



If calling, please ask for Democratic Services

Climate Committee

Thursday 7 September 2023, 09.30am

Taumata Kōrero, Council Chamber, Greater Wellington Regional Council,
100 Cuba St, Te Aro, Wellington

Quorum: Seven Members

Members

Councillors

Penny Gaylor (Chair)

David Bassett

Quentin Duthie

Ken Laban

Thomas Nash

Hikitia Ropata

Simon Woolf

Yadana Saw (Deputy Chair)

Ros Connelly

Chris Kirk-Burnnand

David Lee

Daran Ponter

Adrienne Staples

Recommendations in reports are not to be construed as Council policy until adopted by Council

Climate Committee (A Committee of the Whole)

1 Purposes

- 1.1 Oversee, review and report to Council on the management and delivery of Greater Wellington's strategies, policies, plans, programmes, initiatives and indicators for climate change mitigation and adaptation.
- 1.2 Provide effective leadership on climate change for Greater Wellington and the Wellington Region on climate change mitigation and adaptation.

2 Specific responsibilities

- 2.1 Apply Council's Te Tiriti o Waitangi principles when conducting the Committee's business and making decisions.
- 2.2 Oversee the development and review of Council's climate change strategies, policies, plans, programmes, initiatives and indicators; and recommend these matters (and variations) to Council for adoption.
- 2.3 Review and monitor, by considering regular reports from relevant activity areas, Greater Wellington's progress towards delivering on and achieving Council's climate change strategies, policies, plans, programmes, initiatives and indicators.
- 2.4 Advise Council on how best to incorporate climate change mitigation and adaptation into other strategies, policies, plans, programmes, initiatives and indicators, including consideration of local, regional, and international best practice approaches.
- 2.5 Advise Council's representative on the Wellington Regional Leadership Committee on Greater Wellington's position on regional climate change projects (including the Regional Climate Emissions Reduction Plan and Regional Climate Adaptation Plan).
- 2.6 Advocate for the alignment and advancement of central government's and other external organisations' programmes and initiatives in climate change programmes and initiatives, working alongside the Wellington Regional Leadership Committee.

3 Delegations

- 3.1 The Committee has the authority to approve submissions to external organisations on matters pertaining directly to the Committee's purpose.
- 3.2 Where a matter proposed for consideration by the Committee (including during the development of proposed Greater Wellington plans and policies) is of strategic importance to the Wairarapa Constituency, that matter shall first be referred to the Wairarapa Committee or its members for their consideration.

4 Members

All thirteen Councillors.

5 Quorum

Seven Committee members.

6 Meeting frequency

The Committee shall meet twice each year, with additional meetings as required.

Climate Committee

Thursday 7 September 2023, 9.30am

Taumata Kōrero – Council Chamber, Greater Wellington Regional Council,
100 Cuba Street, Te Aro, Wellington

Public Business

| No. | Item | Report | Page |
|-----|--|--------|------|
| 1. | Apologies | | |
| 2. | Conflict of interest declarations | | |
| 3. | Public participation | | |
| 4. | Confirmation of the Public minutes of the Climate Committee meeting on 16 March 2023 | 23.104 | 5 |
| 5. | Organisational Climate-Related Risk Assessment | 23.401 | 8 |
| 6. | Updating the Climate Emergency Action Plans | 23.438 | 50 |
| 7. | Low Carbon Acceleration Fund status update | 23.421 | 60 |
| 8. | Update on Regional Climate Change Projects | 23.446 | 64 |
| 9. | Reflections on Takutai Kāpiti and Implications for Greater Wellington's Future Role | 23.447 | 87 |



Please note these minutes remain unconfirmed until the Climate Committee meeting on 7 September 2023.

Report 23.104

Public minutes of the Climate Committee meeting on Thursday 16 March 2023

Taumata Kōrero – Council Chamber, Greater Wellington Regional Council
100 Cuba Street, Te Aro, Wellington at 9.34am.

Members Present

Councillor Gaylor (Chair)
Councillor Saw (Deputy Chair, remotely via Teams)
Councillor Bassett (remotely, via Teams)
Councillor Connelly (in person until 11.27am; remotely, via Teams from 1.29pm until 1.55pm)
Councillor Duthie
Councillor Kirk-Burnnand
Councillor Laban
Councillor Lee
Councillor Nash
Councillor Ponter (from 9.37am until 10.57, from 11.03am)
Councillor Woolf (remotely, via Teams)

Karakia timatanga

The Committee Chair opened the meeting with a karakia timatanga.

Public Business

1 Apologies

Moved: Cr Connelly / Cr Nash

That the Committee accepts the apology for absence from Councillor Staples and apology for lateness from Councillor Ponter.

The motion was **carried**.

2 Declarations of conflicts of interest

There were no declarations of conflicts of interest.

The Committee Chair advised the Committee that Public Participation would be deferred until after Agenda Item 4 – Sea Level Rise in the Wellington Region (Report 23.96).

4 Sea Level Rise in the Wellington Region – Report 23.96 [For Information]

Dr Iain Dawe, Senior Policy Advisor spoke to the report and introduced two guest speakers – Professor Tim Naish, Te Herenga Waka - Victoria University of Wellington, and Professor Richard Levy, GNS Science and Te Herenga Waka – Victoria University of Wellington. Professors Naish and Levy tabled a presentation.

Councillor Ponter left the meeting at 10.57am, at the conclusion of the above item.

3 Public Participation

Patrick Geddes, 350 Aotearoa, spoke on the Homegrown Energy Campaign and the energy industry as a whole.

Molly Melhuish spoke on flooding impact created by climate change.

Councillor Ponter returned to the meeting at 11.03am, during public participation.

The meeting adjourned at 11.07am and resumed at 11.14am. Councillor Laban returned to the meeting at 11.17am, during questions on the below item.

5 Low Carbon Acceleration Fund Round Two 2022-23 Applications – Report 23.75

Luke Troy, General Manager Strategy, introduced the report. Lisa Early, Team Leader, Climate Change, spoke to the report.

Moved: Cr Nash / Cr Duthie

That the Committee:

- 1 Recommends that Council approves the allocation of a \$266,651 grant to Metlink for the 'Solar power generation – Stations roofs' project.
- 2 Recommends that Council approves the allocation of a \$750,000 grant to Sky Stadium for the 'Energy efficient lighting opportunity' project.
- 3 Recommends that Council defers allocation of a \$150,000 grant to the Strategy Group for the 'Solar prospecting study' until it can consider a similar approach with respect to wind generation and projects that may come from CentrePort Limited.
- 4 Recommends that Council approves in principle the 'Diesel bus conversion to electric project #2' from Metlink. A final recommendation on funding amount will be made at a later Climate Committee meeting based on the result from the first trial currently underway.

- 5 Recommends that the Council extends the Low Carbon Acceleration Fund eligibility to CentrePort Limited.

The motion was taken in parts. Part 1 was put and was **carried**. Part 2 was put and was **carried**. Part 3 was put and was **carried**. Part 4 was put and was **carried**. Part 5 was put and was **carried**.

The meeting adjourned at 11.27am during questions on the above item. The meeting resumed at 1.29pm. Councillor Connelly rejoined the meeting at 1.29pm, remotely, via MS Teams.

Councillor Connelly left the meeting at 1.55pm, at the conclusion of the above item, and did not return.

- 6 **Climate Change Programme Update – Report 23.77** [For Information]

Lisa Early, Team Leader, Climate Change, spoke to the report.

Karakia whakamutunga

The Committee Chair invited Councillor Saw to close the meeting with a karakia whakamutunga.

The meeting closed at 2.02pm.

Councillor P Gaylor

Chair

Date:

Climate Committee
7 September 2023
Report 23.401



For Information

ORGANISATIONAL CLIMATE-RELATED RISK ASSESSMENT

Te take mō te pūrongo

Purpose

1. To inform the Climate Committee (the Committee) of the Organisational Climate-related Risk Assessment (OCRA) Stage One findings and next steps.

Te tāhū kōrero

Background

2. Under the provisions of the Climate Change Response (Zero Carbon) Amendment Act 2019 (Section 5ZW) the Minister or the Commission may, in writing, request local authorities (which includes regional councils) to provide information on climate change adaptation. In 2020, Greater Wellington Regional Council (Greater Wellington) were included in a request from the Ministry for the Environment to provide information on how they are preparing for the impacts of climate change. Greater Wellington responded to this request in the allocated timeframe.
3. Some organisations are subject to a climate-related disclosure regime (e.g., large banks, insurers, etc). Reporting is required against standards issued by the External Reporting Board (XRB¹). These standards are based on the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD²). Greater Wellington is currently not required to abide to this regime but may face a similar legal requirement in the future.
4. Greater Wellington completed, this year, Stage One of its OCRA (see [Attachment 1](#)). This report identifies the main climate-related risks Greater Wellington is facing, as well as adaptation measures, gaps, needs, opportunities, and recommendations. This report was first presented to the Climate Emergency Response Programme Board on 31 May 2023.
5. We are in the process of beginning Stage Two of the OCRA.

¹ <https://www.xrb.govt.nz/standards/climate-related-disclosures/aotearoa-new-zealand-climate-standards/>

² <https://www.fsb-tcf.org/publications/>

Te tātaritanga Analysis

6. The OCRA project is separate and different to the Regional Climate Change Impact Assessment (RCCIA) being undertaken through the Wellington Regional Leadership Committee and due to be completed by the end of 2023. The scope of the RCCIA focuses on regional impacts and does not include transition risks, whereas the OCRA focuses on organisational risks and impacts. The Stage Two of the OCRA will nevertheless use some data and findings from the RCCIA. There are some commonalities regarding climate hazards, scenarios, and elements at risks, impacts however, will differ (e.g., the impacts of a breached stop bank will be different at a regional level – surface flooding, loss of houses, etc – and at an organisational level – damaged infrastructure that needs repair, possible litigation, increased workload, etc).
7. The OCRA Stage One report (**Attachment 1**) identified the main climate-related risks Greater Wellington is facing, as well as adaptation measures, gaps, needs and opportunities, and made recommendations set out in paragraphs 8 to 12 below.
8. **Risks identified:**
 - a Transition risks are risks typically associated with the shift to a low-carbon economy (TCFD, 2017). Transition risks are also those arising in communities as they move towards climate resilience and begin adaptation. The transitional risks identified are:
 - i policy and legal
 - ii technology
 - iii market
 - iv reputational
 - b Physical risks: are those resulting from climate change hazards. These can be acute, such as increasingly extreme weather (e.g., cyclones, droughts, floods). They can also arise from longer-term (chronic) shifts in precipitation, temperature, sea-level rise, and more variable weather patterns. The Physical risks identified are
 - i acute
 - ii chronic
9. **Adaptation measures:**
 - a Strategic planning,
 - b Working with partners and stakeholders,
 - c Internal collaboration and capability,
 - d Flexibility and reactivity.
10. **Gaps and needs:**
 - a There are gaps in the data Greater Wellington currently holds and collects which we need to address to have a thorough understanding of our climate-related risks.

- b Greater Wellington's scope of work is increasing (climate change impacts to consider, new regulations, increasing interest from the public, etc.) faster than the budget and time allocated to teams. As a result, some areas of work are identified as missing (e.g. no work is currently being done on marine pests).
- c Greater Wellington is a large and complex organisation, with many different teams working on a wide range of topics and projects. This creates challenges to maintain internal collaboration, consistency, and efficiency, and prevent the risk of duplication.
- d Some work programmes are getting harder to achieve (e.g. when weather conditions are not favourable, teams cannot undertake field work and fall behind schedule).

11. Opportunities:

- a *Improved resource efficiency:* technology becomes more efficient and becomes less expensive.
- b *Energy sources:* renewable energy (local production and national grid), carbon market (New Zealand Emissions Trading Scheme (NZ ETS) and carbon credits), etc.
- c *Products and services:* increased need for Greater Wellington's services (increased patronage for public transport, increased need for environmental management, adoption of nature-based solutions, etc).
- d *Markets:* more suppliers with sustainable options, increasing funding opportunities, etc.
- e *Increased resilience:* a holistic approach to corporate climate change mitigation and adaptation will increase the overall climate-resiliency of Greater Wellington.

12. Recommendations:

- a Develop a full risk assessment to close the gap identified in data collection followed by the development of a cross-organisational adaptation plan.
- b Develop the full understanding of Greater Wellington's assets and infrastructure.
- c Increase data collection, including tracking of carbon sequestration.
- d Set up and validate chosen emissions and impacts scenarios and timeframes to use across Greater Wellington.
- e Support the work in climate change adaptation with an internal adaption group (e.g., the Asset Management Development Group).
- f Increase Greater Wellington's maturity regarding the understanding of climate-related risks (e.g., training, etc).

13. The Stage One report and its recommendations have been endorsed by the internal Climate Emergency Response Programme Board. The recommendations are being integrated into Greater Wellington's work programmes and will be reflected in the refresh of the Climate Emergency Action Plans (see Report 23.420) and recommended for prioritisation through the development of the 2024-34 Long Term Plan.

14. Stage Two of the OCRA, which will commence shortly, aims to provide Greater Wellington with:
 - a A comprehensive set of scenarios (which include climate change projections as well as society changes needed to transition to a low carbon society). These scenarios will help identify the climate-related risks and opportunities Greater Wellington is and will be facing (risks and impacts depend on the severity of projected climate change).
 - b A detailed assessment of the organisation transitional and physical risks as well as cascading impacts³ and opportunities.
 - c Rating of the risks identified (e.g., low, moderate, high, extreme).
 - d Prioritisation of the risks identified for adaptation planning and response.
 - e A GIS component to Greater Wellington's internal GIS system that will help staff members better understand the climate risks that could impact their projects and aid decision-making processes.
15. The project will apply the best guidance available i.e., XRB standards, TCFD and Ministry for the Environment guidance⁴.
16. The development of an organisational adaptation plan will follow Stage Two of the OCRA. The risks identified during Stage Two will go through a prioritisation framework and adaptation measures will be identified to mitigate the risks. The adaptation plan will set a direction for Greater Wellington to increase its climate-resiliency against transition and physical risks. The organisational adaptation plan will be ready to inform the 2027-37 Long Term Plan.

Ngā hua ahumoni

Financial implications

17. Council will use existing staff resource for the Stage Two of the OCRA, and we do not anticipate needing external contract help. Therefore, there will not be any direct financial implications to carry out this project.
18. However, implementing recommendations raised in Stage One or Stage Two may have indirect financial implications. Those recommendations will be discussed and agreed by the Committee. In the case of Stage One, any funding will be part of the 2024-27 Long Term Plan process, in the case of Stage Two, it most likely funding will be part of the 2027-30 Long Term Plan process.

³ Cascades result from interdependencies between systems and sub-systems of coupled natural and socio-economic systems in response to changes and feedback loops (Lawrence J., Blackett P, Cradock-Henry NA (2021) Cascading climate change impacts and implications)

⁴ <https://environment.govt.nz/assets/publications/climate-risk-assessment-guide.pdf>

Ngā Take e hāngai ana te iwi Māori

Implications for Māori

19. There are no direct implications specifically for Māori as a consequence of the OCRA Stage One Report.
20. A greater understanding of Greater Wellington’s climate-related risks will support us to be better prepared to respond and adapt to those risks, which may include through working with our mana whenua partners, enhancing positive cultural outcomes (as well as environmental, social and economic outcomes).

Te huritao ki te huringa o te āhuarangi

Consideration of climate change

21. The OCRA project does not have any direct implications regarding climate change mitigation.
22. The OCRA once complete will enhance our understanding of climate-related risks thereby helping us to be better-prepared for climate changes.

Ngā tūāoma e whai ake nei

Next steps

23. The OCRA Stage Two Project Plan has been prepared and the project is expected to commence in September 2023. Planned completion of Stage Two is June 2024. A report will be provided to the Climate Committee in September 2024.
24. The organisational adaptation plan will be developed after the findings of the Stage Two of the OCRA have been presented and accepted by the Climate Emergency Response Programme Board.

Ngā āpitihanga

Attachment

| Number | Title |
|---------------|--|
| 1 | Organisational Climate-related Risk Assessment Stage 01 – final report |

Ngā kaiwaitohu

Signatories

| | |
|-----------|--|
| Writer | Mélanie Barthe – Kaitohutohu Senior Advisor Climate Change |
| Approvers | Jake Roos – Kaiwhakahaere Matua Manager Climate Change Zofia Miliszewska – Kaiwhakahaere Matua Head of Strategy and Performance Luke Troy – Kaiwhakahaere Matua Rautaki Group Manager Strategy |

| He whakarāpopoto i ngā huritaonga Summary of considerations |
|---|
| <i>Fit with Council's roles or with Committee's terms of reference</i> The Climate Committee's delegation includes to <i>"Review and monitor, by considering regular reports from relevant activity areas, Greater Wellington's progress towards delivering on and achieving Council's climate change strategies, policies, plans, programmes, initiatives and indicators."</i> |
| <i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i> The OCRA Stage One and Two relates to one of the four overarching strategic priorities of the 2021-31 Long Term Plan: responding to the climate emergency. |
| <i>Internal consultation</i> Stage One of the OCRA was developed in collaboration with staff from across the organisation. On-going discussions are happening between the Climate Change team and the Environment Group regarding climate change adaptation and mitigation. |
| <i>Risks and impacts - legal / health and safety etc.</i> There are no identified risks or impacts arising from this paper. |

Greater Wellington Regional Council
Corporate climate-related risks
assessment
Stage 1: Information gathering

Author: Mélanie BARTHE, Senior Advisor Climate Change, GWRC

Date: 13 June 2023



Contents

| | | |
|-----------------------|--|--------------------|
| 1 | Executive summary | 4 |
| 2 | Introduction | 8 |
| 3 | Governance at Greater Wellington | 9 |
| 3.1 | Council committees | 9 |
| 3.1.1 | Finance, Risk and Assurance Committee (FRAC) | 9 |
| 3.1.2 | Climate Committee | 9 |
| 3.2 | Management | 9 |
| 3.2.1 | Executive Leadership Team (ELT) | 9 |
| 3.2.2 | Climate Emergency Response Programme Board | 10 |
| 4 | Methods | 11 |
| 4.1 | Categories of risk | 11 |
| 4.2 | Scenario analysis | 11 |
| 4.3 | Physical changes | 12 |
| 5 | Corporate climate-related risks and impacts | 13 |
| 5.1 | Transition risks | 13 |
| 5.1.1 | Policy and legal risks | 13 |
| 5.1.2 | Technology | 17 |
| 5.1.3 | Market | 18 |
| 5.1.4 | Reputation | 19 |
| 5.2 | Physical risks | 21 |
| 5.2.1 | Previous risk assessment of built assets | 21 |
| 5.2.2 | Acute risks | 22 |
| 5.2.3 | Chronic risks | 24 |
| 6 | Gaps and needs | 26 |
| 6.1 | Data | 26 |
| 6.2 | Resources | 26 |
| 7 | Adaptation measures | 27 |
| 7.1 | Strategic planning | 27 |
| 7.2 | Working with partners and stakeholders | 27 |
| 7.3 | Internal collaboration and capability | 27 |
| 7.4 | Flexibility and reactivity | 28 |
| 8 | Opportunities | 29 |
| 9 | Recommendations | 32 |
| 10 | Interviews with staff | 33 |
| 11 | References | 34 |

Table of figures

| | |
|--|--------------------|
| Figure 1: Spot price of NZUs in the NZETS, February 2021 to March 2023 | 15 |
|--|--------------------|

Table of tables

| | |
|---|--------------------|
| Table 1: Projections of future climate | 12 |
| Table 2: Impacts from central government reforms, policies and guidance | 13 |
| Table 3: Impacts from litigation risks | 14 |
| Table 4: Impacts from likely future requirement to undertake climate risks disclosure | 14 |
| Table 5: Impacts from carbon price | 15 |
| Table 6: Impacts from managed retreat..... | 16 |
| Table 7: Impacts from the transition to low emissions technologies | 17 |
| Table 8: Impacts from unsuccessful investment in new technologies..... | 17 |
| Table 9: Impacts from updated climate science | 18 |
| Table 10: Impacts from insurance..... | 18 |
| Table 11: Impacts from shortages in certain goods and services | 18 |
| Table 12: Impacts from competing priorities..... | 19 |
| Table 13: Impacts from negative press or social media coverage | 19 |
| Table 14: Impacts from political context or stakeholder pressure | 20 |
| Table 15: Impacts from managed retreat..... | 21 |
| Table 16: Corporate risk assessment of vulnerable assets impacted by climate change and natural (external) hazards..... | 22 |
| Table 17: Impacts from extreme weather events..... | 22 |
| Table 18: Impacts from flood..... | 23 |
| Table 19: Impacts from landslides..... | 23 |
| Table 20: Impacts from changes and extreme variability in weather patterns | 24 |
| Table 21: Impacts from sea level rise | 24 |
| Table 22: Impacts from erosion | 25 |
| Table 23: Impacts from saltwater intrusion..... | 25 |
| Table 24: Impacts from increased pests and loss in biodiversity..... | 25 |
| Table 25: Opportunities arising from climate change | 29 |

1 Executive summary

Introduction

This report is an assessment of the current corporate climate-related risks Greater Wellington is facing. It is based on the international Task Force on Climate-related Financial Disclosures (TCFD) guidance and the New Zealand External Reporting Board (XRB) standards.

Methods

Categories of risk

The TCF identifies categories of risks:

- **Physical risks:** Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. These can be Acute risks, such as a sudden flood, or Chronic risks, such as sea level rise.
- **Transition risks:** Transitioning to a lower-carbon economy may entail extensive Policy & Legal, Technology, and Market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and Reputational risk to organizations.

Scenario analysis

Several scenarios are considered in a climate-related risk assessment:

- **Physical scenarios:** These are based on greenhouse gas concentrations and global air temperatures. It is recommended by the TCFD and the XRB standards to use scenarios of 1.5°C and 3°C increase relative to pre-industrial.
- **Transition scenarios:** These are a prediction of what the future may look like (future policies, new technologies, market changes, etc). Transition scenarios explore the different socio-economic options available that might reduce the greenhouse gas emissions and maintain the temperature ideally under 2°C increase.

Corporate climate-related risks and impacts

Transition risks

| Risk | Cascading impacts | Financial impacts |
|--|--|--|
| Policy and legal | | |
| Central government reforms, policies, and guidance | Legal risk Increased workload Uncertainties HSW impact on workforce | Increased workforce FFF Increased monitoring needs Increased legal and compliance costs |
| Litigation | Increased workload Uncertainties HSW impact on workforce | Litigation actions have a financial impact |

| Risk | Cascading impacts | Financial impacts |
|--|---|---|
| Likely future requirement to undertake climate risks disclosures | Increased workload HSW impact on workforce | Increased workforce |
| Carbon price | | Increased organisational costs and stranded assets |
| Managed retreat | Increased workload Uncertainties HSW impact on workforce Unmanaged retreat | Cost of managed retreat |
| Technology | | |
| Transition to low emissions technologies | Increased needs in electricity | Increased cost for low-carbon technologies Potential decreased operational costs |
| Unsuccessful investment in new technologies | | Loss of investment and need to invest budget in a different technology |
| Updated climate science | Models used can be legally challenged (updated or not) | Cost of model updates |
| Market | | |
| Insurance | Uninsured damaged assets may not be replaced – a form of unmanaged retreat | Increased budget allocated to insurance |
| Shortages in certain goods and services | | Increased organisational costs |
| Internal competing priorities | Increased workload HSW impact on workforce | Increased workforce Increased engagement and collaboration Increased investment |
| Reputation | | |
| Negative press or social media coverage | Increased workload HSW impact on workforce Litigation risks Reputation risks | Increased workforce Increased organisational costs |
| Political context or stakeholder pressure | Uncertainties | Increased organisational costs |
| Managed retreat | Increased workload Uncertainties HSW impact on workforce | Increased engagement and collaboration |

Physical risks

| Risk | Cascading impacts | Financial impacts |
|---|---|------------------------------------|
| Acute risks | | |
| Extreme weather events | Decreased level of service Need for EOC | Increased organisational costs |
| Flood | Increased workload Litigation risks | |
| Landslide | Decreased patronage if public transport is unreliable | |
| Chronic risks | | |
| Changes and extreme variability in weather patterns | Uncertainties HSW impact on workforce | |
| Sea level rise | Planning for managed retreat (QEP) | Cost associated to managed retreat |
| Erosion | Increased workload | Increased organisational costs |
| Saltwater intrusion | Risk on water supply | |
| Increased pests | | Increased organisational costs |

Gaps and needs

Gaps and needs were identified:

- There are gaps in the data needed to have a thorough understanding of climate related risks
- Greater Wellington's scope of work is increasing faster than the budget and time allocated to teams. As a result, some areas of work are identified as missing.
- Greater Wellington is a siloed organisation which creates challenges to maintain internal collaboration, consistency, and efficiency, and prevent the risk of duplication.
- Some work programmes are getting harder to achieve (e.g., when weather conditions are not favourable, teams cannot undertake field work and fall behind schedule).

Adaptation measures

Adaptation measures are in place to mitigate the risks identified:

- Strategic planning
- Working with partners and stakeholders
- Internal collaboration and capability
- Flexibility and reactivity

Opportunities

Many opportunities are arising from climate change:

- Resource efficiency:
 - o Efficiency in new regulations (RMA, etc)
 - o Guidance from central government on climate change mitigation and adaptation
 - o Increased collaboration between stakeholders
 - o Operational delivery alignment and synergies
 - o Low carbon vehicles
 - o Efficient buildings
- Energy source:
 - o Lower-emission and renewable sources of energy and electricity production (solar, wind, etc.)
 - o New and efficient technologies available and affordable
 - o Participation in carbon market
- Products and services:
 - o Increase patronage for public transport and active transport
 - o Increased need for environmental management (e.g., flood protection, parks management, pest control, etc.)
 - o Potential adoption of nature-based solutions, enhanced biodiversity, ecosystem services, and water quality improvements
- Markets:
 - o Suppliers with sustainable capacities
 - o Access to funding
 - o Reducing the risk of asset stranding considered in investment decision making
 - o Increased carbon price
- Resilience:
 - o Increased resiliency of the organisation
 - o Increased return on investment for environmental restoration and nature-based solutions

Recommendations

- Develop a full risk assessment to close the gap identified in data collection followed by a cross-organisational adaptation plan
- Develop the full understanding of Greater Wellington's assets and infrastructure
- Increase data collection, including tracking of carbon sequestration
- Set up and validate chosen emissions and impacts scenarios and timeframes to use across Greater Wellington
- Support the work in climate change adaptation with an internal adaptation group (e.g., the Asset Management Development Group)
- Increase GW's maturity regarding the understanding of climate-related risks (e.g., training, etc).

2 Introduction

This report is an assessment of the current climate-related risks Greater Wellington is facing, developed through interviews with GW staff held between November 2022 and February 2023.

The assessment is based on the international Task Force on Climate-related Financial Disclosures (TCFD) guidance first released in 2017 and the New Zealand External Reporting Board (XRB) standards published in December 2022. The approach aligns with the National Climate Change Risk Assessment (NCCRA) and the need to provide high-level information about how Greater Wellington is preparing for the impacts of climate change under section 5ZW of the Climate Change Response Act 2002.

Scope of this assessment

This assessment focuses only on Greater Wellington corporate risks. A Regional Climate Change Impact Assessment is currently underway and led by the Regional Leadership Committee¹.

This assessment excludes the Council Controlled Organisations, the Council Controlled Trading Organisations, and the Council Organisations (e.g., Wellington Water).

¹ For further information go [here](#).

3 Governance at Greater Wellington

3.1 Council committees

3.1.1 Finance, Risk and Assurance Committee (FRAC)

The Finance, Risk and Assurance Committee's purpose is to 'oversee, review, and report on Greater Wellington's discharge of its responsibilities in the areas of financial management; risk management; statutory reporting; internal and external audit and assurance; and monitoring of compliance with laws and regulations (including health and safety)'.²

It reviews 'the effectiveness of Greater Wellington's risk management process, including overseeing changes to the risk management policy and approach, with a particular focus on:

- Providing guidance to Council on the appetite for risk
- Whether Greater Wellington is taking effective action to mitigate significant risks, including cyber security and climate change'.

FRAC meets three times a year.

3.1.2 Climate Committee

The Climate Committee's purpose is to 'oversee, review and report to Council on the management and delivery of Greater Wellington's strategies, policies, plans, programmes, initiatives and indicators for climate change mitigation and adaptation'.³

The Climate Committee meets twice each year.

3.2 Management

3.2.1 Executive Leadership Team (ELT)

In 2022, Greater Wellington adopted a new risk management approach using an ELT dashboard and a one-pager. Those documents are reported on a monthly basis during ELT meeting.

The dashboard is based on objectives, success statements and uncertainties (or risks):

- There is one ultimate objective (public trust and confidence in Greater Wellington and license to operate) and three objectives (Understanding and meeting community needs, Delivering core services and Foundation to success).
- Success statements are in line with the Long Term Plan's Integrated Strategy.
- There are 22 uncertainties identified, including the impacts of climate change and GW's impact on the environment.

² FRAC terms of reference, December 2022

³ Climate Committee terms of reference, December 2022

For each of the 22 uncertainties, a one-pager will be created (work in progress). This covers:

- Sub-uncertainties (another one-pager can be created for each identified)
- Actions and controls: How are we managing the uncertainty?
- Consequences: What are the threats and opportunities arising from the uncertainty?
- Assurance: How do we know that the uncertainty is managed effectively?
- Alignment with the FRAC's risk appetite statement
- Measures: What are the elements being tracked to monitor the uncertainty?
- Response: What will be done differently as a result of this one-pager?

Each uncertainty is owned by an ELT member. The Corporate Risk and Assurance Manager supports this process.

3.2.2 Climate Emergency Response Programme Board

In 2019, Greater Wellington adopted a target of reducing corporate carbon emissions to net zero by 2030 and declared a climate emergency. These decisions were supported by the adoption of two ten-point plans - the Corporate Carbon Neutrality Action Plan and the Regional Climate Emergency Action Plan – as part of a Climate Emergency Response Programme.

The role of the Climate Emergency Response Programme Board is to coordinate, direct and oversee the implementation of the Climate Emergency Response Programme to meet its outcomes: to reduce greenhouse gas (GHG) emissions and ensure a climate resilient future for the Wellington Region. The Team Leader Climate Change supports this process.

The Board meets quarterly.

4 Methods

4.1 Categories of risk

The TCF identifies categories of risks:

- **Physical risks:**
Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organizations, such as direct damage to assets and indirect impacts from supply chain disruption. Organizations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organizations' premises, operations, supply chain, transport needs, and employee safety.⁴
These can be **Acute risks**, such as a sudden flood, or **Chronic risks**, such as sea level rise.

- **Transition risks:**
Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organizations.⁵
These can be further categorised as:
 - **Policy and legal risks**
 - **Technology**
 - **Market**
 - **Reputational.**

4.2 Scenario analysis

Scenario analysis is a process for identifying and assessing the potential implications of a range of plausible future states under conditions of uncertainty. Scenarios are hypothetical constructs and not designed to deliver precise outcomes or forecasts. Instead, scenarios provide a way for organizations to consider how the future might look if certain trends continue or certain conditions are met.⁶

Several scenarios are considered in a climate-related risk assessment:

- **Physical scenarios:** These are based on greenhouse gas concentrations and global air temperatures. It is recommended by the TCFD and the XRB standards to use scenarios of 1.5°C and 3°C increase relative to pre-industrial.
- **Transition scenarios:** These are a prediction of what the future may look like (future policies, new technologies, market changes, etc). Transition scenarios explore the different socio-economic options available that might reduce the greenhouse gas emissions and maintain the temperature ideally under 2°C increase.

⁴ Recommendations of the TCFD, June 2017

⁵ Recommendations of the TCFD, June 2017

⁶ Recommendations of the TCFD, June 2017

4.3 Physical changes

The Intergovernmental Panel on Climate Change (IPCC) released scenarios in its fifth and sixth assessment reports (AR5 and AR6).

Scenarios from the AR5 – Representative Concentration Pathways (RCP) scenarios:

- **RCP2.6:** This scenario aims to keep global warming below 2°C above pre-industrial temperatures. CO₂ emissions peak in 2020 and start to decline to reach net zero in 2050 and zero in 2100. This is a stringent climate change mitigation scenario.
- **RCP4.5:** CO₂ emissions peak in 2040 and start to decline to reach net zero in 2080. This is a low to intermediate scenario.
- **RCP6.0:** CO₂ emissions peak around 2060 and start to decline. This is an intermediate scenario.
- **RCP8.5:** No measures are taken to reduce greenhouse gas emissions. This is a scenario with very high emissions.

Scenarios from the AR6 are Shared Socio-economic Pathways (SSP) scenarios. Downscaled scenarios from the AR6 are not yet available in the Wellington Region.

The scenarios recommended for physical risks are the RCP4.5 (low to intermediate scenario) and RCP8.5 (very high GHG emissions scenario).

Table 1: Projections of future climate

| | West of Wellington's ranges | | Wairarapa | |
|---|-----------------------------|--------------|--------------|--------------|
| | RCP4.5 | RCP8.5 | RCP4.5 | RCP8.5 |
| Projected maximum temperature changes (°C, relative to 1986-2005) | | | | |
| 2040 | +0.75 – 1.00 | +0.75 – 1.25 | +0.75 – 1.25 | +0.75 – 1.50 |
| 2090 | +1.25 – 1.75 | +2.50 – 3.25 | +1.25 – 1.75 | +2.50 – 4.00 |
| Projected minimum temperature changes (°C, relative to 1986-2005) | | | | |
| 2040 | +0.50 – 0.75 | +0.50 – 0.75 | +0.50 – 0.75 | +0.50 – 0.75 |
| 2090 | +0.75 – 1.25 | +1.75 – 2.50 | +0.75 – 1.25 | +1.50 – 2.50 |
| Projected growing degree day per annum (base 10°C) changes (relative to 1986-2005) | | | | |
| 2040 | +85 – 250 | +150 – 300 | +85 – 250 | +150 – 300 |
| 2090 | +200 – 400 | +500 – 850 | +200 – 400 | +400 – 905 |
| Projected rainfall total changes (% , relative to 1986-2005) | | | | |
| 2040 | -2% to +8% | -2% to +4% | -2% to +4% | -2% to +8% |
| 2090 | -2% to +8% | -8% to +12% | ±4% | ±8% |
| Projected 99th percentile of daily rainfall changes (relative to 1986 – 2005) | | | | |
| 2040 | -14% to +16% | -1% to +12% | Up to +15% | +1 – 15% |
| 2090 | +2% – 16% | +2 – 30% | -3 to +15% | +3 – 30% |
| Projected dry spell changes days per annum (relative to 1986 – 2005) | | | | |
| 2040 | +1 – 10 | -2 to +8 | +1 – 12 | -1 to +10 |
| 2090 | -2 to +6 | -1 to +13 | -4 to +10 | +1 – 12 |
| Projected windy day changes per annum (relative to 1986 – 2005) | | | | |
| 2040 | -1 to +5 | -1 to +5 | -1 to +5 | +1 – 5 |
| 2090 | -1 to +6 | +2 – 11 | -1 to +6 | +2 – 12 |

Source: Climate change projections for west of Wellington's Tararua and Remutaka Ranges, 2022 and Climate change projections for the Wairarapa, NIWA, 2021

5 Corporate climate-related risks and impacts

5.1 Transition risks

5.1.1 Policy and legal risks

Table 2: Impacts from central government reforms, policies and guidance

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|--|---|
| GW – all groups | <p>The different groups at Greater Wellington are adapting to the increased needs for climate change considerations.</p> <p>The Regional Transport department overseeing development of the Regional Land Transport Plan (RLTP) has seen its workload increase over the last few years due to an increased need for climate change considerations.</p> <p>Current reforms create changes and uncertainties for the Legal and Procurement department. Those challenges are exacerbated by the fact the GWRC does not currently have in-house expertise for environmental law.</p> <p>Through the Environment group, GW has responsibilities implementing the RMA (e.g., the RPS gives effect to the RMA) and its regulations. Therefore, the RMA reform has a direct impact on this group (increased workload, new processes, etc). Indeed, the RMA will be spilt across three proposed acts: the Natural and Built Environment Act, the Spatial Planning Act and the Climate Adaptation Act.</p> <p>Needs for environmental monitoring have been increasing in the last 30 years (+75% between 1994 and 2010). It is projected these needs will keep increasing over the next years.</p> | <p>If regulations are not or are wrongly considered, this could create a legal risk (litigation) for GW.</p> <p>Increased workload, uncertainties, may impact the health and wellbeing of the workforce.</p> | <p>Increased workforce</p> <p>FFF</p> <p>Between 2016/17 and 2024/25, the projected cost of increase in monitoring equipment and services (environmental science department) has been estimated to be \$1,649,500⁷</p> <p>Increased legal and compliance costs</p> |
| GW – all groups | <p>There is a need for more guidance from central government regarding climate change considerations. This is especially true when it comes to managed retreat and other adaptation tools.</p> | | |

⁷ Asset Management Plan Environmental Science 2014

Table 3: Impacts from litigation risks

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|---|--|--|
| GW – all groups | <p>GW faces litigation risks when mitigating and adapting to climate:</p> <ul style="list-style-type: none"> - Not taking action to mitigate and adapt to climate change - Taking action to mitigate and adapt to climate change - Getting mitigation and adaptation to climate change wrong - Disclosing data on natural hazards (e.g., flood maps, etc) <p>GW can also face litigation risks in the case of failure from its assets and services (e.g., if the stop banks fail to protect the communities).</p> | <p>These possible litigation actions can put more pressure on the Legal and Procurement department as well as other concerned departments.</p> <p>This may cause an increased workload and impact the health and wellbeing of the workforce.</p> | <p>Litigation actions have financial and reputational impacts.</p> |

There is mandatory reporting for large New Zealand financial organisations to disclose climate risks, including those who do business with Greater Wellington. This may be extended in future to other organisations.

In 2020, Greater Wellington (along with all other local government agencies) was requested to provide high-level information about how our organisation is preparing for the impacts of climate change under section 5ZW of the Climate Change Response Act 2002. This may happen again.

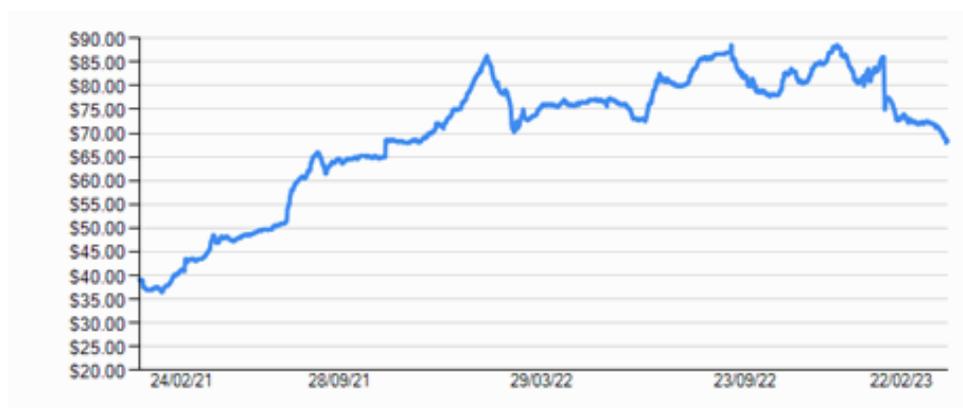
The Ministry for the Environment (MfE) released a guide to local climate change risk assessments in 2021.

Table 4: Impacts from likely future requirement to undertake climate risks disclosure

| Group impacted | Description | Cascading impacts | Financial impacts |
|---|--|--|---------------------|
| Strategy – Strategy and Corporate Planning | It is reasonable to believe that increasingly substantive climate risks disclosures will be made mandatory for local government in the near future. | <p>This may cause an increased workload and capability requirements (increased need for data collection, reporting, etc.) and impact the health and wellbeing of the workforce.</p> <p>Climate risks disclosures, if not done properly, could also increase the litigation and reputational risks.</p> | Increased workforce |
| Corporate Services – Finance | It is also reasonable to believe that the entities that must disclose their climate risks (such as banks) and that are working with GW could ask for information on our own climate risks in order to fully disclose theirs. | | |
| Environment – Strategy, Policy and Regulation | | | |

Table 5: Impacts from carbon price

| Group impacted | Description | Cascading impacts | Financial impacts |
|-------------------|---|-------------------|--|
| GWRC – all groups | <p>GW can be impacted by the carbon price in three ways:</p> <ul style="list-style-type: none"> - Increased carbon price (see Figure 1 below): The cost for emitters to meet their obligations under the NZ Emissions Trading Scheme is included in the price consumers pay for their goods (such as petrol and diesel). Therefore, to a degree the price of those goods varies depending on the traded price of carbon (NZUs). At the time of writing, carbon price for 1 L of petrol is \$0.17 and carbon price for 1 L of diesel is \$0.18. - Potential for scarcity: The Emissions Trading Scheme is supposed to be a cap-and-trade scheme of carbon units. Therefore, if the ETS was used as it was designed, we could see scarcity in carbon units (and high-emission goods). We are not facing this risk currently since the government keeps adding NZUs into the system and a large number of NZUs (equivalent to several year's worth of NZ's national emissions) are already held in private accounts. - Potential decreased carbon price: Carbon price could collapse based on a political will. This would slow down the transition to a low carbon economy and impact our ability to fund the LCAF (Low Carbon Acceleration Fund) which is based on borrowing against GW's carbon units. | - | Increased organisational costs and stranded assets |

Figure 1: Spot price of NZUs in the NZETS, February 2021 to March 2023Source: [New Zealand - Carbon News](#)

Definition of managed retreat:

Managed retreat is an approach to reduce or eliminate exposure to intolerable risk. It enables people to relocate assets, activities and sites of cultural significance (to Māori and non-Māori), away from areas at risk from climate change and natural hazards⁸.

Table 6: Impacts from managed retreat

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|---|--|---|
| GW – all groups | <p>At present time, there is very little national direction on how to implement managed retreat. Roles and responsibilities are not clearly identified. Therefore, complex technical, legal and financial issues are associated with managed retreat.</p> <p>In the absence of guidance from central government, GW had to adapt and make its own decisions (e.g., Riverlink project – Flood protection). This can lead to litigation, reputational and financial risks.</p> | <p>Increased workload, uncertainties, may impact the health and wellbeing of the workforce.</p> | <p>Managed retreat is expensive and there is currently no guidance on how the costs and benefits should be distributed.</p> |
| | <p>Note that central government will pass legislation to support managed retreat to enable relocation of assets from at-risk areas. The Climate Adaptation Bill should be released by the end of the year 2023. While more guidance should reduce the risk, it could also increase the pressure for GW to undertake managed retreat.</p> | <p>Unmanaged retreat (no planned and/or strategic retreat led by public authorities leading to reduced levels of service).</p> | <p>As well as participating in the costs of managed retreat, GW may seek different funding opportunities, depending on the type of projects (e.g., RiverLink, Queen Elizabeth Park managed retreat, etc).</p> |
| | <p>Regional policy statements, regional plans and district plans must give effect to the New Zealand Coastal Policy Statement 2010 (NZCPS).</p> <p>Currently, the operative RPS and the RPS change 1 version provide Territorial Authorities the discretion to develop managed retreat policies. The RPS Change 1 promotes councils to undertake adaptation planning that talks through these processes including managed retreat, but these are non-statutory or voluntary processes.</p> <p>Without greater central government empowerment and direction and funding, and with weak legislative mechanisms, managed retreat is not ‘owned’ by anyone and local government, including regional councils are reluctant to do much about it.</p> | | |

⁸ National Adaptation Plan, MfE, 2022

5.1.2 Technology

Table 7: Impacts from the transition to low emissions technologies

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|--|---|
| GW – all groups | Low emissions technologies are currently more expensive to purchase but are typically less expensive to operate than traditional high carbon technologies. | - | GW plans for the future and the cost of low-carbon technologies. Therefore, the finance strategy 2021-31 ensures that GW's level of service and activities are financed and funded. |
| GW – all groups | Some traditionally used high carbon technologies do not have their equivalent in low carbon technologies (not available yet or not fit for purpose). That is the case for utes, helicopters, etc. | | Potential decreased operational costs |
| Metlink | Metlink is particularly impacted by the transition to low emissions technologies. Metlink is committed to achieving full decarbonisation of the bus, rail and ferry services by 2030 by replacing the current fleet and investing in charging stations. Metlink relies on funding from the government (Waka Kotahi, etc) to transition to low carbon public transport. There is a risk in case of failure to secure those funding sources. | Full electrification of Metlink services means increased needs in electricity. Discussions are happening between Metlink and electricity providers to make sure the current electricity network can answer the current and future needs. | Financial impact of the transition to low carbon emissions technologies is detailed in the Metlink Asset Management Plan (AMP). |

Table 8: Impacts from unsuccessful investment in new technologies

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|-------------------|--|
| GW – all groups | GW is investing in low carbon technologies (e.g., battery powered tools, electric vehicles, electric buses, etc). The risk is that GW invests in a technology that may fail or perform poorly or be replaced by another more efficient low carbon technology (technological obsolescence). | - | Loss of investment and need to invest budget in a different technology |

Table 9: Impacts from updated climate science

| Group impacted | Description | Cascading impacts | Financial impacts |
|----------------|--|--|-----------------------|
| Environment | <p>Climate science is moving fast. In 2021, the IPCC released its sixth assessment report (AR6) which provides climate scenarios.</p> <p>Those scenarios need to be downscaled to the Wellington region to update the climate and flood models used by GW. These updates require time, skills, and budget.</p> | <p>The updates must be done progressively to spread the budget over time. In the meantime, previous models are still used to develop policies, regulations, etc.</p> <p>Due to media coverage, GW's updated climate and flood models are more likely to be legally challenged than the old models.</p> | Cost of model updates |

5.1.3 Market

Table 10: Impacts from insurance

| Group impacted | Description | Cascading impacts | Financial impacts |
|---------------------|--|--|---|
| Corporate – Finance | <p>Cost of insurance is increasing as physical risks from climate change are increasing. GW is already facing increased cost of insurance.</p> <p>In some cases, when the risk becomes too high, assets and infrastructure may become uninsurable.</p> | Uninsured damaged assets may not be replaced – a form of unmanaged retreat | Increased budget allocated to insurance |

Table 11: Impacts from shortages in certain goods and services

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|-------------|----------------------------|---------------------------|
| GW – all groups | | High demand and low supply | Increased budget (likely) |

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------------------------|---|---|--|
| Corporate – Legal and Procurement | <p>The demand for sustainable and low carbon goods and services is increasing faster than the supply (internationally, nationally, and locally).</p> <p>Therefore, when procuring goods and services, GW is competing against other organisations. For example, there is an increased appetite for afforestation and current tree supply is under pressure.</p> <p>GW is increasing its expectations for sustainable procurement. However, suppliers may not have the capacity to deliver the expected level of sustainability (due to constraints in technology, budget, resources, etc.).</p> | <p>increase the prices and limit availability of goods and services.</p> <p>Increased sustainable expectation may increase the cost of goods and services procured by GW.</p> | <p>to be short</p> <p>Short term only as fast transition is planned to be cheaper than low transition) needed to achieve sustainable procurement</p> |

Table 12: Impacts from competing priorities

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|---|--|---|
| GW – all groups | <p>GW faces external and internal competing priorities. In its LTP 2021-31 GW has an integrated strategy with strategic priorities. In some cases, those priorities can be different than other groups (e.g., mana whenua, public sector, businesses, farming industry, residents, etc.).</p> <p>Each GW team is focused to achieve its work programme. This programme can compete with climate change mitigation and adaptation. Resources may not be sufficient to add climate change mitigation and adaptation to an already heavy workload.</p> | <p>Competing priorities, increased workload (engagement, etc,) and impact the health and wellbeing of the workforce.</p> | <p>Increased workforce.</p> <p>Increased engagement and collaboration.</p> <p>Increased investment.</p> |

5.1.4 Reputation

Table 13: Impacts from negative press or social media coverage

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|---|--|--------------------------------------|
| GW – all groups | <p>There is an increased interest from residents in GW activities, including climate change actions, and media focus.</p> | <p>Increased public interest and visibility on GW activities may impact the staff's stress.</p> <p>This may also result in increased litigation and reputation risk.</p> | <p>Increased budget or workforce</p> |

| Group impacted | Description | Cascading impacts | Financial impacts |
|--|---|---|-------------------|
| People and Customers – Customer Engagement | If GW responds poorly to climate change, or fails to respond, the organisation may face negative press coverage, social media commentary, reduced public and partner trust and confidence in organisations responses to climate change and related decision making. | The workload of the People and Customer group would be particularly affected (need to respond to media requests, communicate on climate change actions, avoid misinformation, etc.) | |
| Te Hunga Whiriwhiri | there is and will be an increased needs for Māori engagement regarding climate change matters. Failing at fulfilling those requirements may have a negative impact on GW and Te Hunga Whiriwhiri’s reputation. | Increased workload and impact the health and wellbeing of the workforce. | |

Table 14: Impacts from political context or stakeholder pressure

| Group impacted | Description | Cascading impacts | Financial impacts |
|--|---|---|--|
| GW – all groups | Elections occur every three years (local and central government). Policies and appetite for climate change mitigation and adaptation may change depending on the new governance bodies. | Staff workload may change depending on the appetite for climate change mitigation and adaptation. Budget allocated to climate change mitigation and adaptation may decrease due to low appetite for climate actions. | Increased budget to accommodate a possible increased appetite for climate actions. |
| Strategy – Strategy and Corporate Planning | | | |
| GW – all groups | Some pressure may be put on GW to develop ‘feel good’ climate change documents. This type of document is not required by current legislation and not legally binding. Therefore, there is a risk for GW to engage already stretched resources to develop documents that will not achieve meaningful outcomes. | | Increased budget to develop ‘feel good’ documents. |

Table 15: Impacts from managed retreat

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|--|--|
| GW – all groups | Managed retreat having considerable impacts local communities and mana whenua (loss of land, loss of properties, cultural impact, etc) and without clear guidance from central government, GW may be facing reputational risks. Indeed, there is strong interest from the public regarding managed retreat and GW may face criticism since some decisions may not be palatable by everyone in the community. | Increased workload, uncertainties, may impact the health and wellbeing of the workforce. | Increased engagement and collaboration |

5.2 Physical risks

5.2.1 Previous risk assessment of built assets

In 2019, a desktop risk assessment of Greater Wellington’s built assets was done to predict impacts of climate change and natural hazard events for the 30-year Infrastructure Strategy. The assessment used the report ‘*Climate change and variability – Wellington Region*’ prepared by NIWA in 2017. The assessment considered:

- More extreme rainfall including high intensity falls, changes to average rainfall, groundwater and soil moisture
- Increased river and surface flooding
- Landslips including soil erosion and instability
- Higher winds
- Significant increase in extreme temperature-hot days including air and ground temperature
- Increased fog and humidity
- Drought risk increasing in the Wairarapa
- Wildfire
- Coastal flooding including sea level rise (between 0.28m and 0.98m by 2100⁹) and storm surge
- Coastal erosion

Surface flooding, from more intense and frequent rain events, and coastal flooding, associated with sea level rise, are the biggest risks identified to Greater Wellington assets and services. In some cases, the impacts are being felt now. Consequently, assets and activities on floodplains and/or in relative proximity to the coast are the most at risk, i.e., the lower Hutt Valley and Porirua. Flood protection assets and services are the most at-risk group.

Greater Wellington mitigates that risk through creating and maintaining physical infrastructure and through planning such as Emergency Action Plans. Those plans minimise the potential for asset failure through pre-planned or pre-conceived intervention actions should a flood emergency event arise and in the event that an asset failure cannot be prevented, to limit the effects of an asset failure on people, property and the environment¹⁰.

⁹ By 2100, sea-level rise will likely (i.e. 66% chance) be in the range 0.28–0.61 m [RCP2.6], 0.36–0.71 m [RCP4.5], 0.38–0.73 m [RCP6.0] and 0.52–0.98 m [RCP8.5].

¹⁰ Asset Management Plan, Flood Protection Control, GWRC, 2021

Table 16: Corporate risk assessment of vulnerable assets impacted by climate change and natural (external) hazards

| | Water | Public Transport | Flood Protection | Parks | Environmental Sciences | Harbours |
|----------------------|------------|------------------|------------------|-------------|------------------------|-------------|
| Surface flooding | Moderate 6 | High15 | V High 25 | Moderate 10 | Low 4 | Moderate 9 |
| Landslips | Moderate 6 | High15 | V High 20 | Moderate 9 | Low 4 | Moderate 10 |
| Rainfall | Low3 | High15 | High15 | Moderate 6 | Low 4 | Low 1 |
| Coastal Flooding | Moderate 6 | Moderate12 | V High 20 | Moderate 9 | Low 2 | Moderate 9 |
| Coastal Erosion | Moderate 6 | High15 | V High 20 | Moderate 9 | Low 2 | Moderate 10 |
| High winds | Low 1 | High15 | V High 20 | High15 | Low 1 | Moderate 6 |
| Extreme Temperatures | Low 1 | High15 | Moderate 10 | Moderate 9 | Low 1 | Low 2 |
| Fog and Humidity | Moderate 6 | Low 2 | Low 2 | Low3 | Low 1 | Moderate 10 |
| Drought | Moderate5 | Moderate 6 | Moderate 8 | Moderate 9 | Low 1 | Low 2 |
| Wildfire | Moderate6 | Moderate 6 | Low 2 | Moderate 9 | Moderate 9 | Low 1 |
| Earthquake | Moderate 4 | High 12 | V High 25 | Moderate 9 | Moderate 9 | Moderate 6 |
| Liquefaction | Moderate 5 | High 12 | V High 20 | Moderate 9 | Low 2 | Low 1 |
| Tsunami | Moderate 5 | High 12 | High 12 | Moderate 9 | Moderate 6 | Moderate 9 |
| Volcano | Low 1 | Low 2 | Low 1 | Low 2 | Low 2 | Low 1 |

Source: Asset Management Plan, Flood Protection Control, GWRC, 2021

5.2.2 Acute risks

Table 17: Impacts from extreme weather events

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|--|--|
| GW – all groups | <p>Heavy rainfall, extreme winds, storms, and swells are extreme weather events. These affect GW:</p> <ul style="list-style-type: none"> - Impact (damage or loss) on assets and infrastructure - Teams doing field work may have issues accessing the work site - Impact on workforce safety - Some types of work cannot be carried out in adverse weather (e.g., planting, etc.) - Cultural and well-being impacts, especially on people with deep connection to land and water (e.g., Māori) | <p>May affect the level of service provided by GW.</p> <p>The understanding of physical impacts on GW assets and infrastructure is only partial, i.e., full risks are unknown.</p> | <p>Increased budget to maintain the same level of service and assets and infrastructure conditions.</p> <p>This is explained in the financial strategy and the Asset Management Plans.</p> |

| Group impacted | Description | Cascading impacts | Financial impacts |
|----------------|---|---|-------------------|
| Metlink | Extreme weather events may impact public transport services (train, bus and ferry). | When public transport is unreliable, patronage decreases, as does revenue from tickets fares. | |
| WREMO | WREMO may have to activate Emergency Operations Centres (EOC) and Emergency Coordination Centre (ECC) to manage and coordinate response efforts by Group members to assist communities. | The ECC is staffed with GW workforce. Business as usual activities may not be delivered while the ECC/EOCs are activated. | |

Table 18: Impacts from flood

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|---|---|
| GW – all groups | Surface flooding impacts GW in the same way as extreme weather events (see table above for more information). | | |
| Metlink | | | |
| WREMO | | | |
| Environment | With an increased risk of flooding (frequency and magnitude), the Environment group has an increased workload to plan for the future, protect communities and respond to flood events. | Increased workload, and risks of working in flood environments, may impact the health and wellbeing of the workforce. GW can face litigation risks in case of failure from flood protection infrastructures. | Increased budget to manage the flood risk. This is explained in the financial strategy. |

Table 19: Impacts from landslides

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|--|---|---|
| GW – all groups | Landslides impact GW in the same way as extreme weather events (see table above for more information). | | |
| Metlink | Rail service is particularly impacted by landslides. Trains have no alternative routes (apart from replacing trains by buses). | When public transport is unreliable, patronage decreases, as does revenue from tickets fares. | Reduced fare income and increased cost of providing alternative services. |

5.2.3 Chronic risks

Table 20: Impacts from changes and extreme variability in weather patterns

| Group impacted | Description | Cascading impacts | Financial impacts |
|-----------------|---|---|--|
| GW – all groups | Changes and extreme variability in weather patterns increase uncertainties and make it more difficult to plan for the future. High temperatures may affect staff working in the Wairarapa. There are risks to assets and infrastructure. | Uncertainties and physical conditions may impact the health and wellbeing of the workforce. | The financial strategy considers the impacts of climate change including changes and extreme variability in weather patterns |

Table 21: Impacts from sea level rise

| Group impacted | Description | Cascading impacts | Financial impacts |
|----------------------------------|--|---|--|
| Environment – Delivery (Parks) | Sea level rise impacts some assets and infrastructure. This is particularly true for Queen Elizabeth Park. | GW manages sea level rise, which increases workload. For example, a Coastal Erosion Plan was adopted in 2020 for Queen Elizabeth Park to remove the assets and infrastructure away from the area at risk. GW has yet to fully plan for managed retreat, in consultation with affected communities. | The original estimate for the costal retreat project was around \$2,400,000 over two years and \$500,000 for the heritage precinct. However master planning is still underway, and scope and budget is likely to change. |
| Environment – Delivery (Harbour) | Sea level rise may not have any significant impact on the Harbour's assets and infrastructure. | | |
| Metlink | Sea level rise already has an impact on the transport network (road and rail). Even though this network does not belong to Metlink, this has a direct impact on public transport services. For example, buses and trains may not be able to travel if the network is damaged or flooded. | When public transport is unreliable, patronage decreases, as does revenue from tickets fares. | |

Table 22: Impacts from erosion

| Group impacted | Description | Cascading impacts | Financial impacts |
|----------------|--|--|---|
| Environment | Erosion is different than landslides. While landslide is a fast and sudden event, erosion happens more slowly under the influence of water and/or wind. The main impact of erosion is on assets and infrastructure. | Increased workload. Understanding of physical impacts on assets and infrastructure is only partial. | Increased budget to maintain the same level of service and assets and infrastructure conditions. This is explained in the financial strategy and the Asset Management Plans. |

Table 23: Impacts from saltwater intrusion

| Group impacted | Description | Cascading impacts | Financial impacts |
|----------------|--|---|-------------------|
| Environment | With an increased sea level and an increased need for freshwater, saltwater intrusion can be an issue for the Waiwhetū Aquifer, one of Wellington's most important water supply sources. | Water supply is impacted by saltwater intrusion. Indeed, the amount of water being pumped must be reduced from time to time to reduce saltwater intrusion in the Waiwhetu Aquifer ¹¹ . | |

Table 24: Impacts from increased pests and loss in biodiversity

| Group impacted | Description | Cascading impacts | Financial impacts |
|---|--|--|--|
| GW – all groups Environment – Delivery (biosecurity) | With a changing climate, new pests can arrive in the region. To manage these, the Biosecurity team's workload may increase. The team is already doing an active watch on possible pests to be ready (collaboration with Horizon Regional Council to understand which pests are already affecting them, knowing that those pests may move towards the Wellington Region because of climate change). | Marine pests are not currently being managed by GW. There is a collaboration between central government, mana whenua and GW to ensure the protection of the biodiversity but the level of marine biosecurity capability for the region has been low and is slow to increase. Loss in biodiversity and increased pests may affect human health and well-being, including GW staff. It may also affect GW's reputation. | Increased budget to manage current and new pests |

¹¹ More information [here](#)

6 Gaps and needs

6.1 Data

There are gaps in the data needed to have a thorough understanding of climate related risks.

Even though physical risks from climate change are well understood by the organisation, Greater Wellington does not have a deep understanding on how those risks may impacts its assets and infrastructures. Filling this gap would require having access to an exhaustive list of assets, including location and dollar value, and layering these data with the physical risks of climate change.

Data required to fulfil a complete reporting under the XRB / TCFD requirements are not currently well understood by the organisation.

There is also a lack of data collection at a national level. For instance, there is no national data about pests and pests' locations. This could be helpful for pest management to understand the distribution of neighbouring pests. To override this gap, Greater Wellington works in collaboration with neighbouring regional councils to share data.

6.2 Resources

Greater Wellington's scope of work is increasing (climate change impacts to consider, new regulations, increasing interest from the public, etc.) faster than the budget and time allocated to teams. As a result, some areas of work are identified as missing (e.g., no work is currently being done on marine pests).

In a complex organisation it is challenging to work across silos, maintain internal collaboration, consistency and efficiency, and prevent the risk of duplication.

It was also identified that some work programmes are getting harder to achieve (e.g., when weather conditions are not favourable, teams cannot undertake field work and fall behind schedule).

7 Adaptation measures

7.1 Strategic planning

GW strategically plans for the future through documents such as the Long Term Plan, Infrastructure Strategy, Financial Strategy, Annual Plans, Regional Policy Statement, Regional Land Transport Plan, Regional Public Transport Plan, Wellington Rail Programme Business Case, Toitu te Whenua and more. A detailed approach to planning is seen in the annual programmes of work and in the five Asset Management Plans (harbours, parks, environmental science, flood protection control, Metlink).

These documents include careful climate considerations based on climate change projections. Strategic planning allows GW to be proactive. For example, detour routes already exist to maintain bus services in case of a climate event. Another example is the monitoring of landfills against flood and erosion risks.

The Climate Emergency Response ten-point plans are under review. It is likely the review will propose an increased number of actions focused on climate risk and adaptation.

7.2 Working with partners and stakeholders

To mitigate risks, GW works in collaboration with many partners and stakeholders at a local and national level. These include central government agencies, territorial authorities, businesses and farmers, Crown Research Institutes and universities, and all our communities.

Mana whenua and Māori bring a te ao Māori view and a long-term vision that is extremely important when it comes to climate change. Intergenerational impacts of climate change are a huge concern.

Any planning on corporate climate-related risk needs to consider the work being done with the Wellington Regional Leadership Committee (WRLC). This includes a project to undertake a Regional Climate Change Impact Assessment and Regional Adaptation Plan.

Collaboration with the communities in the Wellington Region ensures that projects are well understood, accepted and successful. This may reduce litigation risk. It is also important to consider the communities' expertise (e.g., communities are often well placed to detect new pests).

Working with stakeholders allows a better understanding of what is ahead for Greater Wellington (for example, the current and future regulatory landscape and also the current and future climate). Also, by aligning priorities, collaboration reduces the risks of duplication and increases efficiency in climate change mitigation and adaptation.

7.3 Internal collaboration and capability

One risk identified is the internal silos that exist at GW. Fit For the Future (FFF) aims to implement a new operating model for the Environment group that supports collaborative working. Other initiatives exist to increase internal collaboration, for instance the Asset Management Development Group. There is also a strong focus on communication with Councillors.

Greater Wellington is constantly building in-house capability and expertise. This includes a commitment to develop employees and to hire highly qualified and specialised staff members. This is necessary in the fast-changing field of climate change.

7.4 Flexibility and reactivity

It is understood that climate change is changing our climate patterns, environment, economy, society, and political landscape. Those changes are happening at a fast pace. Greater Wellington needs to be very flexible and reactive to answer all these challenges.

Examples of flexibility and reactivity are:

- The possibility of reviewing plans flexibly (such as the Pest Management Plan if a new pest arises in the region - mini scale pest management plan)
- Having different suppliers to enhance resilience (e.g., multiple tree sources)
- Having multiple options when it comes to insurance (going global instead of locally sourced quotations, insure for the Maximum Probable Loss, self-insure).

8 Opportunities

The TCFD identifies five areas of opportunities arising from climate change:

- **Resource efficiency:** Improved efficiency may reduce operating costs
- **Energy sources:** Transition to renewable energy may reduce operating costs
- **Products and services:** Sustainable organisations are better placed
- **Markets:** New markets and funding opportunities are becoming available to organisations
- **Resilience:** Organisations that develop their capacity to respond to climate change improve their resiliency.

Table 25: Opportunities arising from climate change

| Opportunity type | Climate-related opportunities | Description |
|---------------------|---|---|
| Resource efficiency | Efficiency in new regulations (RMA, etc) | New regulations can provide more guidance and improve efficiency for the different stakeholders working in climate change mitigation and adaptation. |
| | Guidance from central government on climate change mitigation and adaptation | Guidance from central government is needed to achieve meaningful progress on climate change. This guidance can improve efficiency for the different stakeholders working together. |
| | Increased collaboration between stakeholders | Climate change being a global issue, the different actors must collaborate to achieve meaningful action. |
| | Operational delivery alignment and synergies | Sharing resources (information, knowledge, vehicles, tools, etc) and good planning, alignment and collaboration across the organisation can optimise results and enhance delivery quality as well as reduce operational greenhouse gas emissions, costs, time, etc. |
| | Low carbon vehicles | GW already benefits from improved technology for low carbon vehicles. GW is currently replacing its buses and light vehicles with electric vehicles. The southern hemisphere's first electric ferry was launched in 2021 in Wellington. Lower reliance on high carbon technologies will reduce operating cost over time. |
| | Efficient buildings | Having a more efficient building is beneficial for reduced carbon emissions, the wellbeing of the users, and can reduce operating costs. |
| Energy source | Lower-emission and renewable sources of energy and electricity production (solar, wind, etc.) | The Government has an aspirational target of 100% renewable electricity by 2030. Renewable electricity is becoming more accessible and affordable. Renewable energy technologies are less expensive, and GW could potentially produce more energy through solar and wind. This is an opportunity for GW to reduce its operational and capital expenditure and its carbon footprint. |

| Opportunity type | Climate-related opportunities | Description |
|-----------------------|---|--|
| | New and efficient technologies available and affordable | As low carbon and efficient technologies become mainstream, their price is dropping. This is an opportunity for GW to already reduce its operational expenditure. It is believed that GW's capital expenditure could be reduced over time. |
| | Participation in carbon market | Some of GW's forests are registered in the Emissions Trading Scheme (ETS) and the organisation receives carbon credits. |
| Products and services | Increase patronage for public transport and active transport | Central government is supporting the decarbonisation and enhancement of public transport and active transport infrastructure. Those conditions help mode shift to take place. |
| | Increased need for environmental management (e.g., flood protection, parks management, pest control, etc.) | As the climate becomes more extreme, there will be an increased need for environmental management. As well as a huge risk, this can be seen as an opportunity to demonstrate creative solutions with co-benefits for the environment. |
| | Potential adoption of nature-based solutions, enhanced biodiversity, ecosystem services, and water quality improvements | The first National Adaptation Plan prioritises and encourages nature-based solutions. This is an opportunity for GW to work in collaboration with central government and other agencies and receive support. Nature-based solutions enhance biodiversity and ecosystems services as well as response to climate change. |
| Markets | Suppliers with sustainable capacities | Businesses are increasing their ability to deliver more sustainable goods and services due to increased demand from clients. Central and local government provide improved support and guidance to businesses. When procuring goods and services, GW will have a broader range of sustainable suppliers to choose from. |
| | Access to funding | Many funds to mitigate and adapt to climate change are currently available (Climate Emergency Response Fund, EECA, Waka Kotahi, etc.). Applying for these can be time and resource consuming and the outcome is uncertain. There is also a need to plan for what happens to the project once the funding is over. |
| | Reducing the risk of asset stranding considered in investment decision making | Climate-related risks are being assessed in a much deeper way to plan for the future. Having a complete understanding on how climate change is and will impact assets allows GW to avoid asset stranding. |

| Opportunity type | Climate-related opportunities | Description |
|------------------|---|---|
| | Increased carbon price | Because the carbon price is increasing, the carbon units owned by GW are worth more. Therefore, the money available for the LCAF is increasing and it will be possible to fund more projects that aim at reducing GW's corporate carbon footprint. |
| Resilience | Increased resilience of the organisation | Climate change mitigation and adaptation, when properly done, together increase resilience of systems in general, including GW (see the Adaptation Measures section). |
| | Increased return on investment for environmental restoration and nature-based solutions | By increasing now, the resilience of the natural environment (restoration and nature-based solutions), the ecosystems will be able to better respond to the impacts of climate change (disruptions). Therefore, the needs for GW to intervene after a disruption should be lowered due to well-functioning ecosystems, that are rendering good ecosystem services. |

9 Recommendations

- This assessment is the first step in getting to know our corporate climate-related risks. We recommend the development of a full risk assessment followed by a cross-organisational adaptation plan. A full risk assessment would help to close the current gap identified on data collection (see chapter [6](#), page [26](#)). The assessment and the adaptation plan will need to be reviewed on a regular basis.

- We recommend the development of an adaptation plan. The goal of such a plan is to adapt to climate change by reducing the impacts and seizing the opportunities. The adaptation plan could be used in the development of the Long-Term Plan, Infrastructure Strategy and Financial Strategy amongst other strategic documents. Current adaptation measures are mentioned in this report. However, work still needs to be done to increase Greater Wellington's resiliency and plan for our climate future.

- All the assets and infrastructure owned and managed by Greater Wellington are not currently mapped. We recommend having a full knowledge of our assets and infrastructure including location, state and cost. Ideally this information would be available on a GIS layer. This would allow an easy layering between Greater Wellington assets and infrastructure and climate risks.

- We recommend more data collection (including tracking of carbon sequestration) regarding the financial impact of climate change. This data would allow a full disclosure of our risks, as well as better estimation of future financial risks.

- Both international (TCFD) and national (MfE, XRB) guidance require the consideration of different scenarios and timeframes. We recommend setting up and validating chosen emissions and impacts scenarios and timeframes to use across Greater Wellington. Some scenarios and timeframes are recommended by the TCFD and MfE, but Greater Wellington could also decide to adopt complimentary ones.
We also note that, transition scenarios need more engagement with stakeholders than physical scenarios. Indeed, while the physical scenarios were already studied by NIWA and accepted by GWRC (see section [4.3](#), page [12](#) for more details), no work was done on transitions scenarios.

- We recommend using an internal adaption group to support the work in climate change adaptation (corporate climate-related risks assessment and adaptation plan). This could be done through the already existing Asset Management Development Group led by the Principal Advisor Asset Management.

- We finally recommend increasing GW's maturity regarding the understanding and management of climate-related risks. This can be done though professional development of key people in the organisation (training, etc). This can also be done with a good collaboration between the climate change team and other parts of the organisation (Especially Rōpū Taiao, the new environment group) and by creating links between corporate and regional work (e.g.: between this corporate climate risks assessment and the Wellington Region Climate Change Impact Assessment).

10 Interviews with staff

This corporate risk assessment is the result of a consultation with many staff members across Greater Wellington. Those interviews aimed at understanding the work done by each team, department, and group, as well at understanding the current climate risks, needs, gaps and opportunity. Mitigation measures were also discussed.

Catchment Management

- Senior Land Management Advisor
- Biosecurity Advisor
- Team Leader Pest Plants
- Team Leader Pest Animals
- Team Leader Investigations Strategy & Planning (Flood protection)
- Team Leader Floodplain Management Plans Implementation
- Team Leader Operations and Planning (Flood protection)

Environment Management

- Manager Environmental Policy
- Senior Policy Advisors
- Manager Harbours
- Manager Parks
- Principal Ranger Assets and Maintenance
- Principal Ranger Western
- Manager Environmental Science
- Team Leader Hydrology

Metlink

- Manager Policy
- Business Advisor
- Principal Advisor Strategy
- Principal Advisor Bus fleet
- Manager Rail Assets

People and Customer

- Health, Safety & Wellbeing Manager

Te Hunga Whiriwhiri

- Project coordinator

Strategy

- Emergency & Business Continuity Manager
- Parks Planner
- Senior Strategic Advisor
- Team Leader, Travel Choice

Corporate Services

- Chief Financial Officer
- Financial controller
- Treasury accountant
- Strategic Finance Business Partner Wellington
- Strategic Finance Business Partner Masterton
- Accounting Services Manager
- Enterprise Resource Planning Programme Manager
- Manager Legal and Procurement
- Senior Manager, Corporate Risk and Assurance
- Risk Management Support
- Principal Advisor Asset Management

WREMO

- Manager Business and Capability Development

11 References

GWRC – Public documents

Long Term Plan 2021-31 – GWRC, 2021

Pūrongo ā Tau 2022/23, Annual Plan 2022/23 – GWRC 2022

Proposed Change 1 to the Regional Policy Statement for the Wellington Region – GWRC, 2022

Section 32 report Evaluation of provisions for Proposed Change 1 to the Regional Policy Statement for the Wellington Region – GWRC, 2022

Te Tikanga Taiao o Te Upoko o Te Ika a Maui, Natural Resources Plan for the Wellington Region – GWRC, 2022

Ko te Mahere ā-Rohe Waka Whenua o Pōneke 2021, Wellington Regional Land Transport Plan 2021 – GWRC, 2021

Te Mahere Waka Whenua Tūmatanui o te Rohe o Pōneke, Wellington Regional Public Transport Plan, 2021-2031 – GWRC, 2021

Asset Management Plan, Metlink – GWRC, 2021

Wellington Rail Programme Business Case, Wellington's Strategic Rail Plan – GWRC, 2022

Toitū Te Whenua, Parks Network Plan 2020-30 – GWRC, 2020

Hutt and Wainuiomata / Orongorongo water collection areas management plan – GWRC, 2016

Whitireira Park Management Plan and Whitireira Park Bylaws 2016 – GWRC, 2016

Greater Wellington Regional Pest Management Plan 2019-2039 – GWRC, 2019

Guidelines for Floodplain Management Planning – GWRC, 2015

Wellington Region Civil Defence Emergency Management, Group Plan 2019-2024 – GWRC, 2019

Climate change projections for the Wairarapa – NIWA prepared for GWRC, 2021

Climate change projections for west of Wellington's Tararua and Remutaka Ranges – NIWA prepared for GWRC, 2022

Greenhouse gas emissions inventory and management report for GWRC – 2020/2021 – Toitū Envirocare, 2022

GWRC – Internal documents

GWRC – Asset management plans

Asset Management Plan, Flood Protection Control – GWRC, 2021

Asset Management Plan, Parks, 2020-2050 – GWRC, 2020

Asset Management Plan, Harbours – GWRC, 2014

Asset Management Plan, Environmental Science – GWRC, 2014

GWRC – Policies and supporting documents

Procurement Policy – GWRC, 2021

Procurement Manual – GWRC, 2021

Sustainable Procurement Guide – GWRC

Risk Management Policy – GWRC, 2020

Risk Management Procedures – GWRC

Risk Management Guidelines – GWRC

Greater Wellington Regional Council's Health Safety and Wellbeing (HSW) Policy – GWRC, 2020

HSW Risk Management Standard Guidelines – GWRC

HSW Risk management – GWRC

HSW Risk Register – GWRC

GWRC – other internal documents

Queen Elizabeth Park, Coastal Erosion Plan – GWRC (prepared by PAOS), 2020

Wellington Rail Programme Business Case, Wellington's Strategic Rail Plan – GWRC, 2022

Business Continuity Management Policy – GWRC, 2020

Business Continuity Operational Plan, Generic All Council – GWRC, 2020

Task Force on Climate-related Financial Disclosures – TCFD

Recommendations of the Task Force on Climate-related Financial Disclosures – TCFD, 2017

Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures – TCFD, 2021

The use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities – TCFD, 2017

Guidance on Scenario Analysis for Non-Financial Companies – TCFD, 2020

Guidance on Risk Management Integration and Disclosure – TCFD, 2020

Guidance on Metrics, Targets and Transition Plans- TCFD, 2021

Institute of International Finance

TCFD Guidance Template: A voluntary, open-source Toolkit Drawing on Observed Industry Practices – Institute of International Finance, 2021

External Reporting Board – XRB

Aotearoa New Zealand Climate Standard 1 – Climate-related Disclosures (NZ CS 1) – XRB, 2022

Aotearoa New Zealand Climate Standard 2 – Adoption of Aotearoa New Zealand Climate Standards (NZ CS 2) – XRB, 2022

Aotearoa New Zealand Climate Standard 3 – General Requirements for Climate-related Disclosures (NZ CS 3) – XRB, 2022

Ministry for the Environment

Adapt and thrive: Building a climate-resilient New Zealand – MfE, 2022

Websites

[WRLC – Climate change projects](#)

[GWRC – Climate change](#)

Climate Committee
7 September 2023
Report 23.438



For Decision

UPDATING THE CLIMATE EMERGENCY ACTION PLANS

Te take mō te pūrongo

Purpose

1. To advise the Climate Committee (the Committee) of the process of reviewing Greater Wellington's two 10-point Climate Emergency Action Plans and what content has been retained, modified, removed and added.
2. To seek endorsement of the new draft versions of the plans ([Attachment 1](#)) to inform the climate change focus area that forms part of the 2024-34 Long Term Plan.

He tūtohu

Recommendation

That the Committee **endorses** the two updated Climate Emergency Action Plans (Attachment 1) as an input to the 2024-34 Long Term Plan process.

Te tāhū kōrero

Background

3. Council adopted its first climate change strategy (the Strategy) and implementation plan¹ in 2015, with the purpose to provide an overarching document to align and coordinate climate change actions across Greater Wellington. The Strategy has three objectives:
 - a Greater Wellington will act to reduce greenhouse gas (GHG) emissions across all its areas of influence.
 - b Risks from climate change-related impacts are managed and resilience is increased through consistent adaptation planning.
 - c Community awareness of climate change mitigation and adaptation solutions increases.
4. The 10-point Corporate Carbon Neutrality Action and Regional Climate Emergency Plans (the Plans) were adopted following the declaration of a climate emergency by Council in 2019². These replaced the implementation plan of the 2015 Strategy.

¹ <https://www.gwrc.govt.nz/assets/Documents/2015/10/GWRCClimateChangeStrategy7-10-15.pdf> and <https://archive.gw.govt.nz/assets/Climate-change/GWRCClimateChngStrtqvImplementationPlan7-10-15.pdf>

² <https://www.gw.govt.nz/environment/climate-change/>

5. The Plans provide a succinct description of the main activities Greater Wellington will take or is taking to address the Climate Emergency:
 - a Reducing the causes of climate change/GHG emissions (mitigation)
 - b Preparing for the impacts of climate change (adaptation/resilience)
 - c Demonstrating leadership to stakeholders/the public
6. In 2022 officers commenced a review of the Plans to clarify:
 - a What is Greater Wellington doing now that we need to continue, update or better define.
 - b What new actions are needed to reduce emissions, manage risks or adapt to climate change impacts.
 - c What the highest priorities for action are.
7. The Climate Change Team met with staff from across the organisation to elicit feedback and ensure the Plans represented an integrated approach to addressing climate change for Greater Wellington. An interim summary was shared with the Climate Committee at a workshop on 15 March 2023. The new leadership of Rōpū Taiao was given time for additional input following this. The Climate Change Team prioritised and consolidated ideas and recommended new actions to the Climate Emergency Response Programme Board.
8. The Climate Change Team applied the following prioritisation criteria for the review:
 - a Strategic benefit to objectives as adopted in Strategy and the 2021-31 Long Term Plan and the Council's emissions reduction targets.
 - b Having a substantive and transformative impact.
 - c Are specific, measurable, achievable, relevant, and time-bound.
 - d Delivering multiple benefits (organisationally, regionally, towards mitigation and/or adaptation).
9. As a result of these discussions across Greater Wellington and further analysis, some of original actions have been proposed to be removed, amended or merged, and new actions have been proposed. Officers have also incorporated feedback provided by Councillors at the Council workshop on 29 August 2023 into the Plans.

Te tātaritanga Analysis

10. Officers note that there was keen interest in the Plans from across the organisation and in particular a desire to ensure there was improved integration of Greater Wellington's climate change response. Another theme was increasing our emphasis on organisational adaptation and regional leadership in adaptation and mitigation.
11. The Corporate Carbon Neutrality Plan has been renamed the Organisational Climate Emergency Action Plan to better represent Greater Wellington as an organisation, not a corporation. The change allows it to encompass organisational adaptation actions, not just mitigation actions, and to align the titles of both Plans.

12. Some actions can be delivered within existing resources and others will need to be proposed as new activities in the 2024-34 Long Term Plan process before the Plans are confirmed.
13. Officers recommend that these actions be carried over as ongoing work in the Organisational Climate Emergency Action Plan:
 - a Climate change in decision-making.
 - b Governance and leadership arrangements.
 - c Electrify public transport (2035) and our light vehicle fleet (2030).
 - d Retire grazing and restore native ecosystems in regional parks.
 - e Operate the Low Carbon Acceleration Fund (LCAF).
 - f Work with Council Controlled Organisations and CentrePort Limited to align and implement emissions reduction targets and activities.
14. Officers recommend that these actions be removed from the Organisational Climate Emergency Action Plan:
 - a *Investigate agreement with the Department of Conservation over Queen Elizabeth Park carbon credits (NZUs).* This action has been completed. Earning NZUs from the Crown Estate is prohibited by law.
 - b *Investigate securing renewable electricity supplies.* The investigation has been completed and direct investment has been found to be the only credible way forward. The Energy Transformation Initiative is proposed to do this, explained below.
 - c *Investigate options for electric utility vehicles.* Investigations were made, but the issue is not resolved. The action has been merged with the other electric vehicle actions.
15. Officers recommend these new actions be introduced to the Organisational Climate Emergency Action Plan:
 - a Investigate an Energy Transformation Initiative to maximise the potential of renewable energy and batteries to reduce organisational emissions, reduce costs, earn revenue and increase energy security.
 - b Build and maintain a carbon sequestration and storage tracking system for forests and wetlands managed by Greater Wellington.
 - c Develop options for reducing emissions from Greater Wellington flood protection land, including nature-based solutions.
 - d To complete the organisational climate risk assessment and write an adaptation plan.
16. Officers recommend these ongoing actions are included in the Regional Climate Emergency Action Plan:
 - a Develop and implement the whitua (catchment management plans) with mana whenua partners.

- b Implement the Regional Land Transport Plan and Regional Public Transport Plan, including increasing rail services to Palmerston North and the Wairarapa.
 - c Engage in advocacy to central government.
 - d Support the Wellington Regional Leadership Committee climate change projects.
 - e Ensure region has climate-resilient and low emissions infrastructure and urban form.
17. Officers recommend these actions are removed from the Regional Climate Emergency Action Plan:
- a *Establish governance arrangements and senior management champion.* This action has been merged with an action in the Organisational Climate Emergency Climate Action Plan.
 - b *Review the 2015 Greater Wellington Climate Change Strategy.* This review is complete. Its overarching objectives remain relevant, so no change is required.
 - c *Broker native forest reforestation projects, using One Billion Trees funding.* Greater Wellington implemented a One Billion Trees restoration project with mana whenua partners. This project is reaching its end and the fund has now closed.
18. Officers recommend these new actions are introduced to the Regional Climate Emergency Action Plan:
- a Enhance browsing pest animal control programmes.
 - b Research, prioritise and implement nature-based solutions.
 - c Build capacity to deliver adaptation leadership.
 - d Build capacity to appoint a funding officer to identify and apply for alternative funding streams for climate action.
 - e Implement the new climate-related provisions in the Regional Policy Statement, once Plan Change 1's amendments are approved.
19. For more detailed descriptions of the recommended actions, see **Attachment 1**.

Ngā hua ahumoni

Financial implications

20. Some actions will be achievable within existing budgets or are existing work programmes. Those actions which require additional financial support to proceed will be assessed through the 2024-34 Long Term Plan process. The business case for all new actions will also be assessed through the Long Term Plan process before they proceed further.

Ngā Take e hāngai ana te iwi Māori

Implications for Māori

21. Intended mana whenua involvement has been highlighted in the Plans where there is a strong link. Te Hunga Whirwhiri were consulted as part of the review of the Plans.

Engagement with Māori regarding Greater Wellington’s intentions with regards to climate change will occur as part of the 2024-34 Long Term Plan process.

Te huritao ki te huringa o te āhuarangi Consideration of climate change

22. This report follows Greater Wellington’s climate change guidance.
23. The Plans respond directly to Council’s strategic priorities and targets for climate change both for mitigation and adaptation.

Ngā tikanga whakatau Decision-making process

24. The matters requiring decision in this report were considered by officers against the decision-making requirements of Part 6 of the Local Government Act 2002.

Te hiranga Significance

25. Officers considered the significance (as defined by Part 6 of the Local Government Act 2002) of these matters, taking into account Council's *Significance and Engagement Policy* and Greater Wellington’s *Decision-making Guidelines*. Officers consider that these matters are of low significance as they have only a minor impact on residents and ratepayers and they do not affect Greater Wellington's ability to perform its role.

Te whakatūtakitaki Engagement

26. Given the low significance of the matters for decision, officers considered that no related public engagement was required.

Ngā tūāoma e whai ake nei Next steps

27. If the Climate Committee agrees the recommendation, the content of new Plans will strongly inform the climate change package brought to the Long Term Plan Committee for the 2024-34 Long Term Plan.
28. The Plans will be provided as supporting information to the 2024-34 Long Term Plan public consultation in early 2024.
29. The Plans will be modified as necessary following the adoption of the 2024-34 Long Term Plan in June 2024 and then brought back to the Climate for formal adoption.

Ngā āpitihanga Attachments

| Number | Title |
|---------------|--|
| 1 | Greater Wellington’s Climate Emergency Action Plans – draft update |

**Ngā kaiwaitohu
Signatories**

| | |
|-----------|--|
| Writers | Jake Roos – Kaiwhakahaere Matua Manager Climate Change Suze Keith - Kaitohutohu Senior Advisor - Climate Change |
| Approvers | Zofia Miliszewska – Kaiwhakahaere Matua Manager Strategy and Performance Luke Troy – Kaiwhakahaere Matua Rautaki General Manager Strategy |

| He whakarāpopoto i ngā huritaonga Summary of considerations |
|--|
| <p><i>Fit with Council’s roles or with Committee’s terms of reference</i></p> <p>The Climate Committee’s delegation includes to “Oversee, review and report to Council on the management and delivery of Greater Wellington’s strategies, policies, plans, programmes, initiatives and indicators for climate change mitigation and adaptation.”</p> |
| <p><i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i></p> <p>This work responds directly to the 2021-31 Long Term Plan’s overarching priority of ‘Responding to the climate emergency’ and aligns to the draft strategic direction for the 2024-34 Long Term Plan which includes the following cross-organisational focus area “Leading action for climate resilience and emissions reduction”</p> |
| <p><i>Internal consultation</i></p> <p>Internal parties consulted as part of the review of the Plans included: Te Hunga Whiriwhiri, Finance, Procurement, Legal, Risk, Asset Management, Metlink, Strategic Transport, Fleet Management, Company Portfolio, Strategy and Performance, Democratic Services, Environmental Science, Environmental Policy, Parks, Land Management, Flood Protection, Rōpū Taiao.</p> |
| <p><i>Risks and impacts - legal / health and safety etc.</i></p> <p>There are no identified risks or impacts arising from this paper.</p> |

Greater Wellington Regional Council (Greater Wellington)

30 August 2023

The Council declared a climate emergency on 21 August 2019. We are committed to reducing the causes and impacts of climate change and leading by example. The Council has targets for being 'carbon neutral' by 2030, and 'climate positive' by 2035 (that is, removing more carbon from the atmosphere than the equivalent amount of greenhouse gases it emits as an organisation). These two action plans explain what Greater Wellington is doing internally and regionally to address the climate emergency.

Organisational Climate Emergency Action Plan

1. Operate a greenhouse gas (GHG) emissions reduction policy and procurement policy that put a strong bias towards those options that will avoid, reduce or absorb emissions over their entire life. Decision makers must consider how climate change would impact on proposals made to them, and the impact the proposals would have on GHG emissions and targets. **A M**
2. Maintain appropriate governance arrangements for climate change. The chief executive is responsible for achieving organisational emissions reduction targets. Ensure there is a senior management champion for climate change priorities within the organisation and promote the programme internally and externally. **A M**
3. Enhance organisational emissions reporting, including by establishing a system for tracking the amount of carbon stored on Greater Wellington-managed land. Investigating the feasibility of including more supply-chain emissions in Greater Wellington's annual emissions inventory. **M New**
4. Investigate starting an Energy Transformation Initiative to maximise the potential of renewable energy and batteries to reduce organisational GHG emissions, reduce energy costs, earn revenue and increase energy security, through direct investment and new supply arrangements. **M New**
5. Electrify the entire public transport system as rapidly as is feasible, including buses, trains, ferries and shuttles. Achieve an all-electric bus fleet by 2035. Achieve a fully battery-electric light vehicle fleet for the organisation by 2030. **M**
6. Implement the Toitū Te Whenua Parks Network Plan 2020-30, progressively retiring grazing and restoring native ecosystems across parks. **A M**
7. Investigate options for reducing and sequestering emissions on flood protection land including nature-based solutions. **A M New**
8. Operate a Low Carbon Acceleration Fund for projects that reduce Greater Wellington's organisational GHG emissions by leveraging the value of the emissions units gifted to Council by Government in 2012 for its pre-1990 forests. **M**
9. Complete and maintain an organisational climate risk assessment and produce and implement an organisational adaptation plan. Disclose Greater Wellington's climate-related risks. **A M New**

10. Work with the Boards and executives of Council Controlled Organisations (CCOs), in particular CentrePort Limited, to align their level of ambition and programmes for reducing emissions and addressing their climate-related risks with that of Greater Wellington. **A M**

A = Adaptation action M = Mitigation action. New = action substantially new, not undertaken before

DRAFT

Regional Climate Emergency Action Plan

1. Ensure whitua (catchment management plans) increase climate resilience and include mana whenua and tāngata whenua aspirations for climate action. **A M**
2. Investigate options for pest animal control to support the health of native ecosystems and their ability to sequester carbon dioxide from the atmosphere. **A M New**
3. Research nature-based solutions to ensure their use is effective in storing carbon and/or increasing resilience to extreme weather events such as storms, flooding and droughts. Prioritise and implement them where appropriate. **A M New**
4. Implement the Wellington Transport Emissions Reduction Pathway, Regional Land Transport Plan and Regional Public Transport Plan, including increasing rail services to Palmerston North and the Wairarapa, to reduce dependence on private vehicles and reduce transport-related emissions. **M**
5. Advocate to central government for strong and effective climate change and climate resilience policies and to ensure legislation and funding enables Greater Wellington to expedite its own climate-related actions and plans. **A M**
6. Work with regional partners to ensure adaptation planning is proactive, place-based, inclusive, community-led, and informed by sound science and Te Aō Māori. **A**
 - a. Investigate increasing Greater Wellington's capacity to engage and provide direction in this area. **New**
 - b. Support the maintenance and continued improvement of an online regional climate change impacts assessment tool. **New**
7. Develop capacity within Greater Wellington for securing funding for climate change-related research and implementation projects. **A M New**
8. Support the implementation of the Regional Policy Statement's new climate change polices and targets with further guidance for applicants on regulatory measures and via new non-regulatory methods. **A M New**
9. Via the Wellington Region Leadership Committee, work collaboratively with key institutions and agencies across the region to develop a Regional Emissions Reduction Plan and a Regional Adaptation Plan. **A M**
10. Ensure that long term infrastructure investments and in the Region, including in housing and urban centres, properly account for and are resilient to anticipated increased climate change impacts, including both physical risks and transition risks, and avoid locking in high-emissions activities. **A M**

A = Adaptation action M = Mitigation action. New = action substantially new, not undertaken before

Climate Committee
7 September 2023
Report 23.421



For Information

LOW CARBON ACCELERATION FUND STATUS UPDATE

Te take mō te pūrongo

Purpose

1. To inform the Climate Committee on the status of the Low Carbon Acceleration Fund (LCAF) including the amount of funding available at the time of writing.

Te tāhū kōrero

Background

2. The LCAF is funding borrowed against the value of Council's 255,660 allocation of New Zealand Units (NZUs), or emissions units, gifted to it by the Government for its pre-1990 forests at the inception of the NZ Emissions Trading Scheme (ETS). The fund is used for projects that will reduce Greater Wellington's emissions as an organisation.
3. In February 2022, Council agreed to expand the total amount of funding in the LCAF to reflect the increasing value of Council's 'free allocation' NZUs (Low Carbon Acceleration Fund - Report 22.66). Council agreed to limit the funding to no more than 70 percent of the present value of the Council's free allocation NZUs across all LCAF projects, past and present, determined by the current NZU spot price at the time of funding decisions. Council have also extended LCAF eligibility to CentrePort Limited and Sky Stadium.
4. The amount of funding allocated from the LCAF so far is \$9.606 million.

Te tātaritanga

Analysis

Status of current LCAF projects

5. The status of the approved LCAF projects is as follows:
 - a Winter planting for the Recloaking Papatūanuku Restoration Plan has been proceeding. Council is on track to meet the 150ha target for restoration planting this year. \$2.8 million has been spent on the project to date.
 - b The Sky Stadium decarbonisation study is complete and the LCAF allocation of \$39,500 to it spent. The project has six suggested projects in addition to the lighting project that has already been funded from the LCAF.
 - c The Sky Stadium lighting replacement project is about to start via a request for proposals to carry out the work.

- d The project to install solar power on the roof of Masterton Station is commencing this quarter.
- e Metlink decided that the diesel bus battery electric repowering project, which was granted funding in 2022 (Council report 22.338), should not proceed any further. Investigations by Metlink found the cost of safety certification of the repowered bus to meet public transport standards would be prohibitive and was not within the original LCAF allocation to the project. The decision not to proceed further was supported by ELT.
- f Of the \$550,000 allocated to the bus repowering project, \$13,000 has been spent on due diligence. The remaining \$537,000 has been relinquished by Metlink. This means the total allocation from LCAF now is \$9,069 million. It also means the Metlink LCAF application to Climate Committee in March 2023 for repowering several more diesel buses that was deferred has now been withdrawn.

Value of Fund

- 6. The spot price of NZUs on the secondary market dropped to a low of \$37 in on 5 July 2023. The reasons for this decline were related to actions taken by the Government that undermined confidence in the ETS. These included:
 - a In November 2022, Cabinet not following the Climate Change Commission's advice on ETS settings, including ceiling and floor prices for NZUs auctioned by the Government.
 - b In December 2022, releasing a proposed amendment to the Climate Change Response Act 2002 that would have increased free allocations of NZUs to polluters and made more businesses eligible for them.
 - c In March 2023, launching a consultation on the role of forests in the ETS which included a forecast of the long term NZU price moving towards \$40, due to an oversupply of units from new pine forests if nothing was changed.
- 7. The low prices reached in May, June and July 2023 put the value of current LCAF allocations to date beyond the 70 percent threshold and so under the agreed rules, no further allocations could be made at that time. There was no certainty that the situation would improve in the short term. Because of this and the lead time needed to prepare and consider applications, the decision was taken by the Climate Emergency Response Programme Board in July 2023 to not run another round in 2023.
- 8. On 26 July 2023, Cabinet reversed its position from November 2022 and accepted the Climate Change Commission's advice on ETS settings in full, including increasing the floor price to \$60 in December 2023. There was an immediate recovery in the NZU spot price following this announcement.
- 9. On 15 August 2023, the Climate Change Response (Late Payment Penalties and Industrial Allocation) Amendment Bill was adopted with the clause that would increase the amount of and eligibility for free allocations of NZUs removed.
- 10. The current (as at 28 August 2023) NZU spot price of \$67 means that presently there is a further \$2.9 million million available to allocate in the LCAF up to the 70 percent threshold. The total value of the 30 percent buffer is a further \$5.1 million, which would be available if the LCAF units were sold.

11. Finance is developing a management plan for the LCAF NZUs as part of their update to the Treasury Policy, which would include predetermined trigger points to sell certain volumes. This will reduce uncertainty and risk. However, it is unlikely that any of the NZUs will be sold this financial year. The updated draft Treasury Policy will be brought to the Finance, Risk and Assurance Committee in early 2024 and to Council by June for adoption.
12. All major political parties have stated their commitment to continuing with the ETS. Regardless, it is the view of the Climate Emergency Response Programme Board that a decision on whether to proceed with an LCAF round this financial year should be deferred until after the 2023 General Election.
13. As the 2024-34 Long Term Plan (LTP) process is currently underway with budgeting and work programme prioritisation about to commence with the Long Term Plan Committee, Council could consider using LCAF to fund specific projects or programmes of work that meet the fund criteria and would otherwise have been funded by rates. This was the approach taken for the allocation of \$8 million of LCAF funds to the Recloning Papatūanuku Restoration Plan in the 2021-31 Long Term Plan.

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

14. There are no direct implications specifically for Māori arising from the matters discussed in this report.

Ngā tūāoma e whai ake nei
Next steps

15. If the Climate Emergency Programme Board decides it is prudent to proceed with another round of applications to the LCAF later this year, after the outcome of the general election is clear, details will be promoted to eligible applications, and recommended proposals could be brought to the first Climate Committee in early 2024.
16. Consideration will also be given to using LCAF to fund eligible programmes or projects as an alternative to rates funding through the 2024-34 Long Term Plan process over the next four months.

Ngā kaiwaitohu
Signatories

| | |
|-----------|--|
| Writer | Jake Roos – Kaiwhakahaere Matua Manager Climate Change |
| Approvers | Zofia Miliszewska – Kaiwhakahaere Matua Head of Strategy and Performance Luke Troy – Kaiwhakahaere Matua Rautaki Group Manager Strategy |

| He whakarāpopoto i ngā huritaonga Summary of considerations |
|--|
| <i>Fit with Council's roles or with Committee's terms of reference</i> The Climate Committee's delegation includes to "Review and monitor, by considering regular reports from relevant activity areas, Greater Wellington's progress towards delivering on and achieving Council's climate change strategies, policies, plans, programmes, initiatives and indicators." |
| <i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i> The LCAF is designed to contribute to achieve Council's targets for reducing its greenhouse gas emissions and objectives related to responding to the Climate Emergency. |
| <i>Internal consultation</i> LCAF-funded project leads provided updates on the status of their projects. |
| <i>Risks and impacts - legal / health and safety etc.</i> There are no identified risks or impacts arising from this paper. |

Climate Committee
7 September 2023
Report 23.446



For Information

UPDATE ON REGIONAL CLIMATE CHANGE PROJECTS

Te take mō te pūrongo

Purpose

1. To brief the Climate Committee on the progress of the two Wellington Regional Leadership Committee (WRLC) Climate Change Projects (Regional Emissions Reduction Plan project, and Regional Climate Change Impact Assessment & Adaptation Plan)

Te horopaki

Context

2. The update will cover the following topics:
 - a An introduction to the Regional Emissions Reduction Plan project, progress to date, and next steps.
 - b The current status of the Climate Change Impact Assessment & Adaptation Plan, and next steps.

Ngā āpitihanga

Attachments

| Number | Title |
|--------|---|
| 1 | Update on Regional Climate Change Projects Presentation |

Ngā kaiwaitohu

Signatories

| | |
|-----------|--|
| Writers | Arya Franklyn – Project Lead Regional Emissions Reduction Plan Suze Keith - Kaitohutohu Senior Advisor - Climate Change |
| Approvers | Jake Roos – Kaiwhakahaere Matua Manager Climate Change Zofia Miliszewska – Kaiwhakahaere Matua Head of Strategy and Performance Luke Troy – Kaiwhakahaere Matua Rautaki Group Manager Strategy |

| |
|---|
| <p style="text-align: center;">He whakarāpopoto i ngā huritaonga Summary of considerations</p> |
| <p><i>Fit with Council’s roles or with Committee’s terms of reference</i></p> <p>The Climate Committee’s delegation includes to “Oversee, review and report to Council on the management and delivery of Greater Wellington’s strategies, policies, plans, programmes, initiatives and indicators for climate change mitigation and adaptation.”</p> |
| <p><i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i></p> <p>Greater Wellington has committed to regional leadership in climate change through the 2021-31 Long Term Plan. Through the Wellington Regional Leadership Committee there are two key projects which are supporting this focus in our Long-Term Plan (Regional Emissions Reduction Plan project, and Regional Climate Change Impact Assessment & Adaptation Plan)</p> |
| <p><i>Internal consultation</i></p> <p>There has been consultation and participation across Greater Wellington inputting into both projects.</p> |
| <p><i>Risks and impacts - legal / health and safety etc.</i></p> <p>There are no known risks and impacts related to this report.</p> |

Regional Emissions Reduction Plan

Project update

September 2023







Attachment 1 to Report 23.446



Levin Taitoko Structure Plan

Horowhenua Kapiti Joint Growth Opportunities

Iwi Capacity and Capability Project

Regional Approach to Climate Change Impacts

Regional Economic Development Plan

Upper Hutt Structure Plan

Kapiti Papakāinga Toolkit - Te ara ki te kainga

Regional Emissions Reduction Plan

Future Development Strategy

Food System Strategy

Regional Housing Action Plan

PRIORITY DEVELOPMENT AREAS (PDAs)

Featherston Masterplan

LGWM - Courtenay Place to Newtown

Lower Hutt Central

Porirua Northern Growth Corridor

Otaki

Trentham Mixed Use Development

Waterloo Station TOD

PDAs deliver multiple WRLC objectives at pace & scale

Regional Spatial Planning

Economic development

How we will do this

01

Understand the problem, challenges and opportunities

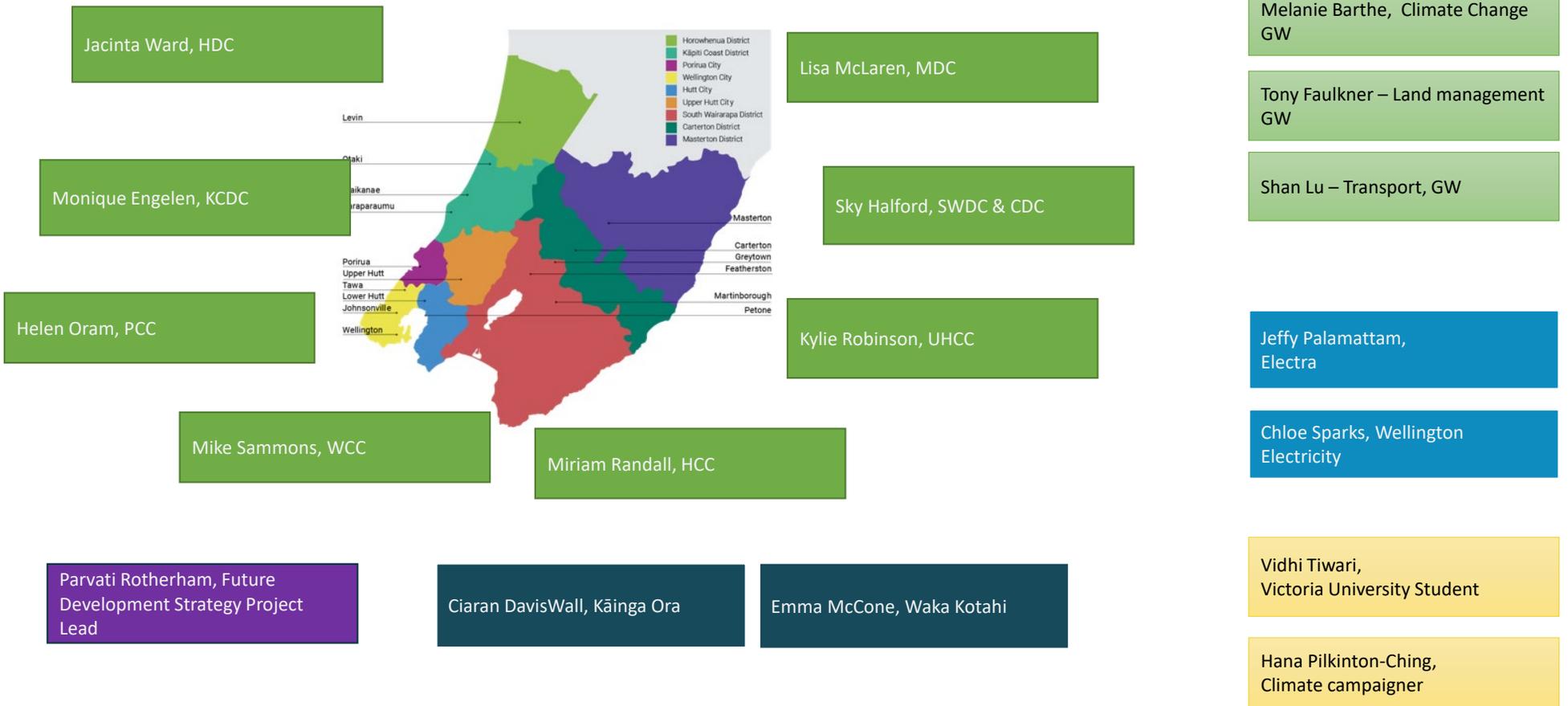
02

Work collaboratively with a range of partners and stakeholders.

03

Outline the key regional shifts and opportunities for action.

Core group



Steering group

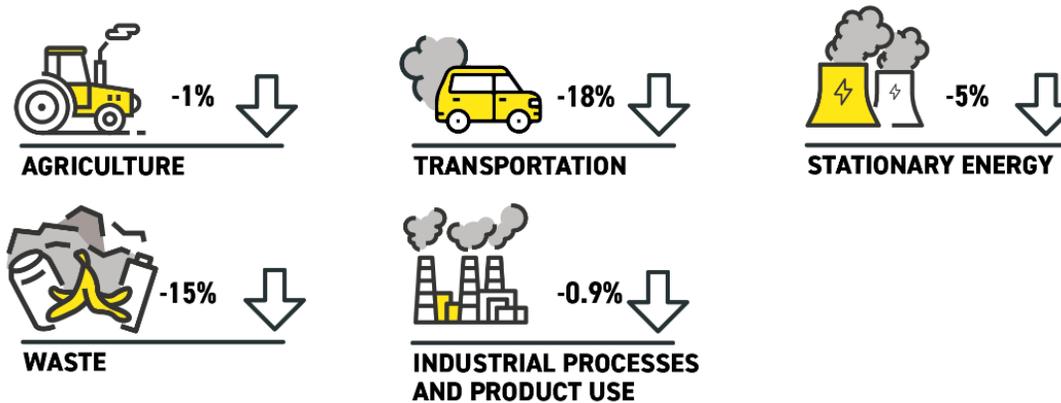
Attachment 1 to Report 23.446
Wellington
Regional Leadership Committee

PROJECT SPONSOR,
GM Strategy, Luke Troy
Greater Wellington



Carbon emissions inventory 2021/22

Greater Wellington Region Greenhouse Gas Emissions Percentage Changes between 2018/19 and 2021/22



Change in Gross Emissions between 2018/19 and 2021/22: **-9%**

Total gross emissions 2021/22

Greater Wellington Emissions Inventory for 2021/22



39%

AGRICULTURE

Top Sector Contributors



Enteric Fermentation
77%



Manure from Animals on
Pasture
11%



Agriculture Leaching and
Deposition
8%



35%

TRANSPORTATION

Top Sector Contributors



Petrol
46%



Diesel
36%



Jet Kerosene
8%



17%

STATIONARY ENERGY

Top Sector Contributors



Electricity Consumption
43%

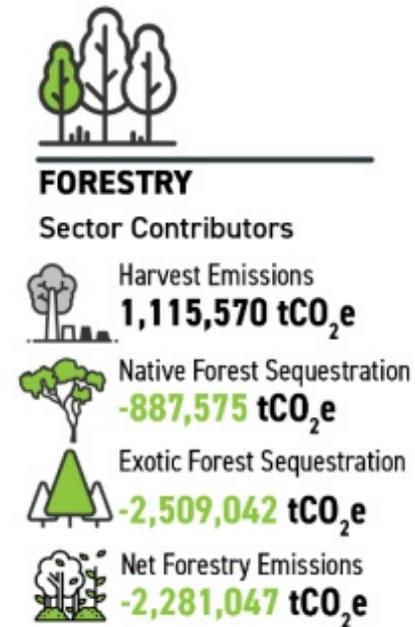
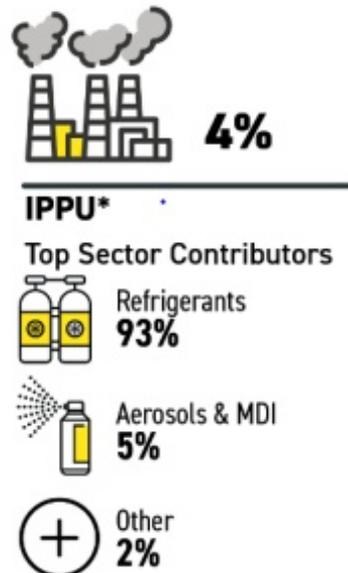
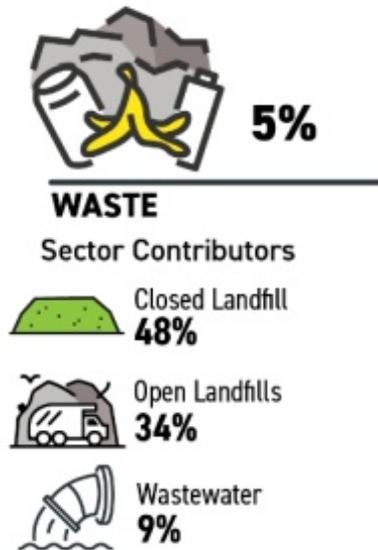


Natural Gas
34%



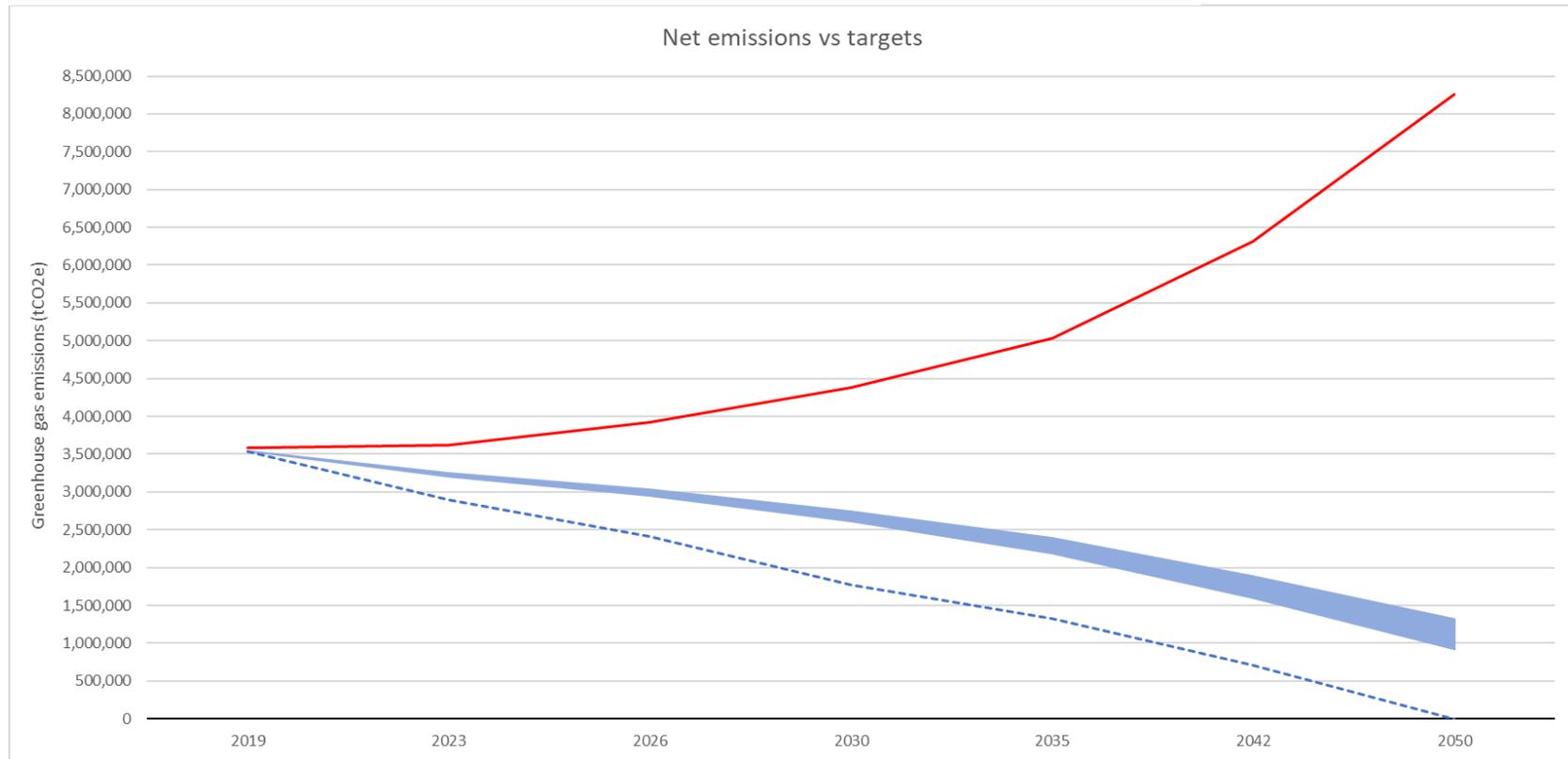
Petrol and Diesel
9%

Total gross emissions 2021/22



Regional Carbon Modelling

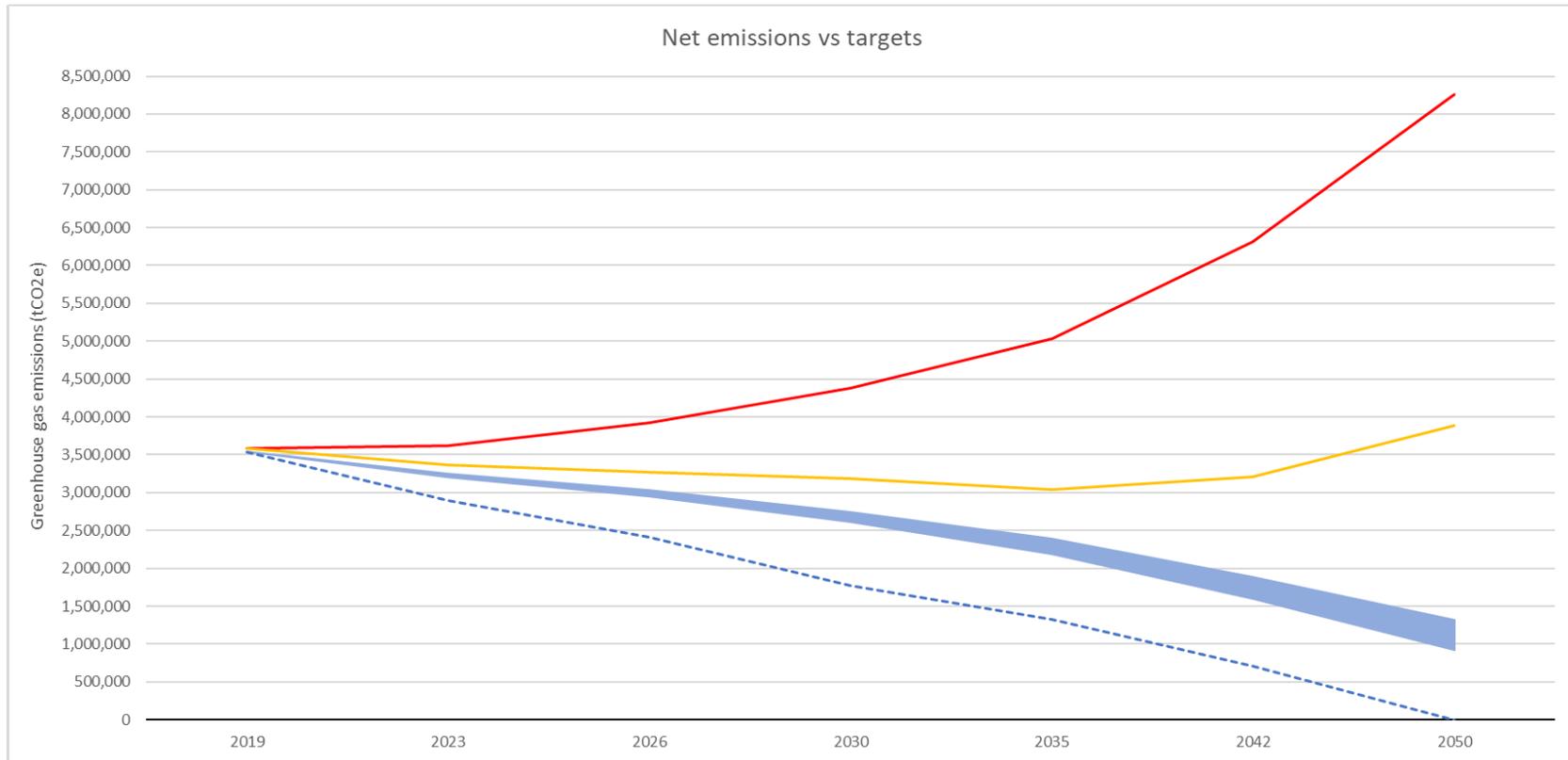
Current trend



National targets
 RPS targets
 Current trend

Regional Carbon Modelling

Pledges and targets



National targets
 RPS targets
 Current trend
 Pledges and targets



Political party panel:
[Commitments to climate change](#)



Attachment 1 to Report 23.446
[Global solutions to carbon reduction and neutrality](#)



Next steps

September-October

Small workshops with stakeholders to unpack/co-create focus areas for regional emissions reduction.

October-November

Further refinement and plan drafting

December WRLC Committee meeting

Draft for feedback

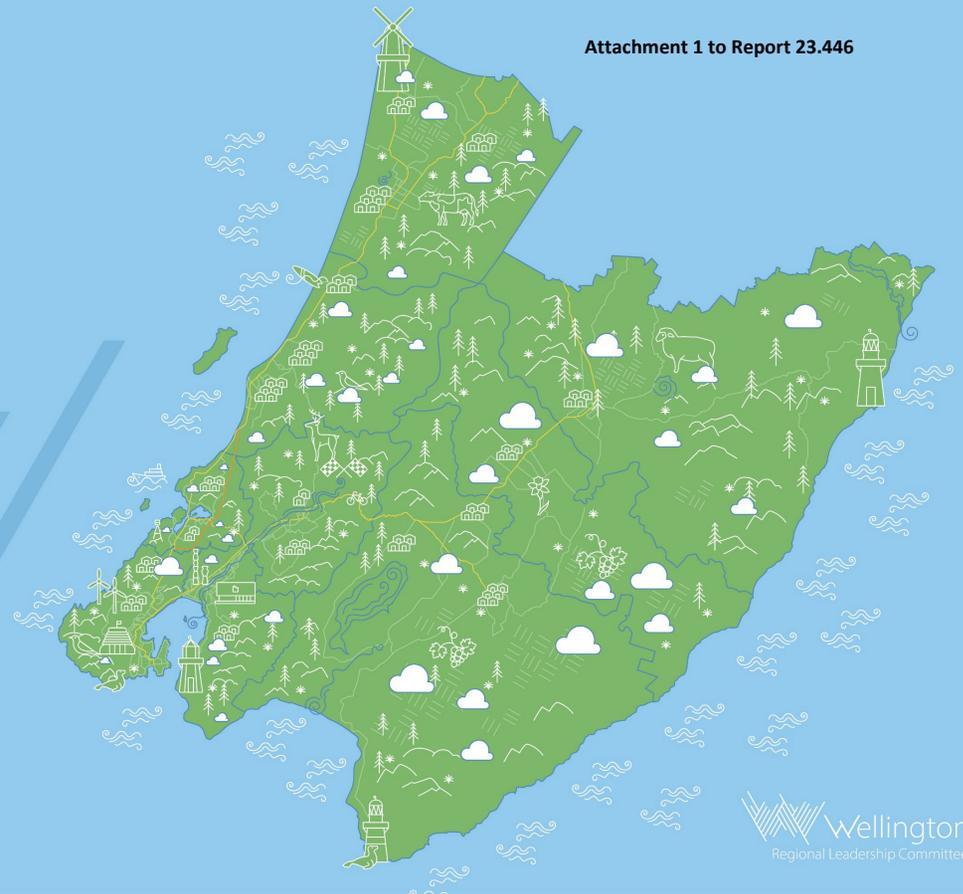
March WRLC Committee meeting

Plan to WRLC for sign-off

Wellington Regional Climate Change Impact Assessment & Regional Adaptation Plan

September 7, 2023

Attachment 1 to Report 23.446



Absolutely Positively
Wellington City Council
Me Heke Ki Pōneke

 **Greater Wellington**
Te Pane Mātua Taiao

 **HUTT CITY**
TE ANA KAIRANGI

 Te Kaunihera o
Te Awa Kairangi ki Uta
Upper Hutt City Council

 **Kāpiti Coast**
DISTRICT COUNCIL
He Hiri Whakamāori, He Titiro Whakamāori

 **porirua city**

 **MASTERTON**
DISTRICT COUNCIL
TE KAMIHĀRA-Ā-ROHE O WAKAMATĀHI

 **SOUTH WAIRARAPA**
DISTRICT COUNCIL
Kia Reretahi Tātau

 **TE KAUNIHERA-Ā-ROHE O TARATAHI**
CARTERTON
DISTRICT COUNCIL

Building understanding

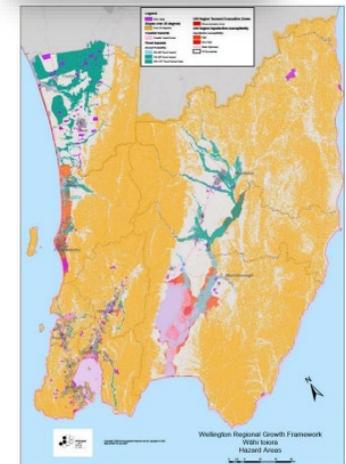
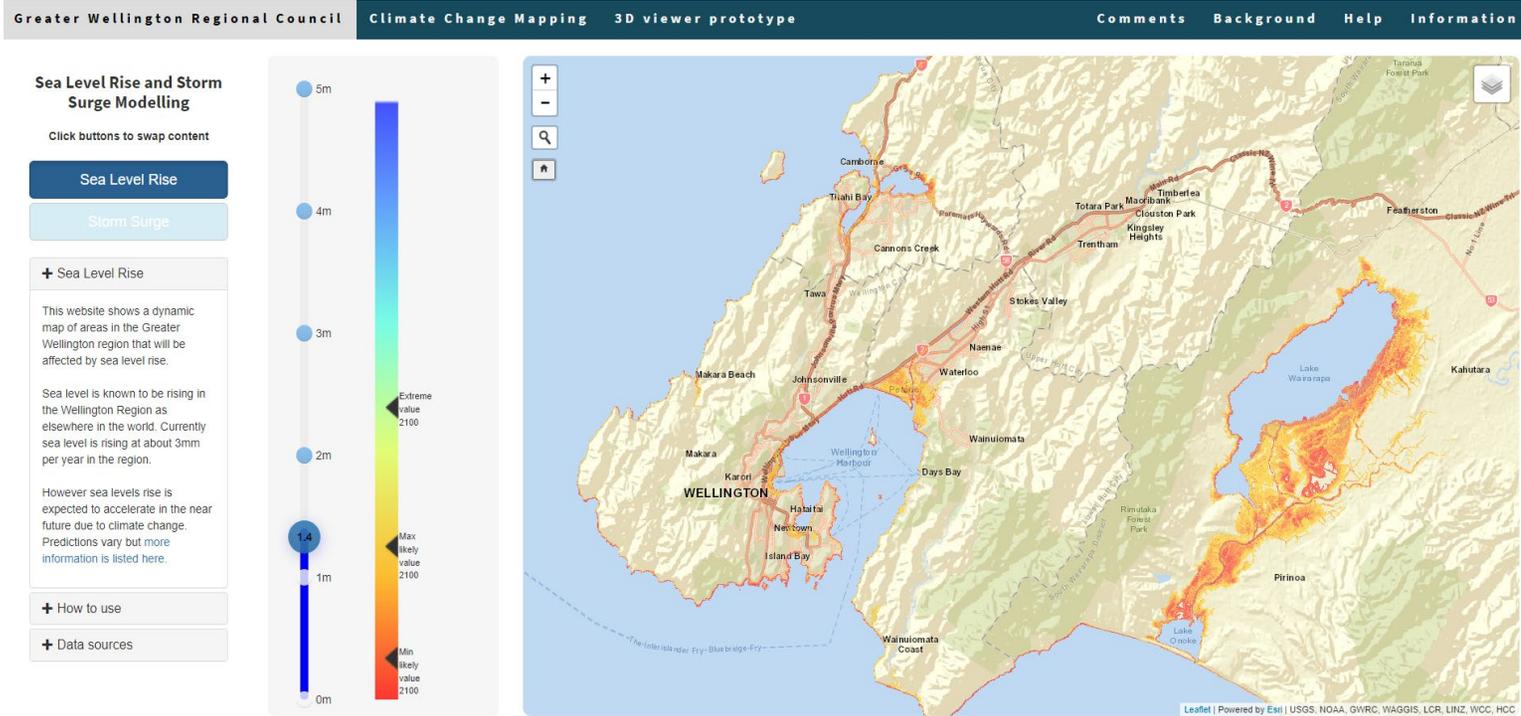


Figure 3.3 Mapping of coastal, flood, landslide, tsunami and liquefaction hazards in the Wellington Region (Wellington Regional Growth Framework 2020).

Project purpose

To build the Region's collective capacity to adapt to climate change impacts in the next 100+ years

1

Problems (& opportunities): Wellington Regional Climate Change Impact Assessment

2

Solutions: Wellington Regional Climate Adaptation Plan

Project outcomes

1

Develop a common regional understanding

Develop a common understanding of how climate change will impact the region over the next 100+ years.

2

Consistent information and approach across the Region

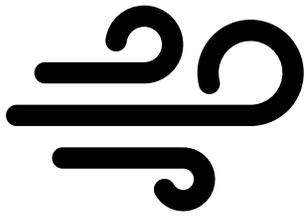
Consistent information and an approach that enables climate adaptation decision-making.

3

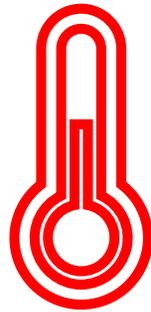
Increased capacity in the Region

Increased regional capacity to understand and manage climate change risks across the region long-term.

Assessment scope



Increased winds and storminess



Extreme temperatures



Extreme precipitation



Sea level rise

Assessment scope



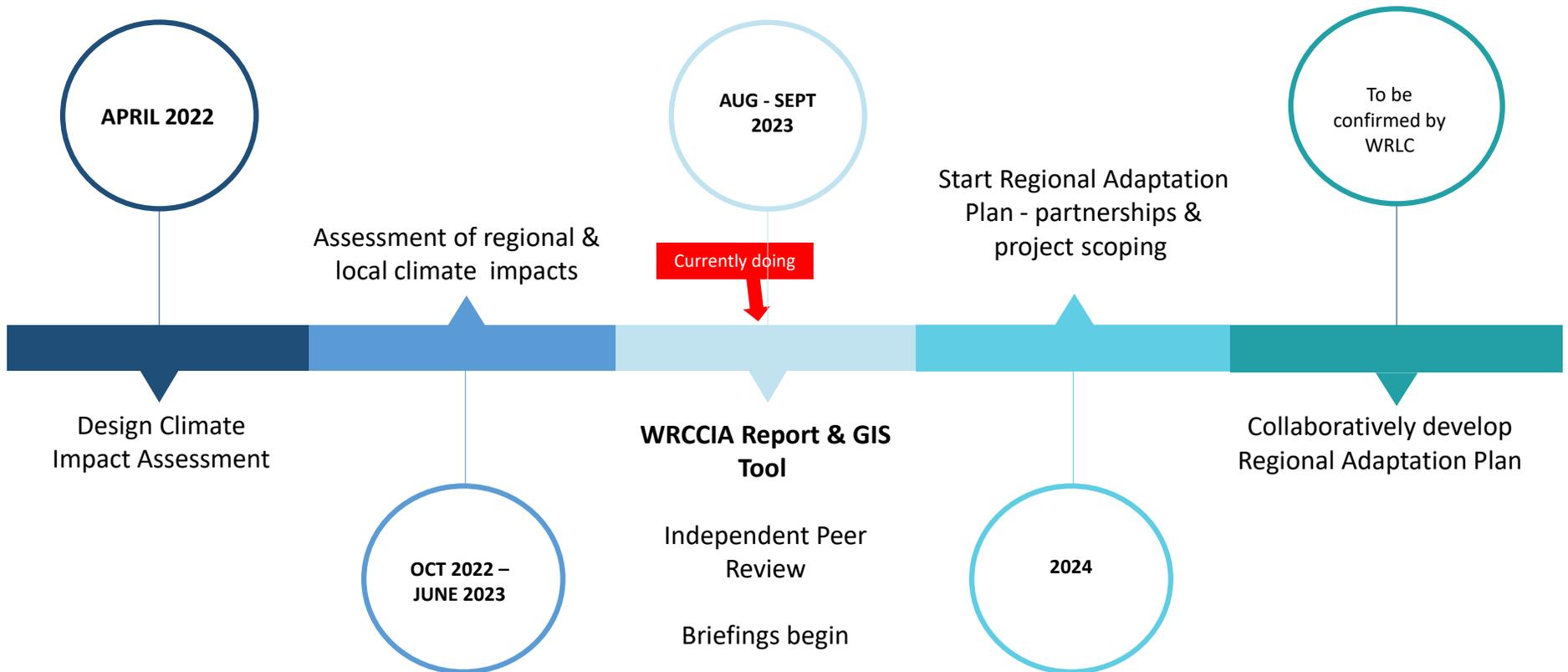
Example DRAFT RESULT – STILL TO BE PEER REVIEWED

Built Environment Results

| Risk Statement | Vulnerability | Risk | | | First-pass impact rating |
|--|---------------|----------|------------------|------------------|--------------------------|
| | | Present | Long 2100 RCP4.5 | Long 2100 RCP8.5 | |
| Risk to buildings and facilities (public and private) due to coastal erosion: cliffs and beaches. | Extreme | High | Extreme | Extreme | Catastrophic |
| Risk to transport (road and rail) landslides and soil erosion. | High | High | Extreme | Extreme | Major |
| Risk to buildings and facilities (public and private) due to coastal and estuarine flooding | High | Moderate | High | High | Catastrophic |
| Risk to buildings and facilities (public and private) due to increasing landslides and soil erosion. | High | Moderate | High | High | Catastrophic |
| Risk to flood and coastal defences due to river and pluvial flooding. | High | Moderate | High | High | Major |

Timeline

1 Regional Climate Change Impact Assessment → 2 Regional Adaptation Plan



Climate Committee
7 September 2023
Report 23.447



For Information

REFLECTIONS ON TAKUTAI KĀPITI AND IMPLICATIONS FOR GREATER WELLINGTON'S FUTURE ROLE

Te take mō te pūrongo

Purpose

1. To brief the Climate Committee on the Takutai Kāpiti project and implications for Greater Wellington's future role in regional adaptation.

Te horopaki

Context

2. Takutai Kāpiti is the Kāpiti Coast District Council's community-led coastal adaptation project. This project is designed to help guide their response to the impacts of climate change including weather patterns and sea level rise on the district's environment and people.
3. Takutai Kāpiti has established a community assessment panel to deliver recommendations on coastal adaptation options for Kāpiti Coast District Council's consideration. These recommendations, including any potential cost associated with those options, should help guide the development of District Plan provisions to manage coastal issues and an approach to help the district deal with coastal hazards in the future.
4. The panel comprises members with expertise in climate change research, law, community volunteering, community engagement, senior government leadership, business consultancy, education, and a university science student. They're gradually being joined by six iwi representatives. The Rt Hon James Bolger is the chair of the panel.
5. For the duration of the 2024-34 Long Term Plan, the majority of councils in the Region will be undertaking similar adaptation planning processes, including multiple community processes running concurrently within respective council jurisdictions, both in the coastal area and inland. The role of Greater Wellington Regional Council in these activities currently involves technical expertise and submissions to district plans and is considerable with only one process currently underway.
6. While Greater Wellington's role in future processes is not yet fully defined, it is safe to assume there will be increasing expectation for Greater Wellington support over this period.

- 7. The Rt Hon Jim Bolger will be in attendance for this Agenda Item to speak directly to the Climate Committee on the Takutai Kāpiti project, opportunities and challenges for Greater Wellington.

**Ngā kaiwaitohu
Signatories**

| | |
|-----------|--|
| Writers | Jake Roos – Kaiwhakahaere Matua Manager Climate Change |
| Approvers | Zofia Miliszewska – Kaiwhakahaere Matua Head of Strategy and Performance Luke Troy – Kaiwhakahaere Matua Rautaki Group Manager Strategy |

| He whakarāpopoto i ngā huritaonga Summary of considerations |
|---|
| <i>Fit with Council's roles or with Committee's terms of reference</i> The Climate Committee's delegation includes to "Oversee, review and report to Council on the management and delivery of Greater Wellington's strategies, policies, plans, programmes, initiatives and indicators for climate change mitigation and adaptation." |
| <i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i> Greater Wellington has committed to regional leadership in climate change through the 2021-31 Long Term Plan. There is an increased focus on Adaptation and Climate Resilience draft strategic framework for the 2024-34 Long Term Plan with the cross-organisational focus area "Leading action for climate resilience and emissions reduction". |
| <i>Internal consultation</i> There has been no internal consultation in the preparation of this report. |
| <i>Risks and impacts - legal / health and safety etc.</i> There are no known risks and impacts related to this report. |