28) – Lead agency: MPI – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>Significant investment in MPI's plant health and environment operations (currently situated in Tāmaki, Auckland) will support growth and development in the arable, forestry and horticulture sectors by accelerating access to high-value plant varieties and cultivars to support commercialisation of new products. Faster access to genetic material can support innovation and deliver benefits such as higher yields and improved resilience to pests and diseases.</p>			
<p><i>Utilise the Animal Health Laboratory (AHL) and Plant Health Environment Laboratory (PHEL)</i></p> <p>Timeframe: Years 1–2 (2022–24) – Lead agency: MPI – Relevant portfolio: Biosecurity – Primarily supports: Objective NE2 – Status: Current</p> <p>AHL and PHEL are New Zealand's national reference laboratories that identify and validate suspected exotic and endemic pests and diseases affecting farm and aquatic animals, and wildfire (AHL), and plants and the environment (PHEL). Both laboratories are an essential component of New Zealand's wider biosecurity system and enable better understanding of new and emerging pests and diseases that are likely to establish in the future under changing climate conditions.</p>			

Supporting actions

Reform the Environmental Reporting and Monitoring System to allow better measurement of environmental change

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective NE1 – **Status:** Current

This work seeks to improve how we monitor, manage, access and report on environmental data. It will provide evidence-based insights and help identify gaps in our knowledge on climate impacts.

Deliver Jobs for Nature to restore indigenous ecosystems

Timeframe: Years 1–6 (2022–28 – some projects ongoing) – **Lead agencies:** MfE, DOC, MPI – **Relevant portfolios:** Environment; Conservation – **Primarily supports:** Objective NE1 – **Status:** Current

This action supports more than 200 projects to restore ecosystems, control pests and mobilise community action across the country. Biodiversity can be strengthened through restoring ecosystems and reducing pests.

Implement the National Policy Statement on Freshwater Management 2020

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective NE1 – **Status:** Current

Adaptation action for freshwater bodies will be achieved through local councils devising suitable plan provisions (eg, rules) to achieve a range of outcomes, and will need to ensure the ability to use resources (eg, land use, discharges, etc) is matched to the assimilative capacity of fresh water. Farmers will adapt land use practices in response to these, and as the impacts of climate change become apparent. These actions will ensure the healthy functioning of freshwater ecosystems and mitigate negative impacts from land use

Implement Revitalising the Gulf: Government action on the Sea Change Plan

Timeframe: Years 1–2 (2022–24) – **Lead agencies:** DOC, FNZ – **Relevant portfolios:** Conservation; Oceans and Fisheries – **Primarily supports:** Objective NE1 – **Status:** Current

This initiative includes the establishment of 18 new areas of marine protection and an area-based fisheries plan in the Hauraki Gulf Marine Park. Other elements include: protected species, active habitat restoration, marine biosecurity, aquaculture and Ahu Moana (localised marine management by local communities and mana whenua). Research, monitoring and reporting will help inform an adaptive management approach. Together these actions will enhance the health of the marine ecosystem (and therefore its resilience).

Implement the South-east Marine Protection Initiative

Timeframe: Years 1–2 (2022–24) – **Lead agency:** DOC – **Relevant portfolio:** Conservation/Oceans and Fisheries – **Primarily supports:** Objective NE1 – **Status:** Current

This initiative may result in 12 new areas of marine protection in the south-east waters of the South Island of New Zealand. It will improve the health of the marine ecosystem (and therefore its resilience) through managing impacts and will help inform future management through science and monitoring.

Implement the Sustainable Land Management Hill Country Erosion Programme

Timeframe: Year 1 (2022–23) – **Lead agency:** MPI – **Relevant portfolio:** Forestry – **Primarily supports:** Objective NE1 – **Status:** Current

The Sustainable Land Management Hill Country Erosion Programme will support regional planning for and treatment of erosion-prone land and, in turn, contribute to afforestation. Afforestation can reduce soil loss and other effects of the increasing scale and magnitude of storms. It also mitigates downstream damage to infrastructure.

Provide a forestry planning and advisory service

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI – **Relevant portfolio:** Forestry – **Primarily supports:** Objective NE1 – **Status:** Current

The forestry planning and advisory service will contribute to reducing climate risks by providing data-informed advice and planning tools. Advice will be provided on both harvest and non-harvest forestry, for example, consider where land is available for new forestry, where restoration, regeneration and reversion may be needed, and where unsuitable land may need to be retired from forestry including conversion from plantation to indigenous.

Future work programme proposals

Prioritise nature-based solutions and implement Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020 (ANZBS)

Timeframe: Years 1–6 (2022–28) – **Lead agency:** DOC – **Relevant portfolio:** Conservation – **Primarily supports:** Objective NE1 – **Status:** Proposed

The ANZBS is a strategic document for the protection, restoration and sustainable use of biodiversity in New Zealand from 2020–50. The first iteration of the implementation plan will be launched in April 2022 and includes actions by agencies and local government delivering on the outcomes the Strategy, in particular climate change goals 13.2 and 13.3. These goals outline the potential for nature based solutions as a climate buffer.

The ANZBS aims to strengthen biodiversity, ecosystems and dynamic land and sea environments, and improve ecosystem health. The Strategy’s monitoring framework will monitor pest impacts on native forest. This will help reduce impacts on biodiversity. Implementing the ANZBS ensures actions and goals are put in place to protect native biodiversity from pressures such as invasive pests and measures the success of these endeavours.

Develop mātauranga Māori indicators of climate impacts on the natural environment

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective NE1 – **Status:** Proposed

Mātauranga Māori indicators will enable monitoring and evaluation of climate impacts on biodiversity, mahinga kai, flora, fauna and human health. This will create data baselines that centralise indigenous knowledge and values and can be used in environmental assessments.

Establish an integrated work programme to deliver climate, biodiversity and wider environmental outcomes

Timeframe: Years 1–4 (2022–26) – **Lead agencies:** DOC, MfE – **Relevant portfolios:** Conservation; Environment – **Primarily supports:** Objective NE3 – **Status:** Proposed

This initiative will address key barriers to regenerating and protecting native ecosystems, such as the cost of investing in native ecosystems and lack of New Zealand-specific evidence on non-forest carbon sequestration. It will look at creating better incentives for restoring existing native forests within key regulatory settings, such as the NZ ETS, and at how private and public money intended for offsetting hard to-abate emissions could support both climate and biodiversity outcomes. The programme will focus on the following areas.

- **Supporting restoration and protection of indigenous forests.** The forestry section sets out a series of actions, including reducing the costs of native plants and establishing a long-term work programme, to support native afforestation and restoration.
 - **Investing in the science of nature-friendly sequestration.** The Government supports and has commissioned research into the carbon storage and sequestration potential of non-forest ecosystems, such as wetlands, peatlands and coastal ecosystems in New Zealand. This includes a research project to scope improving New Zealand-specific estimates of organic soil emissions. This work will also investigate the impacts of management interventions, such as pest control and ecosystem restoration, on carbon sequestration and storage.
-

-
- **Supporting native afforestation and restoration through the Carbon Neutral Government Programme.** By 2025, emissions that Carbon Neutral Government Programme participants are unable to reduce must be offset. The work programme will investigate how Government investment in sequestration as part of the Carbon Neutral Government Programme can also realise biodiversity and wider environmental outcomes.
 - **Investigating incentives for public and private investment in biodiversity.** This work will look to address the barriers landowners face in accessing funding and information. It will also look at how investments in biodiversity can protect and enhance carbon stocks and support climate resilience, so that companies investing in offsets can do so in a way that benefits both climate and biodiversity.
-

Actions across other outcome areas also build the resilience of the natural environment

In addition to protecting the natural environment, work to reduce pests and diseases through border control reduces risks to human health. It will support the Communities section action to [Develop the Health National Adaptation Plan](#).

The Water Availability and Security programme also relates to actions in the Infrastructure section because it has important implications for infrastructure planning. The programme provides catchment-based, localised, collaborative processes to conceptualise, plan, develop and operate water infrastructure for multiple uses.

Actions in the Economy and financial system section will improve the health of the marine environment. Catch limits in fisheries system reform will enable stocks to replenish. The Aotearoa Circle Climate Change Adaptation Strategy for the Seafood Sector has a goal to enhance the resilience of the marine environment.

Natural environment questions

14. Do you agree with the actions set out in this chapter?

- Yes
 No
 Unsure

Please explain your answer.

15. What else should guide central government's actions to address risks to the natural environment from a changing climate?

16. Are there other actions central government should consider to:

- a. support you, your community, iwi and hapū, business and/or organisation to build the natural environment's climate resilience?

- Yes

- No
- Unsure

Please explain your answer.

b. strengthen biosecurity in the face of climate change?

- Yes
- No
- Unsure

Please explain your answer.

c. identify and support New Zealand's most vulnerable ecosystems and species in a changing climate?

- Yes
- No
- Unsure

Please explain your answer.

17. What do you identify as the most important actions that will come from outside of central government (eg, local government, the private sector or other asset owners, iwi, hāpu and/or other Māori groupings such as: business, forestry, fisheries, tourism, urban Māori, the private sector) to build the natural environment's resilience to the impacts of climate change?

18. Are there additional actions that would advance the role of Māori as kaitiaki in a changing climate?

- Yes
- No
- Unsure

Please explain your answer.

Homes, buildings and places

In this section:

- [Why we need to take action](#)
- [What we want to achieve](#)
- [How we will get there](#)
- [Actions across other outcome areas also contribute to resilient homes, buildings and places](#)

Why we need to take action

Homes, buildings and places⁷ are the foundation of communities in Aotearoa New Zealand. They include the physical environment around us, the people in that environment and the interaction between the two.

The form, design and characteristics of our homes, buildings and places play a vital role in our health, wellbeing and quality of life.

Most of our existing homes and buildings have been located and built without the without on-going changes to our climate in mind. As the climate changes, an increasing number of those homes and buildings are at risk of becoming less liveable or being damaged or destroyed.

A warmer and wetter climate may affect the durability of building materials and the life span of our homes and buildings. This could include an increased risk of damage due to coastal erosion or the risk of subsidence during intense rainfall and storm surges along the coastline.

Damage to existing housing stock from climate change could have knock-on effects for the country's housing supply. In particular, it could further reduce the supply and affordability of housing, weaken social cohesion and prevent communities from growing. It could also reduce access to good-quality housing for tenants, individuals and whānau experiencing or at risk of homelessness.

Scale of potential impacts

About 675,000 (or one in seven) people across New Zealand live in areas that are prone to flooding, which amounts to nearly \$100 billion worth of residential buildings. A further 72,065 people live in areas that are projected to be subject to extreme sea-level rise. The number of people exposed to these hazards will increase as the climate changes.

⁷ In the context of this outcome area, 'places' refers to urban or rural areas, ranging from neighbourhoods to towns and regions. Adaptation must address both the physical elements of a place (eg, homes, buildings, infrastructure and spaces around them) and the social elements (eg, the identity of people and communities, cultural value).

Impacts on cultural heritage

Climate change presents risks to culture, cultural heritage, and traditional knowledge and ways of life. Many hapori (communities) will face challenges in activities such as documenting and conserving their taonga and cultural infrastructure, and managing properties and facilities. This includes marae, whenua, urupā and wāhi tapu (culturally sacred sites of significance).

Stresses on Māori and iwi

Climate-related hazards can also impact homes and buildings on whenua Māori, and threaten the unique cultural and spiritual connection Māori have to whenua.

Whenua Māori that has either always been in Māori ownership or returned through the Waitangi Tribunal is often on coastal fringes and lowland areas that are exposed to flooding, erosion and sedimentation.

Many significant cultural sites, such as marae, urupā, ancient gardens and healing places, are also located along coastlines or near rivers prone to flooding.

Case study: What is an urban heat island?

The effects of heatwaves are felt more in urban areas than rural areas because they absorb, produce, and retain more heat. This is because vehicles and buildings generate heat, and the dark paved surfaces that typically cover urban areas absorb heat. These impermeable paved surfaces also allow fewer plants to grow, which reduces the cooling effects of shading and evaporation and worsens air pollution.

The resulting 'urban heat-island' effect can increase temperatures in cities by as much as 10 degrees Celsius higher than the surrounding areas. Heat absorbed throughout the day is then released in the evening, raising night-time temperatures and worsening the effects of heatwaves.

Why the heat-island effect is an issue for people

Being exposed to extreme heat for prolonged periods puts stress on the body and can make existing health conditions worse. Heatwaves have widespread negative impacts on health, wellbeing and levels of comfort in occupied spaces, especially for older people and those who may not be able to pay to cool their homes. Extreme heat caused by climate change is also likely to intensify Māori and Pasifika health inequities.

Current and future actions

Building design, materials and urban planning can mitigate the heat-island effect. Planting more trees and using nature-based solutions for infrastructure help to cool urban areas, making this a simple and effective solution that countries around the world are using. In addition to reducing urban heat, the approach has other benefits such as:

- contributing to reducing greenhouse gas emissions
- enhancing mauri of land and water
- enhancing biodiversity
- improving human health and wellbeing.

Over time, these strategies and other proposed actions in the national adaptation plan will contribute to reducing the urban heat-island effect and improving the wellbeing of New Zealanders.

An example of a current action to achieve this in New Zealand is Kāinga Ora's Urban Ngahere Programme. Kāinga Ora is undertaking a large-scale urban development programme in Māngere. With relatively low canopy coverage in Māngere (only 8 per cent), this is an opportunity to show how Kāinga Ora can partner with the community, mana whenua and Auckland Council to increase canopy coverage, reduce inequality and uplift the mauri of the Māngere whenua and people. In addition, Auckland Council's Urban Ngahere Strategy aims to increase canopy coverage across Auckland more generally to 30 per cent.

What we want to achieve

Homes, buildings and places are resilient to the changing climate, allowing people and communities to thrive.

Homes and buildings are climate resilient and meet social and cultural needs (**objective HBP1**).

This means:

- reducing exposure to climate hazards and supporting businesses and communities to understand and respond to climate risks
- improving homes and buildings so they can withstand the expected range of temperatures, rainfall and wind and to improve energy and water efficiency
- conserving valued cultural heritage.

New and existing places are planned and managed to minimise risks to communities from climate change (**objective HBP2**). This means:

- improving resilience through effective planning, urban design and management
- avoiding development in places that may be more exposed to climate impacts, supporting existing places to adapt and relocating people and assets where risks are seen as too high to manage
- managing risks to places of environmental value.

Māori connections to whenua and places of cultural value are strengthened through partnerships (**objective HBP3**). This means:

- supporting initiatives that identify and respond to climate risks that are specific to iwi and Māori
- working in partnership with iwi/Māori to develop Māori-led adaptation solutions
- identifying and embedding Māori knowledge, identity and values in urban design and construction to manage climate-related hazards
- increasing the resilience of cultural heritage, to strengthen the ties between whānau, hapū and iwi and their whenua.

Threats to cultural heritage arising from climate change are understood and impacts minimised (**objective HBP4**). This means:

- understanding where cultural heritage sites are, their values, who they are important to and how climate change could affect them
- understanding how the loss of cultural heritage can affect social, cultural, spiritual and economic wellbeing, including for Māori; and the positive role of cultural heritage in adaptation and wellbeing

- improving disaster management for cultural heritage
- enabling communities to maintain and protect their taonga and assets
- protecting and conserving cultural heritage through appropriate regulation.

The actions that follow are designed to achieve these objectives and address the **risk to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise**. This risk was identified as a significant risk in the National Climate Change Risk Assessment (NCCRA).

Other risks addressed through these actions include risks to:

- Māori social, cultural, spiritual and economic wellbeing from loss and degradation of lands and waters, as well as cultural assets such as marae
- Māori and European cultural heritage sites due to projected ongoing sea-level rise, extreme weather events and increasing fire weather.

How we will get there

Critical actions

Build property resilience

Timeframe: Years 1–4 (2022–26) – **Lead agencies:** HUD, MBIE – **Relevant portfolio:** Housing; Building and Construction – **Primarily supports:** Objective HBP1 – **Status:** Current

This action includes three outputs that build off each other and support other actions in this section:

- **research** to understand the impacts of climate hazards on various housing typologies and the costs and benefits of adaptation strategies at the property level and to inform any future changes to building regulations and standards
- **property-level guidance** to inform homeowners and renters about climate impacts and their options to manage and respond to risks
- an **assessment framework** to help building owners, developers and new home builders to identify climate hazards relevant to their property and understand their building's adaptation requirements

Initial research stages have been scoped and funded and are underway. By August 2024, sufficient data will be available to inform the development of an assessment framework in years 3–4 (2024–26) and inform regulatory updates.

Establish an initiative for resilient public housing

Timeframe: Years 1–2 (2022–24) – **Lead agency:** Kāinga Ora – **Relevant portfolio:** Housing – **Primarily supports:** Objective HBP1 – **Status:** Current

A decision-making framework for public housing assets will be developed to determine the actions needed to adapt new and existing assets. This work will help reduce exposure of public housing tenants to climate-related hazards.

This action will increase the resilience of public housing by identifying where retrofitting is needed and ensuring new dwellings are built away from areas prone to climate hazards. It

will also promote effective planning and the design of resilient infrastructure as part of public housing activities.

Kāinga Ora has undertaken an assessment to determine risk exposure and is increasing understanding of the assumptions and limitations of the data that it has based the assessment on.

By August 2024, we will have understood our material climate risks, developed a conceptual decision-making framework, and determined how the framework should be applied to investment decision making.

Embed adaptation in funding models for housing and urban development, and Māori housing

Timeframe: Years 1–2 (2022–24) – **Lead agency:** HUD – **Relevant portfolio:** Housing – **Primarily supports:** objectives HBP1 and HBP2 – **Status:** Current

Existing funding programmes for urban development and housing, including Māori housing, will be updated to ensure they consider the costs of existing and future climate hazards. New funding programmes may be created if gaps are identified.

This action will help ensure that funding decisions to support urban growth consider climate-related hazards, for example by ensuring new infrastructure is built away from areas prone to sea-level rise or flooding.

This action will also result in reviewing funding settings for new development so that government-funded housing, including Māori housing, can cope with extreme events and the changing climate

By August 2024, the Ministry of Housing and Urban Development (HUD) will review the funding programmes it administers and amend them to appropriately consider climate-related risks.

Support kaitiaki communities to adapt and conserve taonga/cultural assets

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MCH – **Relevant portfolio:** Culture and Heritage – **Primarily supports:** objectives HBP3 and HBP4 – **Status:** Current

Working across government to ensure iwi/Māori and communities have access to information so that they can plan for and adapt their cultural assets. Support includes advice, wānanga, provision of expert assistance, information sharing and funding advice to assist kaitiaki to self-determine adaptation pathways.

This action will provide a coordinated cross-government approach, partnering with iwi and Māori to understand the threats to cultural heritage from climate change and to support initiatives to reduce the impact.

This action will also help achieve *objective HBP1: Homes and buildings are climate resilient and meet social and cultural needs* by adapting and conserving physical structure of cultural values. It also contributes to *objective HBP4: Threats to cultural heritage arising from climate change are understood and impacts minimised* through its focus on taonga of significant value to iwi and Māori.

Supporting actions

Work is underway to ensure the Government's interventions to increase housing supply, affordability and quality are taking climate change into account. For example, the **Government Policy Statement for Housing and Urban Development** signals the strategic direction for adaptation.

The Government has recently amended its objectives for the **Urban Growth Agenda** to sharpen the focus on climate impacts and responses. The **National Māori Housing Strategy, MAIHI Ka Ora**, also stresses the importance of maintaining a connection to whenua and includes sustainability as a pou (priority area).

Other work in progress is helping to initiate and support adaptation for the building and construction sector. For example, the **Building for Climate Change work programme** will support actions in the national adaptation plan to increase adaptation and resilience. It is also connected to the work on emissions reduction and seismic resilience.

Future work programme proposals

Ensure minimum regulatory requirements for buildings take into account future climate data

Timeframe: Years 3–6 (2024–28) – **Lead agency:** MBIE – **Relevant portfolio:** Building and Construction – **Primarily supports:** HBP1 – **Status:** Proposed

Update Building Code performance requirements to respond to forward-looking climate hazards, identify and add hazards not currently in the Building Code, and produce guidance and tools to help people meet new performance requirements. This action will also explore regulatory changes that could support the adaptation of existing buildings. Work on performance requirements will also take into consideration costs and distributional impacts.

This action will improve the quality of buildings and make them resilient to future climate impacts.

Manage potential impacts of adaptation related to regulatory change

Timeframe: Years 5–6 (2026–28) – **Lead agency:** MBIE – **Relevant portfolio:** Building and Construction – **Primarily supports:** Objective HBP1 – **Status:** Proposed

We will monitor the effects of actions to Build property resilience and update minimum regulatory requirements for buildings to identify who these regulatory changes may adversely impact. Future actions to manage impacts could include producing advice or guidance supporting local initiatives and offering incentives. Actions would need to align with activities to reduce the distributional impacts of emissions reduction. This action will address negative impacts of adaptation-related regulatory changes for buildings and manage barriers to the public adapting.

Design methodology for risk assessments of public buildings

Timeframe: Years 3–4 (2024–26) – **Lead agency:** MBIE – **Relevant portfolio:** Building and Construction – **Primarily supports:** Objective HBP1 – **Status:** Proposed

Develop a methodology for risk assessment based on the property resilience research that will take into account matters such as cultural and heritage values and seismic hazard risks, to support decisions.

Work with community housing providers to enable effective climate hazard response

Timeframe: Years 2–4 (2023–26) – **Lead agency:** HUD – **Relevant portfolio:** Public Housing – **Primarily supports:** Objective HBP1 – **Status:** Proposed

This action will provide better data and information on the exposure of community housing providers to climate risks. An action programme will increase the resilience of community housing by supporting strategies for emergency management and long-term adaptation, which in turn will reduce exposure of community housing tenants to climate-related risks. This work will also focus on working with Māori and Pacific providers and will help increasing resilience in ways that are culturally appropriate and respond to the needs of Māori and Pacific recipients.

Update housing and urban settings

Timeframe: Years 5–6 (2026–28) – **Lead agency:** HUD – **Relevant portfolio:** Housing – **Primarily supports:** Objective HBP2 – **Status:** Proposed

Current strategies, programmes and regulations will be reviewed to ensure housing and urban environments are fit for the changing climate. For example, this could lead to updated requirements for homeowners and landlords, or requirements relevant to public and community housing. This action will help ensure the built environment is designed and planned to cope with extreme events and the changing climate. It also helps ensure that rules relating to the quality of private and public housing and tenancies consider climate change and continue to be fit for purpose.

Integrate nature-based solutions into the urban environment

Timeframe: Years 1–2 (2022–24) – **Lead agency:** HUD – **Relevant portfolio:** Housing – **Primarily supports:** Objective HBP2 – **Status:** Proposed

This work will build on indigenous knowledge and new research to produce new data and insights on using nature-based solutions like vegetation (eg, street trees or green roofs) and water elements (eg, open canals or waterways) in the urban environment. It will then be possible to use the findings to identify strategies for integrating natural features into the urban environment to increase resilience, improve biodiversity outcomes and provide services to people and communities.

This action will help reduce the impact of extreme events, such as flooding and heatwaves, on the built environment. It will also help to ground urban adaptation solutions in mātauranga Māori and recognise that its intended outcomes already draw on fundamental Māori values.

Partner with iwi to facilitate through Iwi Management Plans

Timeframe: Years 3–4 (2024–26) – **Lead agency:** HUD – **Relevant portfolio:** Housing – **Primarily supports:** Objective HBP3 – **Status:** Proposed

This work will be progressed in partnership with iwi to assess how well climate-related hazards are considered in Iwi Management Plans. This action will support iwi-led solutions and the use of mātauranga Māori in responses to climate hazards. It will also promote iwi-led planning and supporting adaptation of places managed by iwi.

Partner with Māori land owners to increase the resilience of Māori-owned land, homes and cultural sites

Timeframe: Years 3–4 (2024–26) – **Lead agency:** HUD – **Relevant portfolio:** Māori Housing – **Primarily supports:** Objective HBP3 – **Status:** Proposed

This work will be progressed in partnership with Māori land owners to produce resources and tools to build a better understanding of climate-related risks and increase the resilience of housing on Māori land. It will promote mātauranga Māori and Māori urban design principles, and increase the resilience of Māori-owned land, homes and cultural sites.

Research how cultural heritage contributes to community wellbeing and climate change adaptation

Timeframe: Years 1–4 (2022–26) – **Lead agency:** MCH – **Relevant portfolio:** Culture and Heritage –
Primarily supports: Objective HBP4 – **Status:** Proposed

This research will look at the value of cultural heritage in building and sustaining communities and how this is linked to community climate resilience and wellbeing.

Produce guidance for disaster risk management for cultural heritage

Timeframe: Years 2–5 (2023–27) – **Lead agency:** MCH – **Relevant portfolio:** Culture and Heritage –
Primarily supports: Objective HBP4 – **Status:** Proposed

Improve disaster-risk management for cultural heritage by producing guidance for reducing risks before, during and after disasters.

Develop a framework for assessing exposure and vulnerability of cultural assets/taonga to climate change

Timeframe: Years 1–3 (2022–25) – **Lead agency:** MCH – **Relevant portfolio:** Culture and Heritage –
Primarily supports: Objective HBP4 – **Status:** Proposed

Working with partners (including iwi), the Ministry for Culture and Heritage (MCH) will identify national and local data on taonga/cultural assets. It will identify gaps, data needs and governance and develop a framework to spatially identify valued cultural heritage and the exposure and vulnerability of that cultural heritage to climate change.

Actions across other outcome areas also contribute to resilient homes, buildings and places

The following actions will closely align with this section and support the resilience of homes, buildings and places.

System-wide reforms will encourage a long-term and proactive view to account for climate change. For example, **resource management reform** will support effective spatial planning by promoting development in areas away from climate-related hazards. It will also set out a framework to manage retreat and relocate communities, homes and buildings where risks are seen as unacceptable.

Actions to strengthen ecosystems and to promote the use of indigenous knowledge in the section on natural environment will complement actions to increase the resilience of homes, buildings and places that are alongside the natural environment or include natural sites.

Infrastructure plays a key role in supporting the resilience of homes, buildings and places by connecting communities and places and allowing for goods and services to travel. It also supports new development and housing and helps communities to thrive.

For example, the action to **develop climate change impact assessment guidance for infrastructure** will support adaptation of transport and energy networks. That in turn will complement the **design methodology for risk assessments of public buildings** that includes a focus on 'social' infrastructure, such as schools, hospitals and other public assets.

A number of actions in the section on communities will increase social cohesion and support communities to identify climate-related hazards that are relevant to them, including those relevant for homes, buildings and places.

For example, **improving natural hazard information on Land Information Memoranda (LIM)** will help raise awareness of climate-related hazards at the property level.

The actions relating to insurance availability and affordability in the section on the economy and financial system will help to keep insurance for homes and buildings available and affordable. This will support recovery after extreme weather events.

Homes, buildings and places questions

19. Do you agree with the outcome and objectives in this chapter?

- Yes
- No
- Partially

Please explain your answer.

20. What else should guide central government's actions to increase the resilience of our homes, buildings and places?

21. Do you agree with the actions set out in this chapter?

- Yes
- No
- Partially

Please explain your answer.

22. Are there other actions central government should consider to:

a. better promote the use of mātauranga Māori and Māori urban design principles to support adaptation of homes, buildings and places?

- Yes
- No
- Unsure

Please explain your answer.

b. ensure these actions support adaptation measures targeted to different places and respond to local social, cultural, economic and environmental characteristics?

- Yes

- No
- Unsure

Please explain your answer.

c. understand and minimise the impacts to cultural heritage arising from climate change?

- Yes
- No
- Unsure

Please explain your answer.

The following questions are about existing buildings. These can include housing, communal residential (hotels, retirement village), communal non-residential (church, public swimming pools), commercial (library, offices, restaurant), industrial (factory, warehouse).

23. Do you think that there is a role for government in supporting actions to make existing homes and/or buildings more resilient to future climate hazards?

- Yes
- No
- Unsure

If yes, what type of support would be effective?

24. From the proposed actions for buildings, what groups are likely to be most impacted and what actions or policies could help reduce these impacts?

25. What are some of the current barriers you have observed or experienced to increasing buildings' resilience to climate change impacts?

Infrastructure

In this section:

- [Why we need to take action](#)
- [What we want to achieve](#)
- [How we will get there](#)
- [Actions across other outcome areas also contribute to resilient infrastructure](#)

Why we need to take action

Infrastructure underpins our society by providing the services we depend on to live, work, learn and play. Infrastructure includes:

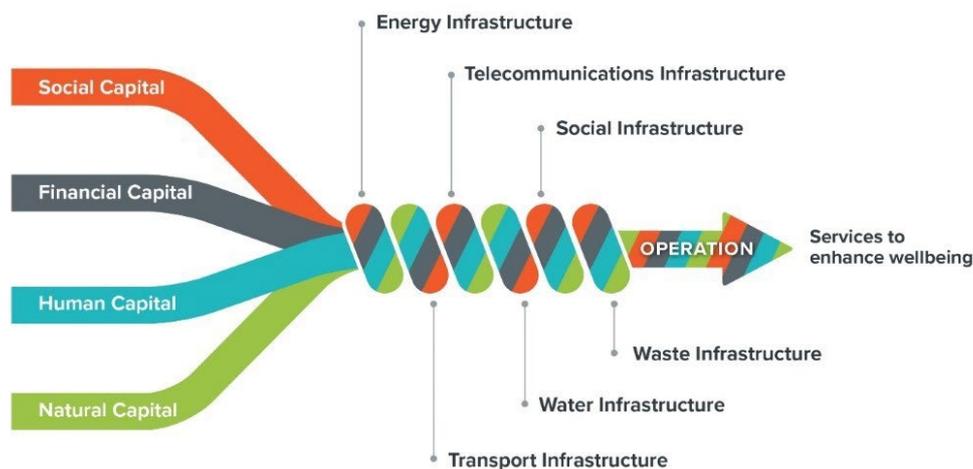
- **energy** – energy generation and distribution networks, including liquid and gaseous fuels, as well as electricity
- **telecommunications** – communication networks, including voice and data transfer and storage
- **transport** – land transport networks, as well as ports and airports
- **water** – wastewater, stormwater, drinking water and irrigation networks, including sources of water (eg, dams, rivers, reservoirs and groundwater), and waterbodies into which stormwater and wastewater are discharged
- **waste** – resource recovery and landfill assets used to manage our waste
- **social** – education and training facilities; health and aged care facilities; community assets such as libraries, stadiums and community centres; the Defence Estate; justice assets, including courts, prisons and remand centres; and social housing (see figure 6).

For Māori, the notion of cultural infrastructure, as represented in the social and cultural systems such as iwi, hapū and whānau, and the associated physical and spiritual structures such as marae and urupā are also important.

In the same way that the physical infrastructure of roads, telecommunication systems and energy systems need to be resilient, so does the cultural infrastructure for Māori.

In the context of the national adaptation plan, the section on homes, buildings and places deals with many of the buildings this plan defines as 'social infrastructure'. The actions in both that section and this one should be considered together to gain a full picture of adaptation actions for the built environment.

Figure 6: Definition of infrastructure



Source: Te Waihangā, 2020

What we want to achieve

Our infrastructure is resilient to a changing climate, so that it protects or enhances the wellbeing of all New Zealanders.

Reduce the vulnerability of assets exposed to climate change (**objective I1**). This means:

- understanding where infrastructure assets and the services they provide are exposed and vulnerable to the impacts of climate
- prioritising asset risk management to ensure services can continue if disruption occurs.

Ensure all new infrastructure is fit for a changing climate (**objective I2**). This means:

- considering long-term climate impacts when we make decisions on infrastructure design and investment so the right infrastructure is in the right places
- understanding future adaptation options and financing them as part of the investment in new infrastructure to build adaptive capacity.

Use renewal programmes to improve adaptive capacity (**objective I3**). This means

- considering long-term climate impacts when making decisions to maintain, upgrade, repair or replace existing infrastructure.

Climate change will affect all of our infrastructure, but some assets require more urgent attention than others. The actions that follow are designed to achieve these objectives and address the **built environment** risks in the National Climate Change Risk Assessment (NCCRA). In particular, they address:

- the risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise.

How we will get there

Working together

Infrastructure asset owners include central and local government and the private sector, onshore and offshore (see table 4). This means that there is a range of drivers underpinning our collective response to climate change.

Important drivers for the private sector are board fiduciary duty, NZX rules and investor sentiment on corporate responsibility and non-financial risk management. For Crown entities, Government priorities and policy, as well as board fiduciary duty, direct their responses. Local government decisions reflect long-term plans and the ability and willingness of ratepayers to pay.

Table 4: Horizontal infrastructure governance

Infrastructure type	Governance	Lifeline utility ¹
Road transport	Crown entity, and central and local government	Yes
Rail transport	Crown entity, and central and local government	Yes
Ports	Local government	Yes
Airports	Private sector, and central and local government	Yes
Energy ²	Private sector	Yes
Water	Local government	Yes
Telecommunications and digital	Public and private sector	Yes ³
Waste and resource recovery	Private sector and local government	No

Note:

1. The Civil Defence Emergency Management Act 2002 identifies the entities and sectors that represent a lifeline utility, which includes many of the infrastructure classes that this section seeks to influence. Under the Act, every lifeline utility must be able to "function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency".
2. Including generation and distribution.
3. Radio New Zealand and Television New Zealand, and telecommunications network providers.

For adaptation to progress, all asset owners must begin the process of understanding and actively managing climate risk. Because asset owners differ in their drivers as noted above, not all actions in this section will influence all assets in the same way or within the same timeframes.

Actions have, however, been developed with the intention of supporting action at the system level, across all asset classes.

Critical actions

Develop a methodology for assessing impacts on physical assets and the services they provide

Timeframe: Years 2–3 (2023–25) – **Lead agency:** Te Waihanga – **Relevant portfolio:** Infrastructure – **Primarily supports:** Objective I1 – **Status:** Current

We will scope and deliver a leading-practice methodology for assessing impacts on physical assets and the services they provide. This will assist asset owners to understand and manage the risks to existing and new assets, aligned with requirements under the CDEM Act. It will also

be designed to leverage, and integrate into, existing enterprise risk-management systems, so climate risks become increasingly assessed alongside other natural and systemic risks.

The methodology may include approaches to understanding how risk may change over the medium to long term, along with approaches to determining criticality, which will help in prioritising resilience actions. It may also include processes for determining planned emergency levels of service, which at the asset level is one of the foundations of resilience planning.

Specific opportunities to ensure that Iwi/Māori interests are not disproportionately harmed and/or inequities exacerbated will also be explored. Alongside this, it will consider the needs of other groups who may be disproportionately impacted by climate change, or who are least able to adapt, including people of lower socio-economic status, disabled people, women, older people, youth and migrant communities.

Opportunities to integrate mātauranga Māori and nature-based solutions will also be explored.

In 2023 the methodology will be complete.

Scope a resilience standard or code for infrastructure

Timeframe: Years 1–2 (2022–24) – **Lead agency:** Te Waihanga – **Relevant portfolio:** Infrastructure – **Primarily supports:** Objective I3 – **Status:** Current

We will scope the impact, including costs, benefits and regulatory impact, of introducing a voluntary standard or code for resilient infrastructure.

This action will focus on:

- how a standard or code would encourage leading-practice risk reduction and resilience planning in existing and new assets
- how to integrate resilience planning into the asset-management cycle to maximise uptake and impact.

If a standard or code proceeds, this would draw on international leading practice; the methodology for assessing impacts on physical assets and the services they provide being developed as part of the actions for infrastructure in this section (see objective I1); and the general data, tools and guidance that will be developed as part of the system-wide actions.

By 2024, advice on the best way forward will be complete.

Integrate adaptation into Treasury decisions on infrastructure

Timeframe: Years 1–5 (2022–27) – **Lead agency:** – Treasury – **Relevant portfolio:** Infrastructure – **Primarily supports:** Objective I2 – **Status:** Current

The Treasury publishes a range of guidance for central government departments and other entities to guide investment management and state sector performance. We will integrate consideration of climate risks and future adaptation requirements into this guidance to help ensure that in taking decisions for new assets and across major renewal or upgrade programmes to plan to:

- include climate change risks in the strategic case and early assessment of the options
- ensure that actions generally acknowledged to build adaptive capacity are included in optioneering (eg, nature-based solutions)
- incorporate the full cost of adaptation over the life of an asset into decision-making

- set up durable investment management systems and processes to respond to, and fund and finance, climate action, with positive climate and resilience outcomes.

The changes to process, and the development of tools, will leverage the system-wide and infrastructure-specific guidance, tools, and methodologies being developed as part of the national adaptation plan.

By 2024, advice on the best way forward, and any associated budget bid or Cabinet decisions, will be complete.

Develop and implement the Waka Kotahi Climate Change Adaptation Action Plan

Timeframe: Years 1–6 (2022–28) – **Lead agency:** Waka Kotahi – **Relevant portfolio:** Transport – **Primarily supports:** Objective I3 – **Status:** Current

Waka Kotahi will publish and begin implementing an Adaptation Action Plan in 2022. The plan will outline how Waka Kotahi will take action to adapt to climate change through the design, delivery, operation and use of the land transport system.

It will address exposed existing assets and new investment in infrastructure, as well as considering adaptation in renewal programmes.

Waka Kotahi will consider multiple risks to the land transport system from climate-related hazards – including sea-level rise, flooding and landslides. Waka Kotahi will lead, collaborate on and support land transport system adaptation, enabling climate-resilient transport networks and journeys, where people live, work and play.

By 2024, an adaptation plan will be published and a reporting framework on the implementation of the adaptation plan developed.

Supporting actions

Manage dry-year risk through the New Zealand Battery Project

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MBIE – **Relevant portfolio:** Energy – **Primarily supports:** Objective I1 – **Status:** Current

The Government is undertaking the New Zealand Battery Project to assess the feasibility of options for managing dry-year risk in a highly renewable electricity system. The current focus is on the feasibility of pumped hydro-electricity at Lake Onslow. The feasibility study will be completed by the end of 2022. The overall aim of the project is to increase the resilience of New Zealand's electricity system to the dry-year problem when the country's hydro lakes have low inflows for extended periods.

Encourage and support the evaluation of climate-related risks to landfills and contaminated sites

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective I1 – **Status:** Current

Coastal inundation and flooding could be a significant risk to existing and closed landfills, as well as to contaminated sites, across the country. At least 110 closed landfills are vulnerable to sea-level rise. The Ministry for the Environment (MfE) has developed a tool for councils to use to evaluate climate-related risks for landfills and contaminated sites, which may make it easier for local government to evaluate the risks from these sites and support planning to address risks.

Explore funding options to support the investigation and remediation of contaminated sites and landfills vulnerable to the effects of climate change

Timeframe: Years 4–6 (2025–28) – **Lead agency:** MfE – **Relevant portfolio:** Environment – **Primarily supports:** Objective I1 – **Status:** Current

The liability of legacy landfill remediation generally sits with territorial authorities, who have variable ability to pay, particularly in smaller local government areas. Considering this, the Government has agreed to consider how best to support the funding of remediation.⁸ Access to funding will help to turn risk assessment into risk reduction and ensure that remediation can occur before inundation risks become a reality. The scope of the existing Contaminated Sites Remediation Fund does not at present extend to climate-related impacts.

Integrate adaptation into Waka Kotahi decision making

Timeframe: Year 1 (2022/23) – **Lead agencies:** Waka Kotahi, MOT – **Relevant portfolio:** Transport – **Primarily supports:** Objective I3 – **Status:** Current

Waka Kotahi will incorporate adaptation when it applies an intervention hierarchy to existing and new investments in the land transport system. The hierarchy will be used to manage the vulnerability of assets to climate change, and will be applied to existing assets, new infrastructure, and in renewal programmes. The intervention hierarchy promotes integrated planning (aligning development with resilient infrastructure/locations), demand management, and best use of the existing system ahead of new infrastructure.

Progress the rail network investment programme

Timeframe: Years 1–6 (2022–28) – **Lead agencies:** Waka Kotahi, MOT – **Relevant portfolio:** Transport – **Primarily supports:** Objective I2 – **Status:** Current

This action is a long-term commitment to invest in rail, with the aim of restoring it to a resilient and reliable state. Restoration of the network will reduce the vulnerability of the network to climate-related hazards and provide a platform for climate-resilient future investments. Multi-modality supports the resilience of the supply chain.

⁸ New Zealand Cabinet. 2019. *Landfills Vulnerable to the Effects of Climate Change*. Cabinet Committee on Economic Development Minute of Decision DEV-19-MIN-0305. Wellington: Cabinet Office, Department of Prime Minister and Cabinet.

Invest in public transport and active transport

Timeframe: Years 1– 6 (2022–28) – **Lead agencies:** MOT – **Relevant portfolio:** Transport – **Primarily supports:** Objective I3 – **Status:** Current

Investment in multi-modal infrastructure can increase the resilience of the transport system and help to manage vulnerability of existing assets. An increase in the use of public transport and active modes will help reduce reliance on private vehicles. It will increase system redundancy, improve equity and support sustainable growth. Safe and attractive alternatives to driving create an overall more climate-resilient transport system, support sustainable growth and reduce emissions.

Increase uptake of tools to invest in infrastructure in urban areas

Timeframe: Years 1–5 (2022–27) – **Lead agencies:** HUD, Treasury, DIA – **Relevant portfolio:** Infrastructure – **Primarily supports:** Objective I2 – **Status:** Current

The Government, through the Infrastructure Funding, Financing and Delivery pillar of its Urban Growth Agenda, is identifying opportunities for addressing systemic barriers to infrastructure provision. This includes exploring options for supporting a more stable, certain and responsive infrastructure funding system, and addressing the institutional barriers and incentives that may be limiting the uptake of existing infrastructure funding and financing tools. One of the three objectives of the Urban Growth Agenda (alongside affordable housing and emissions reductions) is liveable and resilient cities, which involves making urban areas more accessible and inclusive, and increasing resilience to natural hazards and climate impacts.

Support the integration of climate adaptation and mitigation in new and revised standards

Timeframe: Years 2–6 (2023–28) – **Lead agency:** Standards NZ – **Relevant portfolio:** Infrastructure – **Primarily supports:** Objective I3 – **Status:** Current

At the beginning of each relevant project, Standards NZ may bring climate action (adaptation and mitigation) to the attention of the committee members of a standard commissioned through Standards NZ. This may help improve climate resilience in existing and new assets by guiding industry practice in asset design and operation.

Future work programme proposals

Develop the National Energy Strategy

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MBIE – **Relevant portfolio:** Energy – **Primarily supports:** Objective I2 – **Status:** Proposed

The Government has committed to developing an energy strategy, fully collaborating and engaging with Māori and working with energy system stakeholders. The National Energy Strategy will signal pathways to achieve the 2050 target for emissions reduction and set out a vision for a net zero economy where energy is accessible and affordable, secure and reliable, and supports the wellbeing of all New Zealanders. The Strategy could also consider broader objectives such as security and reliability of energy supply, alongside decarbonisation and affordability. It may include a focus on preparing the electricity system to meet future needs, which will likely require adaptation actions.

Actions across other outcome areas also contribute to resilient infrastructure

Many government work programmes will contribute to building the resilience and adaptive capacity of new and existing infrastructure assets. The contribution of the following will be particularly significant.

- **Resource management reform:** Te Waihanga will work with the Ministry for the Environment to include climate action measures for infrastructure in relevant parts of the National Planning Framework. This will influence the development of new assets, as well as maintenance, upgrades and major works on existing assets, in the new resource management system.
- **Modernise the emergency management system:** A multi-year work programme is underway for New Zealand's emergency management system. Obligations under the current Act include risk reduction activities to support continuity of services during and after disruptions. Part of the legislative work under the programme may be to strengthen the duties and obligations of lifeline utilities before, during and after emergencies. It may also influence where, when and how asset owners invest in new assets.
- **Support high-quality implementation of the climate related disclosures programme and explore expansion:** The Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 requires approximately 200 of Aotearoa New Zealand's largest financial market participants to analyse and publicly disclose their climate-related risks and opportunities each year.

This may require or encourage infrastructure asset owners to understand climate risks and develop a management response, including considering climate risks when deciding where, when and how investment in new assets takes place.

- **Addressing risks to potable water supplies – reform of the water sector:** Over the next 30–40 years, an estimated \$120 billion to \$185 billion upgrade of water assets will be required to meet drinking water and environmental standards, and provide for future population growth. The Government is undertaking an ambitious reform of the three waters system. The aim is to significantly improve the safety, quality, resilience, accessibility and performance of the three waters services, in a way that is efficient and affordable for New Zealanders. One objective is to “deliver water services in a sustainable and resilient manner that seeks to mitigate the effects of climate change and natural hazards”.⁹

The work programme on Water Availability and Security (see the section on the natural environment) also has important implications for infrastructure planning and development in the context of a changing climate. Taking a strategic approach to supply and demand at the catchment level will allow a better understanding of future water supply and distribution needs, as well as expose any vulnerabilities. This will help water service entities to decide where, when and how they may deliver new assets, as well as reinforce when demand management will become critical.

⁹ Water Services Entities Bill – Draft for Consultation, s 10.

- **Addressing risks to linear transport systems:** The national Freight and Supply Chain strategy will present a long-term and system-wide view of the freight system. It is considering climate adaptation through its resilience objective, to ensure New Zealand's freight and supply chain system is resilient, reliable and prepared for potential disruption. This will inform the Government, councils and private sector players when they are making decisions about freight infrastructure investment.

Case study: RiverLink – improved transport network, better flood protection and new community spaces

The RiverLink project will transform Lower Hutt through transport improvements, upgraded flood protection and urban development. The result will be a more resilient, more connected and more vibrant city.

The project is a partnership between Waka Kotahi NZ Transport Agency, Greater Wellington Regional Council, Hutt City Council and mana whenua Ngāti Toa Rangatira and Taranaki Whānui ki Te Upoko o Te Ika.

Project activity

Transport improvements will include constructing:

- a new interchange at Melling (with a local road going over State Highway 2) and a river bridge, connecting to the Lower Hutt central business district
- a new pedestrian and cycle bridge linking directly to the relocated Melling Station
- new intersections and road realignments that integrate with the local network
- enhanced pedestrian and cycle routes – plus cycle storage, bus hub and park-ride facilities – giving commuters and residents more travel options.

Flood protection upgrades will include:

- lowering and widening Te Awa Kairangi Hutt River, giving it more room to flow naturally and enabling a higher volume of water to pass down the river during floods, as well as enabling more fish habitats to be established
- raising the height of the stopbanks and upgrading them to strengthen flood defences.

Urban development will include creating new spaces by the river for people to live, work and play. Some of these spaces will be:

- a waterfront promenade to support the development of new cafés, restaurants and apartments in the area
- pedestrian and cycling paths
- recreational and grass areas.

As well as increasing resilience and connectivity, these works are expected to lead to social and economic growth and turn Lower Hutt into a true river-facing city.

Infrastructure questions

26. Do you agree with the outcome and objectives in this chapter?

- Yes
- No

Partially

Please explain your answer.

27. What else should guide central government's actions to prepare infrastructure for a changing climate?

28. Do you agree with the actions set out in this chapter?

Yes

No

Partially

Please explain your answer.

29. The national adaptation plan has identified several actions to support adaptation in all infrastructure types and all regions of Aotearoa.

a. Do you see potential for further aligning actions across local government, central government and private sector asset owners?

Yes

No

Unsure

Please explain your answer.

b. Do you see any further opportunities to include local mana whenua perspectives and mātauranga Māori in infrastructure adaptation decision-making?

Yes

No

Unsure

Please explain your answer.

c. Do you see any further opportunities to include local community perspectives in infrastructure adaptation decision-making?

Yes

No

Unsure

Please explain your answer.

- d. Do you see any further opportunities to ensure that groups who may be disproportionately impacted by climate change, or who are less able to adapt (such as those on low incomes, beneficiaries, disabled people, women, older people, youth, migrant communities) have continued and improved access to infrastructure services as we adapt?

- Yes
 No
 Unsure

Please explain your answer.

- e. Do you think we have prioritized the right tools and guidance to help infrastructure asset owners understand and manage climate risk?

- Yes
 No
 Unsure

Please explain your answer.

30. Are there additional infrastructure actions that would help to strengthen Māori climate resilience?

- Yes
 No
 Unsure

Please explain your answer.

31. Are there any other tools or data that would help infrastructure asset owners make better decisions?

Communities

In this section:

- [Why we need to take action](#)
- [What we want to achieve](#)
- [How we will get there](#)
- [Actions across other outcome areas also contribute to resilient communities](#)

Why we need to take action

Climate change is already affecting how we live. The impacts we face will increase, so having a planned response is essential. We will meet challenges. Individuals and communities may need to move away from high-risk areas.

We may need to think differently about property and land rights if areas become too risky to live in. We may also need to welcome people from smaller Pacific nations that have been displaced by the impacts of climate change.

Some individuals and communities are more exposed to climate impacts because of where they live. For example, many Māori communities are in rural areas along coastlines and near major rivers. Rural communities, including farmland, will be disproportionately affected.

The Government acknowledges that some of the land returned to iwi/Māori through Waitangi Tribunal claims is highly risk-exposed or isolated. The Crown has a duty under Te Tiriti to support Māori and advance their rangatiratanga.

Other vulnerable community members include those experiencing poverty, Pacific peoples, refugees, migrants, women, elderly and disabled people. We acknowledge that these groups will also require support to adapt.

Communities vary greatly in their connections and ability to adapt. In some areas, communities have strong connections, are able to withstand many external challenges and able to adapt. Others are more disconnected and under-resourced.

The effects of climate change will make us more reliant on one another to meet our practical needs, as well as for our emotional and spiritual wellbeing.

For this outcome area

Community is defined geographically as a group of people living in the same town, suburb, area or marae/hapū community. It also includes the broader meaning of social and cultural communities, such as Pacific communities; ethnic communities and minorities; older people; disabled and mobility-compromised people; low-income groups; women; rural communities; rainbow and LGBTQI+ communities; children and youth; and those experiencing deprivation, ill health or isolation.

Local government: Helping communities to adapt

Local government is the system of locally elected members that represent communities and make decisions about their issues, such as managing climate impacts.

Local authorities have a responsibility to help communities prepare for and adapt to the physical effects of climate change.

In enabling the communities they represent to adapt, these authorities have three main roles:

- as owners of infrastructure that communities rely on for their wellbeing
- as planners and regulators of development
- as agencies closest to exposed communities.

Around New Zealand, many councils are now working in partnership with communities and iwi/Māori. Some are also setting up dynamic adaptive pathways to engage their communities and work towards long-term solutions for highest-risk areas.

As owners of infrastructure that communities rely on for their wellbeing

Local authorities own much of the infrastructure that communities rely on for their day-to-day lives and livelihoods. However, many of these assets are directly at risk from sea-level rise and adverse weather events (eg, more frequent and intense storms and floods).

Authorities will need to carefully manage this infrastructure and design it with higher levels of protection for climate resilience, so their communities can thrive into the future. This includes three waters, local roads and other assets, such as buildings and community amenities, parks, sports fields and airports. Nature-based solutions – such as wetlands, rain gardens and swales, and green roofs and walls – can be effective for addressing flood risk.

As planners and regulators of development

Local authorities have primary responsibility for managing natural hazard risk and adapting to climate change. In particular, they are responsible for planning and regulating¹⁰ development. Directing development away from high-risk areas will be critical to reducing the future exposure of communities to climate risks and minimising the long-term costs of adaptation. The role of councils in urban development planning will require them to consider both adaptation and mitigation for communities. This includes:

- achieving compact urban form that is well linked to public transport and jobs, while being located in areas with less exposure to climate impacts
- directing development away from areas exposed to flooding or wildfire
- requiring additional water storage in urban and rural areas as part of adapting to drought.

Local planning documents inform communities about natural hazard and climate risks, via hazard maps and viewers. They also identify and can protect areas of cultural significance to iwi/Māori and communities that might be affected by climate change.

District councils also operate the Land Information Memoranda (LIM) system. This provides information to people looking to buy a property about the natural hazard or climate risks that might be associated with a property.

¹⁰ The Resource Management Act 1991 requires local government to consider the effects of a changing climate on communities, and incorporate climate change into its frameworks, plans, projects and decision making. All of local government is charged with meeting the current and future needs of communities for infrastructure, local public services and regulatory functions (Local Government Act 2002, section 10(1)(b)).

As agencies closest to exposed communities

Local authorities help communities respond to climate emergencies, such as flooding. Now and in future, councils will need to engage communities in reducing risk and adapting to a changing climate. They will need to lead the discussion about what actions are the best way of supporting the wellbeing of exposed communities.

This may require tough conversations. Options that will reduce long-run costs to communities may be unpopular among some residents in the short term. For example, a council might need to turn down requests for bigger and stronger protection structures, when rising sea levels make these increasingly expensive and ineffective.

Local authorities will need to lead discussions about when and how to protect, accommodate or manage the retreat of communities from climate impacts. Some councils are already holding online conversations and in-person events to address this. A range of councils also has their own climate change plans, work programmes and advisors, and some have declared climate emergencies to drive action.

Case study: Adapting to climate change at the head of Lake Wakatipu

Natural hazards and climate change in a changing landscape

The communities at the head of Lake Wakatipu live with a range of natural hazards that arise from the alpine environment, nearby waterbodies and the geological setting. The environment at the head of the lake is also changing as a result of natural landscape processes.

When and how future changes will happen is uncertain, but climate change is expected to make natural hazards, particularly flooding, more likely and more severe in their impact. Flooding poses a substantial threat to the settlement of Glenorchy, which has been flooded on multiple occasions (significantly in November 1999 and February 2020). Projected natural changes to the landscape (growth of the nearby river deltas, rising riverbed levels and the likely avulsion – or rerouting- of the Rees River) along with the impact of climate change are expected to increase these risks.

The Otago Regional Council is working with the Queenstown Lakes District Council, the local community, iwi and stakeholders to develop a long-term, holistic and sustainable response.

Developing adaptation pathways with the community

The Otago Regional Council has adopted a method called 'adaptation pathways' to develop long-term solutions to natural hazards. The Ministry for the Environment (MfE) developed this approach to support community-led decision making in areas affected by natural events and climate change.

The adaptation pathways approach is cyclical and accounts for change and complexity. It uses a 10-step decision cycle that is based around five key questions. The cycle comprises a values, hazard and risk-assessment component (steps 1 to 4), followed by development and implementation of an adaptation strategy (steps 5 to 8), and, later, by a monitoring and review phase (steps 9 and 10). Community engagement is central in the cycle.

So far, the project has carried out a range of surveys, monitoring and technical investigations to better understand natural hazards now and in the future, as well as an assessment of cultural values. The Otago Regional Council has also engaged with the local community to enable them to understand the issues, contribute to the adaptation process and make informed decisions about future adaptation needs.

Supporting change

From this process, the Otago Regional Council will develop an adaptation strategy for the communities at the head of Lake Wakatipu. This information will allow for planning with more certainty in the face of ongoing change and increasing hazard risks. The adaptation pathways approach is relatively new and has mostly been used in coastal hazard environments, rather than in an alpine environment or in areas with multiple hazards. The lessons from this project will have wider benefits for other communities facing similar risks.

What we want to achieve

Communities have a high level of adaptive capacity and are resilient to the impacts of climate change.

- Communities are able make decisions and put resources into suitable adaptive actions.
- Government work programmes are focused on ensuring no one is left behind.
- Local knowledge, including mātauranga Māori, is valued.
- Decision making is transparent and builds and maintains trust.
- Decisions support the tino rangatiratanga (self-determination) of Māori.

Enable communities to adapt (**objective C1**). This means:

- enabling communities, including our Treaty partners, to provide resources and take action relevant to their unique situation, building and sharing knowledge of local issues in culturally appropriate ways, supporting community engagement and participation in decisions and providing information on adaptation options.

Support vulnerable people and communities (**objective C2**). This means:

- understanding where our most vulnerable people are, what they need and what they value and providing them with support, knowledge and resources.

Support communities when they are disrupted or displaced (**objective C3**). This means:

- supporting communities facing climate-related disruption and disasters, so response and recovery can improve their wellbeing and social cohesion.

The health sector is prepared and can support vulnerable communities affected by climate change (**objective C4**). This means:

- understanding future climate-related health risks and are taking steps early to ensure the healthcare system is ready for these shifting demands. This includes meeting the mental and social wellbeing needs of whānau and communities in emergencies, and supporting them to recover, adapt and thrive.

Community resilience and the basic needs of people look largely the same whether we are dealing with a pandemic or a flood. This is an opportunity to integrate this work into wider social policy as it grows.

The actions that follow are designed to achieve these objectives and address the **human domain** risks in the National Climate Change Risk Assessment (NCCRA). In particular:

- social cohesion and community wellbeing are at risk due to displacement of individuals, families and communities due to climate change impacts.
- that climate change could exacerbate existing inequities and creating new and additional inequities due to differential distribution of climate change impacts.

This focus of this section is on new actions that will contribute to this outcome area. However, a number of existing work programmes across central government can support the resilience of communities. Some of these key programmes include a wide range of initiatives to support community resilience, such as Whānau Ora projects, and funding and work programmes such as Rural Assistance Payments and Oranga Mārae.

How we will get there

Critical actions

Raise awareness of climate-related hazards and how to prepare

Timeframe: Years 1–6 (2022–28) – **Lead agency:** NEMA – **Relevant portfolio:** Emergency Management – **Primarily supports:** Objective C1 – **Status:** Current

Enable communities to make emergency preparedness a part of everyday life through public awareness and advice. Increasing public education campaigns and resources, such as www.GetReady.govt.nz and developing tailored information for those who face additional challenges, will help communities understand hazards and support them to take action before, and during, and emergency event.

By the end of 2024 a public education strategy will be developed for natural hazards and increased availability of information on preparedness for extreme weather events.

Develop Health National Adaptation Plan (HNAP)

Timeframe: Year 1 (2022/23) – **Lead agency:** MOH – **Relevant portfolio:** Health – **Primarily supports:** Objective C4 – **Status:** Current

The HNAP will complement the national adaptation plan, and will be supported by regional climate health action plans developed by the health sector, at a regional level. The aim is to prepare the health sector to meet the health needs of communities in relation to the effects of climate change.

A key part of the adaptation planning in health sector is the identification of groups that are vulnerable to the effects of climate change.

Vulnerability can be affected by a wide range of factors including geography, demographics, socio-economic status, physical and mental health status, and family and community support. Vulnerability will be considered alongside risk in the health adaptation planning process.

The HNAP is expected to be completed by the end of 2022 and regional climate health action plans will be developed from 2023.

Supporting actions

Develop the Climate Migration Action Plan

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MFAT – **Relevant portfolio:** Foreign Affairs – **Primarily supports:** Objective C3 – **Status:** Current

Key values include retaining social and cultural identity for Pacific communities and supporting Pacific peoples to live in their own countries where possible. This work aims to support these communities to grow and thrive despite the challenges of climate change-related displacement and migration in a way that is determined in collaboration with Pacific communities themselves, and that values their cultural and local knowledge.

Building community resilience through social cohesion

Timeframe: Years 2–5 (2023–27) – **Lead agency:** MSD – **Relevant portfolio:** Social Development and Employment – **Primarily supports:** Objective C1 – **Status:** Current

This work will improve inclusion and participation in society and build community resilience to lessen instability and isolation caused by climate change. The aim is to support the understanding of diversity within and across communities to allow everyone to feel safe and belong, and to access opportunities.

Strengthen teaching and learning related to climate change

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MOE – **Relevant portfolio:** Associate Education – **Primarily supports:** Objective C1 – **Status:** Current

This work will improve community resilience by addressing inequities in learning outcomes and by supporting local curriculums and marau ā-kura to include understanding and responding to climate change. The aim is to support all children and young people to grow as lifelong learners, connected to the environment and communities and actively involved in a sustainable future.

Improve natural hazard information on Land Information Memoranda (LIM)

Timeframe: Years 1–4 (2022–26) – **Lead agency:** DIA – **Relevant portfolio:** Local Government – **Primarily supports:** Objective C1 – **Status:** Current

Changes to legal requirements for LIMs will help people to make better-informed decisions about natural hazard risk when buying a property and give councils greater certainty about what natural hazard information to include on the LIM. This will link to the suite of information and data portals communities will have about climate risks.

Continue with the reform of the health and disability system

Timeframe: Years 1–3 (2022–25) – **Lead agency:** MOH – **Relevant portfolio:** Health – **Primarily supports:** Objective C4 – **Status:** Current

The way that the health and disability system is structured and the delivery of health services is undergoing a period of reform. The new health and disability system will be simpler and more coordinated, allowing for better and more consistent care that is shaped by the voices of consumers, communities and whānau.

The Public Health Agency within the Ministry of Health will put more emphasis on determinants of health (such as employment and housing) and use data and other sources of intelligence to design policies and services that are better able to prevent disease and to monitor environmental threats to public health.

Health NZ will be responsible for planning and commissioning hospital, primary and community health services. Health NZ will operate four regional offices and each region will work with its districts, located closer to local communities, to develop and implement plans based on local needs to improve the health and wellbeing of communities.

Alongside Health NZ, the Māori Health Authority will have shared responsibility for planning and delivering healthcare. Local iwi/Māori partnership boards will help shape appropriate health and wellbeing services to meet the needs of local communities, through being an influencing and decision-making voice for iwi and Māori at a local level and supporting Te Tiriti partnerships throughout the system.

Assess socioeconomic and climate vulnerability for Māori

Timeframe: Year 1 (2022/23) – **Lead agency:** TPK – **Relevant portfolio:** Māori Development – **Primarily supports:** Objective C2 – **Status:** Current

This action will collect and analyse social data against climate data to determine where support for resilience is most needed. This will allow the Government to better understand what support is needed to strengthen resilience for Māori communities.

Continue to overhaul the welfare system

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MSD – **Relevant portfolio:** Social Development and Employment – **Primarily supports:** Objective C2 – **Status:** Current

This action will make ongoing improvements in support, such as for employment, health and communities, and in incomes for those interacting with the welfare system. This aims to achieve the Government’s vision of a welfare system that ensures people have an adequate income and standard of living, are treated with and can live in dignity and are able to participate meaningfully in their communities.

Connect communities to wider response and recovery support

Timeframe: Years 1–6 (2022–28) – **Lead agency:** NEMA – **Relevant portfolio:** Emergency Management – **Primarily supports:** Objective C3 – **Status:** Current

This action will continue work with central and local government, communities, iwi, organisations and others to support effective, integrated disaster response and recovery. This allows for communities to be assisted through disaster events by networks that are locally led, regionally coordinated and nationally supported.

Future work programme proposals

Expand current funding for proactive community resilience

Timeframe: Years 1–6 (2022–28) – **Lead agency:** TPK – **Relevant portfolio:** Māori Development – **Primarily supports:** Objective C1 – **Status:** Proposed

This will seek to expand funding provided to Māori to build their community resilience through the COVID-19 pandemic and plug funding gaps for communities to carry out their long-term resilience plans. Funding would be decentralised by expanding the scope of funds provided through Whānau Ora. Whānau Ora reaches Māori and Pacific communities as some of our most socio-economically vulnerable, but is accessible to all communities. Communities will be able to be funded to take proactive action to future-proof and adapt to the best of their ability, for whatever adversity comes their way.

Assess healthcare service resilience

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MOH – **Relevant portfolio:** Health–
Primarily supports: Objective C4 – **Status:** Proposed

The aim of this action is to understand the vulnerability of the service to climate events, consider physical risks to infrastructure, and changes in illness patterns and vulnerability. This will help to ensure that communities can continue to access the healthcare services they need, even in the face of climate change-related adversity.

Case study: Wildfire preparedness at Mount Iron, Wānaka

Extreme fire weather is increasing in New Zealand and the number of people living within the rural–urban interface is also rapidly growing. During the 2020–21 fire season, more homes were destroyed than in any other fire season in the past century.

The conditions that led to Australia’s devastating 2019–20 ‘Black Summer’ fires are likely to occur in New Zealand every 3 to 20 years – specifically in areas of Central Otago, the Mackenzie Country and Marlborough. Research suggests that the general public does not fully understand the increasing wildfire risk or their mitigation options. More action is needed to build resilience that enables communities across New Zealand to respond to this increasing risk.

Some New Zealanders have started taking actions as individuals and as a collective community to prepare to respond to increasing wildfire risk. A case study of the permanent Mount Iron residents in Wānaka found that participants had high awareness of and anxiety about wildfire. Their views had been amplified by the recent wildfire at Lake Ōhau, 70 kilometres away, which destroyed half the village (48 houses) in October 2020.

Mount Iron residents have voiced concerns about the increasing wildfire threat to both lives and property. Their concerns focus on local development planning decisions and rules – such as restrictions on removing protected native kānuka vegetation around their properties – as well as flammability of cedar cladding of houses and poor access for fire trucks on residents’ one-way evacuation routes.

Actions across other outcome areas also contribute to resilient communities

The work to reduce pests and diseases set out in the section on the natural environment will also reduce risk to human health. These actions will support the development of the Health National Adaptation Plan.

Climate-resilient infrastructure will support greater community resilience. The needs of communities are strongly connected to the actions in the section on homes, buildings and places, as a community’s wellbeing is linked with the housing, gathering places, sites of significance and wāhi tapu within it. Relevant actions include those around property resilience, building resilient housing and connecting between cultural heritage, climate change and wellbeing.

Communities questions

32. Do you agree with the outcome and objectives in this chapter?

- Yes
- No
- Partially

Please explain your answer.

33. Do you agree with the actions set out in this chapter?

- Yes
- No
- Partially

Please explain your answer.

34. What actions will provide the greatest opportunities for you and your community to build climate resilience?

35. Are there additional actions central government should consider to:

a. support your health and wellbeing in the face of climate change?

- Yes
- No
- Unsure

Please explain your answer.

b. promote an inclusive response to climate change?

- Yes
- No
- Unsure

Please explain your answer.

c. target support to the most vulnerable and those disproportionately impacted?

- Yes
- No
- Partially

Please explain your answer.

36. What do you think are the most important actions that will come from outside of central government (eg, local government, the private sector or other asset owners, iwi, hāpu, non-government organisations, community groups) to strengthen community resilience in the face of climate change?

37. Are there additional actions could be included in the national adaptation plan to help strengthen climate resilience for iwi, hāpu and whānau?

- Yes
- No
- Partially

Please explain your answer.

Economy and financial system

In this section:

- [Why we need to take action](#)
- [What we want to achieve](#)
- [How we will get there](#)
- [Actions across other outcome areas also contribute to a resilient economy and financial system](#)

Why we need to take action

Climate change is already affecting the economy of Aotearoa New Zealand. It is increasing existing risks, such as floods and droughts, and has resulted in sea-level rise.

Between 2007 and 2017 the contribution of climate change to floods and droughts alone cost New Zealanders an estimated \$840 million in insured damages and economic losses (Frame, et al, 2019). The scale of the long-term economic costs and benefits of climate change will depend on actions right across society.

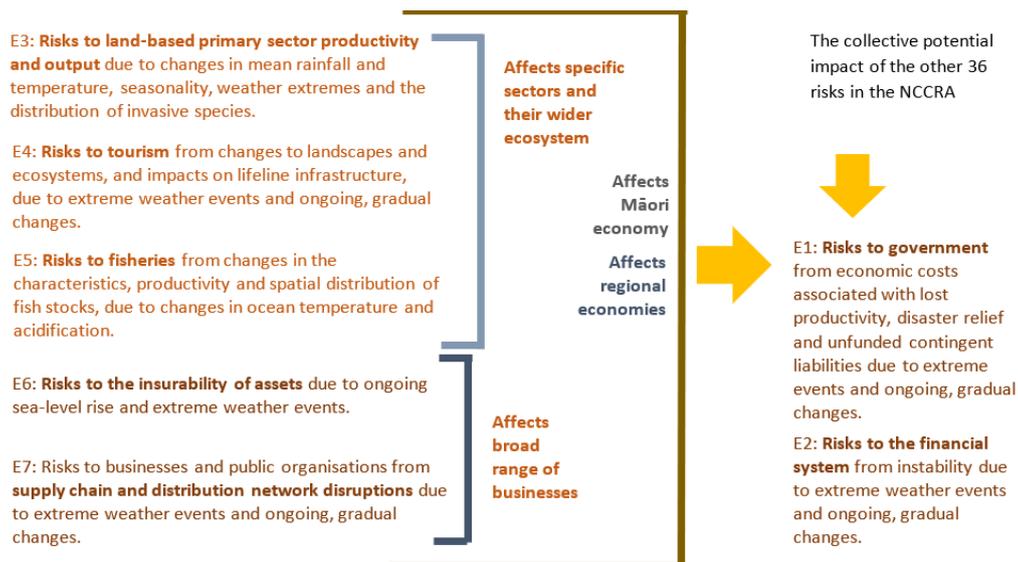
In 2021, less than 10 per cent of firms had assessed the risks to their business from a changing climate, and less than 20 per cent intended to take action to reduce their risks over the next five years. This lack of action increases business vulnerability to climate impacts (Statistics New Zealand, 2022), (Climate Change Adaptation Technical Working Group, 2017).

Central government will play a role in taking action, for example, through legislation, funding or regulation to incentivise others to reduce their risk.

Local government will take decisions, for example, on land use or local infrastructure.

Businesses (including iwi interests) and private citizens exposed to climate risks will likely consider future climate impacts when making long-term decisions, such as where to locate, how to earn an income or what type of insurance to buy.

Figure 7: The seven economic risks and their cascading impact across the economy



Source: Economic risks from the National Climate Change Risk Assessment and the Ministry of Business, Innovation and Employment.

Impacts we are seeking to address

Key export industries failing to adapt

Land-based primary industries, fisheries and aquaculture, and tourism are the most exposed industries as they depend on climate-sensitive natural resources (Ministry for the Environment, 2020a). These three industries and their manufactured products form a significant part of the economy and comprise over 60 per cent of exports.¹¹

Failure of firms in these industries to adapt adequately would reduce their productivity and potentially their viability. Impacts would flow on to their suppliers and customers and to New Zealand's export earnings (Climate Change Adaptation Technical Working Group, 2017).

Exposed local economies failing to adapt

The impacts will not be evenly distributed across New Zealand. Many regional economies rely heavily on the three exposed industries, and those that are located in hazardous areas (eg, low-lying land) will be doubly exposed. Failure to adapt could lead to business closures and job losses, which if widespread could hollow out some communities.

Disproportionate impacts on iwi and Māori

Iwi and Māori are heavily invested in land-based primary industries, tourism and fisheries, which all have a significant Māori workforce.

¹¹ The three sectors contributed about 62 per cent of export earnings for the year ended March 2020. Source: Stats NZ data on [goods and services trade by country](#), and the [tourism satellite account](#), both for the year ended March 2020.

Māori collectively own approximately 40 per cent of fisheries quota, and have diversified interests across the sector, including catching, processing, marketing and food services. Māori also own 40 per cent of commercial forest. In 2018, gross domestic product (GDP) from Māori tourism was estimated at just over \$975 million (BERL, 2021).

Economic inequity means that some Māori businesses and workers have less capacity to adapt, and climate-related costs and disruption could entrench those inequities. At the same time, Māori knowledge of sustainable practices and holistic economic models offer unique ways to adapt. Properly resourced, Māori can take a leadership role in economic adaptation.

Infrastructure, business and housing assets are becoming less insurable

Some assets could become uninsurable (creating further risks if they are used as collateral). The value of buildings exposed to coastal flooding could increase from NZ\$12.4 billion now to NZ\$26 billion for sea-level rise of 0.6 metres, and NZ\$44 billion at 1.2 metres (Paulik et al, 2019).

Insurance retreat would likely reduce private and public asset values, making households and firms or public entities less able to invest in adaptation.

There are likely to be more insurance claims, greater damage repairs and higher premiums. Claims for extreme weather events hit a record \$321.6 million in 2021, breaking the record last set in 2020 at \$274 million (Insurance Council of New Zealand, 2021).

Disrupted supply chains

Local and global supply chains are critical to the functioning of the economy. Supply is subject to disruption from extreme weather (eg, flooding, power outages) and longer-term climate changes that reduce the supply of certain goods.

Disruptions can range from the very local (eg, a washed-out road to a major tourist site), to major freight hubs, through to global distribution networks. The Intergovernmental Panel on Climate Change (2014) suggests the effects of climate change globally (and flow-on effects to our supply chains) may be more significant to our economy than the direct impacts within New Zealand.

Reduced financial stability

Financial stability means having resilient banks, insurers and other financial institutions. It means we have a system that can withstand severe but plausible shocks and continue to provide the services we all rely on.¹²

One of the main ways climate change creates risks to stability is through the physical impacts on collateral (eg, extreme weather damaging assets, such as residential housing or farmland). The transition to a low-emissions economy may also undermine the financial system if it leads to significant shifts in asset values or high costs of doing business.

¹² Reserve Bank of New Zealand. Financial stability. Retrieved from <https://www.rbnz.govt.nz/financial-stability> (4 April 2022).

Fiscal impacts of extreme weather and sea-level rise

In its Statement on the Long-term Fiscal Position, Treasury (2021) modelled the impact of more frequent and severe storms and droughts. The median impacts by 2061 appeared modest (net debt 3.77 per cent of GDP higher than baseline).

This analysis suggested that the Government's fiscal position was relatively resilient. However, these national impacts did not reflect the severe shocks felt by affected communities or local government entities. The fiscal impacts could be greater, given that the analysis did not consider sea-level rise, non-linear or 'tipping-point' changes, or effects beyond 40 years.

Reduced Crown revenue

The Government may also face lower revenue if taxes fall or if productivity or GDP reduces, and the costs to replace or repair its own assets increase.

What we want to achieve

A high wage and low emission economy, which adapts and builds resilience to a changing climate

The Government will take into account a range of considerations in achieving this outcome.

- Economic activity is increasingly becoming carbon neutral, circular and climate resilient.
- Innovation lifts productivity and generates sustainable solutions.
- Te Tiriti partners work together for mutually beneficial economic opportunities.
- Vulnerable sectors have reduced their climate risks, and the economy has diversified towards high-value, less climate-exposed industries.
- Businesses and households have the skills, resources and incentives to reduce their economic risks to climate impacts.
- Every household can meet its material needs.
- The foundation is a stable financial system and clear public/private accountabilities.

The 2020 National Climate Change Risk Assessment (NCCRA) identified significant risks to governments and to the financial system. Underlying these risks, it identified in particular risks to primary industries and tourism, distribution networks and the insurability of assets. These in turn could generate risk to the overall economy (see figure 7). The two objectives below respond to these risks.

Sectors, businesses and regional economies can adapt. Participants can identify risks and take action (**objective EF1**). This means:

- providing businesses with the tools and information they need to respond to climate risks
- reducing barriers to adaptation and innovation
- sectors most vulnerable to near-term or significant change (tourism, land-based primary sector, fisheries) can take action now to reduce costs over time
- providing regions with what they need to make informed assessments of their risk and reduce their exposure to climate-driven economic disruptions.

A resilient financial system underpins economic stability and growth. Participants can identify, disclose and manage climate risks (**objective EF2**). This means:

- financial entities can identify, disclose and manage the risks to their business.
- Insurance access and affordability is understood and managed.

How we will get there

Critical actions

Deliver the national Freight and Supply Chain strategy

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MOT – **Relevant portfolio:** Transport – **Primarily supports:** Objective EF1 – **Status:** Current

The national Freight and Supply Chain strategy will present a long-term and system-wide view of the freight system. Climate adaptation is being considered through the resilience objective, to ensure New Zealand’s freight and supply chain system is resilient, reliable, and prepared for potential disruption. This will inform investment by the Government, councils and private sector players.

It looks across industries, sectors and modes, to identify challenges and opportunities in the long term. This will lay the foundation for identifying any actions to reduce the risk of supply chain disruptions on businesses, industries and consumers.

By the middle of 2023, the Government has launched the national Freight and Supply Chain strategy.

Deliver the fisheries system reform

Timeframe: Years 2–5 (2023–26) – **Lead agency:** MPI – **Relevant portfolio:** Oceans and Fisheries – **Primarily supports:** Objective EF1 – **Status:** Current

The Government is progressing work on the Fisheries Amendment Bill which includes several legislative changes to the Fisheries Act 1996 that aims to strengthen and modernise New Zealand’s fisheries management system. The Bill will allow for more agile and streamlined decision making in response to changes in fish stock abundance, due to the effects of climate change, by enabling development of the pre-set decisions rules. The pre-set decision rules will allow adjustment of the catch limits and other sustainability measures within pre-agreed limits in response to change in abundance without extensive consultation. By 2024 the Government has introduced the Fisheries Amendment Bill.

Deliver the Aquaculture Strategy

Timeframe: Years 1–4 (2022–26) – **Lead agency:** MPI – **Relevant portfolio:** Oceans and Fisheries – **Primarily supports:** Objective EF1 – **Status:** Current

The Government’s Aquaculture Strategy aims to help sustainably grow the aquaculture industry in New Zealand. One of its objectives is to support the industry to adapt to climate change.

Actions include forecasting the effects of climate change on the aquatic environment and supporting actions for biosecurity, resilience, supporting industry to transition to hatchery spat production, and spatial planning approaches informed by climate change considerations to enable industry growth and adaptation.

By 2024 the Government releases annual implementation plans for the Aquaculture Strategy, and report annually on the environmental effects of aquaculture.

Support high-quality implementation of climate-related disclosures and explore expansion

Timeframe: Years 1–6 (2022–28) – **Lead agencies:** MfE, MBIE supported by the XRB and FMA – **Relevant portfolios:** Climate Change; Commerce and Consumer Affairs – **Primarily supports:** Objective EF2 – **Status:** Current

The Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 requires approximately 200 of New Zealand’s largest financial market participants to analyse and publicly disclose annually their climate-related risks and opportunities. This work will explore how entities consider climate-change risks and opportunities and will ensure that the effects of climate change are routinely considered in business, investment, lending and insurance decisions. We will also explore extending the mandatory climate-related disclosures regime to cover a broader range of activities, for example, public entities at the national and local level. As climate risks and opportunities are more accurately factored into pricing and become more transparent, we expect this will shift investment decisions away from high-risk areas, and towards investments that support a sustainable, low-emissions and financially stable economy.

Key actions to support implementation are led by MfE and the External Reporting Board (XRB), and include promoting industry-led sector-level scenario analysis approaches, facilitating improved access to data & collaborating with international organisations to support clear, comparable, and consistent climate disclosures.

By 2024, the Government has decided whether to extend mandatory climate-related disclosure requirements to public entities.

RBNZ supports the stability of the financial system

Timeframe: Years 1–2 and ongoing (2022–24) – **Lead agency:** RBNZ – **Relevant portfolio:** Finance – **Primarily supports:** Objective EF2 – **Status:** Current

The Reserve Bank of New Zealand (RBNZ) is taking action to help regulated financial entities better identify and manage climate risks. These include:

- Introducing climate-related stress tests that model the effect of severe but plausible scenarios on the balance sheets of regulated financial institutions
- incorporating climate change in scheduled supervisor engagements with the management and boards of regulated entities
- developing guidance on managing risk for the entities the RBNZ regulates.

By August 2024, the RBNZ will have climate change considerations increasingly integrated into its supervisory, stress testing and policy work.

Develop options for home flood insurance issues

Timeframe: Years 1–2 (2022–23) – **Lead agency:** Treasury – **Relevant portfolio:** Earthquake Commission – **Primarily supports:** Objective EF2 – **Status:** Current

Work is underway to better understand the scale and timing of insurance market changes due to improved information about risks supporting more granular risk-based pricing by insurers, and due to the increasing frequency and severity of flooding events being exacerbated by climate change. This work includes exploring options to support access and affordability of insurance for floods.

Home insurance supports New Zealand’s resilience to extreme weather events, such as floods, and helps manage climate change risks. The Government intends to develop options to ensure home flood insurance continues to play an appropriate role in supporting community resilience.

This work has important links with other adaptation initiatives, such as improved land-use planning, that reduce climate-related risk and support the insurability of assets.

By the end of 2022, the Government has received advice on flood insurance options and agreed to next steps.

The role of insurance in responding to flood risk

Climate change creates challenges for the insurability of assets, such as residential buildings and homes. The Government has choices about how it responds to these challenges. The Government’s primary focus is on flood insurance for residential buildings. The choices include potentially supporting a national flood insurance scheme for residential buildings.

Climate change will make floods more severe, frequent and costly. The nature of this change and its impact will differ depending on the type of flood (eg, river, surface or coastal flooding) and the specific location involved. The timing and course of such change are relatively uncertain. At the same time, the availability and quality of information, data and modelling on flood risk and climate change (including forward-looking assessments of losses) are improving progressively over time.

Risks such as flooding can be managed in a number of ways, including by:

- avoiding the risk through land-use planning (eg, minimising new builds in high-risk areas)
- controlling the risk (eg, public flood defences, asset-specific flood mitigations, ‘retreat’ from high-risk areas)
- insuring the risk to help communities recover from any floods
- accepting the risk with a view to dealing with the consequences after the event.

The increase in underlying flood risk and availability of information over time is likely to challenge the insurability of flood risks for some assets such as homes. This is because these circumstances no longer meet some of the key characteristics needed for risks to be privately insurable. For example, it becomes increasingly uneconomic for either an insurer or an asset owner to enter into an insurance arrangement (at a proper price) if an asset experiences frequent and significant losses.

This might lead to higher premiums and/or ‘insurance retreat’, such as higher excesses, limits on cover and, in some cases, loss of access to insurance entirely. Any significant and widespread increase in premiums or insurance retreat would likely result in:

- lower wellbeing for affected homeowners, both pre-flooding (eg, income, stress, reduced market value of existing assets, reduced access to finance) and post-flooding (eg, losses)
- potential fiscal and policy implications for the Government if pressed to support uninsured and underinsured homeowners after a flood.

Another result of insurance retreat will be that private insurance plays a smaller role than at present in preventing or responding to damage caused by floods. In addition, loss of insurance or higher premiums are likely to provide incentives for asset owners to manage their risk in other ways, including potentially by taking measures to adapt to the risks (such as seeking the development of public flood defences or moving assets).

The Government has choices about its involvement in managing flood risk in the short term and later as climate change increases those risks. Additionally, the Government has the choice of whether or not to support insurance markets to continue providing flood insurance (and if, it does provide support, in what ways).

In deciding on its position, the Government will weigh up various factors, including:

- who should bear these risks and how they are shared across society, including considering to what extent these risks are different to other risks
- costs and benefits of various options to manage risks
- who is best placed to manage and make decisions about managing these risks (eg, homeowners, local government, central government)
- to what extent any government involvement is transitional or temporary
- the risk of unintended consequences.

The Government needs to consider the short-, medium- and long-term impacts. It will need to consider the trade-offs and risks of any decision to support flood insurance in the context of this national adaptation plan. This includes reducing incentives and masking market signals that could otherwise promote actions to reduce underlying flood risk.

Supporting actions

Consider climate risk in economic and fiscal monitoring and forecasting

Timeframe: Years 1–6 (2022–28) – **Lead agency:** Treasury – **Relevant portfolio:** Finance – **Primarily supports:** Objective EF2 – **Status:** Current

Treasury’s six-monthly economic updates are a core mechanism to monitor and forecast the economic and fiscal environment. This includes the impact of shocks (eg, COVID-19 or natural disasters) on the Crown’s financial position, as well as tracking long-run changes. The updates highlight known quantifiable and unquantifiable climate adaptation risks as a tool to assist in fiscal and economic management.

Design and implement the Farm Monitoring Programme to determine farm performance

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MPI – **Relevant portfolio:** Agriculture – **Primarily supports:** Objective EF1 – **Status:** Current

This action promotes land use that brings more value and is better for the environment, including changing use if necessary. It provides on-farm emissions data to farms and orchards, increasing the primary sectors covered, and enabling sectors to benchmark between similar farm types.

Implement the Government response to the Prime Minister's Chief Science Advisor's report on commercial fishing

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI – **Relevant portfolio:** Oceans and Fisheries – **Primarily supports:** Objective EF1 – **Status:** Current

This report makes several recommendations for fisheries management and for commercial fishers. The Government response is underway and will likely include actions that support innovation across the system, progress an ecosystem approach to fisheries management and protect habitats of significance to fisheries management.

Support the Aotearoa Circle Climate Change Adaptation Strategy for Seafood Sector

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI – **Relevant portfolio:** Oceans and Fisheries – **Primarily supports:** Objective EF1 – **Status:** Current

Building on scenario planning, this action is a collaboration between the Government, major seafood sector leaders, environmental non-government organisations, iwi representatives and the research community. The strategy will set out a shared 10-year vision and goals, and actions to help achieve these. The strategy will increase the fisheries sector's capability and resilience to climate-related risks. It includes actions to ensure adaptation information is more integrated and accessible, and promote ecologically and economically efficient fishing and aquaculture practices.

Deliver the Tourism Industry Transformation Plan (ITP)

Timeframe: Years 1–3 (2022–2025) – **Lead agency:** MBIE – **Relevant portfolio:** Tourism – **Primarily supports:** Objective EF1 – **Status:** Current

The goal of this work is regenerative tourism. The first phase focuses on 'better work' and the second phase on the environment. It will likely include further transition and adaptation plans over the term of this first national adaptation plan. This provides the opportunity for a sector-wide assessment of risks and potential actions.

Meeting the costs of a climate-resilient tourism sector

Timeframe: Years 1–2 (2022–24) – **Lead agency:** MBIE – **Relevant portfolio:** Tourism – **Primarily supports:** Objective EF1 – **Status:** Current

Currently international visitors do not directly pay for many products and services they use, where these are funded by local communities. The Ministry of Business, Innovation and Employment (MBIE), directed by the Minister of Tourism, is reviewing the settings for the International Visitor Conservation and Tourism Levy (IVL). This includes ensuring that international visitors contribute to resilient, adaptable infrastructure and the natural environment they use as part of the visitor experience. Resilient infrastructure, including a healthy environment, will reduce the risks from extreme weather. This action will support a focus on spending priorities of the IVL, as well as any further work across the life of the national adaptation plan (eg, other tools) to further support adaptation and climate resilience in tourism.

Leverage government procurement for climate outcomes

Timeframe: Year 1 (2022/23) – **Lead agency:** MBIE – **Relevant portfolio:** Economic and Regional Development – **Primarily supports:** Objective EF1 – **Status:** Current

This action will check that the current government procurement policy framework enables mitigation and adaptation in government investments. The greatest opportunity will likely be in construction contracts, making buildings and infrastructure resilient to a changing climate and reducing carbon emissions and waste. This links to the homes, buildings and places action plan.

Monitor residential insurance premiums

Timeframe: Years 1–2 (2022–24) – **Lead agencies:** Treasury, EQC – **Relevant portfolio:** Earthquake Commission – **Primarily supports:** Objective EF2 – **Status:** Current

Monitoring residential premiums and uptake of insurance gives a better understanding of the scale of shifts in insurance availability and affordability.

Improve consumer understanding of property insurance pricing and risks

Timeframe: Year 1 (2022/23) – **Lead agency:** Treasury – **Relevant portfolio:** Finance – **Primarily supports:** Objective EF2 – **Status:** Current

Information sheets will help consumers identify, manage or even reduce their risks to climate change. This links to the work on Land Information Memoranda, in that greater information disclosure can help people make more informed decisions on where to buy and build property.

Continue prioritising research and investment in climate-related science

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MBIE – **Relevant portfolio:** Research, Science and Innovation – **Primarily supports:** Objective EF1 – **Status:** Current

The Government has a range of science funding programmes that support innovative adaptation by pushing the boundaries of knowledge and transferring this knowledge. These include:

- Vision Mātauranga Capability Fund, which aims to unlock the science and innovation potential of Māori knowledge, resources and people.
 - The Endeavour Fund. In 2020, the MBIE-run Endeavour Fund for scientific research awarded the National Institute of Water and Atmospheric Research (NIWA) \$15 million over five years to NIWA, to produce New Zealand’s first consistent national flood hazard and risk assessment (Mā te haumarū ō nga puna wai ō Rākahautū ka ora mo ake tonu: Increasing flood resilience across Aotearoa). This will identify risks and help communities and sectors take early action to reduce costs over time by showing where flooding is likely, and by identifying the vulnerability of communities and assets.
 - The STRAND project (an interdisciplinary Royal Society of New Zealand Marsden Fund project led by the University of Otago) is exploring climate-related risks to residential property values across space and time, and the implications for financial stability.
 - The Whakahaora Extreme Events and the Emergence of Climate Change programme is studying extreme weather in climate and weather systems, in hydrological, biological and economic systems.
 - Strategic Science Investment Funds. Examples include
 - The Antarctic Science Platform, which improves scientific understanding of pressing issues such as climate change and ecosystem resilience.
 - The Enhancing Land Use Platform, which supports research that enables New Zealanders to better measure and manage their land resources, reduce greenhouse gas emissions, and manage the environmental impacts of land use.
 - Weather and Climate Hazards Platform, which improves understanding of large-scale weather and climate systems through numerical prediction techniques, monitoring and advanced measurement (eg, predicting extreme weather events and impacts, climate adaptation and mitigation).
 - The Deep South National Science Challenge. The aim of this 10-year research programme, finishing in 2024, is to improve understanding of New Zealand’s changing climate. It will aid timely decisions on adaptation by building New Zealand’s evidence base and providing sectors and communities with insights and information. This is part of addressing gaps in
-

our knowledge and building our monitoring capabilities. There are key inputs to decisions to be made at all levels of society on how to adapt to changing climate conditions.

Continue delivering the Sustainable Land Management and Climate Change (SLMACC) and Greenhouse Gas Inventory research programmes

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI – **Relevant portfolio:** Agriculture – **Primarily supports:** Objective EF1 – **Status:** Current

This work will fund research and develop tools to support the sector to better adapt to climate change, measure emissions and mitigate land-use impacts on fresh water. It includes science extension and policy research and ability to respond to social impacts of climate change.

Continue delivering the Sustainable Food and Fibre Futures Fund

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI – **Relevant portfolio:** Agriculture – **Primarily supports:** Objective EF1 – **Status:** Current

The fund supports innovative projects that design and test new approaches and solutions to risks such as climate change in the primary sector. It includes a research call for regenerative agriculture projects.

Case study: New Zealand Seafood Sector Adaptation Strategy, 2021–30

*“Only a collaborative, sector-wide adaptation strategy can address the impacts of climate-related risk in the seafood sector.”**

Climate risk to fisheries is one of the 43 risks identified in the National Climate Change Risk Assessment. In 2020, the Aotearoa Circle brought together 23 organisations in the seafood sector to collaborate on a forward-looking climate risks and opportunities assessment. This was based on the international best-practice Task Force on Climate-related Financial Disclosures framework. A key finding was that the next decade will be crucial for the seafood sector to enhance its resilience and adaptive capacity.

The Aotearoa Circle collaboration included industry players, government, iwi and community stakeholders. Based on a risk-and-opportunity analysis of climate scenarios, the group developed and adopted a final Seafood Sector Adaptation Strategy that has a comprehensive programme of actions, to be implemented from 2021 to 2027.

“As kaitiaki we work together to adapt to climate change and ensure a resilient future.”

The strategic goals of the adaptation strategy are bold leadership, resilient prosperity, practical knowledge and values-based governance. Each goal has several commitments that will be implemented out to 2027.

- Bold leadership will ensure stakeholders can better understand their climate risks and opportunities, and drive the implementation of adaptation actions.
- Resilient prosperity will develop adaptive capacity, for example, by funding and researching opportunities to diversify markets. It will also look to enhance the resilience of the marine environment.
- Practical knowledge will enable the development and sharing of all kinds of relevant information and knowledge across the sector. It will ensure that part of monitoring and evaluation of adaptation options is to gather lessons to inform decision making.

- Values-based governance will mean stakeholders from across the seafood community spectrum will collaborate with, and actively support, policy makers as climate change is mainstreamed into legislation, regulation and policy settings.

This is one of the first examples of a sector working together to produce an adaptation strategy, including an implementation roadmap. It is an opportunity to bring lasting co-benefits to habitats, ecosystems, communities and businesses.

The participants found the process invaluable in helping them to prepare and build resilience in their organisations for the changing climate, and the opportunities and challenges that might bring.

** All quotes in this case study come from the Aotearoa Circle Climate Change Adaptation Strategy for the Seafood Sector.*

Future work programme proposals

Support Māori small business resilience and transitions

Timeframe: Years 1–4 (2022–26) – **Lead agency:** TPK – **Relevant portfolio:** Māori Development – **Primarily supports:** Objective EF1 – **Status:** Proposed

The aim of this work is to support Māori small and medium enterprises to develop low-emissions growth strategies, respond to climate-related risks and opportunities, and adopt resilient ways of working. Businesses would commit to reducing their emissions or improving their resilience to physical climate events.

Deliver the Māori agribusiness extension

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MPI – **Relevant portfolio:** Agriculture – **Primarily supports:** Objective EF1 – **Status:** Proposed

This action will deliver a tikanga-based support programme for whenua Māori, developed by Māori for Māori. This will empower Māori landowners and agribusiness to take a te ao Māori approach to adaptation and lowering emissions. It will extend the current pilot programme, which offers resources and support to Māori land-owning collectives. The extended service will also set up a network of skilled and trusted Māori advisors to support Māori land owners to reduce emissions, and improve preparedness for physical climate impacts.

Research business adaptation preparedness & provide guidance for small businesses to adapt

Timeframe: Years 1–6 (2022–28) – **Lead Agency:** MBIE – **Relevant Portfolio:** Small Business – **Primarily supports:** objective EF1 – **Status:** proposed

This will help small businesses reduce their climate risks through the provision of targeted guidance and information. The guidance will be based on research that will help to understand what firms are doing to adapt, and the pain points for business owners. The research will set a baseline for current action, inform future policy, and drive guidance and resources for small businesses.

Establish innovation grants, such as project grants

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MBIE – **Relevant portfolio:** Research, Science and Innovation – **Primarily supports:** Objective EF1 – **Status:** Proposed

These grants will boost private sector research and development investment. They will share the risk with New Zealand companies, and foster more research and development. This means more climate-focused innovation should happen faster, better enabling adaptation action.

Promote more industry partnership networks

Timeframe: Years 1–6 (2022–28) – **Lead agency:** MBIE – **Relevant portfolio:** Research, Science and Innovation – **Primarily supports:** Objective EF1 – **Status:** Proposed

This action will pool knowledge and resources to solve sector problems. The partnerships will recognise the complexity and interrelatedness of climate adaptation issues, and the need for sophisticated networks to test, scale up and spread innovation to help address climate risks. These networks will speed up the connections and relationships needed to implement change at pace.

Identify the impacts of climate change on regional economies

Timeframe: Years 1–3 (2022–25) – **Lead agency:** MBIE – **Relevant portfolio:** Economic and Regional Development – **Primarily supports:** Objective EF1 – **Status:** Proposed

This work will involve modelling the economic impacts of a changing climate on regional economies and providing guidance for assessing climate impacts in local economic decision making. This will help regions make informed assessments of their risks in their planning processes and reduce their exposure to climate-driven economic disruptions. Regional economic preparedness will also be bolstered by other proposals in the national adaptation plan, such as the Māori-led partnership.

Case study: Growing kai under increasing dry-climate adaptation and the primary sector

*“Adaptation is about surviving and thriving in the face of change.”**

Climate change is increasing the frequency and severity of drought in New Zealand; from 2007 to 2017, drought cost the country around NZ\$720 million. The primary sector is particularly vulnerable to drought and can expect conditions to get drier over the coming decades.

Climate disasters place a huge strain on the lives of farmers and growers, particularly in relation to their mental health. To reduce the economic risks of drought, and build climate resilience in farmers and growers, a national long-term climate change adaptation strategy is needed.

“Unless we work together, we are going to lock ourselves into the status quo.”

To develop a strategy that serves all stakeholders, a National Science Challenge consortium brought together farmers, growers, industry bodies, researchers and government. Online webinars and a one-day symposium were held in 2021, after which insights and findings from them were captured in the *Growing Kai Under Increasing Dry* report (2021).

The report emphasises that it is vital for the primary sector to adapt so that it protects its economic viability and that wide-ranging collaboration is essential.

“We can be either proactive or reactive, but climate change impacts are inevitable.”

The report provides a list of adaptation solutions for the primary sector. Suggestions include: connecting policy, research and on-farm practice; planning for the long term rather than short-term planning to respond to events; and enabling behaviour change and diversifying farming activities.

The report notes that although incremental adaptation has been happening for a decade, transformational change is now required. In contrast to incremental adaptation, which involves actions such as changing seed-sowing dates, transformational adaptation involves identifying novel land-use opportunities.

“Neither a top-down nor bottom-up approach alone will do.”

The report sets out key roles and responsibilities for stakeholders. Farmers and growers are the decision makers on the ground; industry bodies work as knowledge brokers for adaptation; researchers contribute new possibilities for adaptation and co-develop solutions; and the Government has a significant role to play through enabling innovation, investment and flexibility.

** All quotes in this case study come from the National Science Challenge report Growing Kai Under Increasing Dry.*

Case study: Flood Re – a flood reinsurance scheme in the United Kingdom

Flood Re is a UK reinsurance scheme that supports the affordability and availability of flood insurance for those homes that are at highest risk of flooding (around 1 to 2 per cent of UK homes). The scheme caps flood insurance premiums and cross-subsidises flood insurance costs between homeowners.

Flood Re is owned and operated by the insurance industry. It is funded by a mix of compulsory levies on all residential-property insurers and reinsurance premiums on flood-prone homes that are reinsured with the scheme.

To manage any adverse incentives Flood Re might create, it is only available to homes built before 1 January 2009; new homes face full-market risk pricing, which discourages building in high flood-risk locations. In addition, Flood Re is planned to end by 2039. This is because the scheme is intended to manage the transition to market prices and the end date preserves the incentive for risk reduction. By 2039, a greater proportion of homes will be in lower flood-risk areas, which will reduce the shock when transitioning back to market prices.

Alongside Flood Re, the UK Government has committed to major investment in flood risk reduction. It is intended that flood risk will be largely addressed by the time Flood Re ends in 2039, which will also help with a smooth transition back to market-based insurance premiums that take account of risk level.

The UK is considering making changes to the scheme to improve the incentives for adaptation. Some possible changes are to introduce premium discounts for properties that have taken resilience measures and provide additional payments that support claimants to rebuild more resiliently.

A five-year review of Flood Re found that 80 per cent of homes with previous flood claims had their insurance price reduced by more than 50 per cent. A 2018 UK government survey found that people living in areas of high flood risk considered household insurance to be more affordable and readily available than it had been in 2015.

Actions across other outcome areas also contribute to a resilient economy and financial system

Given the cascading nature of climate risk, and the extent to which Aotearoa New Zealand's economy is interconnected with all the other outcome areas in this plan, a significant number of actions from the previous sections will also contribute to a high-wage and low-emissions economy, which adapts and builds resilience to a changing climate. The following are some notable examples.

- **Natural environment: Implement the Department of Conservation Climate Change Adaptation Action Plan:** This plan includes actions for heritage, recreation and infrastructure of public conservation land and water. The actions help to reduce risks from weather events to tourism activities and protect the quality of heritage and environmental sites, which are important for our tourism industry.
- **Natural environment: Implement the Water Availability and Security work programme:** As climate change is making the availability of freshwater more variable across the country, this is of key concern to the primary sector. This programme will help maintain the health of waterways, taking its lead from the National Policy Statement on Freshwater Management.¹³ It will help farmers adapt through making technological efficiencies and mapping areas suitable for water-intensive crops. This action will help avoid disruptions to business activity and land use, and potential flow-on impacts to sectors, regions and the economy as a whole.
- **Natural environment: Provide a forestry planning and advisory service:** This service will promote better land use, tree selection, resilience and suitability for the landscape. It will support the primary industry to identify climate risks and take action.
- **System-wide: Deliver the Future Pathways work programme:** This will position our research, science and innovation system for the future. It includes focusing resources on national goals (such as climate change) and exploring how research can best honour Te Tiriti obligations and promote mātauranga Māori.

A future-fit research, science and innovation system that is connected, resilient and adaptable can more effectively respond to the needs of businesses and sectors, and support the development of the right tools, information and innovative capacity to address climate risks.

Economy and financial system questions

38. Do you agree with the outcome and objectives in this chapter?

- Yes
- No
- Partially

Please explain your answer.

¹³ Ministry for the Environment. 2020. *National policy statement for freshwater management*. Wellington: Ministry for the Environment.

39. What else should central government do to realise a productive, sustainable and inclusive economy that adapts and builds resilience to a changing climate?

40. Do you agree with the actions set out in this chapter?

- Yes
- No
- Partially

Please explain your answer.

41. Are there other actions central government should consider to:

a. support sectors, businesses and regional economies to identify climate risks and adapt?

- Yes
- No
- Unsure

Please explain your answer.

b. promote a resilient financial system in the face of climate change?

- Yes
- No
- Unsure

Please explain your answer.

42. What do you think are the most important actions that will come from outside of central government (eg, local government, the private sector or other asset owners, iwi, hāpu and/or other Māori groupings such as: business, forestry, fisheries, tourism, urban Māori, the private sector) to reduce the economic and financial risk they face from climate change?

43. Are there additional actions within the financial system that would help strengthen Māori climate resilience?

- Yes
- No
- Unsure

Please explain your answer.

44. In the context of other risk management options (eg, flood barriers, retreat from high-risk areas), what role should insurance have as a response to flood risk?
Please explain your answer.

45. Should the Government have a role in supporting flood insurance as climate change risks cause private insurance retreat?

- Yes
- No
- Unsure

Please explain your answer.

a. Does your answer to the above question depend on the circumstances? (For example, who the owner is (eg, low income), the nature and characteristics of the asset (eg, residential or commercial property, contents and vehicles), what other risk management options are available and their cost/benefit, and where the asset is located?) Please explain your answer.

46. If you think the Government should have a role in supporting flood insurance as climate change risks cause private insurance retreat, how do you envision the Government's role, and how is this best achieved (eg, direct support and/or indirect support such as reducing underlying flood risk)?

47. If the Government were to directly support flood insurance:

- a. what is the best way to provide this direct support?
- b. should the Government's focus be to support availability or affordability of insurance, or both?
- c. how should the costs of that support be funded, and by whom?
- d. what are the benefits and downsides of this approach?
- e. should this support be temporary or permanent?
- f. if temporary, what additional measures, if any, do you think would be needed to eventually withdraw this support (eg, undertaking wider flood protection work)?

- g. what would the risks or benefits be of also including non-residential property, such as commercial property?
 - h. what design features or complementary policies are needed so any flood insurance intervention retains incentives for sound flood-risk management (eg, discouraging development in high-risk locations)?
48. How effective do you think the insurance “price signal” (eg, higher premiums or loss of insurance) is for providing incentives to reduce flood risk?
49. In your view, should a scheme similar to Flood Re in New Zealand be used to address current and future access and affordability issues for flood insurance? Why or why not?
50. How do you think a scheme similar to Flood Re in New Zealand could support or hinder climate change adaptation initiatives in New Zealand?

Research strategy

Why we need to take action

Some actions in this plan depend on new or updated data or information. Others need additional knowledge before they can be implemented. Additional data may also be needed to inform the next National Climate Change Risk Assessment (NCCRA), which will be published in 2026. This research strategy describes the data, information and research needed to fill these knowledge gaps.

This research strategy along with the corresponding strategy in the emissions reduction plan will form the climate change component of the Environment and Climate Research Strategy. Together these strategies highlight the research needed to action and guide future funding decisions. This strategy also seeks to address the risks of adaptation being delayed and maladaptation occurring due to knowledge gaps.

Knowledge gaps

The first NCCRA (Ministry for the Environment, 2020) noted an under-investment in adaptation research and capacity. It also highlighted knowledge gaps that, if they remain unfilled, will reduce our ability to assess climate risk and take action to adapt. Areas in which we still need more knowledge and better access to knowledge include:

- a lack of coordinated and readily accessible biological inventories and data sets describing the distribution and status of ecosystems and species
- the relationship between social vulnerabilities, cultural heritage and climate change, and impacts on Māori social, cultural, spiritual and economic wellbeing
- how climate change will affect the banking and insurance sectors, and the flow-on effects on the financial system
- consistent hazard information for assessing the exposure of the built environment at a national scale
- the interdependencies and shared risks between infrastructure sectors
- a coordinated, comprehensive research platform to ensure research is available to inform effective adaptation
- the current and future barriers to adaptation
- the full range of opportunities, and better understanding of those already identified.
- mātauranga Māori, and Māori-centred and Māori-led research.

The Climate Change Adaptation Technical Working Group (2018) also highlighted a critical under-investment in research to support adaptation. Research gaps the Group identified include biophysical and ecological changes, biosecurity, changes in the hydrological cycle influencing fluvial and pluvial flooding, and the implications of climate change on human systems, such as the economy and health.

The Deep South National Science Challenge, in its research strategy (2019–2024), also highlighted the need for additional work on adaptation strategies to manage and reduce risk.¹⁴ It noted some specific gaps:

- climate change implications for drinking water supply and quality
- more detailed analysis of primary industry impacts and implications (including cumulative stressors, biosecurity and climate-related diseases)
- research into the socio-economic implications of flooding
- research into financial risks from climate change, and integration of projections into financial forecasts, including the costs of inaction.

Research themes

Across the actions in this plan, the following themes appear often about the gaps in the knowledge we need to respond to climate change and drive adaptation in Aotearoa New Zealand.

Hazard

Climate impacts and the subsequent hazards provide baseline information for understanding changing environmental conditions and extreme events. The data covers historical datasets, current measurements and projections. Longstanding effort in climate science research has produced a large amount of information, including projections and scenarios for climate impacts and hazards.

Although hazard is the best covered of the three risk components, information gaps remain, including updated projections, scaled to regions of interest. There are also gaps in the information about hazards resulting from climate impacts, for example:

- national flood mapping, sea-level rise zones and wildfire zones
- open access to data, models and scientific information, to suit different audiences – from the technical, scientific community to the general public
- data and information at scales suited to adaptation actions, implementation and solutions. For example, spatial data on flooding and sea-level rise are available at coarse scales suitable for national assessments, but not at finer scales for land-use planning and community engagement.

Exposure

How climate change affects society and the environment is often first understood in terms of who or what is exposed, for example, people, buildings, cultural assets and/or ecosystems. The hazard could be changing environmental conditions such as sea-level rise, or an extreme event such as flood or fire.

Common gaps include understanding exposure from a spatial perspective. This answers questions such as: where does a climate change impact/hazard intersect with a place, thing or person? They may also relate to time – when it will happen and how often – and magnitude – how big and how severe it will be.

¹⁴ Deep South National Science Challenge. 2019. Future Strategy for the Deep South National Science Challenge Phase 2 (2019–2024).

Exposure information requires more than just datasets. Case studies showing actual exposure and response to climate hazards help us understand the present and future. To reduce further vulnerability to the impacts of climate change, studies can also investigate:

- how exposure has changed through time
- how it may change in the future through current and proposed practices, planning and policies.

The status of exposure data and information is mixed. Second to hazard, this component of risk receives research attention and effort, but we need more comprehensive information, and access to it in usable forms. Spatial analysis of exposure to various hazards has been highlighted, at different scales for different subjects.

Vulnerability

Vulnerability comprises *sensitivity* and *adaptive capacity* to exposure to climate hazards. This component of risk is perhaps the most important, and the most challenging, to study and understand. Most of the plan's outcome areas identify knowledge gaps in how exposure to climate change impacts and hazards will play out. This includes people's adaptive capacity and the vulnerability of infrastructure, places and ecosystems to changing environmental conditions and extreme events.

Research deepens our understanding of the effects and implications of climate change. Studies will likely draw on both quantitative and qualitative methods, as well as various frameworks and knowledge systems, including mātauranga Māori.

Risk

Risk arises from the combination of hazard, exposure and vulnerability. Although each component is important, it is vital to understand how hazard, exposure and vulnerability come together to form risk. This will require research that synthesises data and findings from each component. The complete risk assessment will be greater than the sum of its parts. There may be quick wins, but this is likely to also require long-term work programmes.

Research on both the vulnerability component and risk syntheses will enhance adaptive capacity and consider climate change in decisions at all levels. It will provide information about sensitivity, adaptive capacity and risk. This can lead to appropriate responses.

Mātauranga Māori

Iwi/Māori share risks common to all New Zealanders, as well as facing their own unique ones. A Māori perspective will help drive how we understand adaptation and what it means for Māori. It can also advance adaptation and emissions reduction for New Zealand as a whole.

Lack of access to datasets is a key barrier to advancing climate research and action. For Māori and iwi groups, it is a barrier to adaptation action. There is also a need to translate scientific knowledge into meaningful information that the community can use. For Māori, bolstering their capacity and capability in the environmental field will strengthen their response to climate risks and vulnerabilities.

Other gaps include research on:

- socio-cultural and socio-economic links between climate change impacts, vulnerabilities and potential impacts for iwi/Māori

- indigenous flora and fauna unique to New Zealand
- the broader ecological system and Māori communities
- fisheries, forestry, health, housing, business and all other key areas across society.

These require more Māori-centred and Māori-led research, to design adaptation solutions.

Accessibility

Access to data, information and research findings is important for adaptation planning, response and action.

Exposure data are nationally significant, requiring open access to databases across scales, ideally with national coverage.

Other accessible information is needed through:

- open-access datasets
- a research platform, as the NCCRA notes
- research results. With visible results, we can build knowledge and act on it. This can include the climate impacts and adaptation research from the last two to three decades.

Research priorities

Across the research themes, the following are areas to prioritise to 2028.

- Collate and complete **priority data** (hazards, exposure).
- Provide **open access data**, accessible to a variety of audiences.
- Design, implement and share research platforms.
- **Transform data into knowledge about vulnerability:** Monitor and evaluate sensitivity and adaptive capacity. This addresses the call to understand vulnerability and, in some cases, generic use of the word 'risk'. Studies such as monitoring and scenario modelling are needed, including in the following specific areas.
 - **Ecosystems.** Monitoring ecosystems helps us understand their state and their changes through time. This makes it possible to understand vulnerability. Integrated monitoring and research highlights current ecosystem functioning as it alters in response to changing conditions and extreme events. It also facilitates invasive/biosecurity monitoring, which is another climate impact. At a higher level, a national monitoring system will help with environmental reporting and resource management.
 - **Community vulnerability** to changing conditions and extreme events. Studies of the events and their aftermath can include the response to and recovery from exposure to hazards, the immediate effects and long-term follow-up. This includes both sensitivity (how communities are affected) and adaptive capacity (how they respond) through the entire cycle. Frameworks include the National Emergency Management Agency's '4 Rs': reduction, readiness, response, recovery.
- Support **mātauranga Māori and kaupapa Māori research**. A number of proposed actions will progress the development of iwi/Māori climate data and information. These include actions that focus on mātauranga Māori environmental indicators, iwi/Māori socio-

economic risk and vulnerability assessment, mapping of taonga, and the extension of mapping the cultural footprint against high-impact weather.

- **Monitor and evaluate the effects** of policy and interventions. This includes ecological restoration, environmental design, effects of adaptation actions in communities, and the adaptive capacity of the built environment and infrastructure.

Implementation timeframes

Short term (2022–2025)

The first three years of this plan are key for both getting the data and information and starting long-term programmes. This will allow data and information to be made available to the second NCCRA, which will be published in 2026.

During this period, research priorities are to: consolidate existing data and make them open access; complete priority datasets; start national networks of long-term monitoring of natural environments; and start and complete vulnerability studies.

Existing and concurrent research should aim to produce and publish results in 2024–25.

National Science Challenges

The National Science Challenges conclude in 2024. The projects with climate adaptation research are: The Deep South, Resilience to Nature's Challenges, Our Land and Water, New Zealand's Biological Heritage, Sustainable Seas, and Building Better Homes, Towns and Cities.

The results will likely be ready in time to inform the second NCCRA and ongoing national adaptation plan work.

Medium term (2025–28)

The second national adaptation plan will be published at the end of this period. Research priorities include: completing nationally prioritised datasets; setting up the national ecological monitoring network; continuing and beginning research programmes; and publishing research results, especially vulnerability studies and risk syntheses.

Long term (2028 onward)

Research in all areas will build on what has been learned, and address what remains to be known, as knowledge about climate change grows. This requires commitment to long-term research, including national environmental monitoring and ecosystem studies.

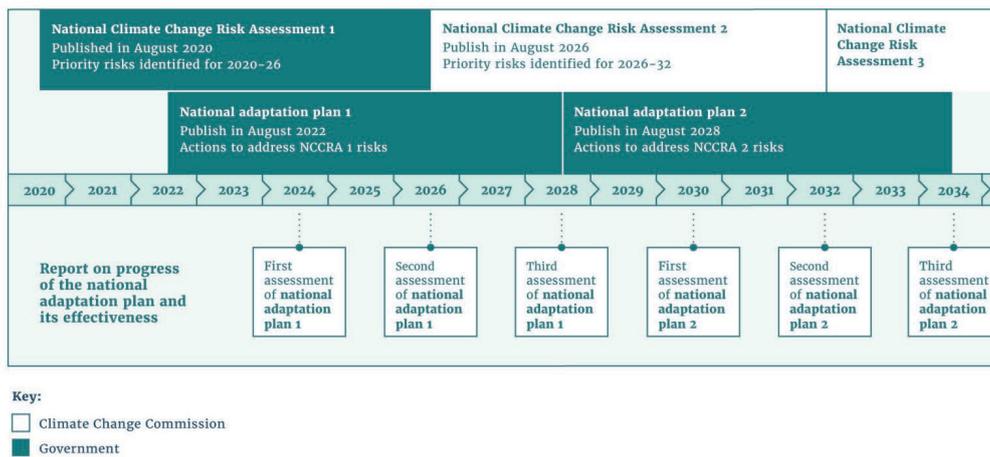
Other actions during this period include: regularly updating maps and information on hazards and exposure; collating research findings in vulnerability assessments and risk syntheses; and monitoring and evaluating restoration and adaptation.

Monitoring and reporting

Reporting on this plan

Every two years, He Pou a Rangi – Climate Change Commission will provide the Minister of Climate Change with a report on the implementation and effectiveness of the national adaptation plan (figure 8). The Minister must respond to the Commission’s reports within six months of receiving them. This provides an opportunity for the Government to adjust the actions and manage changing uncertainty and risk. It also has international commitments to report on New Zealand’s progress towards building resilience.

Figure 8: The monitoring, evaluating and reporting process for adaptation action



Governance and oversight

Successfully implementing the national adaptation plan will require action across government. Strong governance and accountability mechanisms are needed to make continuous progress. An Interdepartmental Executive Board is being established to oversee the emissions reduction plan and national adaptation plan. The Board will monitor and report on overall progress. The Climate Change Response Ministers Group will oversee the plan and drive progress.

Measures and indicators for assessing progress

Each critical and supporting action in this national adaptation plan includes a progress indicator. This defines the progress expected by 2024. Additional indicators to 2028 will be included in the final national adaptation plan.

To help the Commission to fulfil its function of assessing the effectiveness of this plan in reducing risk, the Ministry for the Environment will regularly assess the adaptation preparedness of certain organisations. These organisations include policy development and service delivery agencies. The results from the first survey undertaken in 2020 set a baseline against which the effectiveness of future actions can be assessed.

Closing general question

51. Do you have any other thoughts about the draft national adaptation plan that you would like to share?

Appendix 1: Glossary

Glossary of terms

Key term	Definition
Adaptation	In human systems, the process of adjusting to actual or expected climate and its effects, in order to moderate harm or take advantage of beneficial opportunities. In natural systems, the process of adjusting to actual climate and its effects. Human intervention may help these systems to adjust to expected climate and its effects.
Adaptation options	The wide range of strategies and measures that are available and appropriate for addressing adaptation. They can take the form of structural, institutional, ecological or behavioural actions.
Adaptive capacity	The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences.
Asset	Something of value, which may be exposed or vulnerable to a hazard or risk. It may be something physical, environmental, cultural or financial/economic, and its value may be tangible, intrinsic or spiritual (see Taonga).
Baseline	An initial set of critical observations or data used for comparison or a control.
Biodiversity	The variability among all living organisms on Earth. It includes diversity within species, diversity between species and diversity of an ecosystem. The living organisms may be from any sources, such as terrestrial, marine and other aquatic ecosystems and the ecological complexes they belong to.
Capacity building	The practice of supporting an individual, community, society or organisation to respond to change by enhancing their strengths and attributes, and improving the resources available to them.
Cascading impacts	A series of events where an initial impact produces further impacts that are significantly larger than the first one. In relation to extreme weather events, an extreme hazard causes a sequence of secondary events in natural and human systems that result in major physical, natural, social and/or economic disruption. Cascading impacts are complex and multidimensional, and are associated more with the extent to which the natural and human systems are vulnerable than with the size of the original hazard.
Climate	Informally, the average weather over a period ranging from months to thousands or millions of years. In more formal terms, a statistical description of the mean and variability of quantities, usually of surface variables such as temperature, precipitation and wind, averaged over a period (typically 30 years, as defined by the World Meteorological Organization). More broadly, climate is the state, including a statistical description, of the climate system.
Climate change	A change in the state of the climate that can be identified (eg, by using statistical tests) by changes or trends in the mean and/or the variability of its properties, and that persists for an extended period, typically decades to centuries. Includes natural internal climate processes and external climate forcings such as variations in solar cycles, volcanic eruptions and persistent

Key term	Definition
	anthropogenic changes in the composition of the atmosphere or in land use (IPCC, 2014a). The United Nations Framework Convention on Climate Change (UNFCCC) definition of climate change specifically links it to direct or indirect human causes, as: ‘a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods’. The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes.
Climate resilience	The ability to anticipate, prepare for and respond to the impacts of a changing climate, including the impacts that we can anticipate and the impacts of extreme events. It involves planning now for sea-level rise and more frequent flooding. It is also about being ready to respond to extreme events like forest fires or extreme floods, and to trends in precipitation and temperature that emerge over time like droughts.
Co-benefit	A positive effect that a policy or measure aimed at one objective has on another objective, thereby increasing the total benefit to society or the environment.
Coastal	Describes either the land near to the sea (eg, ‘coastal communities’) or the part of the marine environment that is strongly influenced by land-based processes (eg, ‘coastal seas’, meaning the part of the sea that is generally shallow and near-shore). The landward and seaward limits of the coastal zone are not consistently defined, neither scientifically nor legally. Thus, coastal waters can either be considered as equivalent to territorial waters (extending 12 nautical miles / 22.2 km from mean low water), or to the full Exclusive Economic Zone, or to shelf seas, with less than 200 m water depth.
Coastal erosion	Coastal erosion, sometimes referred to as shoreline retreat, occurs when a net loss of sediment or bedrock from the shoreline results in landward movement of the high-tide mark. The process when the high-tide mark moves closer towards the land due to a net loss of sediment or bedrock from the shoreline. Also known as shoreline retreat.
Consequence	The outcome of an event that may result from a hazard. It can be expressed quantitatively (eg, units of damage or loss, disruption period, monetary value of impacts or environmental effect), by category (eg, high, medium, low level of impact) or qualitatively (a description of the impacts). Alternatively, the outcome of an event that affects objectives.
(the) Crown	Generally, executive government conducted by Ministers and their departments. The Crown does not normally include organisations with their own corporate identities, such as state-owned enterprises.
Cultural asset	Material artefacts, non-material items and natural places that have cultural value.
Cultural heritage	Cultural heritage means those aspects of the environment that contribute to an understanding and appreciation of New Zealand’s history and cultures. It includes historic sites, structures, places, and areas, archaeological sites, sites of significance to Māori, including wāhi tapu, and cultural landscapes.
Disaster	A serious disruption of the functioning of a community or a society at any scale that occurs because hazardous events interact with conditions of exposure, vulnerability and capacity, leading to human, material, economic and/or environmental losses and impacts.

Key term	Definition
Disaster risk management	Processes for designing, implementing and evaluating strategies, policies and measures to improve understanding of current and future disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, prevention and protection, response and recovery practices. The aim is to increase human security, wellbeing, quality of life, and sustainable development.
Displacement	The involuntary movement, individually or collectively, of people from their country or community, notably for reasons of armed conflict, civil unrest, or natural or man-made disasters. In the context of this plan, displacement primarily refers to the involuntary movement of individuals or communities in response to climate change impacts.
Distributional impact	The effects of environmental policies (for example, higher transport or energy costs) across households, iwi/Māori, businesses, communities and regions. Some groups may pay more, or receive fewer benefits from the policies
Drought	An exceptionally long period of water shortage for existing ecosystems and the human population (due to low rainfall, high temperature and/or wind).
Dry year	An extended period when the energy supply in Aotearoa relies more on natural gas and coal because hydro-electric generation is reduced. This occurs because hydro lakes only hold enough water for a few weeks of winter energy demand if inflows (rain and snow melt) are very low.
Dynamic adaptive pathways planning	A framework that supports climate adaptation decision making by developing a series of actions over time (pathways). It is based on the idea of making decisions as conditions change, before severe damage occurs, and as existing policies and decisions prove no longer fit for purpose.
Ecosystem	A functional unit consisting of living organisms, their non-living environment and the interactions within and between them. The purpose of the ecosystem defines what components belong to it and where its spatial boundaries lie. Ecosystem boundaries can change over time. Ecosystems are nested within other ecosystems and their scale can range from very small to the entire biosphere. In the current era, most ecosystems either contain people as key organisms or are influenced by the effects of human activities in their environment.
Ecosystem health	A metaphor that describes the condition of an ecosystem, by analogy with human health. The health status of an ecosystem is based not on a standard measurement but on a judgement of its resilience to change, which varies depending on which measures are used and which social aspirations are behind the assessment.
Ecological corridor	An area of habitat connecting wildlife populations that have been separated by human activities or structures.
Ecological integrity	The ability of an ecological system to support and maintain a community of organisms where the composition, diversity and functional organisation of its species is comparable to those of natural habitats within a region.
Emergency management	The process of applying knowledge, measures and practices that are necessary or desirable for the safety of the public or property, and are designed to guard against, prevent, reduce, recover from or overcome any hazard, harm or loss associated with any emergency. Activities include planning, organising, coordinating and implementing those measures, knowledge and practices.

Key term	Definition
Emissions	In the context of climate change, emissions of greenhouse gases, precursors of greenhouse gases and aerosols caused by human activities. These activities include the burning of fossil fuels, deforestation, land use and land-use changes, livestock production, fertilisation, waste management and industrial processes.
Erosion	The process in which actions of water, wind or ice wear away land.
Equity	The principle of being fair and impartial, often also aligned with ideas of equality and justice. It provides a basis for understanding how the impacts of and responses to climate change, including costs and benefits, are distributed in and by society in more or less equal ways. The principle can be applied in understanding who is responsible for climate impacts and policies, how those impacts and policies are distributed across society, generations and gender, and who participates and controls the processes of decision making.
Exposure	Being present in a place or setting that could be adversely affected. Those that could be harmed in that environment include people; livelihoods; species or ecosystems; environmental functions, services and resources; infrastructure; or economic, social or cultural assets.
Extreme weather event	<p>An event that is rare at a particular place and time of year. What is 'extreme weather' may vary from place to place in an absolute sense. The measure of what is 'rare' may also vary but it involves the occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. In general, an extreme weather event would be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations.</p> <p>When a pattern of extreme weather persists for some time, such as a season, it may be classified as an extreme climate event, especially if it yields an average or total that is itself extreme (eg, high temperature, drought or heavy rainfall over a season).</p>
Flood	An event where the normal boundaries of a stream or other water body overflow, or water builds up over areas that are not normally underwater. Floods can be caused by unusually heavy rain, for example during storms and cyclones. Floods include river (fluvial) floods, flash floods, urban floods, rain (pluvial) floods, sewer floods, coastal floods and glacial lake outburst floods.
Fiscal impacts	The fiscal impact of a policy or event refers to the implications it has for government expenditure or revenue.
Food security	A situation where all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. The four pillars of food security are availability, access, utilisation and stability. The nutritional dimension is integral to the concept of food security.
Frequency (of a hazard)	The number or rate of occurrences of hazards, usually over a particular period.
Governance	<p>The governing architecture and processes of interaction and decision making that exist in and between governments, economic and social institutions.</p> <p>Governance permeates all aspects of New Zealand, from Te Tiriti partnership between Māori and the Crown to the relationship between local government and communities, and from the economy to the built environment to natural ecosystems.</p>

Key term	Definition
Greenhouse gas (GHG)	<p>Gas in the atmosphere, which may have natural or human causes, that absorbs and emits radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's ocean and land surface, by the atmosphere itself and by clouds. This property causes the greenhouse effect.</p> <p>The main greenhouse gases in Earth's atmosphere are water vapour, carbon dioxide, nitrous oxide, methane and ozone. Human-made GHGs include sulphur hexafluoride, hydrofluorocarbons, chlorofluorocarbons and perfluorocarbons.</p>
Gross domestic product (GDP)	<p>The sum of the gross value that all resident and non-resident producers in the economy added, at purchasers' prices, to a country or region plus any taxes and minus any subsidies not included in the value of the products in a country or a geographic region for a given period, normally one year. GDP is calculated without deducting for depreciation of fabricated assets or depletion and degradation of natural resources.</p>
Hazard	<p>The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources.</p>
Heatwave	<p>A period of abnormally hot weather often defined with reference to a relative temperature threshold, lasting from two days to months.</p>
Inter-governmental Panel on Climate Change (IPCC)	<p>The United Nations body for assessing the science related to climate change. The IPCC is organised into three working groups and a task force:</p> <ul style="list-style-type: none"> • Working Group I (WGI) – physical science basis • Working Group II (WGII) – impacts, adaptation and vulnerability • Working Group III (WGIII) – mitigation • Task Force on national greenhouse gas inventories.
Impacts	<p>The consequences of realised risks on natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather events), exposure and vulnerability. They are generally effects on human lives, livelihoods, health and wellbeing; ecosystems and species; economic, social and cultural assets; services (including ecosystem services); and infrastructure. They can be harmful or beneficial. Also known as consequences or outcomes.</p>
Indigenous knowledge	<p>The understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings. For many indigenous peoples, indigenous knowledge informs decision making about fundamental aspects of life, from day-to-day activities to longer-term actions. This knowledge is integral to cultural complexes, which also include language, systems of classification, resource use practices, social interactions, values, ritual and spirituality. These distinctive ways of knowing are important facets of the world's cultural diversity.</p>
Infrastructure	<p>The designed and built set of physical systems, along with their institutional arrangements, that interact with the broader environment to provide services to people and communities that support economic growth, health, quality of life and safety.</p>
Insurance/reinsurance	<p>A group of financial instruments for sharing and transferring risk among a pool of at-risk households, businesses and/or governments.</p>

Key term	Definition
Land use	All of the arrangements, activities and inputs (a set of human actions) that people undertake in a certain type of land cover (eg, forest land, cropland, grassland, wetland or settlements). Alternatively, the social and economic purposes for which land is managed (eg, grazing, timber extraction, conservation and city dwelling).
Maladaptation	Actions that may lead to increased risk of adverse climate-related outcomes, including increased greenhouse gas emissions, increased vulnerability to climate change or reduced welfare, now or in the future. Maladaptation is usually an unintended consequence.
Managed retreat	The purposeful, coordinated movement of people and assets (eg, buildings, infrastructure) away from risks. This may involve the movement of a person, infrastructure (eg, building or road), or community. It can occur in response to a variety of hazards such as flood, wildfire, or drought.
Māori values and principles	Values and principles that come from Māori views of the world and that Māori use to make sense of, experience and interpret the world. They form the basis for Māori ethics and principles.
Mitigation	In the context of climate change, a human intervention to reduce the sources or enhance the sinks of greenhouse gases.
Nature-based solutions	Solutions that are inspired and supported by nature and are cost-effective, and at the same time provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features (ie, vegetation and water features) and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. For example, using vegetation (eg, street trees or green roofs) or water elements (eg, rivers or water treatment facilities) can help reducing heat in urban areas or support stormwater and flood management.
Pathway	The evolution of natural and/or human systems over time towards a future state. Pathway concepts range from sets of quantitative and qualitative scenarios or narratives of potential futures to solution-oriented decision-making processes to achieve desirable social goals. Pathway approaches typically focus on biophysical, techno-economic and/or socio-behavioural changes and involve various dynamics, goals and actors across different scales.
Place/Places	Urban or rural areas, ranging from neighbourhoods to towns and regions. Adaptation must address both the physical elements of a place (eg, homes, buildings, infrastructure and spaces around them) and the social elements (eg, the identity of people and communities, cultural value).
Ocean acidification	A reduction in the pH of the ocean, accompanied by other chemical changes (primarily in the levels of carbonate and bicarbonate ions), over an extended period, typically decades or longer, which is caused primarily by uptake of carbon dioxide (CO ₂) from the atmosphere, but can also be caused by other chemical additions or subtractions from the ocean. Anthropogenic Ocean Acidification refers to the component of pH reduction that is caused by human activity (IPCC, 2011, p. 37). A process in which the pH of the ocean reduces (becomes more acidic) and other chemical changes occur (mainly in the levels of carbonate and bicarbonate ions) over several decades or longer. The main cause is uptake of carbon dioxide from the atmosphere, but other chemical additions or subtractions from the ocean can contribute.

Key term	Definition
	Anthropogenic ocean acidification is the component of pH reduction that is caused by human activity.
Oranga Marae	<p>Oranga Marae is a programme of support, advice and investment for marae. It gives whānau and hapū advice and support to help develop their marae and achieve their goals. This support may include building projects and activities to revitalise cultural knowledge. A key goal of the programme is to strengthen the ability of marae to pass on their ancestral knowledge of whaikōrero, karanga and local mātauranga, tikanga and kawa to descendants. A programme of support, advice and investment for marae. It gives whānau and hapū advice and support to help develop their marae and achieve their goals. This support may include building projects and activities to revitalise cultural knowledge.</p> <p>A key goal of the programme is to strengthen the ability of marae to pass on their ancestral knowledge of whaikōrero, karanga and local mātauranga, tikanga and kawa to descendants.</p>
Regenerative agriculture	An approach to land management that recognises how all aspects of agriculture are connected through a network. This differs from a linear view of agriculture as a supply chain. The principles behind regenerative agriculture are meant to restore soil and ecosystem healthy, address inequality and leave our land, waters and climate in better shape for future generations.
Resilience/resilient	The capacity of interconnected social, economic and ecological systems to cope with a hazardous event, trend or disturbance, by responding or reorganising in ways that maintain their essential function, identity and structure. Resilience is a positive attribute when it allows systems to maintain their capacity to adapt, learn and/or transform.
Retrofitting	The process of adding new technology or features to older systems, especially industrial installations or buildings.
Risk	The potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change. Adverse consequences may affect human lives, livelihoods, health and wellbeing; economic, social and cultural assets and investments; infrastructure; services (including ecosystem services); and ecosystems and species.
Risk assessment	The scientific estimation of risks, which may be either quantitative or qualitative.
Risk management	The process of making plans, actions, strategies or policies to reduce the likelihood and/or scale of potential adverse consequences, based on assessed or perceived risks.
Sea-level rise	<p>Change to the height of sea level over time, which may occur globally or locally. Causes may be:</p> <ul style="list-style-type: none"> • a change in ocean volume as a result of a change in the mass of water in the ocean (eg, due to melt of glaciers and ice sheets) • changes in ocean volume as a result of changes in ocean water density (eg, expansion under warmer conditions) • changes in the shape of the ocean basins and changes in Earth's gravitational and rotational fields • local subsidence or uplift of the land.

Key term	Definition
Storm surge	The temporary increase, at a particular location, in the height of the sea due to extreme meteorological conditions (low atmospheric pressure and/or strong winds). It is the excess in height above the level expected from the tidal variation alone at that time and place.
Stressor	In the context of climate change, an event or trend, often not climate-related, that has an important effect on the system exposed and can increase vulnerability to climate-related risk.
Sustainable/ sustainability	Describes conditions where natural and human systems can persist. Ecosystems continuously function, biodiversity is high, natural resources are recycled and, in the human sector, people successfully apply justice and equity.
Three waters	Drinking water, wastewater and stormwater.
Tipping point	A critical threshold beyond which a system reorganises, often abruptly and/or irreversibly.
Uncertainty	A state of incomplete knowledge that can result from a lack of information or from disagreement about what is known or even knowable. It may occur for many reasons. For example, the data may be imprecise, definitions of concepts or terminology may be ambiguous, understanding of critical processes may be incomplete or projections of human behaviour are in doubt.
Urban heat islands	Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas.
Vulnerability/ vulnerable	Being predisposed or more likely to be adversely affected. Elements that contribute to this concept include sensitivity or susceptibility to harm and lack of capacity to cope and adapt.
Wellbeing	The health, happiness and prosperity of an individual or group. It can cover material wellbeing (eg, income and wealth, jobs and earnings, and housing), health (eg, health status and work-life balance), security (eg, personal security and environmental quality), social relations (eg, social connection, subjective wellbeing, cultural identity and education) and freedom of choice and action (eg, civic engagement and governance).
Whānau Ora	Whānau Ora puts whānau and families in control of the services they need to work together, build on their strengths and achieve their aspirations.
Wilding conifers	Introduced conifers that are spreading across the landscape through natural regeneration. Also known as wilding pines.
Zoonotic disease	A disease that can be naturally transferable from vertebrate animals to humans.

List of acronyms and abbreviations

Acronym	Full name
AHL	Animal Health Laboratory
ANZBS	Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy
CCAAP	Climate Change Adaptation Action Plan
CERF	Climate Emergency Response Fund
DIA	Department of Internal Affairs
DOC	Department of Conservation
EQC	Earthquake Commission
FMA	Financial Markets Authority
FNZ	Fisheries New Zealand
GDP	Gross domestic product
HNAP	Health National Adaptation Plan
HUD	Te Tūapapa Kura Kāinga - Ministry of Housing and Urban Development
IPCC	Inter-governmental Panel on Climate Change
IVL	International Visitor Conservation and Tourism Levy
LIM	Land Information Memorandum
MBIE	Ministry of Business, Innovation and Employment
MCH	Ministry for Culture and Heritage
MFAT	Ministry of Foreign Affairs and Trade
MfE	Ministry for the Environment
MOD	Ministry of Defence
MOE	Ministry of Education
MOH	Ministry of Health
MOT	Te Manatū Waka Ministry of Transport
MPI	Ministry for Primary Industries
MSD	Ministry of Social Development
NCCRA	National Climate Change Risk Assessment
NEMA	National Emergency Management Agency
NIWA	National Institute of Water and Atmospheric Research
NPS IB	National Policy Statement on Indigenous Biodiversity
RBNZ	Reserve Bank of New Zealand
PHEL	Plant Health Environment Laboratory
TPK	Te Puni Kōkiri – Ministry of Māori Development
UNFCCC	United Nations Framework Convention on Climate Change
XRB	External Relations Board

Te reo Māori glossary

Te reo Māori	English
Ara whakamua	The path forward.
Hapū	Kinship group, clan, subtribe.
Hapori	Community, section of a kinship group, family, society.
Iwi	Tribe, large group descended from a common ancestor.
Kaitiaki or kaitiakitanga	Guardian or guardianship, stewardship, for example, of natural resources.
Kaupapa Māori	Māori approach, topic, customary practice, institution, agenda, principles, ideology – a philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society.
Kāwanatanga	Government, dominion, rule, authority, governorship, province.
Kawa	Ceremony, protocol.
Mahinga kai	Places where traditional food and other natural resources are obtained.
Mana whenua	Power from/authority over land or territory.
Marae	Courtyard - the open area in front of the whareniui, where formal greetings and discussions take place. Often also used to include the complex of buildings around the marae.
Marau-ā-kura	Ministry of Education term referring to a living, breathing curriculum. Marau ā-kura reflects the expectations and aspirations of the whānau, hapū, and iwi.
Mātauranga (Māori)	Māori knowledge systems and worldviews, including traditional concepts.
Mātauranga-a-iwi	Knowledge with an iwi-specific base.
Mauri	Life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions - the essential quality and vitality of a being or entity. Also used for a physical object, individual, ecosystem or social group in which this essence is located.
Papatūānuku	Earth, Earth Mother and wife of Ranginui – all living things originate from them in Māori mythology.
Pou	Support, supporter, stalwart, mentor, symbol of support, metaphoric post – someone, a group, tribe, gathering or something that strongly supports a cause or is a territorial symbol, such as a mountain or landmark, representing that support.
Rangatiratanga	Chieftainship, right to exercise authority, chiefly authority, ownership, leadership of a social group
Rongoā crops	Medicinal plants.
Tangata whenua	The people of the land, local indigenous people. Māori are tangata whenua of the land in which they whakapapa back to.
Taonga/Taonga Māori	Treasure, anything prized – applied to anything considered to be of value, including socially or culturally valuable objects, resources, phenomena, ideas and techniques.
Te ao Māori	The Māori world.

Te reo Māori	English
Te Tiriti	The Treaty of Waitangi. Note: While these terms are used interchangeably, the national adaptation plan acknowledges that the English version and te reo Māori translation are separate documents and differ in a number of respects.
Tikanga	Custom, practice, correct protocol; the customary system of values and practices that have developed over time and are deeply embedded in the social context.
Tino rangatiratanga	Self-determination, sovereignty, autonomy, self-government, domination, rule, control, power.
Urupā	Burial ground.
Wāhi tapu	Sacred site – a place subject to long-term ritual restrictions on access or use, for example, a burial ground, a battle site or a place where tapu objects were placed.
Whānau	Family, extended family, family connection.
Whenua (Māori)	Māori land. There are three types of whenua Māori. Māori freehold land, Māori customary land, general land owned by Māori.

Appendix 2: Climate risks this first plan addresses

* The risk has disproportionate impacts on Māori.

† The risk is of particular significance to Māori.

10 most significant risks

Natural (N)	Human (H)	Economy (E)	Built (B)	Governance (G)
N1 Risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea level rise and extreme weather events.	H1 Risks to social cohesion and community wellbeing from displacement of individuals, families and communities due to climate change impacts. *	E1 Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	B1 Risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea level rise. *	G1 Risk of maladaptation across all domains due to the application of practices, processes and tools that do not account for uncertainty and change over long timeframes.
N2 Risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.	H2 Risks of exacerbating existing inequities and creating new and additional inequities due to differential distribution of climate change impacts. *	E2 Risks to the financial system from instability due to extreme weather events and ongoing, gradual changes.	B2 Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea level rise. *	G2 Risks that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for climate change adaptation.
N3 Risks to riverine ecosystems and species from alterations in the volume and variability of water flow, increased water temperatures, and more dynamic morphology (erosion and deposition) due to changes in rainfall and temperature.	H3 Risks to physical health from exposure to storm events, heatwaves, vector-borne and zoonotic diseases, water availability and resource quality and accessibility due to changes in temperature, rainfall and extreme weather events.	E3 Risks to land-based primary sector productivity and output due to changes in mean rainfall and temperature, seasonality, weather extremes and changes in the distribution of invasive species.	B3 Risks to landfills and contaminated sites due to extreme weather events and ongoing sea level rise.	G3 Risks to governments and businesses from climate change related litigation, due to inadequate or mistimed climate change adaptation.

Natural (N)	Human (H)	Economy (E)	Built (B)	Governance (G)
N4 Risks to wetland ecosystems and species, particularly in eastern and northern parts of New Zealand, from reduced moisture status due to reduced rainfall.	H4 Risks of conflict, disruption and loss of trust in government from changing patterns in the value of assets and competition for access to scarce resources primarily due to extreme weather events and ongoing sea level rise. ★	E4 Risks to tourism from changes to landscapes and ecosystems and impacts on lifeline infrastructure, due to extreme weather events and ongoing, gradual changes.	B4 Risk to wastewater and stormwater systems (and levels of service) due to extreme weather events and ongoing sea level rise. ★	G4 Risk of a breach of Treaty obligations from a failure to engage adequately with and protect current and future generations of Māori from the impacts of climate change. ★
N5 Risks to migratory and/or coastal and river-bed nesting birds due to reduced ocean productivity, ongoing sea level rise and altered river flows.	H5 Risks to Māori social, cultural, spiritual and economic wellbeing from loss and degradation of lands and waters, as well as cultural assets such as marae, due to ongoing sea level rise, changes in rainfall and drought. ★	E5 Risks to fisheries from changes in the characteristics, productivity, and spatial distribution of fish stocks due to changes in ocean temperature and acidification.	B5 Risks to ports and associated infrastructure due to extreme weather events and ongoing sea level rise.	G5 Risks of delayed adaptation and maladaptation due to knowledge gaps resulting from under-investment in climate adaptation research and capacity building.
N6 Risks to lake ecosystems due to changes in temperature, lake water residence time, and thermal stratification and mixing.	H6 Risks to Māori social, cultural, spiritual and economic wellbeing from loss of species and biodiversity due to greater climate variability and ongoing sea level rise. ★	E6 Risks to the insurability of assets due to ongoing sea level rise and extreme weather events.	B6 Risks to linear transport networks due to changes in temperature, extreme weather events and ongoing sea level rise. ★	G6 Risks to the ability of the emergency management system to respond to an increasing frequency and scale of compounding and cascading climate change impacts in New Zealand and the Pacific region. ★
N7 Risks to terrestrial, freshwater and marine ecosystems due to increased extreme weather events, drought, and fire weather.	H7 Risks to mental health, identity, autonomy and sense of belonging and wellbeing from trauma due to ongoing sea level rise, extreme weather events and drought. ★	E7 Risks to businesses and public organisations from supply chain and distribution network disruptions due to extreme weather events and ongoing, gradual changes.	B7 Risk to airports due to changes in temperature, wind, extreme weather events and ongoing sea level rise.	G7 Risk that effective climate change adaptation policy will not be implemented and sustained due to a failure to secure sufficient parliamentary agreement.

Natural (N)	Human (H)	Economy (E)	Built (B)	Governance (G)
N8 Risks to oceanic ecosystem productivity and functioning due to changes in sea surface temperature, ocean mixing, nutrient availability, chemical composition and vertical particle flux.	H8 Risks to Māori and European cultural heritage sites due to ongoing sea level rise, extreme weather events and increasing fire weather. ✦		B8 Risks to electricity infrastructure due to changes in temperature, rainfall, snow, extreme weather events, wind and increased fire weather.	G8 Risk to the ability of democratic institutions to follow due democratic decision-making processes under pressure from an increasing frequency and scale of compounding and cascading climate change impacts. ✦
N9 Risks to sub-alpine ecosystems due to changes in temperature and a reduction in snow cover.			B9 Risks to telecommunications infrastructure (risk in addition to those identified in the National Climate Change Risk Assessment)	
N10 Risks to carbonate-based, hard-shelled species from ocean acidification due to increased atmospheric concentrations of CO ₂ .				
N11 Risks to the long-term composition and stability of indigenous forest ecosystems due to changes in temperature, rainfall, wind and drought.				

Source: National Climate Change Risk Assessment

Appendix 3: Action details

Status:

c: current; for example, has funding, mandate and scope is clear

p: proposed; for example, not yet funded, scope not yet agreed or decisions not yet made

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
SW1	Reform the resource management system	MfE	Environment	G1, G2, G3, G4, G8, B3, E1, E6, N1, N2, N3, N7	c	Year 1 (2022/23)	In 2023 we expect the National and Built Environments Act and the Strategic Planning Act to be passed.
SW1	Pass legislation to support managed retreat	MfE	Climate Change	E1, E6, G1, G2, G8, B3	c	Years 1 – 3 (2022–25)	The Government is expecting to introduce the Climate Adaptation Bill by the end of 2023, setting out the managed retreat framework.
SW1	Reform institutional arrangements for water services	DIA	Local Government		c	Years 1–2 (2022–24)	By July 2024, water services entities are established.
SW1	Modernise the emergency management system	NEMA	Emergency Management	G6	c	Years 1–6 (2022–28)	By August 2024, there will be adoption of new EM legislation and improved guidance provided across the emergency management system.
SW1	The future for Local Government Review	DIA	Local Government	E1, G2	c	Year 1 (2022/23)	In April 2023, the Local Government Review Panel will provide the Minister with recommendations for improving the local governance system. Following this, the Government will decide how to respond to the Review's recommendations.
SW1	Establish a foundation to work with Māori on climate actions	MfE	Climate Change	G4	c	Years 1–2 (2022–24)	TBC – to align with the emissions reduction plan

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
SW1	Set national direction on natural hazard risk management and climate adaptation through the National Planning Framework	MfE	Environment	TBC	c	Years 1–6 (2022–28)	Cabinet gives approval for national direction roadmap and implementation is underway.
SW1	Implement the National Disaster Resilience Strategy (NDRS)	NEMA	Emergency Management	G2, G6	c	Years 1–6 (2022–28)	Cabinet gives approval for NDRS Roadmap and implementation underway
SW1	Develop the emergency management workforce	NEMA	Emergency Management	G6	c	Years 1–6 (2022–28)	Implementation and integration of a professional training framework for disaster response and recovery at the national and regional level. This includes recognition of the contribution and development of the Māori emergency management workforce.
SW1	Establish central government oversight and coordination for implementing the national adaptation plan	MfE	Climate Change	E1, G2, G3, G7	c	Years 1–6 (2022–28)	Complete specific yearly reporting requirements by agencies.
SW2	Provide access to the latest climate projections data	MBIE	Building and Construction	G1, G3, G6	c	Years 1–2 (2022–24)	By June 2024, national climate projection datasets for New Zealand are made available and deliver a product that enables end-users to appropriately measure climate change risk.
SW2	Design and develop an Adaptation Information Portal	MfE	Climate Change	G1, G2, G3, G4, G5, G6	c	Years 1–6 (2022–28)	By the end of 2023, a design scope and delivery plan will be complete and user needs defined.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
SW3	Deliver a rolling programme of targeted guidance	MfE	Climate Change				
SW3	Promote the use of the New Zealand Climate Change Projections guidance	MfE	Climate Change	G1	c	Year 1 (2022/23)	Guidance completed by August 2022. By 2024, document has been or is soon to be taken out of commission due to work on latest IPCC projections.
SW3	Produce adaptation guidance for central government policy makers	MfE	Climate Change	G1, G3	c	Year 1 (2022/23)	The guidance will be published in 2022.
SW3	Produce guidance for dynamic adaptive pathways planning (DAPP)	MfE	Climate Change	G1, G2, G3	c	Years 1–2 (2022–24)	Publish a delivery plan for this guidance by September 2022.
SW3	Produce guidance on using different socio-economic scenarios for adaptation planning	MfE	Climate Change	G1, G3	c	Years 1–2 (2022–24)	Publish a delivery plan for this guidance by September 2022.
SW3	Regularly update adaptation guidance for local government	MfE	Climate Change	G1, G3, G8	c	Year 1 (2022/23) and year 3 (2024/25)	Publish a prioritised delivery plan by September 2022 setting out when each piece of guidance will be updated.
SW3	Produce guidance on integrating mātauranga Māori into adaptive planning and working with mana whenua	MfE	Climate Change	G4	p	Years 2–3 (2023–2025)	Publish a delivery plan for this guidance by January 2023.
SW3	Produce guidance for preparing adaptation plans	MfE	Climate Change	G1, G2, G3	p	Years 3–4 (2024–26)	Publish a delivery plan for this guidance by January 2024.
SW3	Regularly update the guide to local climate change risk assessments	MfE	Climate Change	G3	p	Year 5 (2026/27)	Confirm that this update is still on track to be carried out in the 2026/27 financial year.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
SW2	Complete the Data Investment Plan project	Stats NZ	Statistics	G1	c	Years 1–6 (2022–28)	Cabinet has endorsed the Data Investment Plan, which is a prioritised plan to guide investment in data over the next 10 years. Enhancing climate change data is one of the 30 prioritised investment opportunities identified in the plan. The provisional investment pipeline includes climate change in years 1–3.
SW2	Develop Future Pathways for the Research, Science and Innovation System programme	MBIE	Research, Science and Innovation	G2, G5	c	Years 1–6 (2022–28)	By mid 2024, Cabinet agrees direction of travel for Te Ara Paerangi – Future Pathways programme.
SW2	Complete case study to explore co-investment for flood protection	DIA	Local Government	E1, G2, G3, H1	c	Years 1–2 (2022–24)	June 2022, Ministers will receive a strategic business case from Buller District Council and West Coast Regional Council on a package of flood resilience options to reduce flood risk in Westport.
SW2	Improve how science, data and knowledge is used to inform emergency management	NEMA	Emergency Management	G1, G6	c	Years 1–6 (2022–28)	Science, data and knowledge of natural hazards, including extreme weather events, are increasingly shared across all parts of the emergency management system.
SW2	Develop 3D coastal mapping	LINZ	Land Information	G1	p	Years 1–2 (2022–24)	Business case for 3D mapping is developed by December 2022. Work is underway and at least 40% complete by March 2023.
SW2	Implement the programme: Climate Crisis - Defence Readiness and Response	MOD	Defence	G1, G6, H4	p	Years 1–6 (2022–28)	TBC

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
SW2	Produce new tools and guidance specific to mātauranga Māori and mātauranga indicators	MfE	Climate Change	G1, G4	p	Years 3–4 (2024–26)	Publish a delivery plan for this guidance by January 2024.
SW2	Produce guidance and tools for monitoring and evaluating the impact of adaptation initiatives	MfE	Climate Change	G1, G3, G7	p	Year 3 (2024/25)	Publish a delivery plan for this guidance by January 2024.
SW2	Produce an adaptation professional development programme for key practitioners	MfE	Climate Change	G1, G3	p	Years 4–5 (2025–27)	Confirm that this update is still on track to begin in the 2025/26 financial year.
SW2	Explore definitional tools to support greater investment	MfE	Climate Change	E1, E2, G1, G2, G5	p	Years 1–3 (2022–25)	International best practice will be explored in 2022, and a view towards determining applicability in New Zealand. Following on from this, there will be engagement with the private sector.
SW2	Explore additional interventions to mobilise investment	MfE	Climate Change	E1, E2	p	Years 3–5 (2024–27)	Not applicable – action to be delivered after August 2024.
SW3	Public investment in climate change initiatives	Treasury	Finance	E1	c	Years 1–6 (2022–28)	Update the criteria of the Climate Emergency Response Fund in 2022 to extend the scope to fund adaptation measures.
SW3	Ongoing regulatory stewardship	All	All	G2	c	Years 1–6 (2022–28)	Ongoing requirement.
NE1	Implement the DOC Climate Change Adaptation Action Plan (CCAAP)	DOC	Conservation	N1, N2, N3, N4, N5, N6, N7, N8, N9, N10, N11, N12, H5, H6, H8, E3, E4, G1, G2, G4	c	Years 1–4 (2022–25)	By 2024, a reporting framework on the implementation of the CCAAP will be in place. DOC adaptation work progress against the framework will be reported on.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
NE1	Implement the proposed National Policy Statement on Indigenous Biodiversity (NPS IB)	MfE/DOC	Environment, Conservation	G4	c	Years 1–6 (2022–28)	By August 2024, the National Policy Statement for Indigenous Biodiversity is ratified and implementation has begun.
NE1	Implement the Water Availability and Security programme	MPI (MfE support)	Agriculture	N7, N1, E5, N8, N10	c	Years 1–6 (2022–28)	By 2024, the Ministry for Primary Industries (MPI) will form a permanent team and commence addressing issues of water availability and security within our primary sectors and rural communities. This work will include partnering with Māori, communities and other impacted sectors to deliver multi-purpose, multi-benefit solutions.
NE2	Deliver a collection of actions run by Biodiversity New Zealand						
NE2	Pilot the on-farm biosecurity programme	MPI	Agriculture	N2, E3	c	Years 1–2 (2022–24)	<p>Implement the programme with a focus on four core behaviours to shift culture and attitudes towards biosecurity.</p> <p>Outcome measures (for two years) include measuring changes in the four core behaviours to track programme's impact against objectives.</p> <p>Monitoring uptake and effectiveness of programme content and activation to refine and scale those with most impact and recommend investment required for the programme over the longer term (5–10 years).</p>

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
NE2	Invest in strengthening border biosecurity	MPI, NZ Customs	Biosecurity	N2, E3	c	Years 1–6 (2022–28)	<p>Mail Pathways Project: 1 June 2023 – opening of the Auckland Processing Centre for Biosecurity Strengthening at NZ Post’s mail facility. The trials with a 3D real-time tomography (RTT) scanner at the current International Mail Centre are on track to start on 16 May 2022.</p> <ul style="list-style-type: none"> Sea Cargo Programme: The Border Clearance Services Assurance Framework Project will be added to the Sea Cargo Pathways Programme in April 2022. This project will establish key performance indicators to measure the effectiveness of biosecurity risk-management interventions, including a dashboard and headline measure. These indicators are expected to be in place early 2023. Rollout of the new performance-based verification system to Transitional Facilities has started and is expected to be completed by mid 2023. Fund 1 RTT 3D scanner and two other technology solutions (TBC), artificial intelligence algorithms, and advanced data systems to screen incoming mail and parcels for biosecurity risks.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
NE2	Continue the Freshwater Biosecurity Partnership Programme	MPI	Biosecurity	N7, N10	c	Years 1–6 (2022–28)	By 2024, development and implementation of an updated Freshwater Biosecurity Partnership Programme strategy will be completed, which includes more support for collaboration on developing new or improved detection and control tools.
NE2	Prevent the spread of wilding conifers, and contain or eradicate established areas of wilding conifers by 2030	MPI	Biosecurity	N2, E3	c	Years 1–6 (2022–28)	By the end of 2023/24, the programme will be protecting 4 million hectares of land that is significantly vulnerable to invasion by controlling wilding conifer infestations.
NE2	Continue the National Interest Pest Responses programme	MPI	Biosecurity	N2	c	Years 1–6 (2022–28)	A technical review of each of the National Interest Pest Responses species control programmes will be completed by 2024.
NE2	Invest in Plant Health and Environment Capability	MPI	Biosecurity	N2, N4, N11, H5,	c	Years 1–6 (2022–28)	Detailed Business Case is submitted to Cabinet approval in quarter four 2022.
NE2	Utilise the Animal Health Laboratory (AHL) and Plant Health Environment Laboratory (PHEL)	MPI	Biosecurity	N2, N4, N11, H5,	c	Years 1–2 (2022–24)	Enhance the diagnostic capabilities to manage new and suspected exotic pest and diseases through an operational research programme and collaboration with internal and international organisations. Retain technical expertise through MPI career progression opportunities.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
NE1	Reform the Environmental Reporting and Monitoring System to allow better measurement of environmental change	MfE	Environment	G1	c	Years 1–6 (2022–28)	By 2024, the Environmental Reporting Act 2015 will be amended and the changes implemented.
NE1	Deliver Jobs for Nature to restore indigenous ecosystems	MfE/DOC/ MPI	Environment/ Conservation	N2, N4, N11, H5, H6	c	Years 1–6 (2022–28, some projects ongoing)	The Jobs for Nature Programme is a \$1.219 billion cross-agency investment in nature-based employment. As at 31 December 2021, of the projects that have reported timeframes for their planned spend (which total approximately \$946 million in value), 92% (\$874 million) is forecast to be spent by the end June 2024.
NE1	Implement the National Policy Statement on Freshwater Management 2020 (NPSFM)	MfE	Environment	N3, N4, N5, N6, N7, G1, G2, G3	c	Years 1–6 (2022–28)	Regional councils will notify plans implementing the NPSFM by the end of 2024.
NE1	Implement the Revitalising the Gulf: Government action on the Sea Change Plan	DOC, FNZ	Conservation/ Oceans and Fisheries	N1, N2, N4, N5, N7, N11, N12	c	Years 1–2 (2022–24)	Revitalising the Gulf's package of integrated marine conservation and fisheries management actions is implemented to improve the health of the Hauraki Gulf Marine Park.
NE1	Implement the South-east Marine Protection Initiative	DOC	Conservation/ Oceans and Fisheries	N7, N1, E5, N8, N10	c	Years 1–2 (2022–24)	A marine protected area network is implemented in the south-eastern South Island coastal region and co-management arrangements are established across the Kāi Tahu rohe moana.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
NE1	Implement the Sustainable Land Management Hill Country Erosion Programme	MPI	Forestry	N7, H1, H3, H4, H5, E1, E3, B1,	c	Year 1 (2022/23)	The number of hectares treated through Hill Country Erosion Funding in 2021/22. Progress under the Hill Country Erosion Programme is measured by the number of hectares of erosion-prone land treated each year. The programme receives baseline funding but operates under four-year contracts with councils and contracts span 2019/20–2022/23. The targets for those four years are: 4,700 ha, 4,900 ha, 6,100 ha, 6,800 ha. Targets for the following four years can either be estimated when the budget is confirmed in May or confirmed when contracts are in place in late 2022.
NE1	Provide a forestry planning and advisory service	MPI	Forestry	G6, N3, N6	c	Years 1–6 (2022–28)	Planning and advice functions will be agreed by June 2023.
NE1	Prioritise nature-based solutions and implement Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020 (ANZBS)	DOC	Conservation	N1, N2, N3, N4, N5, N6, N7, N8, N9, N10, N11, N12, H5, H6	p	Years 1–6 (2022–28)	By 2024, a reporting framework on the implementation of Te Mana o te Taiao will be in place, to report on shared work programmes delivering on integrated across agencies and the wider sector.
NE1	Develop mātauranga Māori indicators of climate impacts on the natural environment	MfE	Environment	N11, E3	p	Years 1–2 (2022–24)	Mātauranga Māori indicators have been agreed.
NE3	Establish an integrated work programme to deliver climate, biodiversity and wider environmental outcomes	DOC/MfE	Conservation/ Environment	N1, N4, N11, B1	p	Years 1–4 (2022–26)	TBC

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
HBP1	Build property resilience	HUD, MBIE	Housing/Building and Construction	B2, H2, H3, G1	c	Years 1–4 (2022–26)	Initial research stages have been scoped and funded and are underway. By August 2024, sufficient data will be available to inform the development of an assessment framework in years 3–4 (2024–26) and inform regulatory updates.
HBP1	Establish an initiative for resilient public housing	Kāinga Ora	Housing	B2, H2, G5	c	Years 1–2 (2022–24)	By August 2024, we will have understood our material climate risks, developed a conceptual decision-making framework, and determined how the framework should be applied to investment decision making.
HBP1 and HBP2	Embed adaptation in funding models for housing and urban development, and Māori housing	HUD	Housing	B2, H5, H2, E1, E6	c	Years 1–2 (2022–24)	By August 2024, the Ministry of Housing and Urban Development (HUD) will review the funding programmes it administers and amend them to appropriately consider climate-related risks.
HBP3 and HBP4	Support kaitiaki communities to adapt and conserve taonga/cultural assets	MCH	Culture and Heritage	H5	c	Years 1–6 (2022–28)	Working with iwi/Māori and relevant agencies, completed a high-level understanding of existing activities/ support for planning and adapting and of potential gaps (2022–23). Begun working with relevant partners on how we might improve support and access to information on cultural assets to help kaitiaki to self-determine adaptation pathways (2023–24).
HBP1	Ensure minimum regulatory requirements for buildings take into account future climate data	MBIE	Building and Construction	B2	p	Years 3–6 (2024–28)	Not applicable – action to be delivered after August 2024.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
HBP1	Manage potential impacts of adaptation related to regulatory change	MBIE	Building and Construction	B2	p	Years 5–6 (2026–28)	Not applicable – action to be delivered after August 2024.
HBP1	Design methodology for risk assessments of public buildings	MBIE	Building and Construction	B2, G1, G5, E1, E6	p	Years 3–4 (2024–26)	Not applicable – action to be delivered after August 2024.
HBP1	Work with community housing providers to enable effective climate hazard response	HUD	Public Housing	B2, H5, H1, H2, G5, G1	p	Years 2–4 (2023–26)	Engagement with community housing provider is completed. Exposure of community housing to climate-related hazards is known; any gaps are identified. What community housing providers need to respond is well understood.
HBP2	Update housing and urban settings	HUD	Housing	B2, H1, H2, H3, G1	p	Years 5–6 (2026–28)	Not applicable – action to be delivered after August 2024.
HBP1	Integrate nature-based solutions into the urban environment	HUD	Housing		p	Years 1–2 (2022–24)	By 2024 the project has been scoped and funded and is underway. The literature review is complete and use of mātauranga Māori is well understood.
HBP3	Partner with iwi to facilitate through Iwi Management Plans	HUD	Housing	B2, H5, H8, G4, G1	p	Years 3–4 (2024–26)	Not applicable – action to be delivered after August 2024.
HBP3	Partner with Māori land owners to increase the resilience of Māori-owned land, homes and cultural sites	HUD	Māori Housing	B2, H5, H8, G4, G5	p	Years 3–4 (2024–26)	Not applicable – action to be delivered after August 2024.
HBP4	Research how cultural heritage contributes to community well-being and climate change adaptation	MCH	Culture and Heritage	H8	p	Years 1–4 (2022–26)	Initial 'literature review' on the current state of knowledge completed. Includes identification of key stakeholders and existing research programmes.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
							Gaps and potential partnerships identified and research strategy under development.
HBP4	Produce guidance for disaster risk management for cultural heritage	MCH	Culture and Heritage	H8	p	Years 2–5 (2023–27)	Current knowledge of disaster risk management in relation to cultural heritage captured and key stakeholders identified and engaged with.
HBP4	Develop a framework for assessing exposure and vulnerability of cultural assets/taonga to climate change	MCH	Culture and Heritage	H8	p	Years 1–3 (2022–25)	Relevant partners (including iwi/Māori and relevant agencies across national adaptation plan) identified. Research on how we identify taonga/cultural heritage at risk from climate change at national and local levels completed. With partners, draft framework developed for engagement with wider interest groups/stakeholders.
I1	Develop a methodology for assessing impacts on physical assets and the services they provide	Te Waihanga	Infrastructure	H1, H2, H3, E1, E6, E7, B1, B3, B4, B5, B6, B7, B8, B2, G6, G1, G3, G5, G8	c	Years 2–3 (2023–25)	In 2023, methodology will be complete.
I3	Scope a resilience standard or code for infrastructure	Te Waihanga	Infrastructure	H3, E1, E7, B1, B3, B4, B5, B6, B7, B8, B2, G2	c	Years 1–2 (2022–24)	By 2024, advice on the best way forward will be complete.
I1	Integrate adaptation into Treasury decisions on infrastructure	Treasury	Infrastructure	N1, N2, N3, N4, N6, H1, H2, H3, E1, E6, E7, E4, B1, B6, B2, G6, G1, G2, G3, G7, G8	c	Years 1–5 (2022–27)	By 2024, advice on the best way forward, and any associated budget bid or Cabinet decisions, will be complete.
I3	Develop and implement the Waka Kotahi Climate Change Adaptation Action Plan	Waka Kotahi	Transport	H1, H2, E1, E4, E6, E7, B5, B6, G1, G6	c	Years 1–6 (2022–28)	By 2024, an adaptation plan will be published and a reporting framework on the implementation of the adaptation plan developed.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
11	Manage dry-year risk through the New Zealand Battery Project	MBIE	Energy	N3, N4, N6, H2, H3, E1, E7, B1, B3, B4, B5, B6, B7, B8, B2, G1, G6	c	Years 1–6 (2022–28)	Next steps, including performance measures 2024, to be determined after the feasibility study is complete at the end of 2022.
11	Encourage and support the evaluation of climate-related risks to landfills and contaminated sites	MfE	Environment	B3	c	Years 1–2 (2022–24)	By August 2024, regional councils and unitary authorities, in collaboration with MfE, have undertaken the preliminary assessment of landfill and contaminated sites vulnerable to the effects of climate change in their regions.
11	Explore funding options to support the investigation and remediation of contaminated sites and landfills vulnerable to the effects of climate change	MfE	Environment	B3	c	Years 4–6 (2025–28)	By August 2024, regional councils and unitary authorities, in collaboration with MfE, have undertaken the preliminary assessment of landfill and contaminated sites vulnerable to the effects of climate change in their regions.
13	Integrate adaptation into Waka Kotahi decision making	MOT, Waka Kotahi	Transport	B6	c	Year 1 (2022/23)	Waka Kotahi will incorporate adaptation when it applies an intervention hierarchy to existing and new investments in the land transport system.
12	Progress the rail network investment programme	MOT, Waka Kotahi	Transport	H1, H2, E1, E4, E6, E7, B5, B6, G1, G6	c	Years 1–6 (2022–28)	In shifting to a resilient, reliable and safe network, the programme identified 21 targets to be met before August 2024 (and a further 6 to be met by June 2031), with ongoing reporting against these measures to be provided by KiwiRail.
13	Invest in public transport and active transport	MOT	Transport	H1, H2, H3, E4, E7, B6, G1	c	Years 1–6 (2022–28)	By 2024, Waka Kotahi will be reporting each year on the suite of outcome indicators that have been developed to demonstrate progress on the uptake

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
							and impact of walking, cycling and use of public transport; the Public Transport Operating Manual Review will be complete, and any reforms made and implemented through procurement of new contracts; rapid transit network plans for Auckland, Wellington and Christchurch will be complete; National Integrated Ticketing will be in place; and targets identified in regional mode shift plans for public transport will be met.
I2	Increase uptake of tools to invest in infrastructure in urban areas	HUD, Treasury, DIA	Infrastructure	E1, G2, G3, G5	c	Years 1–5 (2022–27)	Options to address barriers will be developed in the second half of 2022, and 2024 will see either implementation or further policy development.
I3	Support the integration of climate adaptation and mitigation in new and revised standards	Standards NZ	Infrastructure	B1, B3, B4, B5, B6, B7, B8, B2	c	Years 2–6 (2023–28)	Work will begin on relevant standards from 2023.
I2	Develop the National Energy Strategy	MBIE	Energy	H2, H3, E1, B1, B4, B5, B6, B7, B8, B2, G6, G1, G2, G3, G7, G8	p	Years 1–6 (2022–28)	To be determined as part of project planning, which will begin in late 2022.
C1	Raise awareness of climate-related hazards and how to prepare	NEMA	Emergency Management	G6	c	Years 1–6 (2022–28)	By the end of 2024 a public education strategy will be developed for natural hazards and increased availability of information on preparedness for extreme weather events.
C4	Develop the Health National Adaptation Plan (HNAP)	MOH	Health	G2, H3, H7	c	Year 1 (2022/23)	HNAP is expected to be completed by the end of 2022.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
							Regional climate health action plans will be developed from 2023.
C3	Develop the Climate Migration Action Plan	MFAT	Foreign Affairs	G6, H1, H5, H7, G1	c	Years 1–2 (2022–24)	Report to Cabinet completed in 2024.
C1	Building community resilience through social cohesion	MSD	Social Development and Employment	H1, H2	c	Years 2–5 (2023–27)	Policy decisions are received from Cabinet in May/June 2022 on the social cohesion work programme, including the strategic and measurements frameworks, and how to support communities and sectors.
C1	Strengthen teaching and learning related to climate change	MOE	Associate Education	H1, H2, H7, H4	c	Years 1–6 (2022–28)	Refreshed content in the national curriculum for schooling includes learning important for understanding and responding to climate change by end of 2024.
C1	Improve natural hazard information on Land Information Memoranda (LIM)	DIA	Local Government	G3, B2	c	Years 1–4 (2022–26)	Legislative changes will likely have been made to Local Government Official Information and Meetings Act 1987 to provide for improved natural hazard disclosure in LIMs by end of 2024.
C4	Continue with the reform of the health and disability system	MOH	Health	H3, H7	c	Years 1–3 (2022–25)	TBC
C2	Assess socioeconomic and climate vulnerability for Māori	TPK	Māori Development	H2	c	Year 1 (2022/23)	A scope for this work is underway and will be completed by June 2022. This will enable more specific indicators to be developed. Insights have been developed on intersecting Māori climate and socioeconomic vulnerability, and a plan is in place for these to be shared by the end of 2024.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
C2	Continue to overhaul the welfare system	MSD	Social Development and Employment	H1, H2, H3, H7	c	Years 1–6 (2022–28)	Reporting back to Cabinet completed, seeking decisions on policy changes related to ongoing implementation of welfare overhaul initiatives, including potential legislative changes by end of 2024.
C3	Connect communities to wider response and recovery support	NEMA	Emergency Management	G6	c	Years 1–6 (2022–28)	Adoption of new civil defence and emergency management legislation and improved guidance provided across the emergency management system. Implementation and integration of a professional training framework for disaster response and recovery at national and regional levels. This includes recognition of the contribution, and development, of the Māori emergency management workforce.
C1	Expand current funding for proactive community resilience	TPK	Māori Development	G4, H2, H3, H4, H7	p	Years 1–6 (2022–28)	Funding and delivery channels have already been developed for the MCCF and this fund ends in July 2022. Evaluations from the MCCF first phase will be completed in 2022. Next prototype developed focused on community resilience more generally (ie, able to respond to a range of adverse events) and funding is secured for this next phase by end of 2024.
C4	Assess healthcare service resilience	MOH	Health	H3, H7, E7, G5	p	Years 1–2 (2022–24)	Desktop national climate change risk assessment completed by May 2022. Guidance material provided for the sector and a set of recommendations produced for Health NZ.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
							Regional assessments to be completed as part of the next phase of health adaptation planning (starting from 2023).
EF1	Deliver the national Freight and Supply Chain strategy	MOT	Transport	E7	c	Years 1–6 (2022–28)	By the middle of 2023, the Government has launched the national Freight and Supply Chain strategy.
EF1	Deliver the fisheries system reform	MPI	Oceans and Fisheries	E5, H6	c	Years 2–5 (2023–26)	By 2024, the Government is releasing implementation plans for the Aquaculture Strategy each year, and is reporting each year on the environmental effects of aquaculture.
EF1	Deliver the Aquaculture Strategy	MPI	Oceans and Fisheries	E5, E7	c	Years 1–4 (2022–26)	By 2024, the Government releases implementation plans for the Aquaculture Strategy, and report annually on the environmental effects of aquaculture.
EF2	Support high-quality implementation of climate-related disclosures and explore expansion	MfE, MBIE	Climate Change; Commerce and Consumer Affairs, supported by the XRB and FMA	G2, G3, G8, E2	c	Years 1–6 (2022–28)	By 2024, the Government has decided whether to extend mandatory climate-related disclosure requirements to public entities.
EF2	RBNZ supports the stability of the financial system	RBNZ	Finance	E2	c	Years 1–2 (2022–24) and ongoing	By August 2024, the RBNZ will have climate change considerations increasingly integrated into its supervisory, stress testing and policy work.
EF2	Develop options for home flood insurance issues	Treasury	Earthquake Commission	E6	c	Years 1–3 (2022–25)	By the end of 2022, the Government has received advice on flood insurance options and agreed to next steps.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
EF2	Consider climate risk in economic and fiscal monitoring and forecasting	Treasury	Finance	E1	c	Years 1–6 (2022–28)	Four 6-monthly economic and financial updates published between August 2022 and August 2024.
EF1	Design and implement the Farm Monitoring Programme to determine farm performance	MPI	Agriculture	E3, E5, H6, G5	c	Years 1–2 (2022–24)	A published business case for climate change mitigation planning by December 2022 for plans suitable for farmers and catchment groups The number of farms actively involved in catchment groups for mapping of soils to guide farmers to develop integrated farm plans that protect and use their soils and supporting catchment groups to identify changes in land use.
EF1	Implement the Government response to the Prime Minister’s Chief Science Advisor’s report on commercial fishing	MPI	Oceans and Fisheries	G5, E5, G2, H6	c	Years 1–6 (2022–28)	Delivery of Government response (May–June 2022). Ongoing implementation of actions identified in the response.
EF1	Support the Aotearoa Circle Climate Change Adaptation Strategy for Seafood Sector	MPI	Oceans and Fisheries	E5, E6, G2, G5	c	Years 1–6 (2022–28)	Support implementation of actions for aquaculture and fisheries in the Aotearoa Circle Climate Change Adaptation Strategy for the Seafood Sector.
EF1	Deliver the Tourism Industry Transformation Plan (ITP)	MBIE	Tourism	E4, B6	c	Years 1–3 (2022–25)	Complete the environment pillar of the Tourism ITP, including a roadmap for the industry on climate adaptation, by quarter 4 2023.
EF1	Meeting the costs of a climate-resilient tourism sector	MBIE	Tourism	E4, B6	c	Years 1–2 (2022–24)	By August 2024, the settings for the International Visitor Conservation and Tourism Levy have been reviewed.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
EF1	Leverage government procurement for climate outcomes	MBIE	Economic and Regional Development	B2, B6	c	Year 1 (2022/23)	By August 2023, the current government procurement policy framework has been reviewed to ensure it enables mitigation and adaptation in government procurement.
EF2	Monitor residential insurance premiums	Treasury, EQC	Earthquake Commission	E6	c	Years 1–2 (2022–24)	By October 2022, the Treasury will have data to show insurance prices. These data will be updated regularly.
EF2	Improve consumer understanding of property insurance pricing and risks	Treasury	Finance	E6	c	Year 1 (2022/23)	By 2024, the information to improve consumer understanding of property insurance (in English) is already published.
EF1	Continue prioritising research and investment in climate-related science	MBIE	Research, Science and Innovation	H5, H6, E3, E4, E5,	c	Years 1–6 (2022–28)	Continue to align research priorities with climate-related science in line with Cabinet decisions about Te Ara Paerangi – Future Pathways programme.
EF1	Continue delivering the Sustainable Land Management and Climate Change (SLMACC) and the Greenhouse Gas Inventory research programmes	MPI	Agriculture	E3, E5	c	Years 1–6 (2022–28)	A suite of outputs from funded science projects, in the form of data, information, reports, decision support tools and official inventory to help the sectors adapt to climate change, measure emissions and mitigate land-use impacts on freshwater.
EF1	Continue delivering the Sustainable Food and Fibre Futures Fund	MPI	Agriculture	E3, E5	c	TBC	The annual number of, and corresponding MPI investment in, projects with clear direct or indirect implications for climate adaptation in the primary sector.

Objective	Title	Lead agency	Relevant portfolio	NCCRA risks addressed	Status	Timeframe	Implementation progress expected by August 2024
EF1	Support Māori small business resilience and transitions	TPK	Māori Development	E3, E4, E5, H2	p	Years 1–4 (2022–26)	By August 2024, resilience and transition supports for Māori small and medium enterprises are established and have been accessed by 1,000 Māori small and medium enterprises.
EF1	Deliver the Māori agribusiness extension	MPI	Agriculture	E3, H5, H6, G4	p	Years 1–6 (2022–28)	Terms of reference for the steering group to lead development of the tikanga-based programme are in place by November 2022. Two MABx panels will assess project proposals by June 2023 for the Māori advisors aspect.
EF1	Research business adaptation preparedness and provide guidance for small businesses to adapt	MBIE	Small Business	TBC	p	Years 1–6 (2022–28)	TBC
EF1	Establish innovation grants, such as project grants	MBIE	Research, Science and Innovation	G5	p	Years 1–6 (2022–28)	TBC
EF1	Promote more industry partnership networks	MBIE	Research, Science and Innovation	G5	p	Years 1–6 (2022–28)	TBC
EF1	Identify the impacts of climate change on regional economies	MBIE	Economic and Regional Development	G5, E3, H2, E4	p	Years 1–3 (2022–25)	By August 2024, the initial regional economic research on land-based primary sectors is 80% completed.

Appendix 4: Roles and responsibilities for adaptation

Central government	<ul style="list-style-type: none"> Partner with iwi/Māori Partner with local government Legislative and policy frameworks Funding and financing arrangements 	<ul style="list-style-type: none"> Increase public awareness of climate change and national risks Communicate information on roles and responsibilities 	<ul style="list-style-type: none"> Set priorities and coordinate research across government Fund research Develop and share locally relevant data and information on national risks Set methodologies or data quality standards Maintain database of information 	<ul style="list-style-type: none"> Develop tools, guidance and processes Provide expertise to assist decision making Provide training and support to local government 	<ul style="list-style-type: none"> Participate in regional planning Set nationally consistent risk tolerances, thresholds and trigger points 	<ul style="list-style-type: none"> Manage risks to public goods and assets Respond to national emergencies Provide physical and mental health services Provide natural disaster insurance 	<ul style="list-style-type: none"> Monitor implementation and effectiveness of national adaptation plan, policy and legislation
Local government	<ul style="list-style-type: none"> Partner with iwi/Māori Partner with central government Local and regional councils align and coordinate plans and strategies 	<ul style="list-style-type: none"> Increase public awareness of local and regional risks 	<ul style="list-style-type: none"> Share information on risks to homes and assets Fund local research Support inclusion of mātauranga Māori in local risk assessments 	<ul style="list-style-type: none"> Develop tools, guidance and processes Resource community to participate 	<ul style="list-style-type: none"> Develop regional and local plans for adaptation Plan and implement upgrades to assets and infrastructure 	<ul style="list-style-type: none"> Co-design adaptation solutions with iwi/Māori Manage risks to public goods and assets Lead discussions with communities Respond to local emergencies 	<ul style="list-style-type: none"> Monitor effectiveness of local plans, policies and actions

Iwi/Māori	Partner with central and local government	Increase awareness of risks with support of central and local government	Develop best practices that recognise data sovereignty Increase development of datasets with specific iwi/Māori focus Resource development of mātauranga Māori	Develop tools, guidance and processes	Support new resource management system	Co-design adaptation solutions with local government Provide physical and mental health services for iwi/Māori	Monitor effectiveness of iwi adaptation plans, policies and actions Monitor risks to iwi/Māori and effectiveness of government policies
Private sector		Share risk information within business and industry networks	Disclose risks to public and customers Insurance sector informs customers of developments in the market	Share tools and best practice within business and industry networks	Assess risks to vulnerable sectors and individual businesses	Manage risks Develop new technologies and business solutions Leverage opportunities of changing climate Provide finance	Monitor risks to vulnerable sectors and individual businesses
Academia		Share research and data to increase awareness	Develop data, projections, research and information Support mātauranga Māori research	Contribute to development of tools, guidance and processes	Plan to address relevant risks	Manage risks to private assets and incomes	Monitor policy effectiveness Provide critical assessment of action or inaction
Communities and individuals		Raise awareness of local risks within networks	Contribute information on specific risks		Plan to manage risks to private assets and incomes, purchase insurance	Manage risks to private assets and incomes Co-design local solutions with local government	
	Legislative and institutional arrangements	Raise public awareness	Develop and share data and information	Improve capacity	Plan	Take action	Monitor, report and evaluate

References

- BERL. 2021. *Te Ōhanga Māori 2018: The Māori Economy 2018*. BERL.
- Climate Change Adaptation Technical Working Group. 2017. *Adapting to Climate Change: Stocktake Report from the Climate Change Adaptation Technical Working Group*. Wellington: Climate Change Adaptation Technical Working Group.
- Deep South Challenge. 2021. *Growing Kai Under Increasing Dry: How does the primary sector in Aotearoa adapt to a changing climate with a changing drought profile?* Summary of joint National Science Challenge rolling symposium.
- Frame D, Rosier S, Carey-Smith T, Harrington L, Dean S, Noy I. 2018. *Estimating Financial Costs of Climate Change in New Zealand: An Estimate of Climate Change-Related Weather Event Costs*. New Zealand Climate Change Institute and NIWA. .
- Insurance Council of New Zealand. 2021. Record insurance support for communities – 2021 extreme weather claims exceed \$300 M. Retrieved from <https://www.icnz.org.nz/media-resources/media-releases/single/item/record-insurance-support-for-communities-2021-extreme-weather-claims-exceed-300-m> (4 April 2022).
- IPCC. 2014. *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.
- IPCC. 2018: Annex I: Glossary [Matthews, J.B.R (ed.)]. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*.
- IPCC. 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.
- Ministry for the Environment. 2020. *National Climate Change Risk Assessment for Aotearoa New Zealand: Main report – Arotakenga Tūraru mō te Huringa Āhuarangi o Āotearoa: Pūrongo whakatōpū*. Wellington: Ministry for the Environment.
- Ministry for the Environment. 2020a. *National Climate Change Risk Assessment Technical Report*. Wellington: Ministry for the Environment.
- Paulik R, Stephens S, Wadhwa S, Bell R, Popovich B, Robinson B. 2019. *Coastal Flooding Exposure Under Future Sea-level Rise for New Zealand*. Wellington: NIWA.
- Stats NZ. 2022. Business operations survey: 2021. Retrieved from <https://www.stats.govt.nz/information-releases/business-operations-survey-2021> (4 April 2022).
- The Treasury. 2021. *Te Tirohanga Mokopuna 2021: The Treasury's combined Statement on the Long-term Fiscal Position and Long-term Insights Briefing*. Wellington: The Treasury.

ANNUAL PLAN 2022/2023 DELIBERATIONS

To:	Performance, Policy and Partnerships Committee
Meeting Date:	Tuesday 24 May 2022
From:	Rhiannon Suter, Manager – Strategy and Policy
Approved:	Michael Day - Group Manager - Finance and Assurance
Approved Date:	Thursday 19 May 2022
Open Agenda:	Yes

Purpose and Summary

This report provides guidance to support Councillors in their deliberations on the 2022/2023 Annual Plan, including the decision on Te Unua – the Southland Museum and Art Gallery. A review is provided of forecast income and expenditure, the impact on Council's management of its finances, the issues raised during submissions and the levers Council has available to impact on the rates increase.

Recommendations

That the Performance, Policy and Partnerships Committee:

1. Receive the report "Annual Plan 2022/2023 Deliberations".
2. Note that communications of additional information for the public around Government rebate relief programme which will take place in May and June.
3. Note the enthusiasm of some submitters for Te Unua Option 2 and the sentiment to do it once and do it right.
4. Note the challenging environment for external funding which increases the risk of Council needing to provide additional funding for Option 2.
5. Note that it remains the advice of officers that the smaller new build (Option 3) represents the best investment option for the ratepayer, delivering on the vision and success factors for Te Unua, while significantly reducing Council's exposure to risk of increased capital costs and future operational costs.
6. Determine to include **Option 2/ Option 3** for Te Unua in the Annual Plan.
7. Note that the Bluff recreation precinct car park at Pearse Street is already included within the 2022/2023 draft Annual Plan budget in line with the request from the Southland Mountain Bike Club.
8. Request consideration of options for Esk Street West, including Wachner Place, as part of the next Annual Plan, noting that consideration is being given as part of master planning to how the central and western areas of the city will relate.
9. Note that if the developer of the new hotel on Esk Street West requires immediate functional changes to Wachner Place in order to operate, there is no Council budget allocated for this work and these would need to be at the developer's cost.
10. Note the impact of changes to the forecast capital and operational expenditure since consultation as a result of third quarter forecasting, identified errors in the model for

infrastructure revenue and expenditure and correcting the allocation of rates for City Streets Stage Two, resulting in a forecast rates increase of 7.15% rather than the 7.78% increase consulted on.

11. Note that the draft 2022/2023 Annual Plan meets Council's limits on rates rises and meets the rates affordability - income benchmark but does not meet the rates affordability - increase benchmark laid out in the Financial Strategy. The planned increase in rates revenue is 7.15% compared to the benchmark of 5.4% (Local government cost index supplied by BERL of 2.4% +3.0%) but below the maximum limit of 7.5%.
12. Note that the draft 2022/2023 Annual Plan meets the Essential services benchmark.
13. Note that the draft 2022/2023 Annual Plan meets the Council's Debt affordability and Debt servicing benchmarks.
14. Note due to changes in timing of receipt of Government subsidy for three waters that the 2022/2023 Annual Plan will be 98.3% of the balanced budget benchmark and that as a result, there will be an unbalanced budget.
15. Recommend to Council to adopt the Annual Plan, **incorporating/ not incorporating** the following further adjustments:
 - a. Reduction of the level of service within the Parks and Reserves activity to make a saving of \$100,000, noting the impact on reduced maintenance of plantings within the Roading reserve and on other maintenance, resulting in a forecast reduction in rates increase of 0.17%.
 - b. Reduction of the budget for city centre activation from \$250,000 to \$50,000, noting the timing of the openings impact of reduced activities within the city centre, resulting in a forecast reduction in rates increase of 0.33%.
 - c. Reduction of the staff budget of \$165,000, achieved through management of the recruitment of current vacancies within Infrastructure group, noting there are a number of positions which are hard to fill in this market and are unlikely to be filled within the first half of the 2022/2023 year. This is not expected to impact delivery but will impact planning into 2023/2024. It will result in a forecast reduction in rates increase of 0.28%.
 - d. Reduction of the Community Wellbeing Fund by \$50,000, resulting in a forecast reduction in rates increase of 0.08%.

Implications and Risks

Strategic Consistency

The proposed changes to the Annual Plan support the Council's vision "Our city with heart – He Ngākau Aroha". It maintains the focus on delivering key projects within the city centre while supporting four wellbeing outcomes for the community.

The Annual Plan is significant as outlined in the Significance and Engagement Policy. Consultation has been completed. It is important to note that significant changes to City Streets Stage two, as it was deliberated on ahead of the Annual Plan process, would require further consultation.

Any significant changes to fees and charges would also require further consultation.

Financial Implications

The financial implications for this Annual Plan are:

- An increase in the forecast rates increase from the 4% outlined in the LTP for 2022/2023 to 7.15% ahead of any further reductions made by Council.
- Capital expenditure is forecast to increase from \$45.4 million to \$74.2 million.
- Operational expenditure is forecast to increase from \$110.9 million to \$116.4 million.
- The rates affordability limits of 7.5% would be met with the forecast rates increase of 7.1%
- The rates affordability – income benchmark would be met which is at 58.2%, under the 60% benchmark.
- The rates affordability – Increase benchmark would not be met. The planned increase in rates revenue is 7.15% compared to the benchmark of 5.4% (Local government cost index supplied by BERL of 2.4% +3.0%).
- The debt affordability benchmark would be met, which is at 11.6%, below the 15% benchmark.
- The debt servicing benchmark would be met, which is at 2%, below the 10% benchmark.
- The essential services benchmark would be met, which is at 162.7%, above the required 100% benchmark.
- Due to changes in timing of receipt of Government subsidy for three waters the 2022/2023 Annual Plan will be 98.3% of the balanced budget benchmark and, as a result, there will be an unbalanced budget.

Consideration needs to be given in future years to how Council can increase revenue or reduce costs in order to cover operational expenses due its current reliance on subsidies for capital projects. The Council's financial strategy notes the importance of increasing fees and charges further as one mechanism to achieve this and this will be a continued focus in 2023/2024.

Legal Implications

This Annual Plan has been consulted on in line with Section 96 of the Local Government Act and meets the requirements laid out in Section 95 and Section 100 of the Act. Any changes to the City Streets Stage Two project would require further consultation with the community.

Risk

There are a number of risks which need to be managed in delivery of the Annual Plan.

Risk	Mitigation/ Management
Deliberations and budgeting are not concluded within good time to allow adoption of the Annual Plan and striking of the rates.	The timeline has been developed with additional time, including to manage delays caused by officers away due to Omicron. At this point there is no reason to think the Annual Plan will be adopted late.
The Annual Plan is not affordable to the community.	Council is operating within the rates affordability benchmark and options have been identified for Council to consider reducing rates further.
Council does not have the available finance to deliver the Annual Plan.	Council is operating within the debt affordability and servicing benchmarks. The adjustments made to Long-term plan budgets as part of this Annual plan do not cause Council to exceed the debt cap.
Council is not able to deliver the capital programme.	The delivery forecast for 2022/2023 has been reduced to 70% from 75% to reflect market conditions. Purchasing of materials and contracting for major projects including

Risk	Mitigation/ Management
	Branxholme mean there is good confidence that Council will manage delivery effectively to 70%.
Council is not able to operate a balanced budget.	A change in the receipt of subsidies for three waters work mean that this risk will be realised. However, this Annual Plan remains within the requirements laid out within Section 100 of the Local Government Act and Council's Revenue and Finance Policy. It has been taken into account in Council's net debt position and does not cause any risk to delivery of services.
Inflation and increased interest rates impact on Council's.	Within the volatile economic environment this remains a risk. Council has sought expert economic input from Infometrics and incorporated higher inflation assumptions for staff costs.

Background

2022/2023 is Year 2 of the 2021 - 2031 Long-term Plan.

Council consulted on the 2022/2023 Annual Plan between 24 March and 29 April.

In addition to general feedback on the Annual Plan, submitters were asked to feedback on the options for Te Unua Southland Museum and Art Gallery, the change of reserve status for Tisbury Reserve and 2022/2023 Fees and Charges.

The Performance, Policy and Partnerships Committee will receive a separate report on Fees and Charges and the Infrastructural Services Committee will receive a report on the consultation on Tisbury Reserve. The options for Te Unua are discussed below.

Overview of forecast financials and the forecast rates increase

In the Long-term Plan, the forecast rates increase was 4.00% and the forecast expenditure for 2022/2023 was:

- \$45.4 million capital expenditure
- \$110.9 million operational expenditure

There have been a number of changes since the Long-term plan which were outlined in more detail on p3 of the Consultation Document which is appended.

Changes from the LTP	2022/2023 Budget increase	Rates Increase
Changes to Our Roadmap to Renewal Projects – including <ul style="list-style-type: none"> • City Streets Stage 2 • Preferred option for Te Unua Southland Museum and Art Gallery 	\$0.8M \$0.4M	1.30% 0.61%
Capital Programme Delivery – A change in delivery forecast of 70% down from 75%. The most significant change to the capital budget has been in the Branxholme water supply mains redevelopment project where costs	-\$0.4M	-0.57%

Changes from the LTP	2022/2023 Budget increase	Rates Increase
have increased from \$11.1 to \$25.5 million. Renewals are funded through depreciation and as a result do not impact on rates		
Changes to operational activities which together resulted in an increase of \$1.1 M, equivalent to a 1.66% rates increase.	\$0.1M	0.12%
Mana whenua representatives on committees.	\$0.2M	0.29%
Operational budget for the new Stormwater Bylaw	\$0.1M	0.08%
Increased budget for activation in the city centre	\$0.2M	0.33%
Property asset condition information development to improve earthquake safety and maintenance plans		
Increased property maintenance funds	\$0.4M	0.64%
Changes to parks operational budgets	\$0.1M	0.20%
Changes in the labour market – Increases to the minimum wage which has flowed through to the ICC Fair Wage and a tight labour market which has required salary increases to attract and retain staff	\$0.7M	1.10%
Changes to income		
The sale of investment property has reduced debt but also reduced operational revenue and expenses, noting this is a self-funded activity.	\$0.0M	-
Increase in fees and charges to reflect changes in operational costs	-\$0.1M	-0.19%
Realignment of NZTA subsidy revenue	-\$0.2M	-0.31%
ICL short-term loan agreement	-\$0.2M	-0.38%
Other minor changes, including change in employee expenses	\$0.3M	0.56%
Change in funding of depreciation from 100% to 93%	-	-
Total	\$2.4M	7.78%

At the time of consultation as a result of these changes, the forecast expenditure for 2022/2023 was:

- \$72.6 million capital expenditure
- \$115.9 million operational expenditure

Over the consultation period, reforecasting for the 2021/2022 year was completed, errors to modelling were found and a change to the timing of City Streets Stage 2 for the purposes of rating occurred. Together, these have changed the position to:

- \$74.2 million capital expenditure
- \$116.4 million operational expenditure

The most significant elements which have changed as a result of reforecasting are:

- **Correction to modelling for infrastructure**
Council made significant changes to the rating approach in 2021. While the correct amount of revenue has been raised, some mistakes were made in the modelling of rates expense in the area of infrastructure which affect the forecast rates increase: \$1.64 million additional expense needs to be added to budgets (which is funded by rates), equivalent to an additional 2.74% increase in rates. This is partially offset by the update to the rating system, bringing additional revenue of \$0.4 million from separately used or inhabited parts of a rating unit (SUIPs), equivalent to a 0.68% rates decrease.

- **City Streets Stage 2** was not included in the LTP but was separately consulted on in January 2022. At this time of consultation it was proposed that the full rates cost of the project 1.30%, would be added in 2022/2023. This was in error and the rates increase should be spread over the life of the project in recognition that the costs are not all incurred upfront. The 1.30% rates increase is proposed to be spread as follows:

2022/2023	0.15%
2023/2024	0.52%
2024/2025	0.54%
2025/2026	0.09%

This reduces the 2022/23 rates increase by 1.15% but will increase future years by the amounts above.

- **Government subsidy revenue - 3 Waters Stimulus and Shovel Ready funding**
This funding was forecast for 2022/2023 but has been received in 2021/2022. Changes to accounting standards mean that it must be reflected in the year it was received or used. While this funding was for capital projects so does not contribute directly to our rates requirement, it indirectly impacts rates through our net debt position and interest cost.

In the LTP, Council planned a balanced budget (income is greater than expenses) however with the moving of subsidy revenue between years our balanced budget position for 2022/2023 will be negatively affected by \$1.798m. This financial year (2021/2022) will have a greater surplus and next year, 2022/2023 will now be unbalanced. This impact cannot be altered – it's a direct result of when the government provides the money and used.

- **Solid waste revenue and expenditure.** As a result of increased levels of waste and reduced quality of recycling, Council is now expecting increased costs of \$700,000 to deliver solid waste services, equivalent to 1.17% rates increase. This will be partially offset by a forecast increase in revenue of \$150,000, equivalent to 0.25% rates increase, if agreement can be reached with Southland District Council on the proportion of these costs allocated to the Southland District.
- **Decreased revenue from building consent services** of \$240,000, equivalent to a 0.40% rates increase which is as a result of fewer commercial consents now being forecast.
- **Reduced capital forecasts**, in part relating to the three waters projects discussed above, result in a forecast net debt reduction and consequently a \$370,000 reduction in finance costs, equivalent to a 0.61% saving in rates costs.
- An accounting error of a double up of water supply repairs and maintenance of \$880,000 has been removed, reducing the forecast rates required by 1.47%
- Other forecast savings equivalent to \$0.46 million achieved through reforecasting have also been accounted for, which equates to 0.78% reduction in the rates increase.

Together these changes have reduced the forecast rates increase Council consulted on from 7.78% to 7.15%.

This paper outlines a number of other options for Council to consider if it wishes to reduce the forecast rates increase further.

Issues and Options

There are two issues for consideration:

- The preferred option for Te Unua
- Options to manage the 2022/2023 rates increase

Analysis of feedback from the public

Hearings for the Annual Plan were held on 10 May 2022. 132 submitted and 21 were heard. Analysis of feedback from submissions is included below. Recommendations for options are discussed in the next section of the report.

Southland Museum and Art Gallery

Three options were presented for public consultation:

- Option one – redevelop the existing building
- Option two (preferred option) – 4,150m² new building
- Option three – 3,550m² new building

There were 111 responses which selected a preference for an option and the majority of respondents were in favour of a new building, with 63% favouring option two or three. The preferred option was the most popular, with only three wanting to see the smaller new build option. The comments highlighted a desire for a 'striking' building with a common theme of, 'let's do this right.'

The option to retain the pyramid elicited strong feeling and in total 37% selected option one. Overwhelmingly, there was a sense of concern about how much was being spent on the museum, and submitters urged Council to consider the financial ramifications during a period of economic uncertainty. There was also a strong sense of pride relating to the pyramid as an Invercargill icon which should be maintained.

There were a number of concerns about the storage element of the project including:

- *The appropriateness of the site and availability of other locations including empty buildings around town:* A full feasibility of locations around Invercargill was completed and the Tisbury Reserve identified as the most suitable location.
- *Feasibility and cost of transport between the storage site and Te Unua was raised several times:* The transport costs have been factored into Te Unua operational costs.

Other specific issues raised by submitters include:

- *Question as to whether it was an Invercargill or Southland Museum:* It is a regional museum for Southland, which is based in Invercargill. It will tell the story of Invercargill, Bluff, Southland, Murihiku, Rakiura, Tamatea and the Sub Antarctic Islands, which is the collection area.
- *Concerns about Tuatara no longer being included within the museum:* There is a new location planned for Tuatara within the Animal enclosure area of Queens Park. This is budgeted for within the Parks budget. The tuatara will also be able to be included within temporary exhibits.
- *Accessible toilets within the Museum:* Accessible toilets will be included in line with Building standards
- *Costs to view exhibitions:* General exhibits will be free to all, although there are planned charged for exhibitions.
- *Environmental standards:* Depending on the option selected, the museum will certainly lower and improve its environmental footprint; this will typically be in the form of reduced energy use and the opportunity where possible to install better technology into the

building. If a re-build option is endorsed, Council can look at the building fabric and level of insulation and other vital elements. Selecting suitable materials will allow us to look at impacts such as carbon impact.

Broader Engagement on Te Unua

As part of the consultation process, Council utilised two online platforms (the newly developed Let's Talk engagement website and Facebook) as well as engagement walls at the Invercargill Public Library and rangatahi informal submission forms. Alongside two attendances at the Southern Farmers Market, this allowed for an engagement presence despite the challenges of the ongoing Omicron outbreak.

This engagement was not included within the formal submissions, but it allowed a broader understanding of the public sentiment around the Museum. Notably, the social media commentary, which is included as an attachment to this report, reflected the general split in opinions for the Museum. There were 256 comments made, of which 22 supported a new build and 20 wanted to keep the Pyramid. Those who supported the Pyramid often connected this to a faster reopening. There were 19 comments highlighting frustration at the perceived delays in the project. Most of the remaining comments were suggestions about what people would like to see in the museum, as well as general disgruntlement with the consultation process and Council in general.

The library engagement offered the opportunity for the public to 'vote' for their preferred option, and saw an increase in support for the Pyramid. There were 22 comments in support of the Pyramid, while another 13 supported one of the new build options. The comments among those looking to maintain the Pyramid reflected the sentimentality felt by members of the community, as well as a desire to open the Museum as soon as possible. Those supporting a new build wanted to see a different building and something new and modern.

Rates Affordability

A significant number of submitters, including the Ratepayers Association noted the challenges the community is facing as a result of economic conditions, including the rising cost of living. Many believed it was important for Council to continue with the 4% rates increase forecast in the Long-term plan.

- **Rates Rebate Programme**

The issue of the support available to ratepayers through the Central Government's rate rebate scheme was raised several times during hearings.

The Rates Rebate Scheme exists to provide financial relief for low-income New Zealanders owning and living in their own home. The scheme provides a rebate of up to \$665 depending on income.

One submitter was concerned that Council only provides the rebate for one quarter instead of the whole year. This is an administrative function of our system which means the whole annual rebate is applied in the quarter when the person makes the application. It does not affect the amount which the person is entitled to. Those ratepayers who pay by direct debit (weekly, fortnightly, monthly) have the rebate spread across the rest of the year once the rebate is applied.

Communications to ratepayers on this topic are taking place during May and June 2022.

Capital delivery

A number of submitters noted that the Council should be focused on capital delivery, particularly given the difficult economic conditions. Some wanted Council to focus on core infrastructure and suggested that larger projects should be reconsidered. Others wanted Council to ensure delivery of major projects was not delayed.

There were a number of suggestions for areas where Council could reprioritise in order to ensure successful delivery of major projects:

- Three submitters believed that the investment in the Museum could not be justified in this economic climate
- One submitter suggested scrapping ACI, suggesting Council should instead partner with SIT on the new arts centre
- A few submitters expressed opposition to the Three Waters reform and suggested Council should reduce investment in water infrastructure ahead of this.
- One submitter when asked which projects they would reduce in priority mentioned Rugby Park and the Civic Building, believing it did not make sense to upgrade this building when the future of local government was unknown.
- The option of reducing or delaying Stage 2 of City Centre Streets was also proposed.

The issue of accurate forecasting and management of costs was raised by some submitters. The Invercargill Ratepayers Association quoted a figure of \$78.5 million increase in forecast costs on major projects since 2021/2022.

The following projects have increased in cost resulting in a total increase of \$38.0 million across the LTP to existing projects since the decisions made in the Long-term Plan in 2021/2022 (an increase of \$22.1 million in 2022/2023 financial year):

- *Branxholme water supply – increase of \$14.4 million.* The initial project budget was set in a very different construction market. As the project team has developed the project scope and design, the project costs (estimates) have grown as the design and team create certainty around route and delivery challenges. This is not uncommon for complex projects; however, the project's initial estimates were too low for the scope of work.
- *Museum – increase of \$23.2 million.* This cost has changed because Council has changed its preferred option and the project has as result changed significantly. It is important to note that \$23.2 million of the total increase would have occurred if the preferred option had not changed as a result of more refined project scoping, inflation and the requirements of the storage solution.
- *Stead Street Stop Bank – increase of \$400,000.* This is a reflection of the stage the project is at and is expected to be returned close to neutral through savings over the final stage of the project.

City Streets Stage 2 which the Ratepayers Association may also have been referring to is a new project not included in the Long-term Plan which Council confirmed ahead of this Annual Plan consultation.

The final project considered may have been City Block. The additional funding required for this project is being commercially loan funded and has no impact on rates. It was required as a result of short term funding requirements rather than an increase in costs.

Advice from the Project Management Office (PMO) is that Council is delivering the capital programme in a volatile construction market that has multiple pressures to material supply and costs, resourcing issues and spiralling wage increases.

This has been compounded by inflation, fuel costs and freight issues.

The PMO has and will continue to engage with the contracting market to bring certainty to suppliers so they can work and operate with confidence. The focus is to increase the certainty of work, scope and budgets.

One submitter suggested buying materials ahead of time to ensure projects could be delivered and to save money.

While it is understandable to consider this idea, given what is in the media about construction material availability and cost increasing, purchasing materials in the current market will attract a premium due to demand outstripping supply. Council will pay more now for material compared to buying materials once the supply chain improves.

It is not possible to purchase all the materials until the building is fully designed and the Council has signed off on the design.

It is common for a project team to identify "long lead" items (things that take a long time to procure). The Museum team will look to identify these early on in the design process.

A final point to consider is that the supply chain is slowly improving globally; while we are facing problems now, it is likely this will improve as we move towards 2023 – 2024.

The construction of the museum (if a new build) will start in mid-2024, and the material supply chain will have improved at this time (we are seeing this in other construction markets – Europe and US).

Other suggested ways to reduce rates increases

Of those submitters who wanted a reduction in the rates increase, beyond delay or cancellation of major projects, a reduction in the level of service was not desired. The exception was one submitter who proposed closing He Waka Tuia to save money, noting while they were an art lover it did not serve their needs as it was too small. Others did however note they enjoyed having a place in the city centre to enjoy.

Other suggestions included:

- Finding money from other sources such as getting sponsorship
- Using reserves or cash investments or selling vacant land to reduce shortfalls.
- Increasing borrowing
- Running an unbalanced budget

Further advice is given on these issues below.

Other specific issues

Esk Street West

Local developer Geoff Thompson presented the plans for the new Hotel and surroundings on Esk Street West. The new facility will be reclad and the design will include reference to local cultural aspects. Geoff submitted that the success of the development would need to be supported by improvements to the street.

At present Esk Street West is not included in the City Centre Masterplan and there is no budget in the Annual Plan or Long-term Plan for improvements in this area. Consideration is being given to how the city centre will relate to this western area as part of master planning over the next few months. This issue will be brought to the new Council as part of consideration and planning for 2023/2034 and the 2024 – 2034 Long-term Plan. The timing of the hotel development project means that any improvements which the developer needs immediately to improve functionality would need to be funded by the developer.

Bluff Motupōhue Recreation Precinct Car Park

The Bluff Mountain Bike Club presented, making the case to bring the upgrade of the Pearse Street Carpark forward in order to support their Bluff Hill Mountain Bike tracks project. The Parks team has been working with the Club and Great South to help support this initiative, including through making an application for Tourism Infrastructure Funding.

The project was brought forward and included in the 2022/2023 budget ahead of consultation and no change is required.

Prudent financial management - Considerations for decision making

There are a number of issues which it is essential that Council consider in its deliberations on changes to funding as part of the Annual Plan.

Managing rates affordability

Council's Financial Strategy states "Council has come through a period of medium-level rates rises over the previous three years (2018/19: 4.91%, 2019/20: 3.50% and 2020/21: 2.00%). This was due to Council focusing on ensuring that rates were low and consistent from year-to-year. For future years there are some key challenges that will present themselves in relation to affordability. This will occur as Council enters a period of accelerated capital expenditure to develop our services, whilst looking to be a growing and innovative city. Increasing costs of providing council services is likely to intensify the affordability issues in the future. In certain years of the Long-term Plan, pressure from required infrastructure renewals has led to rates increases that are less affordable than what the Council would like. A larger rates increase will not necessarily occur in these years as growth projects are loan-funded and will be paid back over time so as not to unfairly burden the current ratepayers with the large costs associated with these projects. Council seeks to embrace innovation and change over the upcoming years, and with the constant evolution and growth of technology, is witnessing and experiencing the change first-hand.

Council limit on rates rises - In determining the impact and limits of rates rises Council has considered the level of capital spending required and also the limit on Council borrowing. To be able to undertake the capital works in the LTP the limits on rates rises are:

- The rates rise in any year will not be higher than 7.5%
- The total rates take in any year will be no higher than a compounding annual rates rise of 7.5% per annum plus growth within the rating base"

The draft annual plan for 2022/2023 meets both these limits. The forecast rates increase is 7.15%.

The rates affordability- income benchmark would be met which is at 58.2%, under the 60% benchmark

The rates affordability – Increase benchmark would not be met. The planned increase in rates revenue is 7.15% compared to the benchmark of 5.4% (Local government cost index supplied by BERL of 2.4% +3.0%)

Intergenerational equity

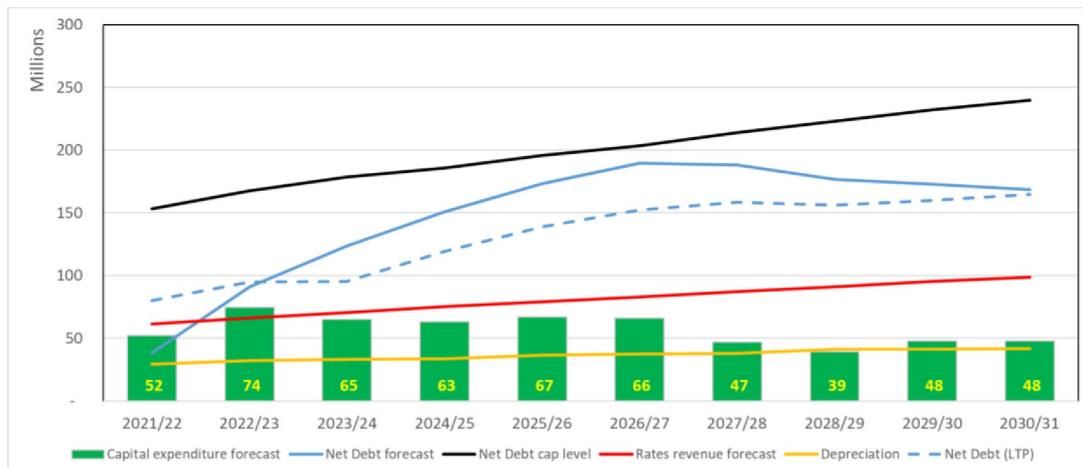
The Financial Strategy states “The Council's strategy is to ensure that both current and future ratepayers pay their fair share of the cost of providing services. Intergenerational equity is achieved through loan funding long-term assets and drawing rates to pay for the loan over an extended period of time.”

The draft Annual plan meets the debt affordability benchmark. Council has a borrowing limit of 15% of assets. For 2022/2023 the borrowing limit will be 11.6%

Managing debt

The Financial Strategy states: To be prudent Council has set a maximum debt level of 150% of revenue. This provides an increasing net debt cap over time rising from \$148M to \$210M While Council remains focused on keeping debt to a manageable level over the course of the Long-term Plan, large infrastructure projects as well as future growth projects necessitate the need for Council to take on an increased level of debt.

The graph below shows the updated forecasts as a result of this Annual Plan, Council sits well under the 150% debt cap for 2022/2023. Borrowing is forecast to peak in 2026/2027 but still remain below the debt cap.



Council's debt servicing was expected to be at 2.8% of revenue for 2022/2023 in the LTP and now sits at 2.0%, still well below the 10% benchmark.

This is a result of debt being down because there has been a drop in the delivery forecast to 70% and a change in timing on some capital projects. In addition interest rates are at this point still lower than forecast in the LTP for 2022/2023.

Managing the risk of Inflation and increased interest rates

The Financial Strategy states: "A significant issue for this LTP and this strategy is the increasing debt at a time when interest rates are at historic lows. This exposes the community to a significant risk of increased interest rates. Debt is predicted to get close to the debt limits in the first 5 years of the plan. With borrowing rates as low as 1%, a rise of 1% will double the rates requirement to pay the interest. Every 1% increase in the interest rate would mean a rates rise above the forecast rates increase of about 2.5%. So a 2% rates rise would become 5%. Part of this impact can be managed through prudent borrowing, but only for a period of time. In the interests of intergenerational equity Council should not go to the debt limits without a recognition that the debt will need to be reduced to allow future ratepayers to also undertake projects that will emerge in the future. The funding strategy for rates will incorporate an amount of 2% of debt to go to the repayment of the debt."

Council has sought expert advice on inflation in preparing this Annual plan and will continue to monitor this closely as we move into preparation of the Long-term plan. Inflation forecasts for specific elements have been increased to reflect market conditions, including supplies of pipes and other key inputs to the capital renewal programme and staff costs.

Interest rates in the budget are unchanged which is a risk which is being closely monitored in order to maintain a low debt cost for the year. This remains a low risk for the Annual Plan but in this volatile interest market it is an important area of focus for the future.

Options

Council has two issues to consider in relation to the Annual Plan. The first of these is to select the option for Te Unua which will go into the Plan. The selection of this option should be considered within the wider context of the Annual Plan, including the impact on rates, on the delivery of the wider capital programme and on management of the debt ceiling.

The second issue is options for further changes Council may wish to make to manage rates increase.

1. Te Unua

Council consulted on three options:

- Option 1 – Redevelop the existing building
- Option 2 – Preferred Option – 4,150 m2 New building
- Option 3 – 3,550 m2 New building

The larger new build (Option 2) was Council's preferred option.

Assessment of Options:

Below is the advice included in the 15 March paper to the Infrastructural Services Committee prior to consultation. The full advice is available as an appendix to this paper.

"It is the collective staff view that Option 3 provides the best overall outcome for Te Unua, when balancing the vision and critical success factors, the community experience as well as the risks and financial costs.

Option 3 also provides the best potential economic benefit to the Southland region for every dollar invested when compared against options 1 and 2.

Option 3 for a comparatively similar experience can be progress with a significantly reduced financial risk."

While the difference in rates increase for 2022/2023 is minimal (0.61% for the Larger new build compared to 0.60% for the Smaller new build) this will increase over future years to a total rates increase of 1.74% for the smaller new build and 1.91% for the larger new build. It is important to note that the larger new build could require more ongoing rates increases to support ongoing operation, as its forecast operating costs are higher.

In addition, there remains a significant risk that not all external funding may be achieved (\$20 million for option 2 compared to \$11 million for option 3) and that inflation and supply chain issues may continue to cause increased costs over the next few years.

If Option 3 is chosen delivering as close as possible to the outcomes of the Museum Governance Group would be the focus of the team during detailed design.

It remains the advice of Officers that the smaller new build (Option 3) represents the best investment option for the ratepayer, delivering on the vision and success factors for Te Unua, while significantly reducing Council's exposure to risk of increased costs.

Further options to manage the 2022/2023 rates increase

The rates increase is contingent on a number of interrelated factors which can be broadly split into:

- Changes to levels of service, for this discussion, split into
 - Delivery of Council services
 - Delivery of new capital projects which impact on ability to provide a level of service
- Management of revenue and other forms of income
- Management of capital, operational and grants expenditure.

Levels of Service – Delivery of Council Services

One option Council has to reduce the rates increase is to reduce the level of service it offers the community – i.e. to do less. It is important to note that any changes will impact on Council's ability to deliver on its committed level of service in the Long-term Plan. This approach was not supported by the public through submissions.

Option: One of the areas where Council consulted on increased forecast expenditure was in Parks, where increased spend on traffic management is required if the maintenance of plantings on the roading network required to maintain the same level of service is to continue.

A saving of \$100,000 could be made by reducing the level of service offering within the Parks activity. This would see a reduction in the amenity value of lower priority areas, such as road berms and centre plots. It would see less proactive and planned plantings and would see more weeds present. We cannot save on the associated Health and Safety costs so this saving would

come at the loss of presentation of green space. Further information will be provided at the meeting.

Levels of Service – Major Projects

Council could determine to reprioritise and either move projects back or remove them from the Roadmap to Renewal or the wider capital programme. The table below shows the forecast spends for 2022/2023. There are limited options for removing spend from 2022/2023. Much of the funding is for projects already in progress. If Council chose not to commence the Museum, City Streets Stage 2 or Branholme Water Pipe Renewal, these would all have significant impact on delivery times.

Roadmap projects

Roadmap Project	Total forecast expenditure - LTP (Note this includes external funding which is included in revenue)	Total forecast expenditure - Annual Plan (Note this includes external funding which is included in revenue)	2022/2023 Forecast	Advice
Anderson House	1.4	1.4	0.2	This project is almost complete – delaying work would be a false economy
Bluff Boat Ramp Upgrade	1.6	1.6	1.0	There would be significant community implications to delaying this project further. The jetties are in poor repair and require attention. Deferring this project could increase long-term maintenance costs.
City Centre - Stage 1	19.8	17.5	5.9	This project is in progress and must be completed to the original plans.
City Centre - Stage 2	-	13.6	2.3	Any change to this project would require further consultation outside of the Annual Plan. Further information on the implications is provided below*
Museum Redevelopment	52.3	65.6	3.0	This initial spend cannot be delayed without delaying the final delivery of the Museum
Museum Redevelopment – Storage facility	-	10.5	5.7	This project is in train. This initial spend cannot be delayed without delaying the final delivery of the Museum
Rugby Park	5.0	5.0	1	Maintenance and strengthening of the media tower to meet the needs of the Trust and Rugby

Roadmap Project	Total forecast expenditure - LTP (Note this includes external funding which is included in revenue)	Total forecast expenditure - Annual Plan (Note this includes external funding which is included in revenue)	2022/2023 Forecast	Advice
				Southland will commence in 2022/2023 but the remaining \$700,000 of the budget can be pushed back to 2023/2034. There is the option to reconsider the scope of this project as part of the forthcoming LTP. There is no rates increase implications.
Surrey Park Grandstand	1.5	1.5	-	N/A – No spend in 2022/2023
Destination Playground	6.6	6.7	-	N/A – No spend in 2022/2023
Water Tower Strengthening	3.9	3.9	-	N/A – No spend in 2022/2023
Art & Creativity Invercargill (ACI)	17.6	17.5	-	N/A – No spend in 2022/2023
Additional Pool	8.2	8.2	-	N/A – No spend in 2022/2023
Programme contingency	12.1	11.2	1	The project contingency must be maintained in line with good management practice to enable unknown circumstances to be managed.

* If city streets stage 2 were not to proceed, then there would be two disconnected areas on Don Street and Esk Street. Not following the masterplan will result in the loss of connectivity and other benefits for shared spaces outlined in the masterplan.

In addition to the loss of strategic benefits, there are a number of practical implications to consider.

Infrastructure work under the streets will still need to be done, including connection of fibre and laying of three waters pipes in Kelvin and Esk streets. Reinstatement will be an additional cost which would need to be budgeted. New solutions to connect the new street works to the existing streets infrastructure would be required as the shape of pavements and other connecting infrastructure has changed.

There would be an increased risk of flooding to the completed area in Esk Street as a result of a severe rain event. There are future pavement works and repairs which are being held off because the new surface is planned. These works would need to be brought into the existing maintenance programme.

A short delay would incur significant costs due to contractor loss and cost increases on renegotiation of contracts. This approach would also cause additional disruption to the public.

No further changes are recommended to Roadmap to Renewal capital projects.

Revenue

Council's primary revenue stream is rates. One way of reducing rates increases is to increase other forms of revenue. Options are discussed below.

- **Fees and Charges**

Fees and Charges are collected on a user pays basis to recover all or a proportion of costs. There is the option to recover a greater proportion of costs through some fees and charges. The Financial Strategy notes that it is Council's strategy over time to increase the amount of revenue collected through fees and charges and this will continue to be a focus into the next Annual Plan and Long-term Plan.

It is important to note that if changes are significant there will be further consultation requirements.

A budgeting change has been made to ensure that Planning and building services are recovering increased consultancy costs through fees and charges but this does not require an increase to the fees and charges.

No further changes are recommended to the fees and charges consulted.

- **Net Debt**

Council can utilise debt to fund capital expenditure in line with its Financial Strategy and Revenue and Finance Policy. Council operates a net debt approach, measuring debt based on total external borrowings less funds invested in term deposits and bank accounts. A number of submitters have suggested using reserves or investments to offset rates increases. It is important for the public to understand that the reserves of Council have already been considered in calculating the net debt position and in setting rates.

Council is already utilising debt where appropriate to fund capital up to the maximum allowed by the Financial Strategy and Revenue and Finance Policy.

No changes are recommended to the use of debt.

- **Subsidies and other sources of income**

Council's largest source of subsidy funding is Waka Kotahi funding which subsidises the roading programme. The roading programme is already designed to maximise the subsidy in line with the Revenue and Finance Policy (noting that City Streets Stage 1 and 2 only qualify for minimal subsidy of approximately 5%). No changes are proposed in this area.

As outlined in the background of this report, Council receives subsidies and Shovel Ready funding for three waters projects including Stead Street. This funding being brought into 2021/2022 has had an implication for forecasts for 2022/2023. This element is outside of Council's control.

The Government have indicated that Invercargill has been allocated a proportion of Better Off Funding as part of the Three Waters Reform, forecast to be \$5.78M. This funding is allocated for new or enhanced projects which meet one of the following criteria:

- Improving climate resilience and environmental outcomes
- Supporting local housing options
- Place making and community wellbeing outcomes.

Council will apply with project proposals for consideration by Government in September 2022. The nature of this process means that this funding cannot be considered as part of the Annual Plan process as there is no surety that individual projects will be confirmed by Government. All projects will be reflected in the 2023/2034 Annual Plan, including forecasting of ongoing operational expenditure which Council would incur through individual projects progressing.

As noted in the financial implications section of this report it is important to reduce reliance on subsidies over time.

There are no recommendations for further changes to subsidies.

- **Asset sales**

Council continually monitors and manages its investments and its general property portfolio. A number of assets have been sold or are in the process of being sold including Esk Street West, Awarua Farm and a number of small pockets of parks land which Council has assessed is no longer required.

These sales have been factored into the Annual Plan in consideration of the capital programme. Applying the proceeds from any asset sales to fund operational costs would not be a sustainable approach and would contravene our Revenue and Finance Policy.

There are no recommendations for further changes to asset sales.

- **Special purpose reserves**

The Revenue and Finance policy notes that Council has a number of special purpose cash reserves which are allocated to a specific purpose. Utilising these reserves for any other purpose would contravene the Revenue and Finance Policy.

The level of reserves do not impact on rates increases, instead they impact on the net debt position.

There are no recommendations for further changes to special purpose reserves.

Capital expenditure

There are limited options for rates increase savings within the capital programme. This is because renewals are funded from depreciation rather than rates. New and growth projects which will have an impact on the level of service have been discussed above under Levels of Service changes. The major projects below are projects which are essential to maintain levels of service. They are primarily debt funded with interest paid via rates, with the exception of healthy homes investment which is funded from rental fees.

Other major projects	Total forecast expenditure - LTP (Note this includes external funding which is included in revenue)	Total forecast expenditure - Annual Plan (Note this includes external funding which is included in revenue)	2022/2023 Forecast	
Stead Street Stop Bank Upgrade	14.2	14.6	2.3	This project is in progress and must be completed to the original plans.
Branxholme Supply Main Renewal	11.1	25.5	15.9	The materials have already been purchased. If the project was delayed there would be strategic risks to the city if the current pipeline fails.
Civic Administration building redevelopment	16.0	16.0	0.6	Delaying this project would result in additional maintenance costs and there could be additional costs occurred as a result of consultancy fees.
Emergency Water Supply	19.7	19.7		N/A – No spend in 2022/2023
Healthy Homes Standard	4.8	6.9	2.4	This project is not rate funded so removing the spend would have no impact on rates.

No further changes to capital expenditure are recommended.

Operational expenditure

Operational expenditure is the primary mechanism to consider as it funded either wholly through rates or through a mixture of rates and fees and charges. Changes to operational expenditure are likely to have an impact on level of service, although some changes are possible in the short term without long term impact.

Two areas of suggested focus for expenditure cuts which relate to timing and are focused to have a more minimal impact on level of service.

Option: Reduction of the budget for city centre activation from \$250,000 to \$50,000, noting the impact of reduced activities within the city centre would be limited as a result of key facilities now opening later than expected, resulting in a forecast reduction in rates increase of 0.33%.

It is important to note that this would not impact on the work of the City Centre Coordinator which is funded through targeted rates.

Option: Reduction of the staff budget of \$165,000 through management of the recruitment of current vacancies within Infrastructure group, noting there a number of positions which are hard to fill in this market and are unlikely to be filled within the first half of the 2022/2023 year.

This is not expected to impact delivery but will impact planning into 2023/2024. It would result in a forecast reduction in rates increase of 0.28%.

Grants expenditure

Council makes grants through two primary mechanisms – through the Long-term Plan and through the Community Wellbeing Fund.

Many of its grants made under the Long-term Plan are linked to service level agreements. In other cases the organisations in receipt of the funds rely on them for operational commitments.

No changes are recommended to these grants ahead of them all being reconsidered as part of the 2024 – 2034 Long-term Plan.

The Community Wellbeing Fund has been increased by \$50,000 to reflect the inclusion of the Southern Warm Homes Trust within this process.

Option: Council could reduce the Community Wellbeing Fund by \$50,000, noting that this will mean that the Community Wellbeing Fund committee will need to manage the funding available and this may result in reduced funding for some future applicants, resulting in a 0.08% reduction in the forecast increase to rates.

Next Steps

Following deliberations, Annual plan budgets will be reworked and the Annual Plan document finalised. Following deliberations on the Roaring Forties Shares Sale consultation, the Annual Plan will be brought to Council for adoption on 28 June 2022. Following adoption, the rates will be struck.

Attachments

1. Annual Plan 2022/2023 Consultation Document (A3847758)
2. Financial Strategy (A3915737)
3. Revenue and Finance Policy (A3275564)
4. Te Unua Options Report (A3829805)

What do you want for our museum?

He
Ngākau
Aroha

He aha a koutou wawata mō te Whare Taoka Hou?



Annual Plan - Te Unua Museum Consultation



Mayor's comment

Ngā kōrero a te Koromatua

In 2021 we set out our Long-term Plan for the city in our Roadmap to Renewal.

We are making good progress on delivering the first projects in the Roadmap, as well as the wider capital works programme. However, Covid-19 challenges mean we need to make some changes to the budget and schedule.

We know one of the most important projects to community is the museum.

When we finalised the Long-term Plan, we agreed to look further at options for a new building. We set up a Museum Governance Group to advise us on what the vision of the museum should be, where it should be located and what experience it should offer. They have presented the vision for Te Unua, a future-focused, interactive experience that will tell our stories while also providing a space to attract international exhibits.

We need to ask you now about what you think of our plans for Te Unua.

Take some time to read through this consultation document, which explains what has changed since 2021, and then make sure you submit your feedback to us before 5pm on 29 April.



His Worship the Mayor Sir Tim Shadbolt.



What is an Annual Plan?

He aha he Take a Tau?

The Annual Plan shows what Council will deliver and how it will be funded in the 2022/2023 financial year (July 2022 – June 2023). Every three years the Council sets out its Long-term Plan and, in the two years in between, the Annual Plan shows what updates are needed to reflect changing prices, changes to projects and new information we have about the economy.

What has changed since the Long-term Plan?

He aha kā mea rereke tae atu ki Te Take Tau Maha?

Changes to Our Roadmap to Renewal Projects

The budget for the second stage in City Streets Stage 2 has been updated following the Next Steps for City Block consultation. Now we are asking you what you think about our proposals for the Te Unua Museum Redevelopment project.

Capital programme delivery

Covid-19 has had a significant impact on the construction market. Demand for contractors to complete work is high. At the same time there are supply chain delays and rising costs. This is making it more difficult to complete the work in our capital programme. As a result we are estimating that 70% of the programme will be delivered in 2022/2023, 5% less than we originally thought.

Changes to operational activities

To support the success of our investment in the city centre it's important we provide resource to enable activities to attract more people into the City Centre.

Council has introduced a new Stormwater Bylaw to improve water quality. This requires that we resource enforcement and education activities. We have also

provided resource to enable mana whenua to have representatives on our committees.

Council owns property valued at \$169m. We need to allocate more funding now to make sure we understand what maintenance is needed and what we need to do to make our assets earthquake safe.

Changes to costs of goods and services

Inflation has increased. Council uses the Berl Local Government Cost Index to make sure we budget appropriately for increasing costs. In the Long-term Plan we forecast 2.9% inflation. While we have retained 2.9% as our overall inflation assumption, the significant increase in other inflation measures has resulted in us applying a higher inflation assumption to specific costs. This has resulted in an increase in some costs. Next year we anticipate that our depreciation cost will be \$2.3 million higher than in the Long-term Plan, as a result of the expected increase in asset values from 5% to 10%. We are due to revalue all our assets at 30 June 2022, which will allow us to provide a better estimate of both asset value and depreciation expense for the 2023/2024 Annual Plan.

Our approach is to fund depreciation expense with rates. However, given the uncertainty over the value of assets and the subsequent depreciation cost we plan to only rates fund 93% of the forecast depreciation expense.

Changes in the labour market

Since last year, two significant changes have impacted our budgets: Government has increased the minimum wage from \$20.00 to \$21.20 from 1 April 2022 and the recruitment market has become much tighter. Council needs to ensure it has the right number of staff with the right skills to deliver the level of service the community needs, as described in the Long-term Plan. Council has increased its ICC fair wage and as a result the cost of employing people has increased.

Changes to income

The sale of one of our investment properties has reduced Council's debt but there is also an associated reduction of operational revenue and expenses.

In setting this Annual Plan we have balanced how to deliver the services and projects the community wants to see with the rates increases required to fund them.

What are we consulting on?

We are asking you what you think about:

- our plans for the Te Unua Museum Redevelopment
- the proposed change to reserve status for Tisbury Reserve to enable storage for the Museum project to proceed.
- 2022/2023 Fees and Charges
- the Annual Plan.

What will it cost?

Te reo heading to follow

In the Long-term Plan, the forecast expenditure for 2022/2023 was:

- **\$45.4 million capital expenditure**
(The money we spend on assets, such as roads, pipes, buildings and other infrastructure)
- **\$110.9 million operational expenditure**
(The money we spend to operate all the facilities in the city and provide the services the community needs)

As a result of the changes described on p3, these forecasts are rising to:

- **\$72.6 million capital expenditure**
- **\$115.9 million operational expenditure**

What's changed in our capital programme?

Increasing prices and potential supply chain delays have been factored in to the Capital Works Programme. Some projects have been significantly impacted - including the Branholme Pipeline Upgrade. We have also added in the cost of City Centre Streets Stage 2 and the preferred option for the museum. Over the time of the Long-term Plan this is forecast to increase costs by \$88.6 million. Council has implemented a Project Management Office in order to assist with improved delivery of the capital programme. Due to supply chain issues we estimate 70% of the capital programme will be delivered rather than the 75% estimated in the Long-term Plan. 93% of depreciation (the cost to replace our assets) is funded in 2022/2023 rising to 100% in later years of the plan.

What's changed in our operational programme?

Council will spend more to undertake earthquake prone building, asbestos and condition assessments on our property to ensure these buildings are safe for the next generation. There are also additional costs within our parks activity from additional traffic management compliance costs, increased waste disposal costs and to meet our obligations under the Regional Pest Management Plan and Predator Free 2050.

Fees and Charges

Te Reo heading to follow

One way that Council covers the costs of providing services is through fees and charges. These cover specific services that individuals use, such as dog registrations, building consents or crematorium fees. We are forecasting an increase in revenue of \$119,000 from fees and charges to cover rising costs of providing services. We are proposing removing some fees and charges for example, library overdue fees, in order to improve use of the service.

You can find out more about our proposed fees and charges online.

Go to letstalk.icc.govt.nz

What does this mean for rates?

Tāke kaunihera

In the Long-term Plan we forecast a 4% rates increase in 2022/2023. As a result of the new projects and the changes to the external environment described on p3 we are now forecasting a 7.78% increase in rates for 2022/2023.

What will it cost me?

- The average rates bill for residential ratepayers for this year of the Long-term Plan was forecast to be \$2,475. This would increase to \$2,668 in 2022/2023. That's an increase of \$193 a year, or \$3.71 a week.
Note: Every property has a different value – this is an average example.
- In the Long-term Plan, the rates revenue was forecast to be \$62.6 million in 2022/2023. This will rise to \$66.1 million.

Benchmarking our Financial Plans

The required increase in rates for 2022/2023 means that we will exceed a number of limits set for ourselves within the Financial Strategy. Rates will increase 7.78% instead of the maximum 7.5%, which means that the revenue from rates will also rise higher than allowed for in the Strategy. There will also be an impact on the Rates Affordability Benchmark Inflation (Local Government Cost Index + 3%). For 2022/2023 this benchmark is 5.4%, which the rates increase exceeds.

In our Financial Strategy we aimed to fund 100% of depreciation. While it will rise to 100% in later years, in 2022/2023 we will only fund 93% due to uncertainty over the value of assets and subsequent depreciation costs.

What does this mean for debt?

He aha te whakaea mō te nama?

Council manages its debt through setting a net debt limit (Net debt is total borrowing less cash investments). Rates are used to pay the interest and principal on the debt Council holds.

In the Long-term Plan the net debt limit was set at no more than 150% of revenue (\$147 million - \$211 million).

Net debt will remain below 150% of revenue but will peak at \$190 million in 2026/27 as work on the Te Unua is completed.

Net debt levels will increase in 2022/2023 in order to fund the increased expenditure on capital projects, including Te Unua, City Block and City Streets Stage 2 and increased forecast costs across the rest of the capital programme.

You can find more information about our financial plans, including the Financial Impact Statements online at letstalk.icc.govt.nz

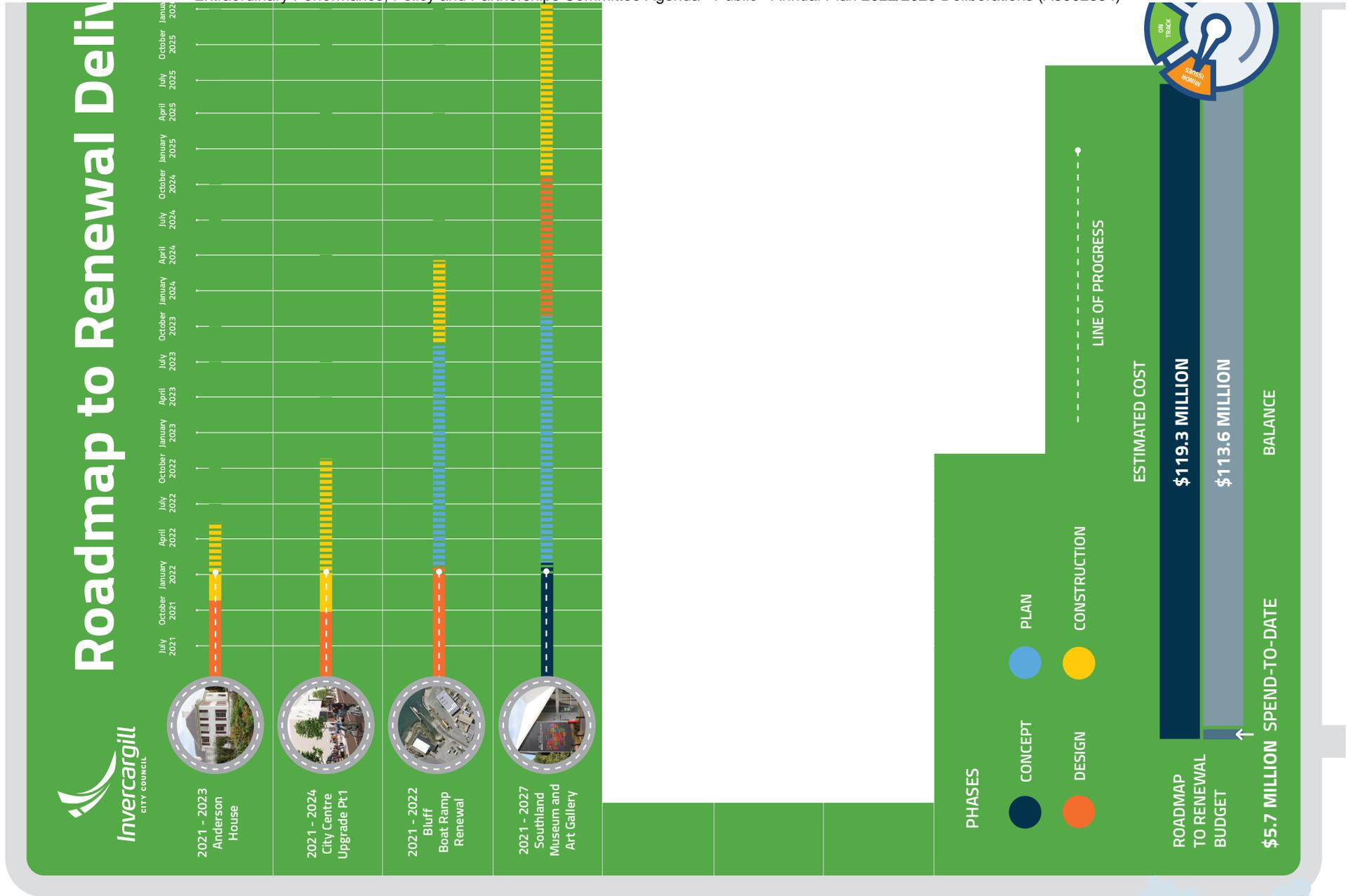
Delivery Process - Progress to date

May 2026
 April 2026
 July 2026
 October 2026
 January 2027
 April 2027
 July 2027
 October 2027
 January 2028
 April 2028
 July 2028
 October 2028
 January 2029
 April 2029
 July 2029
 October 2029
 January 2030
 April 2030
 July 2030
 October 2030
 January 2031
 April 2031
 July 2031
 October 2031
 January 2031
 April 2031
 June 2031

Council laid out our Roadmap to Renewal in the 2021 – 2031 Long-term Plan. You can see our progress in delivering these key projects on this infographic.

- Anderson House and City Centre Streets Stage 1 are on schedule and on budget.
- The Bluff Boat Ramp project has been delayed due to budget increases linked to the complex marine environment. The project is now expected to commence later in 2022.
- Options for next steps for the Southland Museum and Art Gallery project are presented here for your feedback.
- The rest of the projects are not scheduled to commence until future years of the Plan. Work on the Water Tower will commence later but will still be finished in 2026/2027.





Te Unua - Reimagining the Museum

Kapahewatia Te Whare Taoka



Te Unua – Museum Redevelopment | options

Kōwhiringa whakaahu hou Whare Taoka

What we're asking you

He aha a mātou pātai

Based on your feedback in last year's Long-term Plan, the Council is pushing ahead with the development of a new cultural facility for Invercargill. When we agreed to move ahead with this project we asked whether a new building would better meet the needs of the community.

Over the past year, an independent Museum Governance Group was formed and has prepared a report outlining a vision for the reimagined facility, establishing critical success factors that will ensure the right outcome for the community and identifying three options for the future of the facility.

As part of the process, the project has been gifted the name Te Unua by Waihōpai Rūnaka and Te Rūnanga o Awarua.

We're now asking for your views, thoughts and feedback on three options for our future cultural facility.

What do you want for our museum?



Background

Tuarongo

The potential redevelopment of the Southland Museum and Art Gallery has been the subject of discussion in the local community for the past 10 years. In April 2018, the facility was closed because it did not meet earthquake seismic codes, and the conversation about the future of the facility was accelerated.

Following feedback from the community last year, the Council committed in its Long-term Plan 2021-31 to invest \$39.4 million to redevelop the city's museum and art gallery. This was to be part of a \$52.5m total budget, including \$13.1m of third party funding.

At the same time, Council noted that there were differing views on the right option for the future of the facility itself and agreed that more options should be considered.

A Governance Group was formed in August 2021 to reimagine the museum and art gallery and make recommendations to Council on the best outcomes to deliver a future cultural facility in the city. It was also tasked with creating measurable success factors, considering the preferred location of the facility and testing whether there were any alternative sites.

Timeline

Rārangai Wā

2012, 2015 & 2017

Southland Museum and Art Gallery (SMAG) Trust Board redevelopment proposals considered but not progressed.

April 2018

SMAG closed due to earthquake risk.

2020

Release of strategic review of facility and redevelopment options.

April-May 2021

Council asks for public feedback on future of facility in Long Term Plan consultation.

June 2021

Based on feedback, Council agrees to fund the redevelopment of the Southland Museum and Art Gallery and consider whether a new building would be a better option.

August 2021

Museum Governance Group formed.

August-November 2021

Museum Governance Group meets to consider the future of the facility.

December 2021

Museum Governance Group report presented to Council.

February 2022

Te Unua name gifted by Waihōpai Rūnaka and Te Rūnanga o Awarua.

March 2022

Council Infrastructure Committee agrees to consult on options for the future of Te Unua.

March-April 2022

Consultation on Te Unua options through Annual Plan.

June 2022

Council makes a decision on future cultural facility.

2022-2023

Cultural facility design phase.

November 2022

Storage facility construction begins.

2024-2026

Cultural facility construction, fit-out and occupation.

2027

Cultural facility opens to public.

● COMPLETED

● TO BE COMPLETED

Museum Governance Group

Te Rōpu Mana Whakaruruhau a Te Whare Taonga

As part of its Long Term Plan deliberations, the Invercargill City Council in 2021 resolved to establish a governance group to provide advice on reimagining a cultural facility for the region.

The purpose of the group was to create a unique and compelling vision for the museum that defines the nature of the service for the community of Invercargill and solidifies its role in the Southland region.

Experienced South Island director Rex Williams was appointed Independent Chairman of the group in August 2021. The appointed members of the group: Rūnaka appointee Evelyn Cook, Gavin Bishop, Trish Lindsay, Lou Sanson, Roger Beattie and Simon Owen.

Over 16 weeks, the Governance Group developed a vision, pillars and critical success factors to deliver a new cultural facility. The exercise considered community views, iwi partnerships and aspirational goals for the region.



Vision Te Unua - Exploring the Stories of Southland

Moemoeā Kimihia Ka Purakau o te takiwa

Pillars Pou

- **Connecting** with Murihiku, the land, sea and sky
- **Involving** he tākata through diversity and inclusion
- **Inspiring** with stories shaped by our people, our land, and our waters
- **Aspiring** to bring change and understanding
- **Protecting** our taoka for future generations
- **Engaging** with the past, the present, and the future
- **Value** balancing cost with quality.



sky, and its people. This will make Te Unua unique to Southland and unprecedented in New Zealand.

Te Unua will be inviting, a community precinct of internal and external spaces that connect people. Welcoming all, Te Unua is inclusive, accessible and diversely appealing to all ages, cultures and demographics of the region, nation, and the world – a reflection of the people of Southland. This will be achieved through consultation and collaboration with the community.

Inspiring

Te Unua will be an experiential visitor journey based on taoka, art, the natural world and compelling storytelling. The visitor experience will be a narrative through people and time rather than an ordered sequence of artefacts. The visitor will leave Te Unua with a deeper understanding of the history of Murihiku and New Zealand, and the people and stories behind the exhibited collection.

Aspiring

Te Unua will be an enquiry hub that sparks curiosity for continuous learning. It will offer a variety of formal and informal learning opportunities, within the built space and throughout the adjoining precinct.

Te Unua's approach to storytelling will include tactile and technological interactive exhibits that engage both young and more mature minds.

Protecting

Te Unua will be a safe environment for people and collection, achieving agreed resilience for seismic and flood risks and providing appropriate environmental controls to protect taoka over time. Design approach, materials and systems will be selected to ensure permanence and managed to reduce load on the present and future environment.

Engaging

Te Unua will be designed as a highly flexible space for exhibition and service with sufficient volume, floor area, and systems to enable future reconfiguration. Physical and technological aspects of development are provided to accommodate future change and development. Te Unua will be responsive to cultural change, how that affects the collection and how it is reflected in the stories we tell.

Value

When complete, Te Unua will represent excellent value for the community's investment. This consideration, while including monetary assessment, will extend to non-monetised aspects such as culture, energy, and resources. Te Unua will have delivered all foreseeable operational requirements, with appropriate materials for permanence, durability, and maintenance, while offering optimised ongoing running costs for future efficiency.

Critical success factors

Piki kā tauwehe mātua

What will Te Unua need to deliver for visitors and the community?

Connecting

Visitors to Te Unua will enjoy an immersive experience. This experience, be it exhibition, education, research, staff contact, performance or reflection, will leave the visitor with a deeper awareness of Murihiku's land, sea,



Te Unua – Explore the Stories of Murihiku Southland

Te Unua - Kimihia Ka Purakau o te takiwa

Based on public feedback and the findings of the Governance Group report, the Council has decided:

- **The cultural facility will remain in Queens Park** – the community has a strong connection with the park and has been clear they wish the facility to remain there.
- **A new home for the tuatara** – Southlanders love the tuatara and a new home is proposed for them near Te Unua and connecting with other Queens Park facilities. Discussions are ongoing with iwi and the Department of Conservation before final decisions are made.
- **A separate storage facility** – an alternative location of Tisbury Reserve has been identified for a separate storage facility to support the redevelopment.



You will be able to taste the salt air, smell the upheaval of the sea, hear the cries of life as they are constantly challenged in a changing landscape; touch the fossils of life embedded forever in a cocoon of sedimentary preservation; and witness the impossibility of how life beat the odds and survived.

Throughout time the layers of our landscape will be revealed – the story comes much later than geology, and flora and fauna. These will include, but not be limited to:

- **The story of Minnie Dean** – as a hologram
- **The violence of the sea** – the loss of Tuhawaiki, wreck of the Endeavour, Tararua and General Grant
- **When nature wins** – The Enderby Settlement
- **The unscrupulous** – Joseph Hatch and the Macquarie Island Hatchery
- **The dreamers** – Ernest Robert Godward, Peter Beck
- **Lost opportunities** – Southland Provincial Council – gold and railway
- **The legacy** – The Underwood Milk Company (Highlander Condensed Milk); Owen McShane; Richard Henry
- **Conflict** – Tukurau, Spencer, South African War, world wars
- **The Home Front** – Coast Watchers, women
- **Commerce** – H & J Smith; Broad Smalls, Calder McKay

What visitors can expect from Te Unua

Te Unua will provide a major additional attraction in Queens Park, and will be the pre-eminent cultural facility in Invercargill where visitors will engage in the stories of Murihiku Southland.

A journey

You arrive at your new facility – Te Unua – where the strength of two waka lashed together will invite you on a journey into our community. The sound of the sea, a volcanic eruption, the screech of a seabird and a blast of cold air will quicken the senses as your eye adjusts from natural light, and you enter the world of Te Ao Mārama.

Public spaces

For all options, the arrival area includes main entry point, foyer and reception. Close by will be visitor spaces including retail, cafe, kitchen and back-of-house, parents' room, toilets, lockers and light storage.

A multi-use space is included for temporary displays, functions (suitable for holding medium-sized groups), pōwhiri and other cultural welcoming ceremonies. Adjacent will be an "education space". The public spaces will have easy flow between key visitor touchpoints with links to the nearby exhibition spaces on ground and upper levels.

Exhibition spaces

In all options, there will be four different spaces for different types of exhibitions:

- **Long-term storytelling** – encapsulating the stories of the region using immersive displays, in-built technology, cases and display mounts, and reflecting the surrounding Queens Park area.
- **Short-term storytelling** – content will change over time using collections of art and visual media.
- **Special exhibition space(s)** – a flexible area that can be open to support large travelling or international exhibitions, or separated into smaller spaces to display special collections.
- **Education-focused space** – aimed at school-aged children and operating as an on-site learning space, this area will change depending on the local or visiting exhibition topics.

What are the options for Te Unua?

He aha kā kowhiri ka mō Te Unua

Three options have been identified for the redevelopment of the museum. The Council's preferred option is the largest 4150m² rebuild. There is a significant difference in experience offered by both options. ★ Okay ★★ Great ★★★ Excellent

WILL THIS OPTION OFFER...	PYRAMID STRENGTHENING AND REFURBISHMENT: OPTION 1	NEW BUILD 3550M ² : OPTION 3	NEW BUILD 4150M ² : PREFERRED OPTION 2
A captivating and immersive experience?	A refurbished building would allow the experience at the museum to be improved, but we would be severely restricted by the constraints of the shape, size, fabric and structure of the current building. It will limit our ability to create new experiences within the current building and to implement new technology. It's also unclear at this stage how much the seismic structural strengthening work would impact on the already-limited space and flexibility of exhibitions. ★	This option would also give us the opportunity to build and design a thrilling and enveloping experience from scratch. While there won't be quite as much space as option 2, we would not be limited by space or technological capabilities like in option A. ★★★	This option would give us the opportunity to start from scratch in creating the most captivating and immersive experience possible, with the building designed and built purposefully. There would be a huge amount of space for technology and an experience that captures your imagination from the beginning. ★★★
Science, Technology, Engineering, Arts and Mathematics?	STEAM is all about learning and in the current building we do have a classroom space, but it's not spacious enough to allow large groups of our tamariki and it doesn't have capacity for additional technology and learning tools. ★	This new build option will offer expansive educational spaces with hands-on technology and learning tools for tamariki to experience STEAM in new ways. ★★★	The biggest new build option would allow the learning areas to expand in space and in the technology and tools we could provide, giving an entirely new and flexible hands-on educational experience. ★★★

★ Okay ★★ Great ★★★ Excellent



What are the options for Te Unua continued?

Ka haere tonu te kōrero

WILL THIS OPTION OFFER...	PYRAMID STRENGTHENING AND REFURBISHMENT: OPTION 1	NEW BUILD 3550M ² : OPTION 3	NEW BUILD 4150M ² : PREFERRED OPTION 2
<p>National and international touring exhibitions?</p>	<p>The physical space, structure and layout of the current building means we are limited in our ability to receive touring exhibitions.</p> <p>But, more importantly, the maximum rating of the seismic building standards we could achieve at the pyramid building are still not enough to allow us to house touring exhibitions, or even to borrow items from other national collections.</p> <p>While we would make the building as safe as possible, there would be insurance impacts that mean we may not have the ability to fully protect taoka or treasured items in this building. There may even be cases where we can't display items from our own collection. (-)</p>	<p>This option will deliver an extremely resilient and safe building to house our collections and to welcome visiting exhibitions and items. We would see national and international exhibitions through our doors frequently and we would have the flexibility to house many of them. While we'll have the opportunity for most of them, it is possible we could miss out on a few really big ones if they are larger than the space available. ★★</p>	<p>A new and resilient building means we could completely and confidently protect our own taoka and those borrowed from other collections. We would have enough space and flexibility to house exciting national and international exhibitions that we've never seen in Murihiku before, and like those many of our residents travel to Dunedin or further afar to see. ★★★</p>
<p>Spatial rethinking and opportunities?</p>	<p>The current structure of the pyramid building is what we have to work with in this option. It means we can't be as flexible with moving exhibitions and displays in and out to utilise different spaces and make it fresh and interesting. ★</p>	<p>We'd be able to provide an exciting, flexible and changing space with this option. With no limits on structure and layout, you could expect to see something new and different at every visit. ★★★</p>	<p>This option would provide a huge amount of space and flexibility to change and adapt our displays, move exhibitions in and out and create a constantly changing and engaging cultural experience. ★★★</p>
<p>An enhanced physical connection to Queens Park?</p>	<p>At the moment, while the building is set within Queens Park, you can't see much of it from inside. ★</p>	<p>This option means we could design a building that is physically and visually connected to Queens Park so you would know that this cultural facility is part of the park, and not just set within it. ★★★</p>	<p>To design a new building would give us the opportunity to create a clear physical connection with Queens Park. We could create indoor-outdoor flow with the special spaces we know and love in the park, and we could include windows and spaces that are directly connected. ★★★</p>

★ Okay ★★ Great ★★★ Excellent

WILL THIS OPTION OFFER...	PYRAMID STRENGTHENING AND REFURBISHMENT: OPTION 1	NEW BUILD 3550M ² : OPTION 3	NEW BUILD 4150M ² : PREFERRED OPTION 2
Improved retail and hospitality opportunities?	The current museum café is limited by its size and a commercial kitchen that is only capable of basic fare. The space for retail is also limited here. (-)	This new build would give us the opportunity for a larger and more flexible kitchen, café, retail and function space. It wouldn't be as sizeable as option 2, but we could still accommodate events and more people. ★★	A new build would allow us to create a larger kitchen, more space for hospitality and functions, and a new area for retail. We would have the flexibility to expand and shift this area to showcase our region's products or to allow for events. ★★★
Suitable staff and back-of-house facilities?	In this option, there is almost no space for back-of-house activities, such as preparing and setting up new exhibitions. It limits staff's capability to plan and create the best displays possible. (-)	This new build would give us the opportunity for a larger and more flexible kitchen, café, retail and function space. It wouldn't be as sizeable as option 2, but we could still accommodate events and more people. ★★	This option allows for a significant increase in back-of-house facilities. It would ensure staff would have plenty of space to prepare, set up, create and pack down as we shift between exhibits. There would also be storage solutions and great spaces for our staff. ★★★
Opportunities for visitors to return, connect and engage?	With less ability to change exhibitions, show precious taoka, create expansive or immersive experiences, or attract touring exhibitions, it's less likely that our visitors will want to come back time and again. ★	More space, changing exhibitions and displays, clever and creative learning tools and facilities, and touring exhibitions, mean option 2 would provide a multitude of opportunities for visitors and residents to consistently visit, engage and connect with the facility. ★★★	The huge space on offer in this option, the ability to be flexible and change displays, create engaging experiences and learning opportunities, as well as draw large and unique touring exhibitions, means this option creates the most opportunities and incentive for visitors to return, connect and engage. ★★★
A user-friendly experience?	The current building has limitations in accessibility and it can be difficult to find your way around. This could potentially be limited further after the building has been seismically strengthened. ★	This option means we can ensure accessibility for everyone, and create a wayfinding experience that is easy, enjoyable and natural. ★★★	A new building gives us the opportunity to ensure our spaces are completely accessible for those who use wheelchairs or other mobility devices. It also means we can create a purposeful flow and focus on clear, natural and clever wayfinding. ★★★
A resilient facility that will be around for many years?	We know the pyramid has seismic strength issues, and the maximum we could achieve with structural support is 67% of the national building standards. While it would be improved and safe, if there was an earthquake event, this building could be damaged beyond repair. (-)	This option would provide an extremely resilient building that meets 100% of building standards. It would be large enough for us now and into the future, but at some point, it's likely our collection and ambitions may outgrow the physical size and space. ★★	A large new building would be built to meet 100% of the national building standards. It would be safe, secure and physically last many years, and it would also be large enough to allow us to expand our collection and grow our experiences into the future. ★★★

★Okay ★★Great ★★★Excellent



Options and funding

Kōwhirika me te putea.

The 2021-31 Long-term Plan set aside funding of \$52.5m for a new cultural facility, with \$39.4m from Council and the remaining \$12.9m from external funding. This included \$4.5m for storage. It was expected that the new facility would be delivered in 2026/27.

Three options have been identified for the development of the museum. All of the options will require additional Council funding over what was set out in last year's Long-term Plan. This is variously due to cost escalations, higher build costs for new builds and current circumstances reflecting a lower expected level of external funding.

For all three options, Council will be required to manage the role of achieving the expected level of external funding by underestimating these costs.

For the option to redevelop the pyramid, this is \$6 million, which equates to a 0.72% rates increase.

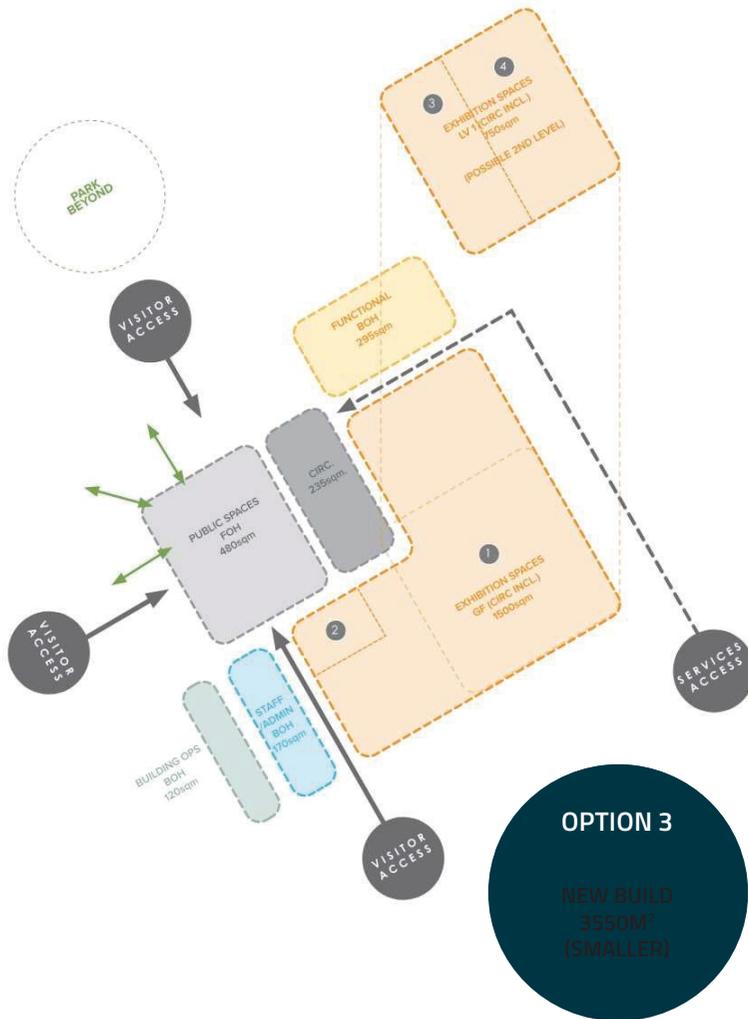
For the smaller new build option, this is \$11 million, which equates to a 1.32% rates increase.

For the preferred option, this is \$20 million, which equates to a 2.4% rates increase.



PYRAMID STRENGTHENING AND REFURBISHMENT - OPTION 1				
DESCRIPTION	COSTS	RATES IMPACT	ECONOMIC IMPACT	OPERATING COSTS
<p>Strengthen the Pyramid to 67% of new building standards and refurbish.</p> <p>This option addresses the structural issues of highest concern and increases the building's ability to withstand an earthquake.</p> <p>It does not address increased seismic requirements for storage.</p> <p>It does not comply with the Te Unua vision, critical success factors, services or functional brief.</p> <p>Forecast to open 2027.</p>		2022/23 +0.30%		
	Total \$57.1m	2023/24 +0.55%		
	Council \$51.1m	2024/25 +0.52%	Generates between \$1.15 and \$3.66 for the Southland region for every dollar invested	\$0.1-\$0.3m additional operational costs during the construction phase
	External \$6m	Total average rates per year (includes increase already rated in 2021) \$158.05 per year		
	Additional to LTP \$11.7m			
	Investment required 2022/2023 \$2.9m			



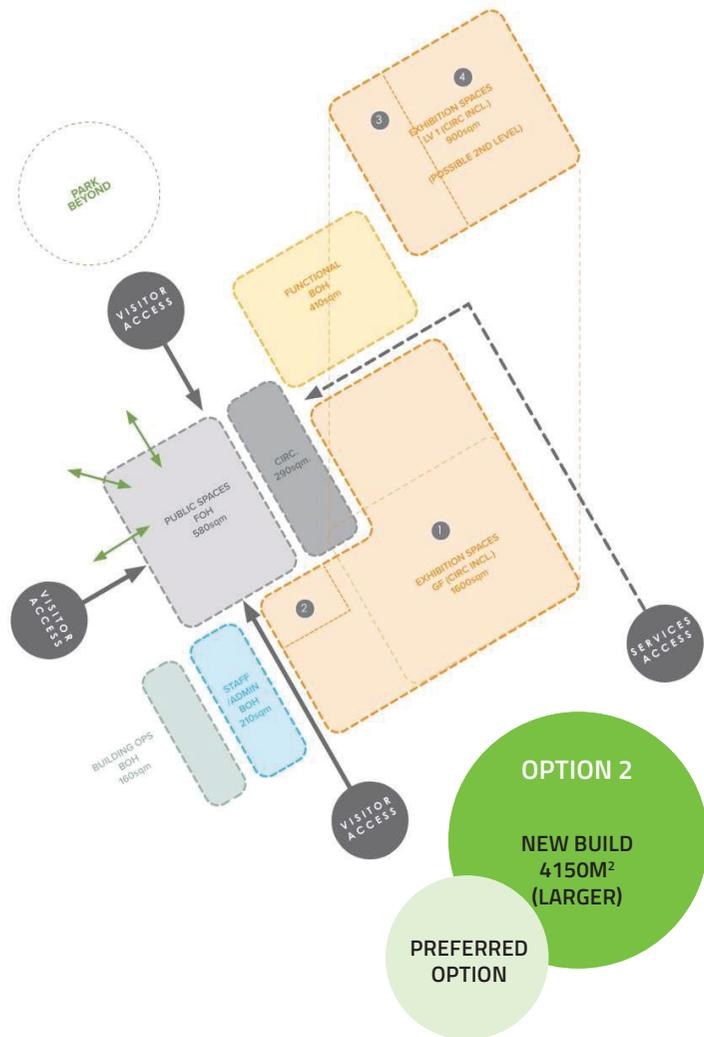


NEW BUILD 3550M ² (SMALLER) - OPTION 3				
DESCRIPTION	COSTS	RATES IMPACT	ECONOMIC IMPACT	OPERATING COSTS
The Pyramid is demolished and a replacement building positioned within the current footprint. A new standalone storage facility is built off-site. The design is a smaller version of option two, but also provides a modern new building with similar features. The 600m ² reduction in space means smaller public, exhibition and staff areas. This would not adversely affect the delivery on the vision and critical success factors; it requires a more flexible approach.	Total	2022/23		
	\$65.3m	+0.60%		
	Council	2023/24		
	\$54.3m	+0.55%		
	External	2024/25		Generates between \$1.26 and \$3.69 for the Southland region for every dollar invested
	\$11m	+0.59%		\$0.1-\$0.3m additional operational costs during the construction phase
Additional to LTP				
\$14.9m				
Investment required 2022/2023				
\$1.7m				
		Total average rates per year (includes increase already rated in 2021)		
		\$167.23 per year		

↑
*THE AVERAGE DOLLAR INCREASE PER WEEK.
\$3.22

Options and funding continued

Ka haere tonu te kaupapa



THE PREFERRED OPTION - NEW BUILD 4150M ² (LARGER) - OPTION 2				
DESCRIPTION	COSTS	RATES IMPACT	ECONOMIC IMPACT	OPERATING COSTS
The Pyramid is demolished and a replacement building positioned within the current footprint. A new standalone storage facility is built off-site. The design offers a world-class, spacious and modern new building, maximised opportunities to showcase the stories of Murihiku Southland, and right-size for future requirements.	Total	2022/23		
	\$75.7m	+0.61%		
	Council	2023/24		
	\$55.7m	+0.64%		
	External	2024/25		Generates between \$1.19 and \$3.60 for the Southland region for every dollar invested
	\$20m	+0.66%		0.2m additional ongoing operational costs
Additional to LTP		Total average rates per year		
\$16.3m		(includes increase already rated in 2021)		
Investment required 2022/2023	\$12.5m	\$171.34 per year		

*THE AVERAGE DOLLAR INCREASE PER WEEK.
\$3.30

Frequently asked questions

Ka pātai pu putu

Why are we consulting on this again?

Public feedback during the Long Term Plan consultation made it clear that people wanted to see the facility reopened, however, there were differing views about options for the future, with some people agreeing the refurbishment of the pyramid was the right way to go, and others suggesting a rebuild would be better. As a result, the Council decided to look a little deeper into the options, forming a Governance Group to advise on a future cultural facility for Invercargill and consider a range of options. We now want your feedback on the options considered so we can make decisions for the future.

What will be the name of the facility?

The new facility has been gifted the name “Te Unua” by Waihōpai Rūnaka and Te Rūnanga o Awarua.

When will the museum open?

Under proposed plans, the museum is scheduled to be opened in 2027.

Why is the pyramid building no longer suitable?

The existing pyramid building had to be closed in 2018 due to the fact it did

not meet earthquake building code and is considered a significant safety risk. As work has progressed on options to reopen the facility, it has become clear that significant work and cost would be incurred to bring the pyramid building to 67% of New Building Standards – the minimum allowed for existing buildings. During public consultation in 2021, the idea of a new build was raised and the option of a new, modern facility that meets all building standards and can offer larger spaces has arisen.

What parking will be available?

There will be plenty of free parking available at the new facility.

What will happen to the pyramid building?

We know the local community has developed a strong connection to the pyramid over the years. While the building would need to be demolished to make way for a new structure, we would like to work with the community to capture the memories and feelings associated with the pyramid as part of the process.

What will happen to Henry the Tuatara and his mates?

Through the reimagining phase it was agreed that a new enclosure for the tuatara should be built separate from the new cultural facility but remaining within Queens Park. It was also agreed they should have some level of visibility and accessibility within Te Unua. Tuatara are now seen by many as an important part of the Invercargill and Southland story. However, Council does not own the tuatara so we are talking with iwi and the Department of Conservation about the proposed changes to ensure the solution is suitable for everyone.

Will entry to the museum be free?

Entry to the main areas of the museum will be free for locals and visitors alike. Special exhibitions will require an entry fee.

What kind of exhibitions will there be?

Entry and public spaces will lead through to a multi-use space for temporary displays, functions (suitable for holding medium sized groups), pōwhiri and other

cultural welcoming ceremonies. The public spaces will have easy flow between key visitor touchpoints with links to the nearby exhibition spaces on ground and upper levels. Exhibition spaces will include long-term storytelling, shorter-term exhibitions, space for special exhibitions and touring shows, and an education exhibition space. Both new build options will provide greater opportunity for visiting exhibitions.

How much is this going to cost ratepayers?

Each option has a different cost. The full details on costs and the impact on rates can be found on page 5.

What happens if Council is not successful in achieving the level of external funding required?

Council will be required to underwrite all costs. This means that if external funders provide less than expected, Council will need to make up the shortfall and this will need to be paid from rates.



Frequently asked questions

Ka pātai pu putu

Where is the museum going to be?

There was strong public feedback in 2021 that Queens Park is the right location for Te Unua and the Council has decided it should remain there. A separate storage facility is planned off-site on Tisbury Reserve.

What is happening with the material (artwork, exhibitions, artefacts) the museum has in it?

Right now, these are being catalogued to go into long-term storage at the planned new facility. These will be used in the long-term and short-term storytelling spaces in Te Unua as well as part of other changing exhibitions.

Why is the storage facility being built first and the museum not being prioritised?

The delivery of the new cultural facility in 2026-27 is intrinsically linked to a storage solution. The reimagining phase tested and confirmed the preferred location for Te Unua as Queens Park; however, this approach will require the alternative storage solution to be completed and the collection decanted in full by early 2024. Should the storage project be delayed, this will impact the start date and potentially the completion date of Te Unua.

To mitigate the risk to the Te Unua programme, the Project Control Group agreed to decouple the storage project from the delivery of the new facility. There is funding available within the Long Term Plan (\$4.5m) to allow this process to commence immediately, reducing any delay associated with the public consultation of Te Unua. It has been estimated that the design and construction period for a new storage facility is 24 months. The new location meets requirements for seismic and flooding risk management.

Further consideration for temporary storage should be carried through to the next phase of the project; should the storage project experience delays that negatively impact Te Unua construction programme ie. delay the commencement of demolition.

What will happen to the Arts and Creativity Invercargill project?

Arts and Creativity Invercargill (ACI) is a facility to enable art activity in the central city. This project is still planned for delivery in 2027 – 2030. Council will consider the projects focus as part of future planning.

Why is it taking so long to make a decision about rebuilding the museum?

The museum is an integral part of the Invercargill community and people have strong feelings about what happens next. The redevelopment of the facility will also cost ratepayers a significant amount of money and will result in an outstanding facility for the region and visitors alike. It's important to take time to hear from experts, compare with other facilities and listen to public views to make sure we get the best possible outcome for Invercargill.

Why are workers allowed to access the museum and not us?

Earthquake building standards mean the museum is unsafe for public. Workers are allowed on site to carry out essential work under strict health and safety guidelines and following correct procedures.

Will the new building be a pyramid shape?

The pyramid shape is not intended to be replicated in any of the proposed new builds. The Council does, however, recognise the community's affiliation with the pyramid and would like to consider how memories and feelings could be shared through the redevelopment process.

What modern/tech features are being built into the new museum?

Te Unua will reflect modern exhibition and display techniques and include special technological features. This may include virtual or augmented reality displays as well as screens and other tech concepts. There will be more options to include these in the new build options.

What about He Waka Tuia? Doesn't that building have an earthquake risk too? Will He Waka Tuia be open until the new museum is complete? What will happen to that space afterwards?

While the building in the inner city that is host to He Waka Tuia has been identified as an earthquake-prone building, Council is working with the landlord of the building to address the identified issues. This building is not considered to be the same level of critically earthquake-prone as the pyramid.

No decision has been made on the future of He Waka Tuia after Te Unua is opened, but it will remain open until then.

Storage facility for the Museum – Tisbury Reserve

Te Whenua Rāhui Te Whata mau taoka

We are proposing to amend Rural Reserves Omnibus Management Plan 2012 to reclassify Tisbury Reserve to allow for the museum storage facility development.

Creating somewhere safe to store the region's taoka (artefacts) will be key to the success of the project. It is proposed to build a new storage facility (Te Unua) on Tisbury Reserve. This location meets the requirements for a seismically safe location that is within a good distance to Queens Park. Tisbury Reserve is currently used for grazing (lease soon expiring) and pony club activities. Discussions are being made to look at alternative locations if needed.

Submissions are invited on a proposal to amend the Rural Reserves Omnibus Management Plan 2012 to change the classification of Tisbury Reserve from Recreation Reserve to Local Purpose (Museum) Reserve for Te Unua Development.



- Location:** 800 and 820 Rockdale Road
- Legal Description:** Secs 68, 69, 71 and part Section 70 Blk II Town of Seaward Bush, Sec 72 Blk II Town of Seaward Bush SO 1278
- Reserve Status:** Recreation Reserve – Proposed to change to Local Purpose (Museum) Reserve
- Area:** 9.0364 hectares



Looking ahead to 2023/2024

Titiro whakamua 2023/2024

This is a time of significant change for Local Government.

The Three Waters Reform and Local Government Reform processes will change the way councils operate. These changes do not impact the 2022/2023 Annual Plan but our plans next year will reflect these issues.

The transition process for Three Waters is expected to start in 2023 with the service taken over by the new entity in 2024. Council is preparing the information that the Government will need to ensure a smooth handover. This will support services for the community and good stewardship of the assets owned by the community.

The Future of Local Government review has commenced. The interim report was published in 2021. This report outlines the Government's intention to create a new local government structure that is more focused on community services rather than infrastructure and will introduce co-governance principles with Iwi.

The Government is intending to release the draft report and recommendations for public consultation later this year, with the final recommendations agreed in 2023. No changes to operations are expected until the new Long-term Plan in 2024.

Council has commenced work considering what community capacity building could look like for Invercargill in partnership with the Ministry of Business, Innovation and Employment's Just Transitions Programme, which seeks to build community resilience through any closure process for Tiwai Point Aluminium Smelter.

In 2023/2034 we also expect to have more information about how Covid-19 has impacted the economy, including how our population has been impacted by border closures and the long-term impact on inflation. We will take this information into account in putting together the Annual Plan next year and in our Long-term planning.



Tell us what you think about our Annual Plan



Ko te mea tino nunui kite korero e pa ana Te Unua

Now we want your submissions to help Council agree the plans for the museum and finalise the Annual Plan.

Submissions are due by 5pm, 29 April 2022.

Online submission

Complete a submission form online:
letstalk.icc.govt.nz

Face to face

Come and tell us face to face.
You can find our programme of events here:
letstalk.icc.govt.nz

Postal Submission

Complete the submission form and post it to us:
FREEPOST - ICC
CONSULTATION
Invercargill City
Council
Private Bag 90104
INVERCARGILL 9810



FOLD

Make a submission on the future of Te Unua.

Tukua mai a kaoho tāpaetaka e pa ana Te Unua

Tell us what you think of our Annual Plan, including options for Te Unua.
Submissions are due by 5pm, 29 April 2022.

Full name: _____

Organisation: _____

Address: _____

Email: _____

I would like to speak on my submission

Hearings are planned for 10 and 11 May. There will be the option to speak in person, on Zoom or via phone, subject to Covid-19 requirements.

Note: Your name and location will appear in the Council agenda with your submission. All other information will be kept confidential.

Phone: _____

Please provide your phone number if you wish to be heard.





FOLD

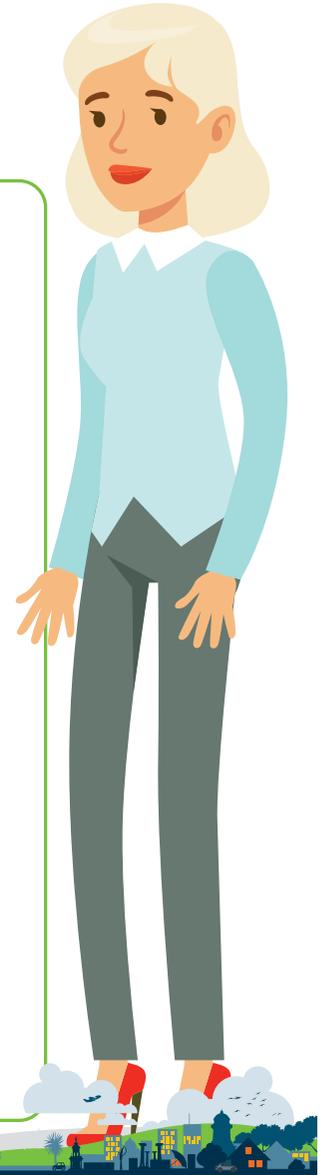
Do you agree with our preferred option for Te Unua or do you support another option?

(See pages 9 and 16) If you need more room, please attach another piece of paper.

Option 1
Redevelop the existing building
Tell us why

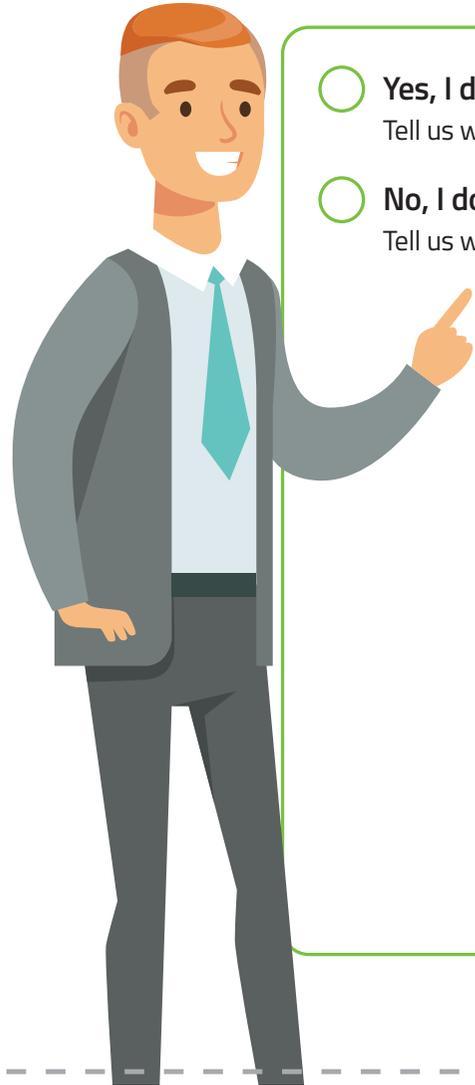
Option 3
3,550m² New Building
Tell us why

Preferred Option (Option 2)
4,150m² New Building
Tell us why



FOLD

Do you agree with the proposal to change the Reserve status of Tisbury Reserve? (See page 16)



- Yes, I do agree**
Tell us why
- No, I don't agree**
Tell us why

What is your submission on the fees and charges schedule?
(See icc.govt.nz/Annualplan/Feesandcharges)

Do you have other feedback on our Annual Plan?



If you need more room, please attach another piece of paper.



FOLD

Do you live in the Invercargill District? Yes No

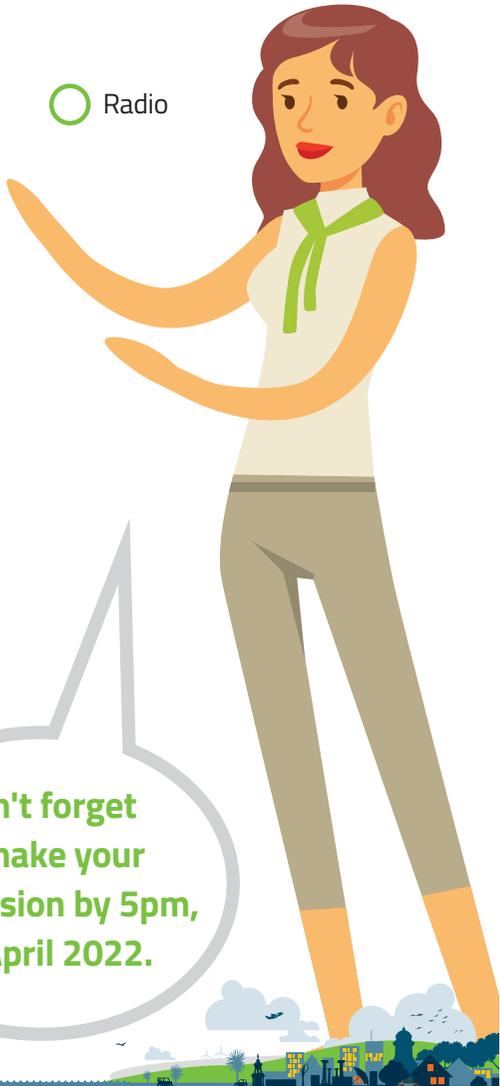
How did you hear about the Annual Plan consultation?

- Website Facebook Public meeting Event Newspaper Radio
- Other

Please provide your email address if you would like to stay up to date on Council consultations and engagements.

How will consultation be impacted by Covid-19? The consultation will still continue, for more details go to www.icc.govt.nz/roadmaptorenewal/covid-19-plan/

Don't forget to make your submission by 5pm, 29 April 2022.



↑Secure here

↑Secure here



Tell us what you think of our Annual Plan.

It's important you have your say
on the plans for Te Unua.



FOLD

↓Secure here



FREEPOST - ICC
Roadmap to Renewal
Te Unua Submission
Invercargill City Council
Private Bag 90104
INVERCARGILL 9810



Make a submission 2022-2023 Annual Plan

Financial Strategy

He ara whakaoho

Prudent Financial Management

Prudent financial management is a legal requirement for Councils. Subpart 3 of the Local Government Act provides for a level of predictability for ratepayers, and highlights the need for decisions to be made in the interests of current and future residents.

The major components of a good strategy tie in three key factors:

- Capital expenditure identified to continue to deliver sustainable levels of service. This includes:
 - costs to renew existing assets,
 - to provide for increasing levels of service where desired, and
 - to provide for growth if necessary
- Borrowing is a rationed resource. Council does not have unlimited borrowing capacity and the ratepayers do not have unlimited resources to pay increasing rates for increased debt servicing
- Rates are a limited resource. Council must be mindful of the impact rates has on ratepayers. It runs into two limitations. The first is ability to pay, and the second is willingness to pay. Ability to pay is addressed through the government rates rebate, but willingness to pay is harder to define

Key challenges

Invercargill will be exposed to several challenges over the next ten years. Those challenges include:

1. A demographic change toward an ageing population with less growth than forecast.
2. Growing pressure to recognise climate change effects
3. Significant capital expenditure on existing infrastructure
4. Emerging pressure on higher standards for water, stormwater and sewage disposal
5. Growing pressure to amalgamate Three Waters into larger service delivery entities
6. Investment in the Inner city
7. Ageing Buildings needing significant upgrade or replacement (including Rugby Park, Museum, Civic Administration building among others)

However, acknowledgment of these challenges is the first hurdle to overcome. Commentary on items 1-3 is included below.

For water and sewerage reform, Council has taken an approach of business as usual. The combination of rising standards and amalgamation of waters into separate entities address problem and solution. Council approach to these is that ICC will continue to deliver water and

sewerage according to our plans, and that if new entities are formed in the next three years as expected, then they will get assets and a revenue base that has been maintained.

Investment in the Inner city and ageing buildings has been addressed through the capital work programme.

There are no other factors that are expected to impact on ICC ability to maintain existing levels of service and to meet additional demands for service.



Demographic changes

In the recent past there was a short-term trend for provincial city populations to decrease, leading some commentators to raise the spectre of “ghost towns”. This followed several years of slow decrease in population with an increased drift to major urban centres. In the past three years this trend of lower populations and decreasing real estate values has slowly reversed. Invercargill has seen significant lifts in property values and discussions have emerged relating to housing shortages. The recent outbreak of Covid-19 will create significant uncertainty about the near and medium-term economic outlook and that will flow through to property and population. However, it is too early to determine whether that will be a short term “blip” in the statistics or move provincial NZ to more growth or more retraction. That trend will take some time to determine, however analysis at this time shows that Invercargill population growth has outstripped recent StatsNZ mid-range forecasts.

While Council will be taking action to influence a positive outcome rather than a negative impact, it is worth reflecting on what the impact of change may be for Council and the community. In relation to growth the city has most of the infrastructure necessary to service a population for most of the growth in the Long Term Plan. Council has already identified a need for another water supply to mitigate the risks of a single source of supply. That need would be accelerated if population rises. The costs of an emergency water supply are highlighted in the Water Activity. Another effect of growth would be on the volume of sewage outfalls. An increased population may put additional pressure to improve the quality of the outlets for treated sewage, however it is expected

that the standards for these will be lifted when the current consents need to be renewed. Increasing population would likely see the current increase in house prices continue, with more houses being built to cope. Subdivision capacity for growth is not unlimited but is able to respond to market demand. New subdivisions are responsible for providing all of the infrastructure for new properties (roads, footpath, stormwater pipes and water and sewerage pipes) so the increase for Council is the maintenance of those assets, which is funded from the increased rates. Costs only fall to Council if the major arterials and collector pipes need to be upgraded through growth. This is not envisaged to be a factor in the next 20 years.

Major demographic shocks are possible through Central Government reform. Those reforms include:

- Reform of the Southland Institute of Technology will have an uncertain impact on the number of both foreign and NZ students living in Invercargill to complete their studies
- Increasing likelihood that water, sewage disposal and stormwater disposal will be delivered by Central Government
- Potential future closure of Tiwai point

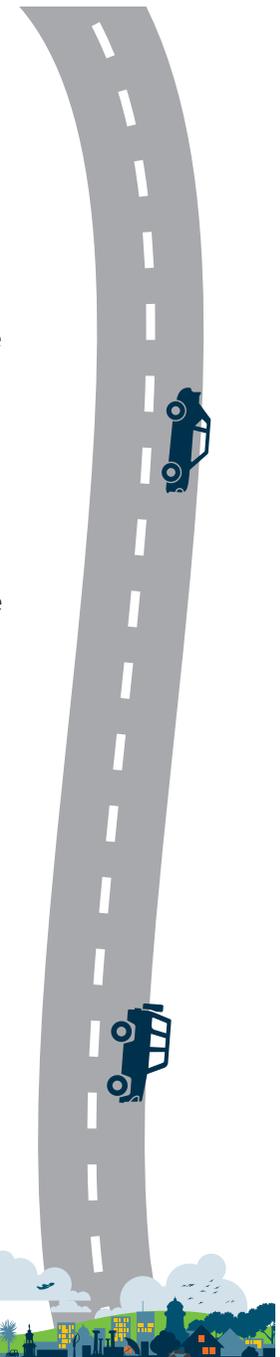
These changes are uncertain, and so cannot be planned for. The extent of the change and impact is unknown. However, it takes a significant change to significantly impact on Council services and costs. Also, it takes some time for the community to make decisions and adjust to the change. Council will need to respond to the collective impact of individuals choices.

If population reduces it can have different impacts:

- The same number of properties but a lower average persons per property
- Sales prices of properties reduce and they take longer to sell. The market adjusts for these changes
- Properties are unable to sell and get abandoned, and then subsequently demolished. This has occurred in New Zealand in past decades but typically in much smaller communities than Invercargill. A trend at this level takes time to emerge and so there is time to manage it if it emerges. Communities need to be mindful of this possibility. The sooner it is identified the better it can be managed

Due to the significant uncertainty of the current economic outlook, Council is not planning for major changes in population. Our past observation is that the changes in recent year have been both up and down and the impact has been minor.

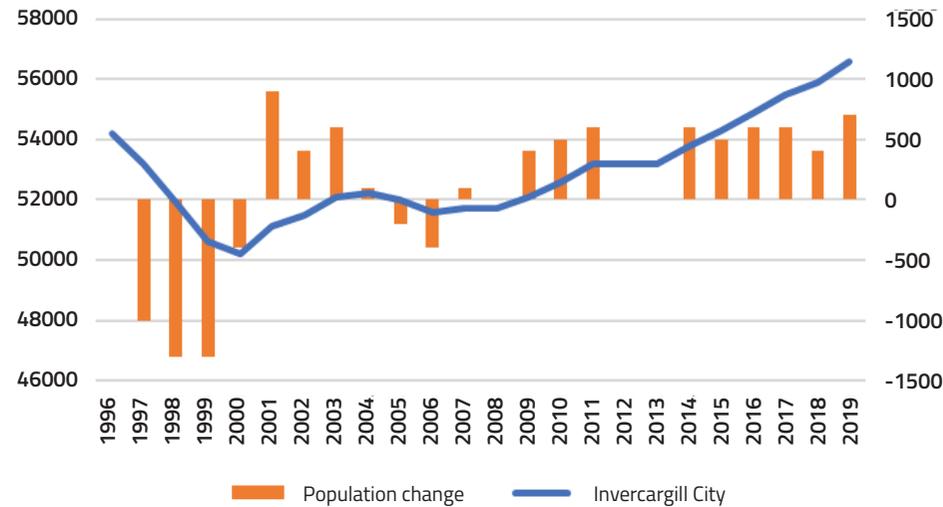
Changes in the composition of population by age group and ethnicity are also expected to continue. This change is not expected to have a significant change in the services provided by Council, although Council will adapt to these changes as they emerge. Changes may occur in the nature and shape of Council's activity programmes for operating activities. These changes will not be significant and will occur within the current funding envelopes.



One major composition change that may impact significantly is dependent on the economic fall-out from Covid-19. It is expected that this will have a significant impact on unemployment, although how much and where and when that may occur is extremely uncertain. Council will be monitoring unemployment levels for Invercargill/Southland and also other statistics for homelessness and crime. If necessary, Council will change its programme delivery to address these issues. Council expects that if these occur there will be Nation-wide initiatives to help address these. Council will be ready to engage in these for the benefit of Invercargill. Council will also modify its operational programmes if needed.

Information from Statistic NZ shows the population change for Invercargill since 1996. The shape of the blue line indicates why there has been significant change in the Invercargill housing market. After a long period of decline to be below the 1996 population, the population rose to be at a similar level to 1996 in 2015. Steady growth since then has put pressure on existing housing supply. That pressure has built-up and the latest Rating Values show very large rises in residential property values averaging around 50% since 2017. An increase in population of 500-600 people per annum is around 1%. Our assessment of growth for the LTP has been included at 0.6%. The impact of growth for the city is positive for the next 10 years as it can occur with within the current and planned infrastructure so does not incur additional cost.

INVERCARGILL POPULATION CHANGE



There is a consistent theme within Council's community outcomes. The outcomes demonstrate that the Council will maintain a strong, safe and well-utilised city with an increased, more diverse and active population who encourage the development of future technology and embrace the facilities offered to them.

Council seeks to encourage this through the development of growth projects and sustainability of existing services. However, it is not anticipated that land use will change to an extent that would have an impact on debt over this course.

With low growth anticipated for the number of properties, Council notes that the current infrastructure network is set to service the community, provided it is renewed when required. Council's infrastructure network has been built to service a population much larger than that which currently resides within the city.

The historic pattern of Invercargill growth and development means that a number of the Council's assets were built at the same or a similar time, and therefore generally require renewal at a similar time. As a result there will be peaks in renewal costs which are evident within this Strategy.



Growing pressure of Climate change

Climate change has been noticeable in some forms for a number of years. There is no doubt that the weather patterns have developed more extremities. Council is noticing a combination of more storms, with flooding, and more droughts. These higher extremes place more pressure on Council infrastructure services. Higher frequency of storms leads to increased costs on roads to recover from storm damage, also the flooding frequency could lead to a need to upgrade the capacity of the stormwater network to mitigate flooding of buildings. Droughts create more frequency and longer duration of water peak use, and that puts stress on the current single source of water.

In addition to the weather pattern changes, rising sea levels are a future concern. Invercargill is a flat and low-lying city; parts of the City are likely to be impacted by rising sea levels.

While not wanting to diminish the significant future impact of these issues the timeframes for sea level rises are into the future, rather than the ten-year planning horizon of this plan. It is expected that rising sea levels will have an impact on some Invercargill properties, those that are low lying and close to the sea. Assessment of the impact of the mid-range forecast of sea level rise for the Southland region shows that the number of areas impacted by a 1m rise in Invercargill are very minimal. The potential impact of more significant sea level rises will emerge over time and individual property owners will become aware of the impacts well in advance. Council will be aware of future developments and will be mindful

of rising sea levels when considering Resource consents for new properties and the impact on future District Plans. Council will not impact individual's property rights by taking pre-emptive action on existing properties where the current uncertainty remains. As this may have an effect of making a future possible loss for a property owner a certain current loss. At this stage that would be unfair to both the property owner and the ratepayers who may then have to fund the loss.

Significant Capital Expenditure

This Strategy operates in line with the Infrastructure Strategy and observes that over the next ten years the cost to the Invercargill community to preserve, renew and maintain our infrastructure assets will be significantly higher than previous renewal costs. Because of this the rates increase will be higher than in previous years. When looking at this Strategy it is important to understand where Council is starting from and where it wants to get to in ten years. As at 30 June 2020 the financial situation of Council is one of good health, with reasonable strong capacity to invest for the future.

Council was meeting four of the six prudence benchmarks. It has a relatively low level of debt compared to other New Zealand Councils and a low level of debt compared to its rate revenue. Council asset position showed total assets of over \$1 billion and investments of \$97.6 million with no significant liabilities outside of term debt. Council also had its credit rating from Fitch Rating upgraded from AA to AA+ stable, which further supports Council's strong financial position.

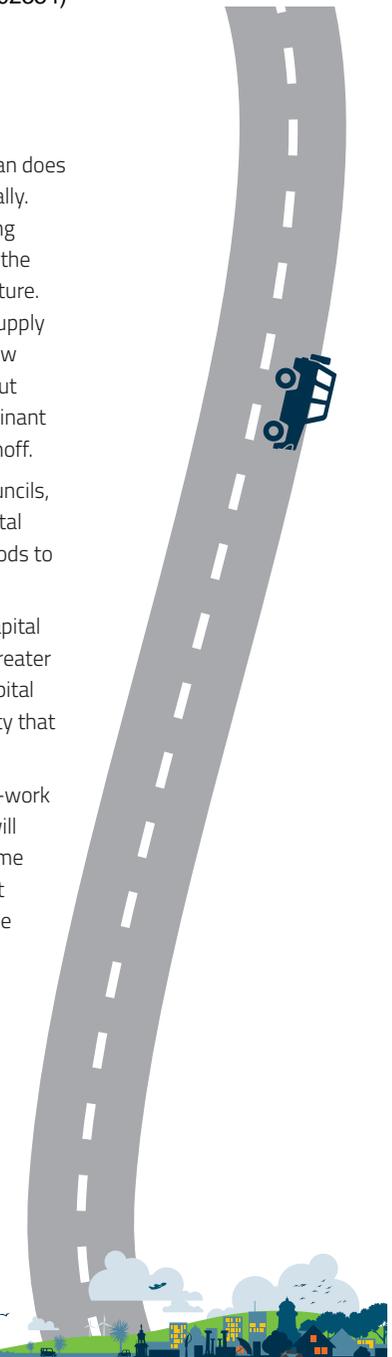
The ten years covered by the Long-term Plan does present the Council with challenges financially. This is in response to the Council's increasing knowledge of its infrastructural assets and the increasing demand for improving infrastructure. This is of particular importance for Water Supply and Stormwater, as communities within New Zealand are becoming more concerned about drinking water quality and reducing contaminant entering our waterways via stormwater runoff.

Invercargill City Council, like many other Councils, has a pattern of under delivering on its capital spending plans. There are 2 potential methods to address this:

1. Spend more money to ensure that the capital is spent. Taking this path would require greater knowledge of the obstacles related to capital projects, and indicates a sense of certainty that does not exist in reality.
2. Recognise that there is a sense of guess-work in the programme and recognise that it will not all be delivered within the arbitrary time constraints that are an integral constraint of financial planning. That constraint is the accounting concept of a financial year.

Council will take a joint approach:

- additional resource being engaged to monitor capital project delivery,
- provision of funding for a portion of the items listed in the plan.



The level of funding provided for the renewals component of the capital programme will gradually rise from 70% to 75% of the programme over three years. This recognises that the assessment of work and timing is uncertain. The renewal capital programme is based on average lives, and while it is supported by evidence, it clearly cannot be based on prospective asset condition.

When resorting to statistical references for averages it can be seen:

An average life of 80 years will have a level of variation for each asset. This is called a standard deviation. Statistics tells us that there is almost certainty that an asset will need to be replaced within 3 deviations. If the variation is 5 years, which is reasonably conservative, then it can be almost certain that an asset will be replaced in one of 30 years. Being 15 years before the average and 15 years after - not as precise as modelling may suggest.

In regards to major projects, 75% will effectively mean that the projects will be delivered 25% later than that indicated in the plan. That is, a two year project will take 28-30 months, which is a significant improvement on our historic delivery.

Council is also focused on growing Invercargill's community assets and reinvigorating Invercargill's CBD. A number of large community projects are planned throughout the ten years, all part of making Invercargill a more desirable place to live and work. These initiatives are also designed to complement and support the Southland Regional Development Strategy. The main projects that

fall within this category include a new urban play facility and art centre within the CBD and a museum redevelopment.

The Council, via its subsidiary company Invercargill City Holdings Limited, is taking part-ownership of a company that is planning a major upgrade of the inner city area.

The end goal for Council is to provide its citizens with a city that is maintaining and improving its key infrastructure assets while understanding that a city needs to also be a vibrant, entertaining and an interesting place to live, work and play.

Financially this means that Council will be increasing its debt over the life of the Plan in order to achieve what it has set out to do.

Depreciation is calculated on an annual basis and currently represents 27% of total operating expenditure.

Charging depreciation each year spreads the cost of an asset over its useful life.

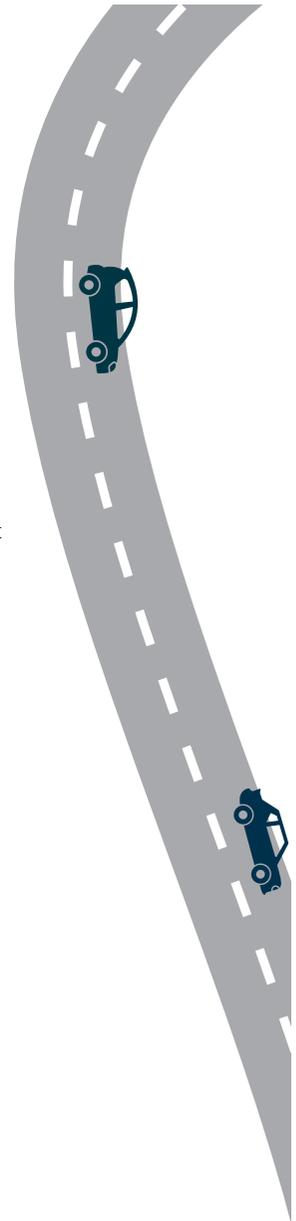
Council is proposing to balance its budget in each year of the LTP. With Council's net debt approach and a balanced budget Council is funding depreciation at a global level. Council does not fund depreciation on a service-by-service basis. Council does not transfer depreciation into special reserves but for some targeted rates outlined below any cash surplus after meeting all costs (excluding depreciation) and capital spending will be placed in a targeted reserve so rates for that purpose will only be used for that purpose.

Those targeted rates that will have a targeted reserve are:

- Water Rates
- Sewage disposal rates
- Stormwater
- Transportation
- Central City Coordinator
- Bluff Community Board.

While depreciation is an important indicator of the true long-term cost of the service, as it reflects a level of asset consumption in a particular period, it is not panacea for the long-term sustainability of a given service. Assets have been purchased by a combination of debt and annual revenue. The goal of the funding of services is that there is a level of equity between generations that is that each generation pays a fair share. Depreciation can be a proxy for this equity but there are a number of circumstances where this does not hold true. New assets that have a high debt have the cost of debt and depreciation to meet. However, debt has a lower cost over time due to inflation, and the generation that has the debt pays interest and contributes to repayment of the debt. This reduction of debt lowers the costs for future generations through two mechanisms. The first being the inflation effect on debt and the second being the debt repayment.

The financial strategy reflects a prudent approach to debt and inter-generational equity.



Intergenerational Equity

The services that the Council provides are costly due to the value and amount of assets that are used. The Council's strategy is to ensure that both current and future ratepayers pay their fair share of the cost of providing services. Intergenerational equity is achieved through loan funding long-term assets and drawing rates to pay for the loan over an extended period of time. Also, depreciation assists in intergenerational equity by ensuring that a cost is recognised for the consumption of the assets. Where debt is low and future asset renewal is approaching, the generation that is consuming the asset should also be contributing to its replacement. For major renewal the level of service remains the same before and after replacement. This ensures that both current and future users pay for the assets. Examples of this can be found in the Invercargill City Council Infrastructure Strategy.

Replacement of an asset with a like asset should not lead to a significant increase in the funding required for a service. If that occurs it indicates that funding is not equitable, as ratepayers of the future are paying a higher cost for the same level of service enjoyed by previous ratepayers at a lower cost.

Debt Management

Net Debt

To aid understanding and predictability of funding requirements Council has introduced the concept of net debt.

Net Debt = total borrowings less cash and cash investments.

Council is able to borrow and invest money at similar interest rates. Sometimes it is slightly higher and sometimes slightly lower. Currently the interest rate paid on debt is lower than the amount which can be

earned on an investment. As Council is a conservative organisation it does not borrow for the sole purpose of investing. In some years there may be financial gain from that, but in other years it will have a cost. Borrowing for the sole purpose of investing is considered to be too close to speculation. It is imprudent to speculate with ratepayers' money. However, to gain future certainty of funding costs Council may decide to borrow in anticipation of capital spending. In such a case the funds will be invested for a short period.

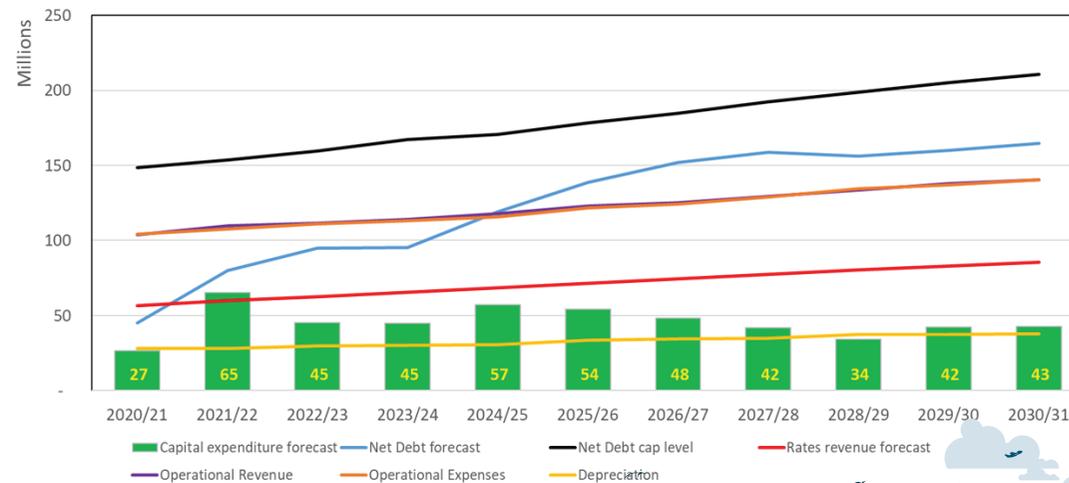
Borrowings

The Council's debt (excluding Invercargill City Holdings Limited (ICHL) bond) remains relatively low against the Council's total assets base (11.8% as at 30 June 2020). However, Council recognises that it has \$100m of uncalled capital within ICHL. That capital can be called at the discretion of the directors of ICHL. Therefore in determining the maximum debt to would be prudent to incur, allowance needs to be made for the possibility of the capital to be called.

As a borrower from LGFA there is a maximum debt that Council can borrow. As a Credit rated Council that limit has been 250% of annual operating revenue. This is expected to rise to 300% before falling back to 280% over a number of years. Due to the reduction to 280% being in 5 steps it would be unwise to take debt above 280%. In addition to the uncalled capital Council needs to make provision for unforeseen shocks. It would not be prudent to be at the maximum debt and then find a recession or natural disaster impacts on costs or revenue, with the potential to push the organisation above debt limits and therefore not able to access the necessary cash.

To be prudent Council has set a maximum debt level of 150% of revenue. This provides an increasing net debt cap over time rising from \$148M to \$210M

While Council remains focused on keeping debt to a manageable level over the course of the Long-term Plan, large infrastructure projects as well as future growth projects necessitate the need for Council to take on an increased level of debt.



Debt repayment

A significant issue for this LTP and this strategy is the increasing debt at a time when interest rates are at historic lows. This exposes the community to a significant risk of increased interest rates.

Debt is predicted to get close to the debt limits in the first 5 years of the plan. With borrowing rates as low as 1%, a rise of 1% will double the rates requirement to pay the interest. Every 1% increase in the interest rate would mean a rates rise above the forecast rates increase of about 2.5%. So a 2% rates rise would become 5%. Part of this impact can be managed through prudent borrowing, but only for a period of time.

In the interests of intergenerational equity Council should not go to the debt limits without a recognition that the debt will need to be reduced to allow future ratepayers to also undertake projects that will emerge in the future.

The funding strategy for rates will incorporate an amount of 2% of debt to go to the repayment of the debt.

Security for Borrowings

Council borrows from the Local Government Funding Agency. Part of borrowing from that source is that a standard security over rates is required. This is the most common security for Local Authority borrowing and is understood by the financial market lenders. It means that there is the ability in the event of a debt default for a security agent to set a rate to be able to pay the loan requirements.

The Council currently maintains an AA+ credit rating.

Cash and Cash investments

The Council must ensure that each year's projected operating revenues are set at a level sufficient to meet that year's operating expenses, unless the local authority resolves that it is financially prudent not to do so.

Council aims to operate a surplus for the duration of the Long-term Plan. To maintain sound treasury practice Council holds a range of investments in cash deposits. These are in two groups; funds held for restricted and non-restricted reserves.

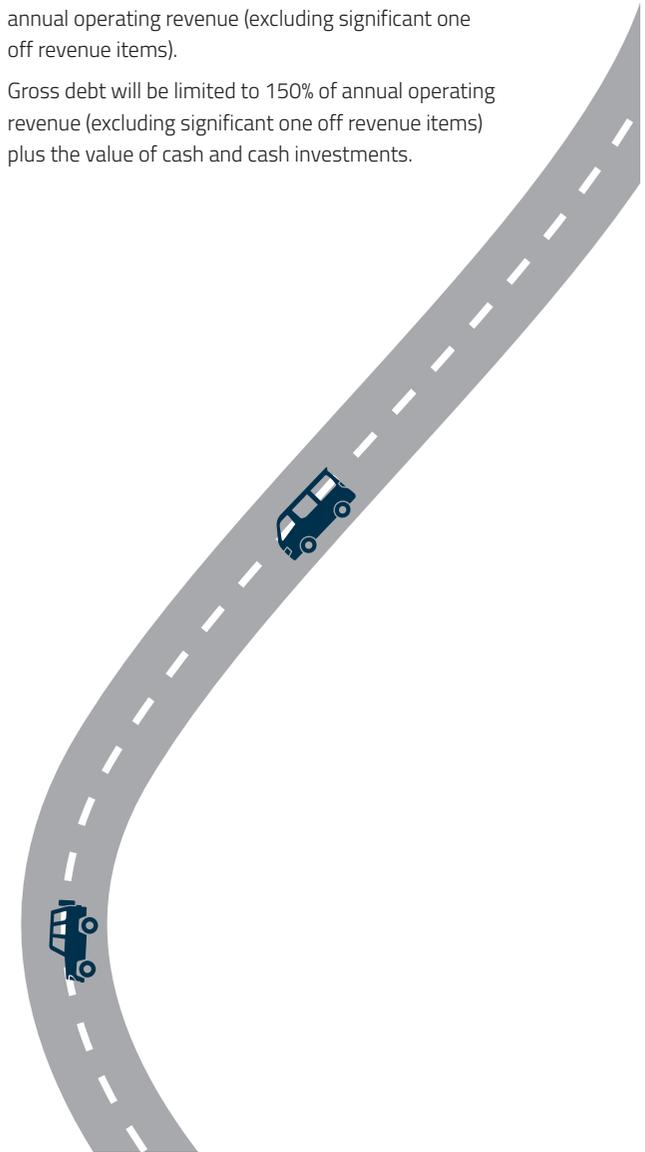
Restricted reserves are held for a specific purpose and money is only available to be used for that purpose. In contrast a non-restricted reserve can be for a variety of reasons. These investments build up or reduce over time due to funding needs.

Holding a level of cash in investments provides a safety buffer for Council in times of uncertainty in the financial markets, as it gives us the option to use funds if the interest rates are considered to be artificially high. Having this flexibility is one factor contributing to Council's strong financial position and good credit rating. Council is targeting to maintain at least a cash investment portfolio of around \$40m, this will fluctuate according to financial need.

Council limit on borrowing

Council is setting its limit on borrowing based on the Net debt measurement. The net debt limit is 150% of annual operating revenue (excluding significant one off revenue items).

Gross debt will be limited to 150% of annual operating revenue (excluding significant one off revenue items) plus the value of cash and cash investments.



Rates

The Council will ensure that there are sufficient cash resources available to meet its obligations. Council's current assets need to outweigh current liabilities, where current assets include cash on hand and available lines of credit

Council reviews operational expenditure for short and long-term cost savings and has established operational savings targets for the first three years of the Long-term Plan. These savings are intended to improve efficiencies within activities and services without impacting the current level of service being provided.

Rates are the "balancing factor" in the financial equations of Council. Revenue for all sources are examined on an annual basis, as are costs. Capital expenditure is evaluated for priority, need and timing for maintaining levels of service. Capital is funded from rates and, borrowing or use of investments. In the long term there is a limit on borrowing as the result of which either rates need to rise or the level of capital investment needs to reduce. This is an iterative process where the outcome is to get the service level desired by the community at a costs that is both affordable and does not hit the "willingness to pay" trigger.

Rates are set based on the factors relating to the property. One of the main factors that impacts predictability of rates is the three yearly revaluation of every property to establish the "Rateable values". When properties are revalued it creates distortion in the rates increases each ratepayer has compared to Council stated rates rise. Unfortunately, there is very little Council can do to alleviate this effect.

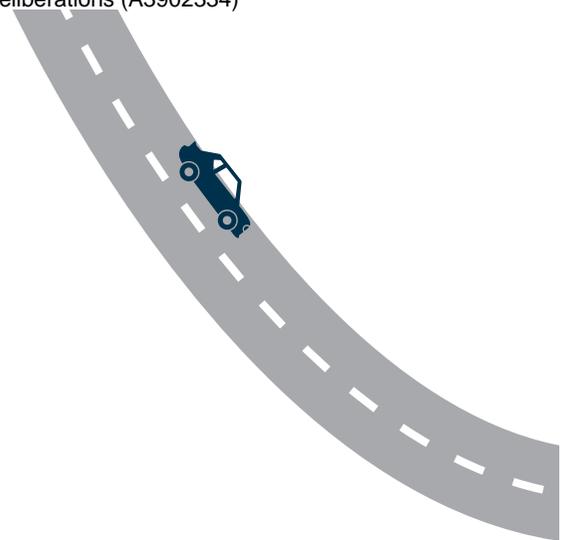
However, council is mindful that the rates increases should be predictable, not just in terms of total rates rise but also in impact on an individual property. For the past two years Council has set a uniform increase in rates that is each rate has risen by the same percentage. This means each ratepayer has the same increase, unless the owner has made changes to the property that trigger a need for a revaluation. It is part of this strategy that Council will maintain that practice for years that are not a Rates revaluation year.

Council limit on rates rises

In determining the impact and limits of rates rises Council has considered the level of capital spending required and also the limit on Council borrowing. To be able to undertake the capital works in the LTP the limits on rates rises are:

- The rates rise in any year will not be higher than 7.5%
- The total rates take in any year will be no higher than a compounding annual rates rise of 7.5% per annum plus growth within the rating base

Council in this strategy has put an emphasis on the predictability of rates. Council also recognises that the LTP is a ten year plan rather than being 10 one year plans. This means that the work programmes are established to maintain levels of service and that if work is not completed in one year it still needs to be funded over the period of the plan.



Managing Financial Investments and Equity Securities

Council holds investments in companies, property and cash.

Investments in Companies/Trusts

Council is an equity holder in companies and has a controlling influence over four trusts. The principal reason for holding an equity interest in the company investments is to provide a financial return on investment for ratepayers. The interests in the trusts are to enable more efficient and targeted community outcomes for the community. Trusts provide a good opportunity for community engagement with a particular outcome. Council does not seek financial return for the trusts. Council's interest in the companies and trusts are as follows:

COMPANY	SHAREHOLDING	PRINCIPAL REASON FOR INVESTMENT	BUDGETED RETURN
Invercargill City Holdings Ltd	100%	To undertake commercial opportunities and provide dividend returns to the city	\$4,886,000 for 2020/21 year
Southland Museum and Art Gallery Trust Board	Controlling interest	To provide specialised governance for the museum	Nil.
Bluff Maritime Museum Trust	Controlling interest	To provide specialised governance for the museum	Nil.
Invercargill City Charitable Trust	100%	To provide access to recreational and cultural events within the city, in line with community outcomes	Nil.
Invercargill Community Sports and Recreation Trust	100%	To increase Invercargill residents' active participation in sports and physical activities and arts and cultural activities	Nil.

The Council has no plans to change its shareholding, although in accordance with good practice this is reviewed regularly

Property Investments

Council's Investment Property Department oversees the development and undertaking of investment in property within the City. The properties are divided into two categories:

- Endowment properties which have been either allocated (per above) or purchased from endowment funds
- Trading properties (fee simple, no classification on title, currently leased)

Council's objective is to maximise return from endowment and trading properties, however due to historic lease arrangements (21 year Glasgow leases) the return from these properties is below market rates. The objective for the net return on investment from both endowment and trading properties is at least equal to current market interest rates

Council also has a portfolio of operational properties and properties acquired for a strategic purpose. Where a property acquired for a strategic purpose is no longer required for that purpose, it is placed in the Trading Properties portfolio and is considered to be available for sale. Council does not see itself as a property investor for profit, with the exception of the endowment property portfolio.

One significant property acquired for strategic purposes is the Don Street property developed by Council

Cash Investments

The Council holds cash for two main reasons:

- To ensure strong lines of liquidity and access to cash remains available to Council.
- To support the balance of reserves through short-term investments (90 to 360 days) to maximise return on investment.

Rates and Affordability

Council has come through a period of medium-level rates rises over the previous three years (2018/19: 4.91%, 2019/20: 3.50% and 2020/21: 2.00%). This was due to Council focusing on ensuring that rates were low and consistent from year-to-year.

For future years there are some key challenges that will present themselves in relation to affordability. This will occur as Council enters a period of accelerated capital expenditure to develop our services, whilst looking to be a growing and innovative city.

Increasing costs of providing council services is likely to intensify the affordability issues in the future. In certain years of the Long-term Plan, pressure from

required infrastructure renewals has led to rates increases that are less affordable than what the Council would like.

A larger rates increase will not necessarily occur in these years as growth projects are loan-funded and will be paid back over time so as not to unfairly burden the current ratepayers with the large costs associated with these projects.

Council seeks to embrace innovation and change over the upcoming years, and with the constant evolution and growth of technology, is witnessing and experiencing the change first-hand.

Invercargill City Holdings Limited (ICHL)

Invercargill City Holdings Limited is a 100% owned subsidiary of Invercargill City Council. ICHL was formed to provide a clear differentiation between Council's core ratepayers orientated activities and its commercial trading enterprises and investments. It was established for the purpose of consolidation and management of existing Council companies, with the responsibility of control and oversight of the performance of the Council Owned Companies activities on behalf of the ultimate shareholder, Invercargill City Council.

Companies that sit within the ICHL group include, Invercargill City Property Limited (ICPL), Invercargill Airport Limited and Electricity Invercargill Limited (EIL). Within ICPL sits an additional entity. Within EIL sits a number of utility based entities. One of the main purposes of ICHL is for these individual companies to trade profitably in order for ICHL to return a dividend to Council and help offset the rates demand as a result.

ICHL has historically given a dividend to Council since 1999. In order to provide predictability for rates Council has set an expectation that the dividend is set at a level that allows ICHL to be able to pay an annual dividend that will increase with inflation each year. The dividend is forecast to increase over the next ten years with \$4,886,000 predicted for the 2020/21 year. Should this dividend fail to increase as predicted, Council would have less income received to minimise the impact on the general rates draw.

Council has noted that they cannot be financially reliant on an increasing dividend to match 10% of the general rates draw every year. Whilst ICHL strives to produce greater dividends year on year this is not necessarily going to be in line with the anticipated rates requirement increase.

Disclosure Statement

The purpose of this statement is to disclose Council's planned financial performance in relation to various benchmarks to enable the assessment of whether Council is prudently managing its revenues, expenses, assets, liabilities and general financial dealings. Council is required to include this statement in its Long-term Plan in accordance with the Local Government (Financial Reporting and Prudence) Regulations 2014 (the regulations). Refer to the regulations for more information, including definitions of some of the terms used in this statement.

Rates Affordability Benchmark

Council meets the rates affordability benchmark if:

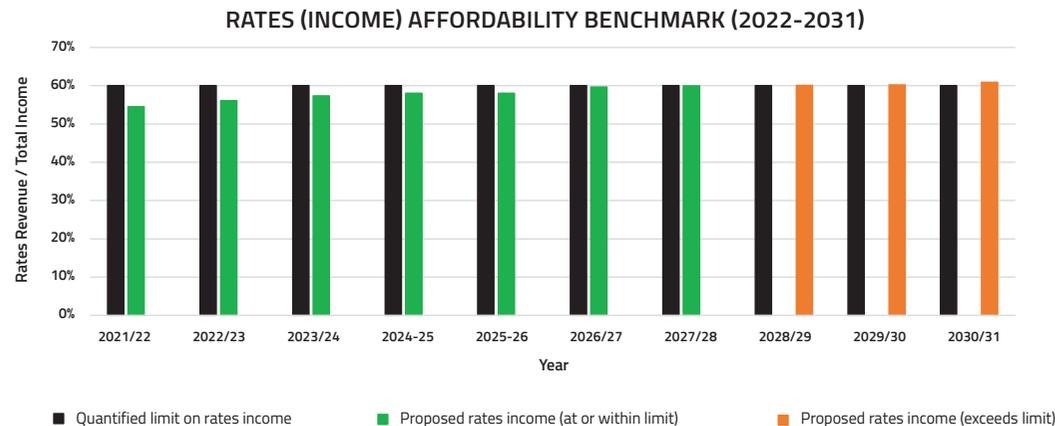
- its planned rates income equals or is less than each quantified limit on rates; and
- its planned rates increases equal or are less than each quantified limit on rates increases

Rates (Income) Affordability

The following graph compares Council’s planned rates with a quantified limit on rates. The quantified limit is rates revenue will not exceed 60% of total revenue.

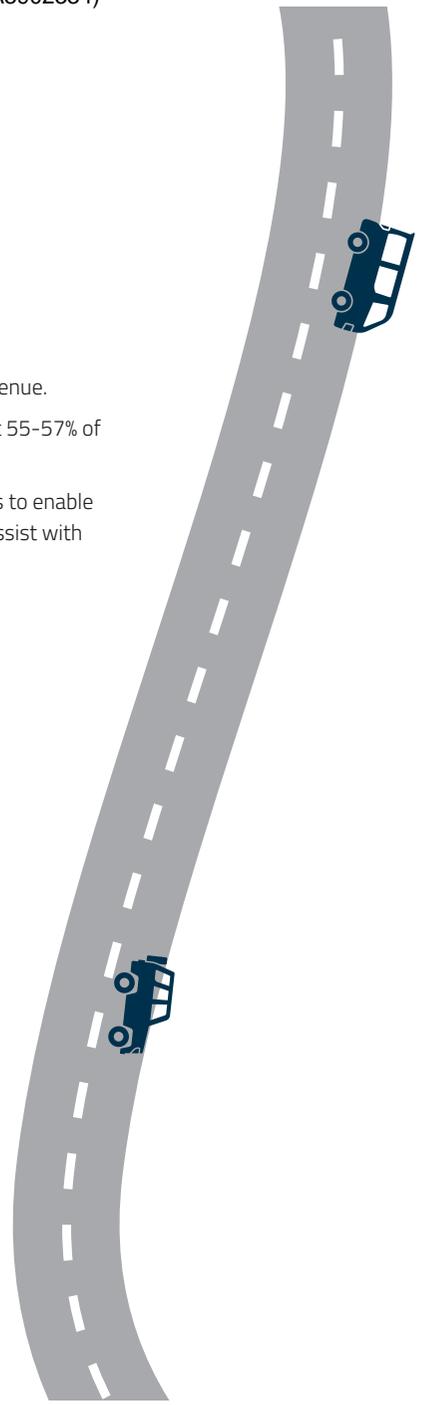
The Local Government Rates Inquiry suggests that around 50% of a council’s operating revenue should be taken from rates. Currently Council draws about 55-57% of its operational revenue from rates.

Council aims to maintain the rates collected to between the range of 50% and 60% of total Council revenue. Council intends to increase user-pays methods to enable the income required from rates to maintain steady without significant rates increases. Council will also seek efficiencies in how services are delivered to assist with maintaining rates revenue at a steady level.



Rates are an important source of funding for Council, but they are not the only source available. You can see more about how Council funds its services in the Financial Management section of the Long-term Plan. Council’s Revenue and Financing Policy sets out the funding of its operational and capital expenditure and the sources of those funds on an individual activity basis.

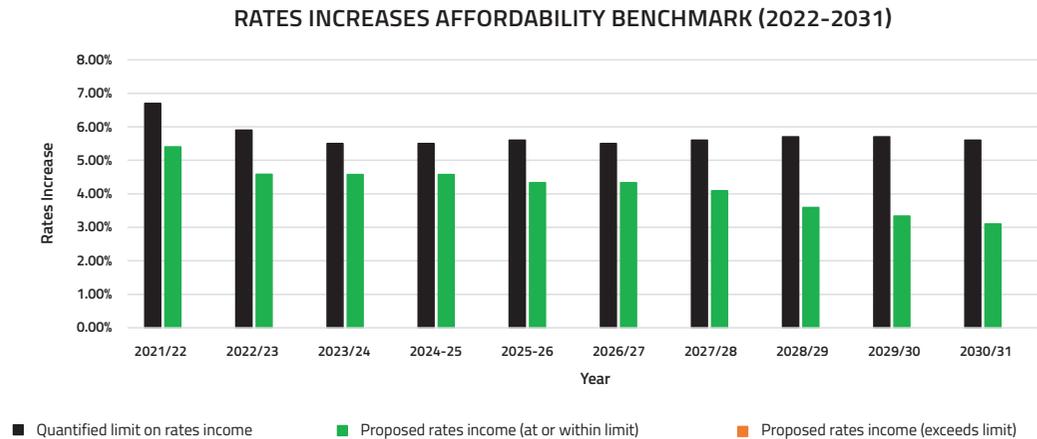
Throughout the Long-term Plan rates fund between 55% and 61% of Council’s total revenue. The 2026/27 year has a significantly higher rates funded component due to the planned completion of the museum. The museum will cost roughly \$2 million annually to cover the repayments and interest with minimal fees revenue to offset this charge to rates. Council will look to increase fees slightly in the later years to bring the balance back once the timing of the museum opening is further defined.



Rates (Increases) Affordability

The following graph compares Council's planned rates increases with a quantified limit on rates increases. The quantified limit is rates increases will not exceed the Local Government Cost Index (LGCI) plus 3%. The forecast LGCI increases for the next ten years are shown in the table below, but for example, if the LGCI change was 2.20%, Council's rates increase would be no more than 5.20%. Council recognises that this increase could potentially be higher than household income, so although a maximum limit has been set, Council will endeavour to achieve lower increases when planning projects and services that rely on rates revenue.

Council recognises that the cost of providing Council services (LGCI) is rising at a higher rate than the Consumer Price Index (CPI). Council is also mindful of affordability issues amongst our ratepayers. Council continues to investigate cost-cutting methods to ensure that the revenue required to run Council is kept relatively steady.



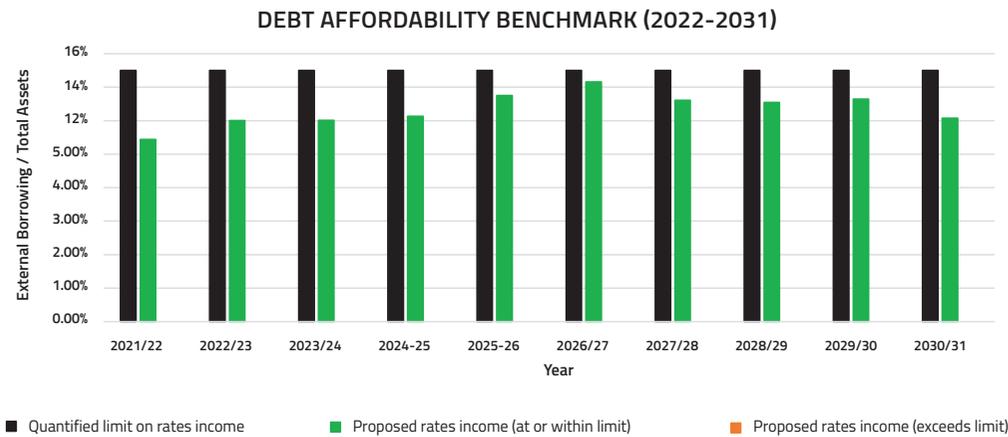
The rates increases reflect the money required each year.

Changes in the consumer price index (CPI) are used as the basis for measuring the inflation faced by households. It gives a picture of how the prices of the goods and services purchased by the typical New Zealand household are changing over time. It is therefore heavily represented by food, accommodation and transport costs, which collectively make up over 50% of the index. Council, however purchases a different mix of goods and services. Council's 'basket' is dominated by changes in the Local Government cost adjustors such as labour costs, land and materials associated with assets. There is therefore a difference between changes in CPI and Council's cost (LGCI). To enable Council to best predict what the future cost of providing its services will be, Council has based future inflationary costs on the LGCI rather than CPI. The additional 3% is to allow Council to undertake new projects, for example the Central City Master Plan, Museum and Art Centre projects.

Debt Affordability Benchmark

Council meets the debt affordability benchmark if its planned borrowing is within each quantified limit on borrowing.

The following graph compares Council's planned debt with a quantified limit on borrowing. The quantified limit is that debt will not exceed 15% of total assets.

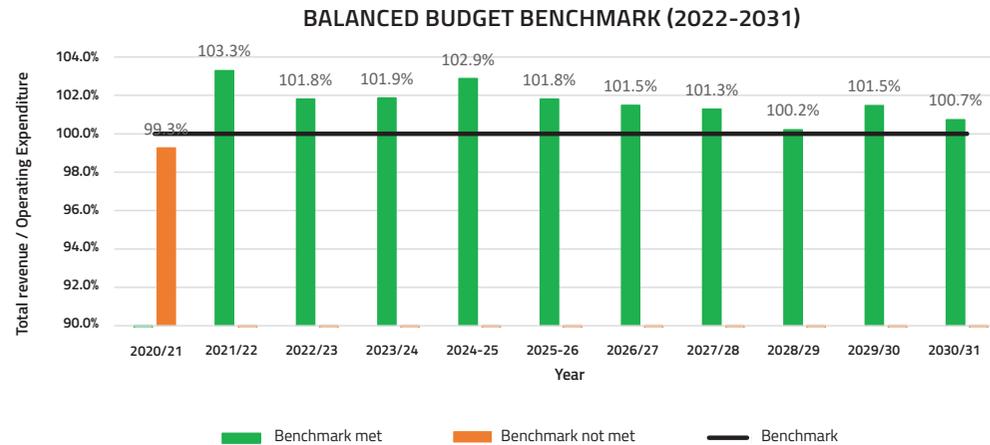


During the Long-term Plan period, the debt affordability percentage is expected to increase, peaking at 14.32% in 2026/27 before decreasing again.

Council considers that setting a borrowing limit of 15% of assets will assist in prudently managing Council's borrowing activities to ensure the ongoing funding of Council. Council will continue to consider and approve the borrowing requirement for each financial year in the Annual Plan or Long-term Plan recognising that borrowing capacity does not have to be fully utilised.

Balanced Budget Benchmark

Council meets this benchmark if its revenue equals or is greater than its operating expenses.



The above graph displays Council’s planned revenue (excluding development contributions, financial contributions, vested assets, gains on derivative financial instruments, and revaluations of property, plant, or equipment) as a proportion of planned operating expenses (excluding losses on derivative financial instruments and revaluations of property, plant, or equipment).

Council meets the balanced budget benchmark if its planned revenue equals or is greater than its planned operating expenses.

Section 100(2) of the Local Government Act 2002 (LGA) sets out the matters that Council must have regard to when determining that it is prudent to operate an unbalanced budget.

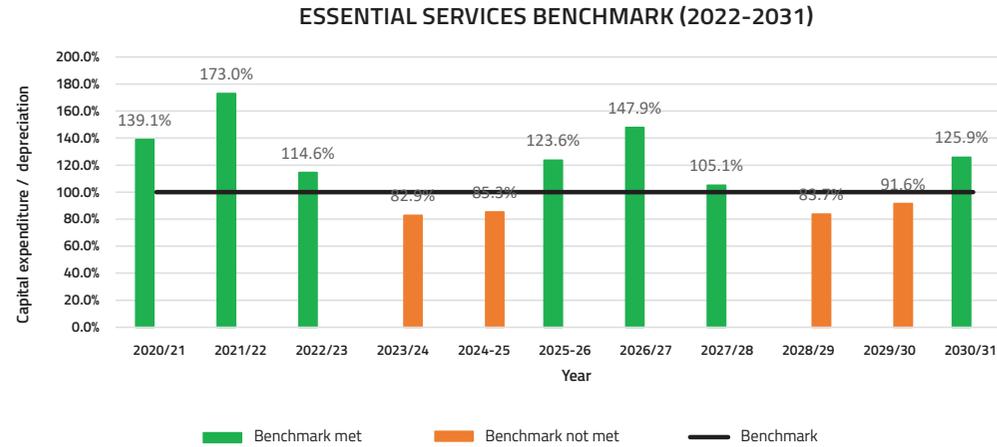
These matters are:

- (a) the estimated expense of achieving and maintaining the predicted levels of service provision set out in the Long-term Plan, including estimated expenses associated with maintaining the service capacity and integrity of assets throughout their useful life; and
- (b) the projected revenue available to fund the estimated expense associated with maintaining the service capacity and integrity of assets throughout their useful life; and
- (c) the equitable allocation of responsibility for funding the provision and maintenance of assets and facilities throughout their useful life; and
- (d) the funding and financial policies adopted under section 102.

The proposed Long-term plan has set projected operating revenues for all years at levels that would meet the projected operating costs.

Essential Services Benchmark

The following graph displays Council's planned capital expenditure on network services as a proportion of expected depreciation on network services.

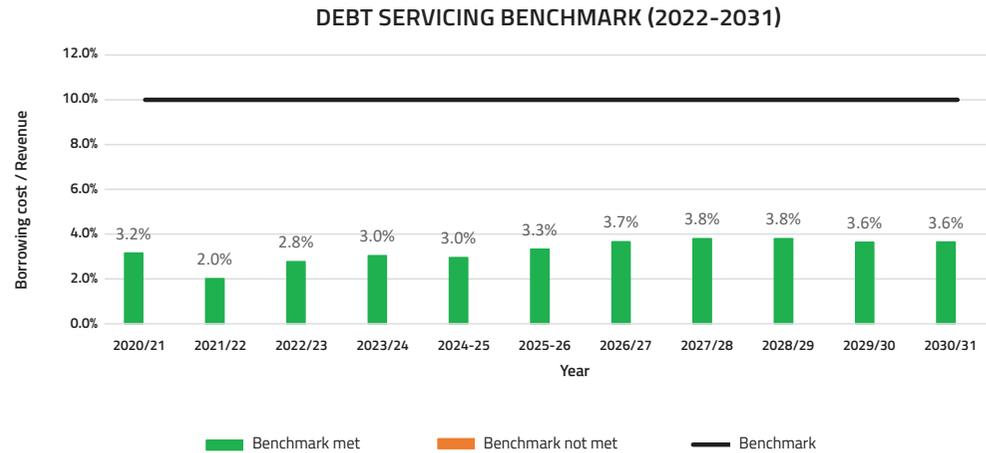


Council meets this benchmark if its capital expenditure on network services equals or is greater than depreciation on network services. Although not reaching the target in every financial year, over time Council's capital expenditure should equal its depreciation. This will mean Council is replacing its assets as they deteriorate, however due to some projects being large it is hard to assess this on a year by year basis.

Council does not meet this benchmark in four of the 10 years. 2023/24, 2024/25, 2028/29 and 2029/30 are lower than depreciation level due mainly to the timing of projects which were brought forward to meet Government funding requirements around 3 Waters and Shovel ready projects. The increase years for the Government joint funding projects are in 2020/21 and 2021/22. Council does meet the benchmark over the course over the combined 10 year, and exceeds in most cases.

Debt Servicing Benchmark

The following graph displays Council's planned borrowing costs as a proportion of planned revenue (excluding development contributions, financial contributions, vested assets, gains on derivative financial instruments, and revaluations of property, plant, or equipment).



Because Statistics New Zealand projects Council's population will grow as fast as the national population is projected to grow, it meets the debt servicing benchmark if its planned borrowing costs equal or are less than 10% of its planned revenue.



REVENUE AND FINANCING POLICY

Effective from 01 July 2021

Revenue and Financing Policy

The requirements for a Revenue and Financing policy are in the Local Government Act 2002. Section 103 requires that the Revenue and Financing Policy must state its policies for:

- funding operating expenditure and
- funding capital expenditure.

A local authority must manage its finances, and financial dealings in a way that promotes the current and future interests of the community.

*“The funding needs... must be met from those sources that the local authority considers to be appropriate, **following** consideration of:*

- a) *in relation to each activity to be funded,-*
 - i) *the community outcomes to which the activity primarily contributes; and*
 - ii) *the distribution of benefits between the community as a whole, any identifiable part of the community, and individuals; and*
 - iii) *the period in or over which those benefits are expected to occur; and*
 - iv) *the extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity; and*
 - v) *the costs and benefits, including consequences for transparency and accountability of the activity distinctly from other activities; and*
- b) *the overall impact of any allocation of liability for revenue needs on the community. (Section 101(3))*

Council has considered the above before establishing this policy.

Policy for funding operating expenses

Funding Sources Per Section 103(2)	Application by Invercargill City Council
General rates, including <ul style="list-style-type: none"> • choice of the valuation system 	Applied to activities delivering wider community benefits using capital value base. The capital value rate is applied on the same basis to all properties. Rating

Funding Sources Per Section 103(2)	Application by Invercargill City Council
	values are revised every three years.
<ul style="list-style-type: none"> differential rating 	<p>Invercargill City Council will apply differentials where there is a significant difference in the level of service available to properties relative to the collective values of the properties within a group. If differentials are to be applied the groups will be Commercial/Industrial, Farming, Lifestyle, Tiwai point smelter and residential. Council will analyse the effect of the UAGC on the incidence of rates between groups, in determining whether or not a differential will apply.</p>
<ul style="list-style-type: none"> Uniform Annual General Charge 	<p>A uniform Annual General charge is set based on separately used or inhabited parts of the property. It is part of the total general rate and set at a level that Council considers appropriate. The level of the charge is subject to some legal limitations and Council will not breach that limit. In setting the UAGC Council will analyse the effect that any UAGC has in shifting the incidence of rates away from Farming and Commercial onto residential.</p>
Targeted rates	<p>Council has a preference for rates to be within the General rate unless the services have a specific area of benefit, which is not as wide as the entire district, and where the amount of the separate rate is substantial enough to warrant the additional administration required for a separate targeted rate.</p> <p>Targeted rates are not a user charge as there is no provision for a user to opt out. They are levied for separate services where the Rate is a proxy for a uniform user fee. Those services are Sewage disposal, Water supply, Transportation, Stormwater Drainage and refuse collection.</p> <p>They allow Council to assist communities to collectively fund services that can only be delivered without collective funding. Due to the administration of separate targeted rates Council will try to avoid setting a targeted rate for less than \$100k for the total value of the rate. If a targeted rate is set for a lower revenue level Council will identify the special circumstances that warrant an additional rate.</p> <p>Targeted rates are set for transparency purposes rather than to create an on-going pool of funds separately managed. Therefore any unspent targeted rates will become part of Council general funds.</p>
Lump sum contributions	<p>Available for capital project funding under the Local Government (Rating) Act 2002. It is a complex mechanism which is not considered to provide any advantage to our ratepayers and so is not used.</p>
Fees and charges	<p>Fees and charges are a preferred funding option for services where they are practicable. They reflect that a choice has been made to utilise community resources.</p>

Funding Sources Per Section 103(2)	Application by Invercargill City Council
	<p>That choice gives benefit to the individual and may impose costs on the wider community. Charges are set to recover the costs Council incurs in delivering that activity. Council recognises that some services it provides are for facilities which are available for community and private benefit. If that service attempted to recover full costs it is likely they would be too expensive for users. If the charges are set too high, it could lead to reducing use, and this may mean the net cost of the service increases.</p> <p>Council believes the community wishes these services to be made available so that individuals have the option to use them if they choose. There the general rate meets a level of cost to provide the option for the community use. In these cases, Council uses its judgement to set the fees at a level it believes is at an acceptable market level.</p>
Interest and dividends from investments	<p>Interest and dividends are treated as part of general funds and support the services which are general rate funded. An exception to this is where reserves have been established for targeted rates which cover the long-term needs of a service area. Rates set for that purpose are used for that purpose, and funds not used in a particular year are invested, and interest on those funds are used for that service.</p>
Borrowing	<p>The financial strategy identifies that Council operates a net debt policy. This means that we measure our debt based on total external borrowings less funds invested in term deposits. So borrowing and use of invested cash are treated in the same manner being part of our “balance sheet” funding. Our goal with borrowing is for borrowing to be used primarily for capital spending, however borrowing may also be used to level out highs and lows that can occur in services that have cyclic funding needs.</p> <p>Borrowing is used to recognise issues of inter-generational equity for assets that have a long life and will benefit the community for a long time.</p> <p>Borrowing will not be used to fund long term operational shortfalls but may be used as part of a strategy to get to long run sustainable rates level without large one-off rates rises. However, Council recognises that staggering necessary rates rises inevitably comes at the cost of higher rates.</p>
Proceeds from asset sales	<p>Proceeds from asset sales will not be used to fund operational costs.</p>
Development contributions	<p>Invercargill is forecasting little if any growth. As Council desires growth, it considers that Development contributions are likely to be an impediment to growth. Also the asset base for service delivery is large enough</p>

Funding Sources Per Section 103(2)	Application by Invercargill City Council
	to cope with some growth, without requiring significant growth related investment. Not applied
Financial contributions under the Resource Management Act 1991	Invercargill is forecasting little if any growth. As Council desires growth, it considers that Financial contributions are likely to be an impediment to growth. Also the asset base for service delivery is large enough to cope with some growth, without requiring significant growth related investment.
Grants and subsidies	Other organisations determine the availability of Grants and subsidies. Where grants and subsidies are available, Council will apply when it is considered efficient to do so. Where funding applications are successful or where long-term contracts have grants and subsidy the funds are used for that purpose. The biggest part of subsidy comes from NZTA for roading works. The level of the subsidy is set by NZTA.
Any other source. Special purpose investments (reserves)	Over many years of operations, Council has established a number of Special fund reserves. These reserves are backed by cash investments. Where funds are available in those reserves, they will be used only for the purpose that the reserve was established. When that occurs, the funds in the reserve will be used to meet either a capital cost or operating cost. These funded reserves are a way for the council to manage expenditure and revenue so that the requirements from the community are more even and predictable. Special funds invested will earn interest on the funds and reduce the borrowing needs in higher expenditure years.

Capital expenditure funding sources

Council provides activities which have a long life and long-term benefits. The level of capital expenditure over the period of a long-term plan is relatively minor compared to operating expenses. Council takes a long-term view to funding its services and assets on a sustainable basis. Funding of capital works is from:

- **General and Targeted rates:** Rates will be used to fund capital work. Rates are set based on long term projections, to enable sustainable levels of service, which includes renewal of assets. Typically, rates will fund renewal of assets, but there will be years where rates will fund a portion of new capital items, and years when rates will be repaying loans. Rates and debt are the primary funding sources for Councils planned capital work and these two items need to have an equilibrium identified with the Financial strategy.
- **Borrowing:** Borrowing will be used to fund capital expenditure when the level of renewal is above the average renewal funded in the plan. It is also used to fund the majority of level of service improvement for assets. This reflects that those assets will have a long life and so the cost of the asset should be shared a longer period of time.
- **Subsidy and grants:** A reasonable amount of capital expenditure in the Roothing activity is funded from NZTA subsidy. Council seeks to maximise the amount of NZTA subsidy

available. For some community facilities, it is possible to get grants from specific organisations. Where this is possible Council will use these grants to lower the capital requirement from the community.

- Proceeds from Asset sales: Council owns a number of properties that have been purchased for operational and strategic reasons. Where capital assets are sold the funds from those sales will be used to fund capital items. This will occur through the repayment of loans which will enable increased borrowing capacity for the capital items. This ensures that debt is attributed to the appropriate group of activities.
- Development contributions: Council does not charge development contributions or financial contributions. Growth is not significant in Invercargill and Infrastructure is able to cope with population growth in the foreseeable future.

Consideration of overall effect of funding allocations

When considering the revenue requirements and funding mechanisms used Council is mindful of the impact that both fees and rates can have on individuals in the community. Charges are set to recover the costs that individuals impose on the community and the benefit they receive from the activity. Rates are also set to reflect the ongoing costs of Council activities. Regional Council rates are a small component of total rates paid by property; Council does not believe Council rates levels impose any hardship.

Summary of funding mechanisms used in Activities

Mechanisms selected to fund a particular activity are based on a regular assessment of the efficiency of imposing multiple small charges compared to funding from a larger funding source such as general funds. However, there is a preference for individuals benefiting and causing costs to pay for the costs they impose. This means that individuals can become more aware of the impact their resource use choices have on the sustainability of our activities.

Activity	User fees	Subsidy/ Petrol tax	Investment income Dividends and Interest	General Rate	Targeted rate
Roading	Marginal	Marginal		Majority	
Sewerage	Marginal	Marginal			Majority
Solid Waste Management	Market			Residual*	Marginal
Stormwater				Majority	Marginal
Water Supply	Marginal	Residual			Majority
General Services (Listed below)					
Aquatic Services	Market	Residual		Residual	
Arts and Culture	Availability			Majority	
Corporate Services	Majority			Marginal	
Democratic Process		Residual		Majority	Residual
Housing care	Full				

Investments	Market		Majority		
Libraries	Availability	Residual		Majority	
Parks and Reserves	Availability			Majority	
Passenger transport	Market	Majority		Marginal	Marginal
Property				Full	
Public toilets				Full	
Regulatory Services	Majority			Marginal	
Venue Services	Market			Marginal	

*Solid Waste Management is predominantly funded from a uniform targeted rate per bin, but a portion of the activity for waste minimisation and part of the contract rate is attributed to City wide public benefit.

User charges are used for services where there is a benefit to an individual. If it is possible to efficiently impose a charge, the council does so, on the basis of either recovering the full cost of the service, the marginal cost added by users, or a rate that the market will pay. The market rate becomes an issue to limit the potential for charging. It applies in circumstances where the council believes that a charge set too high will reduce use and therefore, diminish the value of the facility to the community, and impose a greater cost on ratepayers. In selecting market rate the council has made a judgement that the community values the existence of the facility and would rather fund it from rates than for it to close.

Explanation of notations in the above table

1. **Full** (100%) means that all, or almost all, of the cost of the activity is funded from that particular source.
2. **Availability** means that the cost of having the service available is met from that funding source. For these services council believes that charges can be a major barrier to access for some members of the community. Revenue in these services reflects revenue from programmes, hire of the facility and added value services.
3. **Subsidy** means that a portion of the activity is funded from a government subsidy. In some instances the subsidy makes a relatively minor contribution, but in others, such as roading, the subsidy is a substantial contributor to the cost of the activity. Those subsidies are identified within the individual plan of the activity.
4. **Petrol Tax** is a local government share of the petrol tax levied by central government. It is used to contribute to the costs of road maintenance.
5. **Majority** (more than 50%) means the majority of the service is funded from this source. When used in the fees and charges column it reflects the view that the services should be recovered from users but that legislation imposes some constraints which may mean that full recovery is not possible.
6. **Marginal** (10-50%) reflects that the service has a level of public benefit but also recognises that the level of the service required is influenced by the actions or inactions of others. The revenue reflects a contribution to the cost from those parties.
7. **Market** means that the council attempts to set its charges at a level that is affordable for the users and competitive with similar services either within the city or outside the city. It is used where market rates are not sufficient to meet the full costs of the service. The balance is funded from rates.
8. **Residual** (Less than 10%) indicates that a portion of funds comes from this source. It reflects that in some circumstances there are constraints on council charges, or that the alternative revenue source may include enforcement revenue which is imposed to achieve compliance and may not always cover the costs of enforcement.
9. Licence and enforcement fees can be charged for some services. Licence fees may be

set by the council or by regulation, and may not always cover the full costs of the service. Enforcement fees are charged to achieve compliance and do not necessarily meet the full costs of the enforcement activity.

Reference Number:	A3275564
Effective Date:	1 July 2021
Review Period:	This Policy will be reviewed every six (6) years, unless earlier review is required due to legislative changes, or is warranted by another reason requested by Council.
Supersedes:	Revenue and Finance Policy 2018
New Review Date:	July 2027
Associated Documents/References:	Nil.
Policy Owner:	GM - Finance and Assurance, Invercargill City Council

THE NEW CULTURAL FACILITY FOR INVERCARGILL (TE UNUA)

To:	Extraordinary Infrastructural Services Committee
Meeting Date:	Tuesday 15 March 2022
From:	Steve Gibling, GM Leisure and Recreation
Approved:	Clare Hadley - Chief Executive
Approved Date:	Wednesday 9 March 2022
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

The purpose of this report is to provide the completed review and analysis from the Museum Governance Group (MGG) in order to support Council's decision making on the best outcomes for the city as it looks to deliver the future cultural facility.

Recommendations

That the Infrastructural Services Committee:

1. Receive the report the New Cultural Facility for Invercargill (Te Unua).
2. Note that the name Te Niho o Te Taniwha will be retained for Option 1.
3. Agree to adopt the name Te Unua as the working title for options 2 and 3 for the facility.
4. Adopts the Vision and Critical Success Factors as proposed by the Museum Governance Group with one minor amendment.
5. Confirm that Options 1, 2 and 3 are the options to be consulted on in the 2022 / 2023 draft Annual Plan.
6. Note that the Museum Governance Group has identified their preferred option as Option 2.
7. Note the staff recommendation for Council's preferred option is Option 3, for the reasons of comparatively similar customer experience and significantly reduced financial risk.
8. Confirm that, for the consultation process, Option 3 is Council's preferred option.
9. Confirm that the location for the new facility is to be on the existing land lease site at Queens Park.
10. Note that in all options Council will be required to increase its funding levels from the \$39.4 million in the 2021/2031 Long-term Plan.
11. Note that in the case that Council are not able to secure the required third party funding, Council will need to underwrite the shortfall with additional borrowing to enable construction to progress.

12. Note this may result in the current maximum debt limit set in the financial strategy being breached by Council in 2024/25 or 2025/26 under Options 2 or 3.
13. Note that Options 2 and 3:
 - a. include a new stand-alone storage facility that can be constructed on Tisbury Reserve, with a maximum funding envelope of \$10.2 million.
 - b. require a new purpose built Tuatarium enclosure to be developed in Queens Park and the costs are included within the project costs for these options.

Background

The Southland Museum and Art Gallery Trust Board (SMAG) have previously initiated a number of redevelopment proposals. The proposals in 2012, 2015 and in 2017 failed to gain traction with the three principal local authorities of the Southland Region.

In 2018 SMAG commissioned Tim Walker Associates (TWA) to undertake a strategic review of the museum, which included recommendations for its redevelopment. Although the museum closed in April 2018, the TWA report was completed and presented to the SMAG Board in May 2019 and was released to the public in April 2020.

Between April and May 2021 Invercargill City Council (Council) consulted on the redevelopment of the museum in the LTP and identified the opportunity and need to take a strong leadership role to reopen the museum on the weight of feedback from the community. This had become possible as a result of the three Southland local authorities (Southland and Gore Districts and Invercargill City Council) determining the governance arrangements for the museum should be changed to be focused on the collection, and Invercargill City should have responsibility for the operation of the museum. Around the same time Council confirmed with SMAG that Council owned the museum building. This changed previously held views that SMAG owned the building. These two factors have enabled the redevelopment to be driven by Council, and removed some of the barriers to previous redevelopment proposals. A review of the SMAG Trust Deed is underway to allow for the management and preservation of the collection.

At the 30 June 2021 Performance, Policy and Partnerships meeting the Committee agreed to establish the Museum Governance Group (MGG). The MGG was to be composed of an Independent Chair, one Rūnaka appointed representative and five "skills based" appointees. An appointments panel was responsible for selecting the MGG members and sought to balance the skills and individual attributes of the group (*refer to Attachment 5: Museum Governance Group Terms of Reference and Membership*).

The focus of MGG's advice was to create a unique and compelling vision for the Invercargill Museum that will define the nature of the service for the community of Invercargill and solidify its role in the Southland region. In developing this vision it would also create clear and measurable critical success factors, consider the preferred location and test whether there are any alternative sites. One key element of advice which was not in scope for the MGG, but which features strongly in this report, was consideration of the financial risks and general affordability of the options.

The MGG then met through a range of online and face to face workshops and meetings through August to November 2021. Their meetings were supported by Council staff as well as a number of technical (project management, architecture, structural, sustainability and cost) consultants.

They completed their advice ahead of time and presented their report to Council prior to Christmas 2021. This advice is now being used to support the decisions for the best overall outcome for the community of Invercargill and Southland.

As part of the MGG process, a working title for the project "Te Unua" was gifted by Waihopai Rūnaka and Te Rūnanga o Awarua. The name Te Unua refers to a double hulled, voyaging waka as a reflection of several dualities. Mana whenua and tauwiwi, arts and museum, coast and urban, Aotearoa and the world. Unua also speaks of journeys and exploration, of shared stories, and individual strands, the achievements of communities and individuals.

Council was advised of this gift on 15 February 2021, and for the purpose of consistency the project will be referred to as Te Unua (or Cultural Facility) within this report. A permanent name for the facility has not been determined.

Implications and Risks

Strategic Consistency

The development of Te Unua is aligned to, and equally gives effect to outcomes and actions as set out in the following documents. More detail can be found in Attachment 3 – Te Unua Strategic Assessment.

- ***Invercargill City Council Long Term Plan – Our Roadmap to Renewal (2021-31)***

The LTP identifies Council's vision "...is to create a city with heart, both in our city centre and through collaboration across the community". Supporting the creation of a vibrant city centre has been our primary focus, along with reinvigorating the arts and culture we can all enjoy. At the time of the adoption of the LTP, Council noted that officers would explore options for a new build facility.

- ***Invercargill City Council Arts, Culture & Heritage Activity Management Plan (2021-31)***

The Arts, Culture and Heritage Activity Management Plan 2021-31 provides the strategic approach for the delivery of arts, culture and heritage activities based on the direction and priorities set out in the LTP. The vision stated in the Plan is for "enriching the heart of our city through preserving and sharing the narratives of our people, land and culture."

- ***Southland Regional Development Strategy –***

Developed in 2015, the strategy identified a range of actions and it is clear that the development of Te Unua, its vision and critical success factors, will serve to deliver directly on the following:

- Southland Story Development: Develop a Southland story in the context of the New Zealand story. The story would contain the essential features that would drive attraction.
- Invercargill rejuvenation with specific reference to the development of an upgraded museum located in Queens Park telling the Southland story and specialising in natural history.

- **Southland Regional Development Strategy – Action Plan (2015 - 2025)**

This plan was developed by the Regional Economic Development Agency to show how to give effect to the strategy. One of the five transformational projects identified in the plan to rejuvenate Invercargill is the *“upgraded museum located in Queens Park telling the Southland story and specialising in natural history.”* This is seen to provide the focus and confidence in the inner city for other businesses to thrive.

- **Invercargill Arts Culture and Heritage Strategy – (2021)**

Recently adopted, the strategy provides a framework for the rich history of innovation and forward-thinking, celebrates our unique identities and empowers tākata whenua to maintain an engaged and valued place in the community. The vision of the strategy is to support the development of *“Waihōpai/Invercargill’s vibrant arts, culture and heritage reflects, connects, and inspires our community identities”*.

- **Murihiku Regional Arts Strategy 2020 – 2030**

The Murihiku Regional Arts Strategy has been prepared by Arts Murihiku as a guiding document to support the strengthening of the arts in the region into the future. The vision of the strategy is to celebrate the distinctive raw beauty of Murihiku’s identity through arts and culture.

- **Queens Park Management Plan (Amended June 2015)**

The Queens Park Management Plan (QPMP) identified the Queens Park area as being a vital area for recreation in Invercargill, alongside the potential to provide for Arts and Culture, specifically through the Southland Museum and Art Gallery (SMAG). The ongoing role of SMAG is supported by several policies within the QPMP, specifically in relation to the educational and recreational opportunities that this infrastructure provides in the context of the wider functioning of the Park. As an important facility on the reserve providing quality amenities to visitors, there is policy direction within the QPMP to ensure that SMAG is maintained to an appropriate standard so that these qualities can be delivered and enhanced in the future.

Financial Implications

The 2021-31 LTP had allocated a funding envelope of \$52.5 million, with Council’s contribution being \$39.4 million and the remainder (\$13.1 million) coming from third party funders to fund the redevelopment of the existing building. Within the funding allocated in the LTP, a sum of \$4.5 million was allocated to a temporary storage facility to house the collection whilst the redevelopment was to occur.

The proposed options all require additional capital funding from Council. This is due to a number of reasons, including cost escalation being applied to Option 1 to 2026/27, higher build costs for the larger Options 2 and 3 and the level of third party funding now likely to be achievable for all three Options in the current economic environment. The operating costs of the three options have also been assessed. The impacts are set out in the following tables:

Te Unua – Cultural Facility and Storage Facility

\$ MILLION	INCLUDED IN LTP	OPTION 1 - REFURBISHED EXISTING BUILDING	OPTION 2 - NEW BUILD 4,150SQM + OFFSITE STORAGE APPROX. 1,600SQM	OPTION 3 - NEW BUILD 3,550SQM + OFFSITE STORAGE APPROX. 1,600SQM
Cost in LTP		52.5		
External Funding		13.1		
Council funding - LTP		39.4		
Capital		57.1*	75.7	65.3
Third Party funding		6.0	20.0	11.0
Council borrowing		51.1	55.7	54.3
Additional Council funding required		11.7	16.3	14.9
Annual additional interest and principal cost		0.9	1.2	1.1

Notes to the table:

*increase for inflation to 2026/27 financial year

Operating Costs

An exercise has been undertaken to assess how much it will cost annually to operate the facilities prior to and post opening at the beginning of 2027/28. These costs are generally in line with what was provided for in the LTP. However, during the construction phase (2022/23 – 2026/27) an additional \$100-\$340k of operating costs is modelled across the three options.

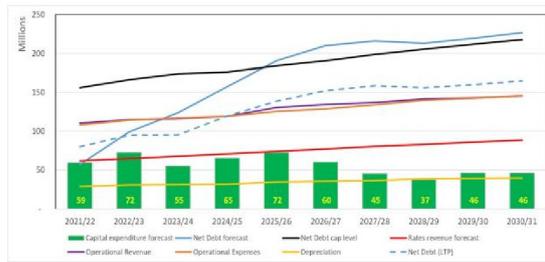
Impact on Council's debt policy

Council's current debt policy within the financial strategy limits the maximum net debt level to 150% of revenue. This limit is lower than that set by the Local Government Funding Authority as Council has taken a prudent position to ensure that it has the ability to borrow a further \$100 million should Invercargill City Holdings Limited need to make a call on its uncalled capital.

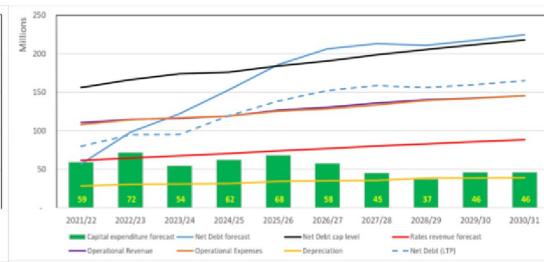
Based on the LTP financial model, both Option 2 and 3 may breach the Council's net debt limit in 2025/26 (based on current policy limits) without any other actions being taken. The quantum of the breach is lower for Option 3 due to the lower additional debt funding required.

The two graphs on the following page show the extent of the breach.

Option 2



Option 3



Any shortfall in securing of external funding will increase the level of net debt and increase the extent of the breach.

Council has options available to it in future years to manage the potential net debt breach including increasing the limit of 150% of revenue or managing the quantum of future growth projects that need to be debt funded.

Impact on Rates

The impact on rates is the result of needing to fund both the interest cost of the borrowing and the future repayment of the debt. The total rates increase is proposed to be spread over three years to smooth the impact of the increase to ratepayers.

	RATES INCREASE			
	Total	2022/23	2023/24	2024/25
Option 1	+1.38%	+0.30%	+0.55%	+0.52%
Option 2	+1.92%	+0.61%	+0.64%	+0.66%
Option 3	+1.75%	+0.60%	+0.55%	+0.59%

The average dollar rates increase is outlined below. This table includes the amount that was included in the Long Term Plan and shows the additional amount for each option.

	OPTION 1 \$	OPTION 2 \$	OPTION 3 \$
Average rates increase per annum			
Rated in Long Term Plan	124.16	124.16	124.16
Additional amount	33.89	47.18	43.07
Total rates per annum	158.05	171.34	167.23
Average rates increase per week			
Rated in Long Term Plan	2.39	2.39	2.39
Additional amount	0.65	0.91	0.83
Total per week	3.04	3.30	3.22

Summary of the findings from the Strategic Business Case

The Te Unua Investment is a key pillar of the LTP to revitalise and modernise Invercargill city and the wider Southland region. Te Unua aims to develop a safe, modern, and flexible cultural and artistic space that can be used to enhance Invercargill's reputation, attract tourists, foster a sense of civic wellbeing, and improve overall economic wellbeing of those in and around the Southland region.

Three options for development have been identified and an economic impact analysis undertaken to quantify the direct, indirect and induced economic benefits that each option would add to the economy. The strategic business case noted the following:

1. All three options provide a positive net economic benefit
2. The net economic benefit for each dollar invested (Return on Investment) are all positive:
 - a. Option 1 has the potential to generate between \$1.15 - \$3.66 in economic benefits for the Southland Region for every dollar invested
 - b. Option 2 has the potential to generate between \$1.19 - \$3.60 in economic benefits for the Southland Region for every dollar invested
 - c. Option 3 has the potential to generate between \$1.26 - \$3.69 in economic benefits for the Southland Region for every dollar invested
3. If maximising the net economic return is one of the priorities, then Option 3 provides the best potential economic benefit to the Southland region for every dollar invested.

A summary of the Strategic Business Case findings can be found in the Staff Summary Attachment 1 with the full report and findings in Attachment 4.

Risk

In establishing the MGG, Council noted the learnings from previous projects. This has seen the development of the Strategic Business Case (*refer to Attachment 3*) which provides an assessment of the social and economic impacts of the project and each option. A number of initiatives have been implemented to ensure the advice provided by the MGG to Council was robust enough to support the decision making required. These include:

- The project has been overseen by a project control group and this has ensured that the critical risks and opportunities have been regularly tested with the MGG.
- Council sought technical advice from a range of consultants who were procured following an RFP process in July and August.

While it is clearly understood the community and council wishes to see the project get underway, it is also critical that the finished product reflects community aspirations for a new cultural facility.

There are however a number of remaining risks for this project – these include:

1. Funding and Affordability

The current LTP has an allocation of \$39.4M from Council with the remaining budget to be funded through external sources. Dependent on the preferred option selected the funding gap may increase from the \$13.1M up to \$36.3M. If additional external funding cannot be secured for the preferred option, the affordability of the new facility and the ability for Council to stay within its debt limits will be stressed.

ICC have already undertaken steps to mitigate the risks associated with the funding including:

- Early engagement with SGL Ltd. to understand the interest and requirement from primary external funders who have already shown interest in Te Unua such as Central Government
- The development of a stakeholder management plan which identifies the funders, impact to the project, who and how to approach as well as timings to carry out the engagements
- Development of cost estimates from a Quantity Surveying firm to support the design options during the Reimagining Phase.

However, there is significant change occurring both within the construction market but also within the broader economy.

Any decision taken will likely always carry an element of risk and the greatest risk we have identified within the three options is the degree of third party funding required in order to meet the total project cost.

Once a preferred option has been chosen, and Council have engaged contractors for the project – from design to project management to construction – Council is committed to the full project budget.

In all options, should Council not be able to secure the external funding amount, Council will need to fund the shortfall with additional borrowing. This will cost an additional 0.12% rates increase per annum for each additional \$1 million borrowed. Staff identify Option 3 carries the least amount of risk compared with Options 1 and 2. Council will need to underwrite the shortfall with additional borrowing to enable construction to progress.

2. Programme

The delivery of the cultural facility in 2026-27, as outlined in the LTP, is intrinsically linked to a storage solution. The reimagining phase tested and confirmed the preferred location for Te Unua as Queens Park; however, this approach will require the alternative storage solution to be completed and the collection decanted in full by early 2024 (demolition start). Should the storage project be delayed, this will impact the start date and potentially the completion date of Te Unua.

Additionally, a suitable alternative location of Tisbury Reserve for the storage was confirmed during the reimagining phase, however this location has challenges around the land use which is addressed under the Reserves Act risk.

To mitigate the risk to Te Unua programme, the Project Control Group decoupled the storage project from the delivery of the new facility. There is funding available within the LTP (\$4.5M) to allow this process to commence immediately, reducing any delay associated with the public consultation of Te Unua.

It has been estimated that the design and construction period for a new storage facility is 24 months; this period can be managed and potentially reduced through the delivery method selected, such as a design and build approach.

Council staff will start reporting from March 2022 on the progress of the collection, cataloguing and packing for relocation, and will also begin reporting to the Performance, Policy and Partnerships Committee and SMAG on the estimated time to complete the packing of the collection.

3. Reserves Act

As proposed within this report, the location for Te Unua is to remain in Queens Park on the current land site. Council staff have reviewed the Queens Park Management Plan and have confirmed the following options will not trigger the need for land status change and also confirm all three options would fit within the 5905m² space allocated within the Queens Park Management Plan that has already been consulted on and adopted.

For Options 2 and 3, the preferred site for the new storage facility has been confirmed as Tisbury Reserve. This land is classified as recreation reserve and is currently managed through the Rural Reserves Omnibus Management Plan. To erect a building on Tisbury Reserve is not allowed for under the current management plan as the purpose does not comply.

A report will be presented the Extraordinary Infrastructure Services Committee on the 15th March 2022 to commence the reclassification of this reserve to Local Purpose (Museum) Reserve.

4. Tuatara

Through the reimagining phase it was agreed a new enclosure for the tuatara should be built separate from the facility but within Queens Park. It was also agreed that tuatara should have some level of visibility and accessibility within Te Unua. Tuatara are now seen by many as an important part of the Invercargill and Southland story. However Council does not own the tuatara, and therefore there is a risk that tuatara may be removed from the site altogether.

Council staff have commenced early engagement with Iwi and Department of Conservation to discuss the proposed changes to ensure the solution is suitable for all stakeholders involved.

The design team has also undertaken preliminary investigations at the Wellington Zoo as their new tuatara enclosure is considered best practice and fit for purpose for the tuatara. Any changes are proposed to be modelled from this example.

5. Communications

There is significant community interest in the museum and its future, and as this project has been discussed for many years in Invercargill and Southland, it is reasonable to expect there will be considerable public interest to parts of the Te Unua project.

Taking into account the community's response to the closure of the Pyramid building in 2018, the potential demolition associated with the building if Option 2 or 3 are progressed is likely to receive a high level of response from the community. There is also a considerable amount of complex and dense information to be delivered regarding

the next steps for the project, including potential changes to the tuatara enclosure, storage location and the programme of work.

The Communications and Strategy teams are working closely together with the project team to ensure messages around the process, vision and experience of a possible new facility are clearly communicated throughout and post the consultation process. It is essential that there are regular and ongoing updates to the public and key stakeholders, and that the community is part of the journey to redevelop the museum. Proactive and positive storytelling with a focus on future outcomes will underpin communications.

Issues and Options

Significance

This decision is highly significant in terms of Council's Significance and Engagement Policy. The recommendations, if accepted, will require Council to consult with the community through the Annual Plan 2022 / 2023 on the basis that:

- the decisions have a potentially significant positive impact on the social, cultural and economic wellbeing of the community.
- there is significant public interest in the Museum.
- the cost to Council and the community.
- the impact on Council's Financial Strategy and LTP.

Options

The MGG was tasked to "create a unique and compelling vision" and in developing this vision it would also create clear and measurable "critical success factors" as a way to measure and direct how the vision would be met. Not only would this information guide the services but it would become the critical test against which the current facility and any new potential facility would be assessed against.

The proposed vision for Te Unua is "Te Unua – explore the stories of Southland" and is supported by seven Critical Success Factors (refer to Attachment 2: Te Unua Reimagining Phase pg.8 for full details). The following table sets out a summarised version of the vision and crucial success factors.

EXPLORE THE STORIES OF SOUTHLAND	
Connecting - with Murihiku, the land, sea and sky	An immersive experience, be it exhibition, education, research, staff contact, performance or reflection, will leave the visitor with a deeper awareness of Murihiku's land, sea, sky, and its people.
Involving - he tākata through diversity and inclusion	Inviting, a community precinct of internal and external spaces that connect people. Inclusive, accessible and diversely appealing to all ages, cultures and demographics - a reflection of the people of Southland.
Inspiring - with stories shaped by our people, our land, and our waters	An experiential visitor journey based on Taaka, art, the natural world. The visitor experience will be a narrative through people and time rather than an ordered sequence of artefacts. The visitor will leave Te Unua with a deeper understanding of the history of

	Invercargill, Southland and NZ ¹ , and the people and stories behind the exhibited collection.
Aspiring - to bring change and understanding	An enquiry hub that sparks curiosity for continuous learning. It will offer a variety of formal and informal learning opportunities, within the built space and throughout the adjoining precinct. Will include tactile and technological interactive exhibits that engage both young and more mature minds.
Protecting - our taoka for future generations	A safe environment for people and collection, achieving agreed resilience for seismic and flood risks and providing appropriate environmental controls to protect Taoka over time. Design approach, materials and systems will be selected to ensure permanence and managed to reduce load on the present and future environment.
Engaging - with the past, the present, and the future	A highly flexible space for exhibition and service with sufficient volume, floor area, and systems to enable future reconfiguration. Physical and technological aspects of development are provided to accommodate future change and development. Responsive to cultural change and how it is reflected in the stories we tell.
Value - balancing cost with quality	Excellent value for the community's investment. This includes monetary and non-monetized aspects such as culture, energy, and resources. Meeting foreseeable operational requirements, with appropriate materials for permanence, durability, and maintenance, while offering optimised running costs

This vision and the critical success factors have been developed by the MGG and have guided the design team on establishing the three options and have also been used to test each option to establish how well each option will support the vision. It has also focused the MGG on identifying the preferred option/s. A summary of the options developed based on the requirements of the service brief and functional areas is summarised below and is included in attachment 1.

Option 1 – 67% NBS and Full Refurbishment

Under this option the Pyramid would be strengthened to 67% NBS and fully refurbished. This option addresses the structural issues of highest concern and increases the building's ability to withstand an earthquake. It would also reduce but not avoid repair requirements to the building following a relevant seismic event. This option does not address the increased seismic resilience requirements for storage, nor does it comply with the vision, critical success factors, services or functional brief.

Option 2 – New Build 4,150m2

Under this option the Pyramid would be demolished, and a replacement building positioned within the current footprint. A new permanent standalone storage facility would also be constructed. The design associated with Option 2 to build a new facility, achieves with best outcomes:

- Functional qualities and criteria identified in the services and functional brief.
- World class, spacious and modern new building.
- At 4,150m2 it maximises the opportunities to showcase and celebrate the stories of Murihiku Southland.
- Ensures the facility is right sized not just for current but also future requirements.

¹ Staff proposal to amend the MGG Critical Success Criteria for Inspiring – proposal to include Invercargill and Southland in the last sentence in this section as highlighted above.

Option 3 – New Build 3,550m2

Under this option the Pyramid would be demolished, and a replacement building positioned within the current footprint. A new permanent standalone storage facility would also be constructed. The design associated with Option 3 is a smaller version of option 2. It also provides a modern new building with similar features and technological possibilities, but it has a reduced footprint of 3,550m2.

The 600m2 reduction in space means we would see smaller areas within the public and education areas, the special and temporary exhibition areas, and the provision of on-site staff facilities and workshop space for staff. From a customer experience point of view these changes do not adversely affect the delivery on the vision and critical success factors and will require a more flexible design and operational approach to make these spaces work. The following table summarises the options with an assessment of the ability of each option to deliver² on the specific items listed.

Item	Option 1 67% NBS and Full Refurbishment	Option 2 – New Build 4,150m2	Option 3 – New Build 3,550m2
Captivating Immersive Experience	RESTRICTED	YES	YES
Science, Technology, Engineering, Arts + Mathematics	RESTRICTED	YES	YES
National and International Touring Exhibitions	NO	YES	YES – MEETS MOST
Encourages Spatial Rethinking and Opportunities	RESTRICTED	YES	YES
Enhanced Physical Connection to the Park	RESTRICTED	YES	YES
Improved Retail and Hospitality Opportunities	RESTRICTED	YES	YES – MEETS MOST
Suitable Staff and Back of House Facilities to reflect Service	PARTIAL	YES	YES – MEETS MOST
Repeat Visitors Connect, Share and Engage	PARTIAL	YES	YES
Create a User-Friendly Experience	PARTIAL	YES	YES

The MGG's position on the three options are:

- they have discounted Option 1 - as it will largely fail to meet any of the critical success factors for a cultural facility and storage option, there are significant limitations to the current facility and does not represent any long term value for the community.
- their preferred option is Option 2 - new build 4,150m2.
- they have no specific comment on Option 3 – new build 3,550m2.

² **No** - does not meet requirements; **Yes** - meets 100% of requirement; **Yes – Meets Most** meets at least 85% of requirement; **Restricted** - meets less than 50% of requirement; **Partial** - meets less than 33% of requirement.

Staff Assessment of Options:

As noted in the table above, there are significant differences in terms of the experience that can be created between option 1 and options 2 and 3.

Staff's collective advice is that:

- Option 1 will have a limited capacity to deliver on a captivating and immersive experience whereas Options 2 and 3 will achieve 100% of the vision and critical success factors for the new service
- Option 1 will have a limited capacity to support the STEAM³ / education programmes whereas Options 2 and 3 will enable and likely grow the potential for learning and education outside the classroom
- Option 1 will not be able to facilitate any touring exhibitions whereas Option 2 will be able to accommodate nearly all national and international touring exhibitions. With slightly smaller space Option 3 will be able to accommodate most but not all shows compared with Option 2.
- Option 1, with the significant internal structural works, will have limited opportunities to reshape the facility to provide a more engaging customer journey and a greater connectivity within Queens Park. Options 2 and 3, being new builds, will enable a purpose built response to the vision and critical success factors and will also enable significant connectivity to the surrounding environment. A similar assessment follows for retail and hospitality options, with the only difference being the spaces within Option 3 will be more constrained, therefore requiring a slightly more flexible approach to both design and operations in order to achieve the same outcome that Option 2 provides for.
- Option 1 is unable to provide for a functional space for staff to support the vision and critical success factors. Option 3 will mostly support the functional back of house requirements but these may be spread across the Storage and the Te Unua facility whereas Option 2 provides all of the functionality within the one building.
- Option 1 will seek to encourage return visitation through an engaging customer experience but the potential, compared with Options 2 and 3 is significantly different and more constrained.

It is the collective staff view that Option 3 provides the best overall outcome for Te Unua, when balancing the vision and critical success factors, the community experience as well as the risks and financial costs.

Option 3 also provides the best potential economic benefit to the Southland region for every dollar invested when compared against options 1 and 2.

Option 3 for a comparatively similar experience can be progress with a significantly reduced financial risk.

Community Views

The views of the community, for this facility and service, have been canvassed multiple times over the past decade. The focus of the MGG has been to build upon the previous advice and findings from the reports by Gorbey (2012 and 2015) and TWA (2018) but has also sought to tie the service and design narrative together.

³ Science, Technology, Education, Arts and Mathematics

Council sought the views of tangata whenua and asked the two rūnaka to appoint a representative to the MGG. The appointment of Ms. Evelyn Cook was confirmed and the views of tangata whenua have contributed to the MGG process.

Because of the significance of this decision, it is recommended that all three options be presented to the community for consultation in the draft Annual Plan 2022 / 23 process.

Next Steps

The next steps are to, with the approved options, to draft the consultation material for the draft Annual Plan 2022 / 23 consultation pack.

Council to commence the land disposal/change process for the new storage facility on Tisbury Reserve.

Attachments

Attachment 1: Te Unua Reimagining Phase Options Report - A3831714

Attachment 2: Te Unua Reimagining Phase Architectural Report - A3639700

Attachment 3: WSP's report – Te Unua Strategic Assessment - A3621406

Attachment 4: WSP report - Te Unua Economic Assessment - A3621408

Attachment 5: MGG Membership and Terms of Reference - A3831694

CONFLICT ADVICE

To:	Performance, Policy and Partnerships Committee
Meeting Date:	Tuesday 24 May 2022
From:	Michael Morris – Manager, Governance and Legal
Approved:	Clare Hadley - Chief Executive
Approved Date:	Monday 23 May 2022
Open Agenda:	Yes
Public Excluded Agenda:	No

Purpose and Summary

To present staff advice regarding a Conflict of Interest by the making of a submission by a Councillor who then determines that submission.

The member, under the Code of Conduct must make their own decision whether to withdraw or not, based on advice.

Recommendations

1. That the Committee receives the report titled "Conflict Advice".

Issues

This is a situation where a Councillor makes a submission to the annual plan and also then wishes to decide the outcome of that submission and others.

The Member would be able to determine matters where the submission presented did not seek an outcome from Council. Only matters raised in the submissions are covered by this report.

There is no legislation that states that a Member cannot do this, in part because the legislation in place is the Local Authorities (Members Interests) Act 1968 and that only deals with financial conflicts. Rather consideration must be taken of the common law regarding perceived or actual conflicts of interest and their impact on the validity of decision making. The issue is further complicated by the broad remedies available to the court even where it finds that the conflict of interest has impacted the decision making process. Those remedies range from no action to referring the decision for further consideration by the decision maker.

Code of Conduct

The code covers this issue in Appendix A (page 14-15) (Pages are Appendix A to this report) where it looks at non-pecuniary interests.

The key issue it covers is that of a perception of a conflict.

Perception is often more damaging than an actual conflict. The code asks the question in these cases:

"Is there a real danger of bias on the part of the member of the decision-making body, in the sense that he might unfairly regard with favour (or disfavour) the case of the party to the issue under consideration."

As the code goes on to state, the most common risks are where statements or conduct indicate that they have predetermined the decision before hearing all relevant information.

This is the case where a Councillor makes a submission seeking a certain set of outcomes and then sets to determine what those overall outcomes will be.

The public will perceive that the member, in speaking and presenting on behalf of IRAG will of course favour their submission, and if another group or person was to submit something that is different to IRAG then they could see the member as having closed their mind to what they have to say and the member will of course favour the submission the member helped present.

While that may not be what the member actually does, for those on the outside it could be perceived that way.

The code also notes that members need to consider the context and circumstance of the issues and states that where a member has been voted in on a platform that the public will expect that member to give effect to that promise.

However, it is a different situation where a submission is made seeking Council to do a series of things and then determining those series of things, than having a platform and voting in accordance with that platform.

Standing Orders

Standing Orders also provide some guidance for non-financial conflicts.

They confirm that only the member is able to make the determination for themselves and specifically provides that the Chair and meeting have no power to make a ruling on whether the member has a non-financial interest.

It records:

Non-financial interests always involve questions of judgement and degree about whether the responsibility of a member of a local authority (or local or community board) could be affected by some other separate interest or duty of that member in relation to a particular matter. If a member considers that they have a non-financial conflict of interest in a matter they must not take part in the discussions about that matter or any subsequent vote.

The member must leave the table when the matter is considered, but does not need to leave the room. The minutes must record the declaration and member's subsequent abstention from discussion and voting.

Neither the Chairperson nor the meeting may rule on whether a member has a nonfinancial interest in the matter being discussed.¹

¹ Standing Orders, 20.8 Non-financial conflicts of interest

Office of the Auditor-General

The Office of the Auditor-General (AG) also has provided guidance on this in a guidebook called *Managing conflicts of interest- a guide for the public sector*². (The Guide)

Scenario 7 in the Guide (Appendix 2) which also covers this situation and the AG state that the perception is that the Councillor is acting both as an interested party and a decision-maker in the same matter and would be the judge of his own cause, the decision could be open to challenge.

The AG advice states that the Councillor, if he/she wishes to make the submission (and their Code of Conduct allows it) must sit out from the decision making process.

There is a Latin phrase that is a principle of the law: *nemo iudex in sua causa* which is simply that no man shall judge their own cause. The reason for this is that is when making a determination on submissions it is unfair to those submitters who seek something different if you are then able to determine what to do with those submissions.

The difficulty in the factual scenario that has been created for this Council is determining the scope of the submission conflict. Unlike the scenario provided by the Auditor- General while there a single decision that sets the rates this is a culmination of a number of prior decisions. It is a range of decisions covering projects, operating costs, borrowing and capital replacement that ultimately determine the final rates figure that is presented to Council.

Possible Consequences

There is a risk that by remaining to make the decisions on the member's own submission could lead to a Judicial Review and see the decision be overturned for procedural unfairness and being unreasonable in general.

It could also (potentially) lead to a Code of Conduct enquiry, but that is far less of a concern in terms of the impact of the decision being overturned.

Attachments

Appendix 1- Code of Conduct Extract

Appendix 2 - Scenario 7 from the Guide

² *Managing conflicts of interest: A guide for the Public sector*, June 2020, Controller and Auditor-General, ISBN 978-0-9951321-3, Wellington <https://oag.parliament.nz/2020/conflicts>

Appendix 1

Appendix A: Legislation bearing on the role and conduct of elected members

This is a summary of the legislative requirements that have some bearing on the duties and conduct of elected members. The full statutes can be found at www.legislation.govt.nz.

...

Non-pecuniary conflicts of interest

In addition to the issue of pecuniary interests, rules and common law govern conflicts of interest more generally. These rules apply to non-pecuniary conflicts of interest, including common law rules about bias. In order to determine if bias exists or not members need to ask:

"Is there a real danger of bias on the part of the member of the decision-making body, in the sense that he or she might unfairly regard with favour (or disfavour) the case of a party to the issue under consideration?"

The question is not limited to actual bias, but relates to the appearance or possibility of bias reflecting the principle that justice should not only be done, but should be seen to be done. Whether or not members believe they are not biased is irrelevant.

Members should focus be on the nature of the conflicting interest or relationship and the risk it could pose for the decision-making process. The most common risks of non-pecuniary bias are where:

- members' statements or conduct indicate that they have predetermined the decision before hearing all relevant information (that is, members have a "closed mind"); and
- members have a close relationship or involvement with an individual or organisation affected by the decision.

In determining whether or not they might be perceived as biased, members must also take into account the context and circumstance of the issue or question under consideration. For example, if a member has stood on a platform and been voted into office on the promise of implementing that platform then voters would have every expectation that the member would give effect to that promise, however he/she must still be seen to be open to considering new information (this may not apply to decisions made in quasi-judicial settings, such as an RMA hearing).

Appendix 2

Scenario 7: Making a public submission in a private capacity

- 7.43 Ken is an elected member of a city council. The council is proposing to adopt a new bylaw on the location of brothels. As it is required to carry out a formal public consultation process on its draft bylaw, the council has invited written submissions and will hold a public hearing where submitters can make an oral presentation to a council committee. The adoption of the bylaw will be decided by a vote of the full council.
- 7.44 Ken feels strongly about the draft bylaw, and wishes to lodge a submission.
- 7.45 This situation might create a conflict of interest for Ken.
- 7.46 Some public organisations will have a code of conduct or policy that prohibits their members or officials from making public submissions to the organisation in a private capacity³.
- 7.47 Assuming that Ken will not be breaching the council's code of conduct, he will be entitled to exercise his democratic right to make a submission, like any other private citizen. But, if he does so, he should not participate in the council's decision on whether to adopt the draft bylaw; nor should he sit on the committee that hears and considers the submissions. Otherwise, his behaviour could indicate pre-determination.
- 7.48 Ken would create the perception that he is attempting to act as both an interested party and a decision-maker on the same matter or, in other words, acting as a

³ In particular, senior officials – or officials who work in policy roles – in the public service need to take extra care to maintain their political neutrality.