

## If calling, please ask for Democratic Services

## **Wairarapa Committee**

Tuesday 30 March 2021, 10.00am Hurunui o Rangi Room, Carterton Events Centre

## **Members**

Councillor Staples (Chair) Greater Wellington Regional Council

Mayor Beijen South Wairarapa District Council

Councillor Gaylor Greater Wellington Regional Council

Mayor Lang Carterton District Council

Mayor Patterson Masterton District Council

Councillor van Lier Greater Wellington Regional Council

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

## **Wairarapa Committee**

Tuesday 30 March 2021, 10.00am Hurunui o Rangi Room, Carterton Events Centre

## **Public Business**

No.	Item	Report	Page
1.	Apologies		
2.	Conflict of interest declarations		
3.	Public participation		
4.	Confirmation of the Public minutes of the Wairarapa committee meeting on 1 December 2020	20.492	3
5.	Update on progress of action items from previous Wairarapa Committee meetings – March 2021	21.123	5
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Please note these minutes remain unconfirmed until the Wairarapa Committee meeting on 30 March 2021.

Report 20.492

# Public minutes of the Wairarapa Committee meeting on 1 December 2020

Hurunui o Rangi Room, Carterton Events Centre at 10.07am.

## **Members Present**

Councillor Staples (Chair)

Mayor Beijen

South Wairarapa District Council

Councillor Gaylor (from 10.21am)

Greater Wellington Regional Council

Greater Wellington Regional Council

Carterton District Council

Mayor Patterson

Masterton District Council

Councillor van Lier (via Zoom)

Greater Wellington Regional Council

## Also present

Cr Ponter (via Zoom, until 11.00am –item 7)

Deputy Mayor Emms

Greater Wellington Regional Council

South Wairarapa District Council

## **Public Business**

## 1 Apologies

Moved: Mayor Patterson / Mayor Lang

That the Committee accepts the apology for lateness from Councillor Gaylor.

The motion was carried.

#### 2 Declarations of conflicts of interest

There were no declarations of conflict of interest.

## 3 Public participation

There was no public participation.

## 4 Confirmation of the Public minutes of the Wairarapa Committee meeting on 15 September 2020

Moved: Mayor Beijen / Mayor Patterson

That the Committee confirms the Public minutes of the Wairarapa Committee meeting on 15 September 2020 – Report 20.399.

The motion was carried.

## Government COVID-19 Recovery Response Projects Wairarapa Report - Report20.459 [For Information]

Madeliene Playford, Project Manager, Flood Management Protection Implementation, spoke to the report.

## 6 Wairarapa Flood Protection update report - Report 20.462 [For Information]

Madeliene Playford, Project Manager, Flood Management Protection Implementation, and Graeme Campbell, Manager, Flood Protection, spoke to the report.

Moved: Mayor Patterson / Mayor Lang

That a working group be convened to work with the aggregate industry to identify future long-term sites for gravel extraction and report back to the next Wairarapa Committee meeting.

The motion was carried.

Note: Cr Gaylor arrived at 10.21am, during the discussion on the above item.

## 7 Public Transport update – Report 20.446 [For Information]

Scott Gallacher, General Manager Metlink, spoke to the report.

**Noted:** The Committee noted that officers would arrange a Wairarapa transport-related fieldtrip.

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Chair			

Date:

Wairarapa Committee 30 March 2021 Report 21.123



#### For Information

## UPDATE ON PROGRESS OF ACTION ITEMS FROM PREVIOUS WAIRARAPA COMMITTEE MEETINGS – MARCH 2021

## Te take mō te pūrongo Purpose

1. To update the Wairarapa Committee (the Committee) on the progress of action items arising from the previous Committee meetings.

## Te horopaki Context

2. Items raised at the Committee's previous meeting, which require action by officers, are listed in **Attachment 1**. The status and a brief comment is provided on progress to date.

## Ngā hua ahumoni Financial implications

3. There are no financial implications from this report, but there may be implications arising from the actions listed.

## Ngā tūāoma e whai ake nei Next steps

4. All completed items will be removed from the action items table for the next report. Items not completed will continue to be progressed. Any new items will be added to the table, following this Committee meeting, and circulated to the relevant business group for action.

## Ngā āpitihanga Attachment

Number	Title
1	Action items from previous Wairarapa Committee meetings

## Ngā kaiwaitohu Signatory

Approvers	Wayne O'Donnell – General Manager, Catchment Management Group	
	Scott Gallacher – Kaiwhakahaere Matua Waka/General Manager, Metlink	

## He whakarāpopoto i ngā huritaonga Summary of considerations

## Fit with Council's roles or with Committee's terms of reference

The action items are of an administrative nature and support the functioning of the Committee.

## Implications for Māori

There are no direct implications for Māori arising from this report.

## Contribution to Annual Plan / Long Term Plan / Other key strategies and policies

Action items contribute to Council's or Greater Wellington's related strategies, policies and plans to the extent identified in **Attachment 1.** 

#### Internal consultation

There was no additional internal consultation in preparing this report and updating the action items.

## Risks and impacts - legal / health and safety etc.

There are no known risks or impacts.

Wairarapa Committee 30 March 2021 Report 21.108



#### For Information

#### WAIRARAPA FLOOD PROTECTION UPDATE REPORT

## Te take mō te pūrongo Purpose

- 1. To update the Wairarapa Committee (the Committee) on:
  - a. implementation progress for the Te Kāuru Upper Ruamāhanga Floodplain Management Plan (TKURFMP);
  - b. the progress of investigations projects; Waipoua Urban Catchment Plan, Waiohine River Plan, and Mangatārere River Plan, flood hazard mapping and regional initiatives;
  - c. the ongoing operational maintenance of the Wairarapa River Schemes;
  - d. the progress of Ministry for the Environment (MfE) funded project Major Rivers Riparian Management
  - e. the progress of Crown Infrastructure Partnership (CIP) funding project, River Road, Masterton

## Te tāhū kōrero Background

2. This section provides an overview of Flood Protection works in the Wairarapa.

## Flood Management Plan Implementation

3. At present, the Te Kāuru Upper Ruamāhanga Floodplain Management Plan is the only Flood Management Plan (FMP) that is currently in an implementation phase. The Waiohine and the Mangatārere are currently in the FMP planning and investigation stages. The Lower Valley has an established scheme that is being maintained but will need to be reviewed in time for the lodgement of new consents for the operation of the scheme by 2027.

## MfE Funding – Major Rivers – Riparian Management

- 4. Greater Wellington has two MfE-funded 'Jobs for Nature', Greater Wellington Biodiversities' Wairarapa Moana project and the Greater Wellington's Flood Protection's Major Rivers Riparian Management.
- 5. The Major Rivers Riparian Management application was based on Te Kāuru Upper Ruamāhanga Floodplain Management Plan, planting of the buffers. The project has a value of \$5 million over a five year period, with a 50/50 (MfE/Greater Wellington) contribution split. It consists of planting 120,000 trees (both willow and native) over a

total of 100 hectares, with 30 kilometres of fencing. Pest plant and pest animal control will be one of the main costs of the project to ensure sufficient plant survival rates. The project also has a target of increased employment and it is proposed that a total of 35 people will be employed over the five year project period.

#### CIP Funding – River Road, Masterton

- 6. Government funding has been offered for flood protection projects through Government's stimulus package focusing on climate resilience and infrastructure development to help rebuild the economy following COVID-19 alert levels lockdown periods. Greater Wellington's programme comprises three projects located in the Te Awa Kairangi /Hutt River and the Ruamāhanga River. Within the three projects, there are 14 separate locations of works. The works comprise flood and erosion protection in Te Awa Kairangi/Hutt River and Landfill erosion protection in the Ruamāhanga River.
- 7. The River Road Masterton site is based on the Te Kāuru Upper Ruamāhanga Floodplain Management Plan major response project, with an extension of river edge protection from River Road down to and including the Masterton District Council closed landfill. Erosion is threatening residential properties on River Road, with the erosion extending into the transfer station and landfill immediately downstream.
- 8. The funding for River Road is for a total of \$2 million over two years, with a 64 percent Provisional Development Unit ((PDU)/CIF) 36 percent (Greater Wellington) contribution split.
- 9. The project involves the following:
  - a. Consequence assessment of erosion of the landfill to confirm the proposed design standard;
  - b. Obtaining consents and access agreements for construction and long term management of relief overflow and erosion control works;
  - c. Proposed rock riprap revetment along River Road where the buffer zone is too narrow for groynes;
  - d. Transition of proposed revetment into existing rockwork at the confluence of the Waipoua River;
  - e. Proposed rock groynes along the boundary of the transfer station / landfill where berm width is sufficient;
  - f. Stripping heavy vegetation on the true left bank and replacing with planting suitable for a managed overflow path.

#### **Investigations**

## Waipoua Urban Catchment Plan

10. A Waipoua Urban Catchment Plan, which incorporates floodplain management planning, is being developed by a community led project team. The Waipoua project team was established after a community meeting where individuals with an interest in this reach spoke to a gathering of approximately 150 people. The project team consists of three community members, one riverside landowner, one engineer, three

- iwi representatives, one Masterton District Council officer, one Greater Wellington officer and a facilitator.
- 11. This project has been focusing on the completion of flood hazard modelling for urban Masterton to allow for options to be assessed to manage the flood risk and to feed into the Wairarapa Combined District Plan. Draft flood hazard maps are expected mid-2021.

#### Waiohine River Plan

- 12. The Flood Protection department has been working with the Waiohine Action Group (WAG) to produce a Waiohine River Plan. This plan is intended to provide the strategic approach to flood and erosion risk management for the Waiohine River to protect the Greytown community.
- 13. The Project Team is planning submissions and consultation to be complete by the end of this financial year. Greater Wellington are working with the project team to support them through this process.

## Mangatārere River Plan

14. Greater Wellington has been working with the Mangatārere Restoration Society (MRS) to produce a Mangatārere Catchment Plan. This plan is intended to provide the strategic approach to flood and erosion risk management, water quality and catchment management for the Mangatārere River.

#### Upper Ruamāhanga Rural Modelling

15. Following the Te Kāuru Upper Ruamāhanga Floodplain Management Plan (TKURFMP) independent model audit, Flood Protection has been working with Masterton District Council to update the flood hazard mapping. Draft flood hazard maps are expected mid-2021.

#### **Design Lines**

16. As an outcome of the Te Kāuru Upper Ruamāhanga Floodplain Management Plan (TKURFMP) Flood Protection has been working with specialist consultants to review and update, where necessary, the design lines for the upper Ruamāhanga rivers. This work includes the definition of the buffer adjacent to the river channel. This is expected to be completed in mid-2021.

## Regional Initiatives

- 17. As well as delivering specific Wairarapa projects, Flood Protection is working on a range of regional initiatives to improve efficiency across the Region. These include:
  - a. Flood Response and Warning Greater Wellington continues to work with the Wellington Region Emergency Management Office to improve flood response, warning and awareness across the region. Greater Wellington has developed new duty officer procedures and is currently progressing a programme of training, exercising, and updating catchment specific information ahead of roll out in Quarter 2 of the next financial year.
  - b. Floodplain Management Planning Guidelines Flood Protection are reviewing the guidelines for floodplain management planning with a view to incorporate

- lessons learnt from recent projects and the national policy direction for fresh water management, specifically Te Mana o Te Wai.
- c. Flood Hazard Modelling Standard (FHMS) The draft FHMS was presented to the Wairarapa committee in September and is currently being updated ahead of release to the Territorial Local Authorities (TLA's) for comment. Discussions are planned around links to storm water modelling and District plans.

## **Operations - Schemes & River Management**

- 18. Planning and preparation for the eight Upper Ruamāhanga and Waiohine River advisory group's annual scheme meetings is underway. The advisory group meetings are planned to be held at the end of May 2021. The purpose of these meetings is to update the members on the progress of the 2020-21 work programme and budget, present the asset condition rating report and present next years proposed work programme and budget.
- 19. Following the advisory group meetings, the Upper Ruamāhanga River Management Advisory Committee (URRMAC) will be held in early June. Preparation for this meeting is underway.
- 20. The 2020/21 operational work programme and finances for Waiohine-Mangatārere River management scheme were confirmed by the Wairarapa Committee at the 15 August 2020 meeting. The scheme committee has not been established this triennium pending the completion of the Waiohine River Plan.
- 21. The Lower Ruamāhanga Valley Flood Management Advisory Committee (LRVFMAC) Meeting is scheduled to be held in early June 2021. We regret to advise that the LRVFMAC Chair Mr Bernie George passed away on 16<sup>th</sup> March 2021. Bernie had been a member of this committee for many years.
- 22. The Geoffrey Blundell Barrage Gates resource consent is currently being processed and a seven year consent term is being sought to align with the other Lower Wairarapa Valley Development Scheme consents which expire in 2027. Draft conditions have been received, reviewed and returned as agreed.
- 23. Gravel management from the Wairarapa Rivers has continued in accordance with the transition plan that has been developed to provide some certainty to the contractors extracting from these rivers. However, the availability of sufficient aggregate resources will be a significant constraint on infrastructural developments in the region. Planning is underway to form a working group to help manage and develop solutions regarding the supply of aggregate for the construction industry.

## Te tātaritanga

#### **Analysis**

24. This section provides an update on the Flood Protection works in the Wairarapa since the last Wairarapa Committee meeting.

#### **FMP** Implementation

25. Te Kāuru Upper Ruamāhanga Floodplain Management Plan Implementation (Te Kāuru) has been given a financial boost with the recent government COVID-19

- recovery projects. Ministry for the Environment (MfE) Major Rivers Riparian Management and CIP shovel ready River Road Masterton projects are enabling implementation of two aspects of Te Kāuru.
- 26. The Upper Ruamāhanga River Management Advisory Committee (URRMAC) had its first meeting in December. This meeting was a meet and greet, with an update provided on the status of Te Kāuru, a detailed description of the government funded projects and Mr Gavin Wall was elected as Chair.

## **Current status of MfE Project**

- 27. The final Work Programme and Annual Work Plan were agreed upon and the funding agreement (Deed of Funding) for MfE was signed off in October 2020, with the deed number issued in early November 2020.
- 28. A 'Riparian Management Advisor' has been appointed and started on 1 February 2021.
- 29. Plant nursery discussions have commenced with a nursery offering seed collection for the 2022 planting season. There will be a need to source approximately 1,200 plants for the 2021 season.
- 30. Consultants have been engaged to identify land parcels along the rivers to assist with site selection. We intend to initially plant public land as an example of the project, to encourage landowners to engage.
- 31. Connection with community and iwi groups have started and liaising with the various interested groups on this year's planting sites has started.
- 32. Plants have been secured for this planting season
- 33. Clearance works at two sites for this winter's planting will start in the coming weeks

#### Current status of PDU/CIF Project

- 34. The funding agreement was signed off in November 2020.
- 35. Recruitment to assist with these projects is underway, with two people (based in Wellington and working on the overall project programme) employed for the climate resilience projects.
- 36. Geotechnical and initial design work is currently underway. The initial design for River Road is a rock revetment along the River Road residential area with a series of 15 groynes, with the protection continuing along the Masterton District Council landfill. Rock supply is being progressed.

## Investigations

#### Waipoua Urban Catchment Plan

37. Over the last quarter we have been progressing the hydrological assessment with the community group to gain agreement on the hydrological component of the flood hazard modelling. This has largely been completed and we are on track to provide draft flood hazard maps in 2021.

#### Waiohine River Plan

38. The project team are continuing to work on the finalisation of the river plan so as to ready it for release for submissions and engagement in Quarter 4 of this financial year.

#### Mangatārere River Plan

39. Over the last quarter, Greater Wellington has been progressing the hydrological assessment with the community group to gain agreement on the hydrological component of the flood hazard modelling. This has largely been completed and we are on track to provide draft flood hazard maps in 2021. We are also exploring avenues for wider catchment management solutions with specialists from Victoria University and our own internal specialists in Environmental Science and Land Management.

#### Upper Ruamāhanga Rural Modelling

40. Over the last quarter we have been progressing the hydrological assessment and liaising with Masterton District Council. This has largely been completed and we are on track to provide draft flood hazard maps in 2021.

#### **Design Lines**

41. Flood Protection has been working with specialist consultants to review and update where necessary the design channel lines for the Upper Ruamāhanga Rivers. The initial draft is nearing completion ahead of wider engagement and targeted consultation with key stakeholders.

## **Operations - Schemes & River Management**

- 42. Upper Ruamāhanga schemes, consist of the Ruamāhanga's three schemes of Mt Bruce, Te Ore Ore and Gladstone, the Waipoua, Waingawa, Kopuaranga, Whangaehu and Taueru Rivers. In the eastern schemes blockage removal work was completed in Kopuaranga River, crack willow removal completed in lower Taueru River channel and Whangaehu River had its annual spray programme of crack willow regrowth completed. Beach vegetation clearing and beach re-contouring were completed in Waingawa River and Ruamahanga River in the Gladstone section. Waipoua River had stopbank clearing, noxious weed control of Old Man's Beard, channel blockage of large poplar tree removed and problem macrocarpa trees removed from cliff edge in the Paierau Road to Ruamahanga section. Asset condition ratings have been completed for all River Schemes.
- 43. The Waiohine River has had ongoing erosion issues in the reach from the Rail Bridge to SH 2. Two sites required a large amount of machine work to undertake beach recontouring and construct gravel groynes, in preparation for willow planting in the winter. Other works included noxious weed control spraying, targeted gravel extraction at two locations and beach vegetation and flood debris clearing from top of the scheme to Kuratawhiti Street. The final rock delivery for the 20/21 year totalling 1500 tonnes was completed in January. Asset condition ratings work has been completed for Waiohine River.
- 44. Stopbank maintenance in the Lower Wairarapa Valley Development Scheme is continuing with repairs at various stock damage site, vegetation mulching, mowing and spraying. Three large erosion sites have been repaired and strengthened with rock

- armouring and prepared for the future willow planting programme. Two further sites are due to start in the next two weeks.
- 45. The floodgate maintenance cleaning programme will be progressed when contractor and staff resources become available. To date, Lake Onoke mouth has closed seven times since 1st July 2020 and required mechanical intervention on four occasions and self-opened three times.
- 46. Capital work projects include the Pukio East Stopbank Realignment and Whakawhiriwhiri Stream upgrade. Pukio East Stopbank realignment is in its final stage and excess material will begin to be removed at the beginning of April. Whakawhiriwhiri Stream upgrade includes the replacement of the Simmonds Culvert and is proposed to commence at the end of March and be completed this financial year. The Hikunui Road Culvert upgrade has not progressed due to ongoing land access agreement issues.

## Ngā hua ahumoni Financial implications

## CIF and MfE Projects

- 47. The projects are being funded with budgets being bought forward in the Long Term Plan (LTP).
- 48. Ruamāhanga River Scheme River Road (IRG) costs are detailed below:

LTP or Annual Plan	Te Kāuru Capex Implementation
description:	
Capex allocated:	\$1.72m (LTP 2018-28)
Third Party Funding	\$1.28m
Rates Impact:	\$3k in 20/21, \$17k in 21/22, \$24k in 22/23, then \$19.5k for 23 years (included in the budget baseline)

Project 4: Ruamāhanga River Major Rivers Riparian Management Project (MfE)

LTP or Annual Plan	Wairarapa River Scheme Maintenance
description:	
Loan allocated:	\$0.8m (debt)
Internal Funding:	\$1.7m (LTP 2018-28)
Third Party Funding	\$2.5m
Rates Impact:	\$6k in 22/23, \$34k in 23/24, \$76k in 24/25 then \$97k for 9
	years
	(in the current baseline)

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

49. Each project within the catchment considers and responds to the predicted impacts of climate change when considering the appropriate response to the issue the project seeks to address.

- 50. This programme aligns with the 2015 Climate Change strategy which states we will help the region adapt to climate change. The projects increase climate change adaptation and resilience to natural disasters in the region.
- 51. The greenhouse gas (GHG) emissions from rock supply vary depending on the quarry source of the rock and transport to the work sites. The quarry source is presently unknown. The emissions from rock supply production and transport are not presently part of the organisation's GHG inventory.
- 52. The project will also use heavy machinery to carry out the work proposed in these projects. The emissions from these have not been estimated. However in the 2018-19 year use of heavy machinery mainly for flood protection works at Greater Wellington represented 2% of the total organisational carbon footprint (835 tCO2e).
- 53. Selection of the quarry will be the single largest determinant of the initiative's emissions. While it seems likely that quarry operations could be improved to reduce emissions to some extent, the avoidance of long-distance transport of the rock is the most obvious means to minimise emissions. This will be looked into as part of procurement for projects 1-3.
- 54. Greater Wellington currently assesses options to address flood risk based on the predicted impacts of climate change over the next 100 years. Unless specified differently for specific projects, these values are an increase in rainfall intensity of twenty percent, and a sea level rise of 0.8 metres.

## Ngā tūāoma e whai ake nei Next steps

- 55. Projects will continue, with design and development work over the coming months.
- 56. The MfE project will have a total of 20 hectares of planting identified for the next planting season. The 20 hectares will be made up of various sites, rather than one large site, to enable more opportunities for employment. Ground preparation will commence as soon as practicable to ensure the sites are ready for planting in the 2021 planting season.
- 57. A workshop is planned for the next meeting of the Upper Ruamāhanga River Management Advisory Committee (URRMAC). URRMAC's Terms of Reference states that their purpose is "To oversee the implementation of Te Kāuru Upper Ruamāhanga Floodplain Management Plan (FMP)". As both of these projects are part of the FMP, URRMAC members will play a valuable role in the oversight of public involvement and methods adopted for each project.

## Ngā kaiwaitohu Signatories

Writers	Sharyn Westlake – Team Leader, Implementation, Flood Protection	
	Andy Brown – Team Leader, Investigations, Flood Protection	
	Colin Munn – Team Leader, Operations, Flood Protection	
Approvers	Graeme Campbell – Manager, Flood Protection	
	Wayne O'Donnell – General Manager, Catchment Management Group	

## He whakarāpopoto i ngā huritaonga Summary of Considerations

## Fit with Council or Committee's Terms of Reference

The URRMAC, LRVFMAC and Waiohine Steering Group operate under their own separate Terms of Reference which were adopted by Council on 12 December 2019. The Waipoua and Mangatārere Steering Groups are currently informal and have been approved by Democratic Services to remain this way during the development stage.

### Implications for Māori

There are no implications for Māori arising from this update report.

## Contribution to Annual Plan / Long Term Plan / Other key strategies and policies

All river matters discussed here are included in the 2018—28 Long Term Plan.

#### Internal consultation

There is no requirement for internal consultation at this stage for any of the rivers in Wairarapa.

## Risks and impacts: legal / health and safety etc.

Greater Wellington has adopted procedures and processes to minimise risks. Working with community committees enables a wider understanding of the risks before adoption of work programmes.

Wairarapa Committee 30 March 2021 Report 21.89



#### For Information

#### THE WAIRARAPA WATER RESILIENCE STRATEGY

## Te take mō te pūrongo Purpose

1. To inform the Wairarapa Committee (the Committee) of the outcomes of the Wairarapa Water Resilience Strategy.

## Te horopaki Context

### The Strategy

- 2. The October 2018 Wairarapa Economic Development Strategy and Action Plan stated, "an optimum and integrated view of water is required" when referring to water use in Wairarapa. The plan also noted: "The opportunity is to address these issues in an integrated manner now while there is time, to avoid being forced into urgent action when time is compressed".
- 3. This Wairarapa Water Resilience Strategy was subsequently initiated by the Wairarapa Economic Development Group and encouraged by a local water users group. The resilience group has been a large group representing many interests including councils, iwi, land users, commercial interests, sector and advocacy groups. Development of the strategy was coordinated by Greater Wellington Regional Council (Greater Wellington), funded by the Provincial Growth Fund, and chaired by Dame Margaret Bazley.
- 4. The Strategy is a key step in implementing the Ruamāhanga Whaitua Implementation Programme (WIP). The WIP is the "blueprint" for managing land and water. The WIP recommends a broad approach to water resilience issues, as outlined in the Strategy. The Strategy must also give effect to the National Policy Statement for Freshwater Management. In particular, it must give effect to Te Mana o Te Wai. This is a fundamental reset in water management, where the health of waterbodies comes first, ahead of social and economic interests.
- 5. Freshwater is an essential resource and yet its importance is not often appreciated until the supply is threatened. Climate change is the dominant threat to its availability, aided and abetted by our 'traditional' approach towards water that there are supposedly infinite volumes available and that where there is scarcity, infrastructure solutions will save the day. That will simply not be the case. Climate change will substantially affect eastern New Zealand regions, including Wairarapa and over time may become severe.

#### What is Resilience?

6. Resilience is often regarded as the ability to "bounce back" after a shock. Climate change is not a sudden event. It is a progressive, cumulative, long term, destructive and perhaps irreversible trend that will impact the next 100 years of human existence. In this context, resilience is less about bouncing back and more about springing forward to a new and more sustainable reality. How we define that new reality and what actions we take to achieve it are the subject of the strategy.

## Te tātaritanga Analysis

### What is the climate change "shock"?

- 7. There are four aspects of the "shock" that add up to a significant impact on our community and economy:
  - a **Water deficit** by mid-century, it will take 15 percent more water just to continue with our present day activities due to less rainfall and increased evaporation.
  - b **Restrictions at low flows** increasing some minimum flows, and further restrictions on groundwater users recommended by the Whaitua Committee will significantly reduce the availability of water in the hot, dry summer period. This too has its origins in climate change.
  - c Accommodating growth there is already demand pressure on freshwater and the Wairarapa population is growing. Even at one percent a year, this involves significant extra demand for water over the next 20 years. This estimation does not include allowing for a further increase in demand that would be likely caused by increased air temperatures.
  - d **Infrastructure challenges** the local councils are already facing the cost of upgrading ageing water infrastructure. Limited capital funds may be available for investing in other resilience priorities.
- 8. The scale of the challenge is significant, and the community's readiness and ability to respond may be compromised. It is likely to be difficult to resolve issues in the long-term, however, there may be some short-term gains as water losses due to current high levels of leakage from piping systems are resolved. This could result in a 5-10 year demand plateau in the towns. There is also a positive gap between what water is consented for use and what water is actually used, meaning there may still be some capacity. Nevertheless, this may only help the situation in the autumn and spring (shoulder) seasons.
- 9. A significant problem is the water deficit period experienced from January to March, is likely to intensify with climate change. Currently water consumption increases significantly in this period in both town and country. As minimum flow regulations progressively tighten throughout January to March (the peak demand period in both urban and rural sectors) then availability will become severely constrained. Nonetheless, if we act over the next 10 years, and resilience needs to be viewed over a 50-year horizon, then we have some hope of managing the impact of the shock and progressing towards a new equilibrium.

#### The essence of the Strategy?

- 10. The key threat is the loss of water through evaporation because of higher temperatures and longer dry periods. The counter is essentially two-fold:
  - a **To manage or temper demand** by doing more with less (efficiency) such as spreading demand into shoulder seasons or changing land uses;
  - b **To enhance supply** by retaining water in the total Wairarapa ecosystem from the surplus periods (primarily winter) to the deficit period (high summer) through as many means as possible.
- 11. The supply problem is more nuanced. Climate change predictions postulate that there will continue to be rainfall events through the October to April period, though they may be more frequent but of less volume. Known as "freshes", they have the potential to enhance the Wairarapa water ecosystem if that water can be held in that system and provide both societal and environmental benefits.

## How could we manage or temper demand?

- 12. Options include:
  - a Broadening water use throughout the year, particularly to shoulder seasons (November/December) to reduce the dependence on the water deficit period of January to March (urban and rural).
  - b Facilitating its availability to encourage innovative resilience-conscious activities.
  - c Changing land uses towards lower water using 'crops', deeper rooting and more resilient plants.

#### How could we enhance supply?

- 13. The Strategy seeks to harness all the following activities into a comprehensive, integrated and well-orchestrated programme of action:
  - a Slowing flows in rivers, lakes and streams
  - b Sequestering water into groundwater and/or surface storage such as reservoirs and tanks for later use.
  - c Holding moisture in soils and vegetation and by providing shading to reduce evaporation.
- 14. Equal to the physical challenges involved is the change of mind-set required to manage the water resource much more effectively than previously. Although some progress has been made a transition is required to manage water resources in a new, more innovative way. The options considered all have strengths and weaknesses and the Strategy takes advantage of the strengths and offsets the weaknesses by the strengths of other compatible activities.

#### **Green and Grey Solutions**

- 15. Historically our go-to solutions have tended to focus on built or "grey" infrastructure, namely: various types of piped distribution, storage solutions and irrigation systems. These have been favoured in the past because generally they can deal with large volumes of water and can be controlled to achieve reliability of supply. The challenges of climate change require a much more comprehensive response. Climate change impacts are progressive and cumulative. Such a long term 'shock' involves very different challenges.
- 16. On their own, stand-alone grey solutions will not be sufficient to deal with the scope of the problem. They tend to be focused on specific geographical areas such as farm irrigation or specific municipal supply locations. They are generally focused on a single or small number of uses and those which have a direct economic return. They are often expensive making them less suitable for medium or lower value activities. They also can sometimes have significant environmental impacts which can be mitigated in many cases, but at a cost. Their greatest limitation is the narrowness of their focus. They do not address water scarcity at a whole of catchment scale, but still have their place.
- 17. The limitations of grey solutions have stimulated interest in green or "nature-based solutions" involving working with nature rather than against it. Nature-based solutions also have their limitations. Many are relatively untried (in terms of retrofitting), especially at a whole-of-catchment scale. They can take time to be developed because of the growth cycle. They themselves can be vulnerable to climate change impacts. Their intrinsic benefits are significant. They are often simple to introduce and operate. They are often within the scope of a single farmer or small group of farmers or a small town. They address a complexity of needs from economic to social and environmental. Most importantly, they take advantage of the huge resource of the natural resilience of nature. Many of these solutions have multiple benefits, and some will be required anyway for water quality and biodiversity enhancement.

## Optimisation

- 18. No one solution will do the job. A range of solutions will be required. The optimum solutions are, in fact, combinations of grey and green where each enhances the other, and where a cluster of solutions generates sufficient scale and effect to address the substantial impacts of climate change. In simple terms green solutions would be ideal for holding water in soils and vegetation, providing shade, directing water into groundwater for later use, broadening production to the shoulder seasons and squeezing the climate change effects out of the shoulder seasons. Grey solutions may be required to offset the intense water loss during the water deficit period by augmenting supplies, providing reliable water for high value activities such as crops, municipal supply or major events.
- 19. The task of this Strategy is to optimise the combination of grey/green solutions using a wide range of criteria. For example, simple structures like water retention bunds (grey) could be used to direct surface water into groundwater, but the concept is yet to be proven at scale. Water from storage can be used to augment rivers and streams to offset low flows. Constructed wetlands can be used to retain water and moisten the surrounding soil.

#### The Way Ahead

- 20. Setting firm priorities was hampered by the variable knowledge across the solutions, particularly the green solutions, many of which have, at this point in time, few direct exemplars, especially at scale, or are applied in very different contexts such as developing world countries. Another complicating factor was the need for an integrated approach where solutions are mixed and blended to achieve an overall effect.
- 21. Accordingly, four focus areas were identified that would form the nucleus of a strategy and action points were identified in each of these focus areas. Of these four key focus areas two fall into the each of the categories of adaptive and new water solutions.

#### **NEW WATER SOLUTIONS (SUPPLY MANAGEMENT)**

Water Capture focus area

- 22. Within this focus area we identified three solutions worthy of priority attention:
  - a Managed retention

Though largely experimental in nature to date, this was viewed as having potential because of its whole-of-catchment reach and relatively modest cost versus benefits. However, the concept and the economics need to be proven.

b Artificial storage

Multiple storage sites have been investigated over the last few years and in-depth feasibility is being investigated on the Wakamoekau site. While there are many limitations of stand-alone grey developments, it is seen to fill a gap in the spectrum of solutions and there is action to mitigate adverse effects.

c Hill country attenuation

The eastern hills in particular, are going to be hard hit by climate change. The economics of water capture in the hills may be challenging, but there is a range of relatively low cost solutions that can be considered, together with adaptive solutions.

d Natural Attenuation focus area

Of all the nature-based solutions, those in this category are the most developed. There are already many examples of reconstituted wetlands, riparian planting, woodlots and afforestation. We know these solutions retain moisture in the ecosystem and while they are localised, when developed at scale they have catchment-wide implications such as water quality and sediment control. They also have multiple benefits including social, cultural and aesthetic benefits. However, they take time to become fully effective so early action is required.

#### ADAPTIVE SOLUTIONS (DEMAND MANAGEMENT)

Allocation focus area

23. Reduced availability of water with climate change and the cost of "new water" initiatives will mean that the whole question of who gets the water and how much, needs to be revisited. The current allocation regime does not adequately recognise the increased "competition" for water and the equity and access issues that accompany it.

There are periods where there is little use, but existing allocations limit the supply of water.

- 24. The initiatives that have been considered in the strategy process are:
  - a Moving water allocations around and maximising beneficial use

This involves establishing policies and processes that encourage transfer of allocations or a more complex allocation system rather than a simple "annual allocation" system. This may include developing a set of criteria for allocating water based on benefits, resilience outcomes and availability. This would also benefit allocation efficiency.

b Land use adaption focus area

De-intensifying demand in the water deficit period by spreading demand across the year particularly into the shoulder periods and changing land use patterns will have the benefit of transitioning productivity and therefore prosperity through the climate change shock.

- 25. The initiatives that have been considered are:
  - a Introduction of adapted crops- introducing crops that take advantage of an expanded growing season, require less water or root more deeply.
  - b Encouragement of mixed farming models- using changing farming regimes and systems that are better adapted to changed climatic conditions and water availability.

## **Making it Work**

- 26. This is a complex programme of work which would require well developed leadership and management systems and skills. It will inevitably fall on existing entities such as Greater Wellington and the local councils to provide funding and support. Yet this must be a total community and stakeholder effort with contributions from central government and active involvement of local people in rural and urban settings. In particular, engagement with river management groups, catchment management structures and sector groups will be vital.
- 27. With regard to governance and oversight, a "four rooms" configuration is recommended, connected through a central coordinating entity. The central coordinating entity could comprise the regional and local councils, iwi and central government (in association).
- 28. The four "rooms" comprises the following interests:
  - Water Capture (the storeroom creating a hedge against periods of scarcity) Wairarapa Water Ltd, irrigators and irrigator collectives (where they exist), Greater Wellington and river/catchment management groups.
  - b **Attenuation** (the waiting room holding water in the environment) River management and catchment groups, town advancement groups, Greater Wellington, local councils and sector groups.
  - c **Allocation** (the engine room optimising the distribution of water) Greater Wellington, local councils, sector advocacy groups.

d Adaption (the classroom – applying science to achieve more with less water) – Farm sector groups, farm advisors, processing companies, river management and catchment groups.

## Ngā hua ahumoni Financial implications

29. Implementing the Wairarapa Water Resilience Strategy will have significant financial implications. Projects to implement the strategy, their cost, and funding arrangements, including partnerships, will be identified as a "next step". Until this is completed financial implications, and where various costs might lie cannot be identified. Note that there are many existing projects that potentially contribute to strategy outcomes.

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

30. The Wairarapa Water Resilience Strategy is a climate change adaption project. Its purpose is to mitigate societal and economic impacts of climate change relating to water management in the Wairarapa. The latest analyses of the impacts of climate change on the Wairarapa have been used in the preparation of the strategy

## Te whakatūtakitaki Engagement

31. A committee chaired by Dame Margaret Bazley, which included representatives of the regional and district councils, iwi, farmers, industry and environmental interests developed the Wairarapa Water Resilience Strategy. No further engagement was undertaken for the preparation of this paper.

## Ngā tūāoma e whai ake nei Next steps

- 32. The Strategy can only be adopted by each individual Council. The next step is for each Council to adopt the Strategy "in principle". Beyond this step there is the need to better define roles and responsibilities, governance and partnership arrangements, and project definition (and delivery structure) including resource requirements and priorities, through business case and project planning processes. Greater Wellington is prepared to take responsibility in the interim until governance and management arrangements are agreed.
- 33. Greater Wellington will work with individual councils to compile a comprehensive stocktake of existing projects that contribute to the strategy as part of this planning process. Example of existing projects include the regional council's riparian management programme and aeromagnetic groundwater survey and Masterton Districts water meter programme. Many other existing projects also potentially contribute.
- 34. The priorities would be scheduled over an extended period with a base of a 10-year programme (to coordinate with council Long Term Plans) but also with a 50-year

horizon. There would be an emphasis on "getting ready" for when the shock of climate change impacts significantly, so experimentation and development work of managed retention, land use adaption and allocation would be encouraged to create a framework for the future. In parallel, ongoing implementation in water capture and natural attenuation would continue.

## Ngā kaiwaitohu Signatories

Writers	Alastair Smaill – Programme Leader Urban Water Management
	Bruce Geden – Strategic Projects Manager
Approver	Wayne O'Donnell – General Manager Catchment Management

## He whakarāpopoto i ngā huritaonga Summary of considerations

## Fit with Council's roles or with Committee's terms of reference

The Committee has the responsibility to consider matters that are of strategic importance to the Wairarapa. Water resilience and resource management are specific responsibilities of the Committee.

#### Implications for Māori

The National Policy Statement – Freshwater Management requires that freshwater is managed in a way that 'gives effect' to Te Mana o Te Wai, fundamentally through involving mana whenua in all elements of its management.

## Contribution to Annual Plan / Long Term Plan / Other key strategies and policies

Further project planning to implement the strategy will feed into Council business planning processes. There is considerable overlap with other catchment management programmes.

#### Internal consultation

No internal consultation was undertaken in preparing this paper.

## Risks and impacts - legal / health and safety etc.

Most climate change adaption strategies cut across a range of business areas and organisations. The potential for poor integration and inefficiencies' is high. Good business planning, clear and agreed roles and responsibilities will be required to implement the strategy. There are no immediate legal risks.

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#### For Information

#### **PUBLIC TRANSPORT - UPDATE**

## Te take mō te pūrongo Purpose

1. To inform the Wairarapa Committee (the Committee) of Greater Wellington activities and performance relating to Public Transport in the Wairarapa.

## **Update on activities**

#### Rail

#### Network upgrades

- The Trentham to Upper Hutt double tracking project is progressing well. We are currently expecting that the opening of the double section of line will take place in late May / early June 2021.
- 3. The double tracking will increase the network capacity, and ultimately reduce delays to the Wairarapa trains as a result of congestion in this single track section.
- 4. Planning is well underway to undertake the catch up renewal of track on the Wairarapa Line. This project will renew:
  - a Track in both Maymorn and Remutaka Tunnels
  - b Over 58,000 sleepers
  - c 43 kilometres of rail
  - d 150,000 tonnes of ballast
  - e 49 kilometres of drainage
  - f 55 culverts
  - g 11 level crossing tracks
- 5. Work activity set out above (paragraph 4) is likely to start around June 2021. To deliver this work efficiently and effectively, trains will need to be replaced by buses; however, the full extent of this is still being finalised and, in conjunction with KiwiRail, we are refocused on ensuring any disruptions are managed in an efficient way.

#### Park and ride upgrade – Featherston Station

- 6. In January 2021, Metlink began construction of an extension to Featherston Station Park and Ride.
- 7. This project will construct an additional 55 car parking spaces, resolve the ongoing flooding issues within the existing car park, and reduce people and vehicle movement conflicts with the addition of a new footpath from Harrison Street West to the Featherston Station building.
- 8. The project is expected to be finished in May 2021.

#### Masterton Railway Station toilet refurbishment

- 9. The toilets at Masterton Railway Station are undergoing a refurbishment, including modifications to provide accessible toilet facilities.
- 10. The project also involves the removal of asbestos, and it is expected the public toilets will be completed by the end of March 2021, and that staff toilets will be completed by May/June 2021.

### Business case for longer distance rolling stock

- 11. In February 2020, the Government announced \$211 million for further KiwiRail network infrastructure upgrades which included \$126 million for the elements required from Greater Wellington's new train fleet business case. The most tangible elements will see new track and a second platform at Featherston, and a signalling system installed between Featherston and Masterton to provide for more frequent services. Work is underway to develop a team to deliver these improvements.
- 12. Following a competitive tender process, prior to Christmas 2020, Greater Wellington appointed a consortium headed by RPS Group to lead the Detailed Business Case preparation.
- 13. The Detailed Business Case is expected to be completed by June /July 2021.

#### Wellington Regional Public Transport Plan

- 14. Metlink has commenced the review of the Regional Public Transport Plan (RPTP).
- 15. The RPTP is an action-oriented document that sets out how the high level strategic direction for public transport in the Wellington Regional Land Transport Plan and the Greater Wellington Long-term Plan will be delivered over the next 3- 10 years.
- 16. A final consultation draft of the RPTP was adopted by the Transport Committee on 11 February 2021.
- 17. Public consultation via 'Have Your Say' ran from 15 February to 19 March 2021 and was supported through a series of digital public engagement events held via Teams as a result of the move to Alert Level 2 on 7 March 2021.
- 18. 2,674 submissions have been received on the draft RPTP.
- 19. Submissions are currently being analysed by officers. Initial findings show that less than 2% of submissions received via the 'Have your Say' website originated from submitters in the Wairarapa area. No submissions received by direct email originated from community groups or organisations in the Wairarapa.

20. A public hearing on submissions is scheduled for 20-22 April 2021 in the council chamber at Greater Wellington Regional Council.

## **Update on performance**

21. A PowerPoint presentation on Wairarapa public transport performance, issues and opportunities will be given at this meeting.

## Ngā kaiwaitohu Signatories

Writers	Barry Fryer – Rail Assets Lead
	Emmet McElhatton – Principal Advisor, Policy
Approver	Scott Gallacher – General Manager, Metlink

## He whakarāpopoto i ngā huritaonga Summary of considerations

## Fit with Council's roles or Committee's terms of reference

This is an information report on public transport matters in the Wairarapa.

## Implications for Māori

There are no implications for Māori.

## Contribution to Annual Plan / Long term Plan / Other key strategies and policies

This report provides an update on the delivery of public transport activities in the Wairarapa. Delivering public transport is a key activity in the Long-term Plan.

#### Internal consultation

No other departments were consulted in preparing this report.

## Risks and impacts: legal / health and safety etc.

There are no risks arising from this report.

























