



If calling, please ask for Democratic Services

Te Awa Kairangi/Hutt River Valley Subcommittee

Tuesday 27 June 2023

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

Quorum: Two Regional Councillors, one Hutt City Council member and one Upper Hutt City Council member

Members

Councillor Ros Connelly (Chair)	Greater Wellington Regional Council
Councillor Quentin Duthie (Deputy Chair)	Greater Wellington Regional Council
Councillor Simon Edwards	Hutt City Council
Mayor Wayne Guppy	Upper Hutt City Council
Councillor Bill Hammond	Upper Hutt City Council
Councillor Ken Laban	Greater Wellington Regional Council
Councillor David Lee	Greater Wellington Regional Council
Deputy Mayor Tui Lewis	Hutt City Council
Caleb Ware	Te Rūnanga Toa Rangatira Inc

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

Te Awa Kairangi / Hutt River Valley Subcommittee (A subcommittee of the Environment Committee)

1 Purposes

- 1.1 Oversee development, implementation and review of floodplain management plans (FMPs) for the Te Awa Kairangi / Hutt River floodplain
- 1.2 Consider potential arrangements for a catchment-based governance approach for the Hutt Valley, and recommend to Council (as appropriate).

2 Specific responsibilities

- 2.1 Oversee the development and review of FMPs for the Te Awa Kairangi / Hutt River floodplain, for consideration of those FMPs by the Environment Committee.
- 2.2 Oversee the public involvement process during development or review of FMPs for the Te Awa Kairangi / Hutt River floodplain.
- 2.3 Review and monitor periodically the effectiveness of implementation and delivery of:
 - a Riverlink
 - b FMPs for the Te Awa Kairangi / Hutt River floodplain.

3 Members

- 3.1 Four Councillors.
- 3.2 Six members, appointed by Council, as follows:
 - a Two elected members of Hutt City Council, nominated by that council
 - b Two elected members of Upper Hutt City Council, nominated by that council
 - c Two members, appointed for each person's skills, attributes, or knowledge that will assist the work of the Subcommittee, being:
 - i One member, nominated by the Port Nicholson Block Settlement Trust
 - ii One member, nominated by the Toa Rangatira Trust.
- 3.3 Such other members, appointed by the Environment Committee (on the Subcommittee's nomination) for each person's skills, attributes, or knowledge that will assist the work of the Subcommittee.

4 Chair

Council appoints the Chair from the four Councillor members.

5 Quorum

Two Councillors, one Hutt City Council member, and one Upper Hutt City Council member.

6 Voting entitlement

- 6.1 All members have equal speaking and voting rights.
- 6.2 The Chair has a deliberative vote; and, in the case of an equality of votes, has a casting vote.

7 Servicing and Standing Orders

- 7.1 The Subcommittee is serviced by Greater Wellington.
- 7.2 Council's Standing Orders apply to the Subcommittee, with no provision for alternate members.

8 Remuneration and expenses

- 8.1 Elected members' remuneration and expenses are met by the council they represent.
- 8.2 Non-elected members (who are not otherwise remunerated) may claim Greater Wellington's standard daily meeting attendance allowances and expenses.

9 Meeting frequency and dissolution

- 9.1 The Subcommittee meets as required.
- 9.2 The Subcommittee may recommend its dissolution to the Environment Committee.

Te Awa Kairangi / Hutt River Valley Subcommittee

Tuesday 27 June 2023, 4.30pm

Taumata Kōrero, Council Chamber, Greater Wellington Regional Council,
100 Cuba St, 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 Te Awa Kairangi / Hutt River Valley Subcommittee meeting on Tuesday 21 March 2023	23.119	5
5.	RiverLink Project Update Report	23.203	7
6.	Te Awa Kairangi / Hutt Valley Flood Risk Management Report	23.204	17
7.	Whaitua Implementation Information	23.262	41
8.	Flood Warning in the Hutt Valley	23.287	76
9.	Birchville Dam	23.293	79



Please note these minutes remain unconfirmed until the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 27 June 2023.

Report 23.119

Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on Tuesday 21 March 2023

Council Chamber, Hutt City Council
30 Laings Road, Lower Hutt at 4.33pm.

Members Present

Councillor Ros Connelly (Chair)	Greater Wellington Regional Council
Councillor Quentin Duthie (Deputy Chair)	Greater Wellington Regional Council
Councillor Simon Edwards	Hutt City Council
Mayor Wayne Guppy (until 5.38pm)	Upper Hutt City Council
Councillor Ken Laban	Greater Wellington Regional Council
Councillor David Lee (from 4.46pm)	Greater Wellington Regional Council
Deputy Mayor Tui Lewis	Hutt City Council

Karakia timatanga

The Committee Chair opened the meeting with a karakia timatanga.

Public Business

1 Apologies

Moved: Deputy Mayor Lewis / Cr Duthie

That the Subcommittee accepts the apology for absence from Councillor Hammond.

The motion was **carried**

The Committee Chair afforded priority to agenda item 3 – Public Participation under standing orders 3.5.2.

2 Public participation

Godfrey Therkleson spoke on the possibility of the Hutt River flooding and tabled five photographs relating to this.

Alison McKone spoke on the impact the RiverLink project is having on her property in Mills Street.

Councillor Lee arrived at 4.46pm during the above item.

3 Declarations of conflicts of interest

There were no declarations of conflicts of interest.

4 Flood Risk Management for Te Awa Kairangi – Report 23.82 [For Information]

Graeme Campbell, Manager Flood Protection and Sharyn Westlake, Team Leader, FMP Implementation, spoke to the report.

Councillor Duthie left the meeting at 5.26pm during questions of the above item and returned at 5.29pm.

5 Hutt Valley Flood Management Projects – Report 23.33 [For Information]

Sharyn Westlake, Team Leader, FMP Implementation, spoke to the report.

6 RiverLink Project Update – Report 23.32 [For Information]

Rod James, RiverLink programme director, Hutt City Council Tracy Berghan, RiverLink Owner Interface Lead, and Emma Speight, Director Regional Relationships, Waka Kotahi, spoke to the report.

Mayor Guppy left at 5.38pm during introduction of the above item.

The meeting lapsed at 5.38pm when Mayor Guppy left the meeting, as quorum was not achieved following his departure.

Following the conclusion of the meeting, the Subcommittee members present informally discussed the RiverLink Project Update report.

At the conclusion of the gathering, Councillor Duthie closed the gathering with a karakia whakamutunga.

Councillor R Connelly

Chair

Date:

Te Awa Kairangi / Hutt River Valley Subcommittee
27 June 2023
Report 23.203



For Information

RIVERLINK PROJECT UPDATE REPORT

Te take mō te pūrongo

Purpose

1. To update the Te Awa Kairangi/Hutt River Valley Subcommittee (the Subcommittee) on RiverLink and introduce the Report of the Project Director for RiverLink ([Attachment 1](#)).

Te horopaki

Context

2. RiverLink is a partnership between Greater Wellington Regional Council (Greater Wellington), Hutt City Council (HCC), Waka Kotahi NZ Transport Agency (Waka Kotahi), Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika.
3. Delivery of RiverLink relates to Greater Wellington's strategic priorities for regional resilience and public transport. Strategic priorities for freshwater quality, biodiversity, and multi-modal transport options are also supported by the successful completion of RiverLink.
4. The flood protection components are a key deliverable of the Hutt River Floodplain Management Plan.
5. The objectives for RiverLink are:

Achieve Ora Tangata, Ora Taiao and Ora Wairua	To reorient the city to face and connect with Te Awa Kairangi and respond to climate change by: <ul style="list-style-type: none">• Providing resilient transport choices allowing all people and businesses to move safely and reliably to, from and within our city centre.• Improving flood protection for the Lower Hutt city centre and areas south of the city to enable better resilience for people and property.• Stimulating and supporting urban regeneration and economic development. Encourage growth and the regeneration of Lower Hutt city centre and promote commercial and residential development.
--	--

Te tātaritanga Analysis

Overall Project

6. The Te Awa Kairangi Alliance was appointed in May 2023 to deliver RiverLink on behalf of all partners. An Alliance office have been set up in the Majestic Centre and over 70 staff are now working on delivery of Riverlink.
7. The Interim Project Alliance Agreement (IPAA) phase is in full swing with the Alliance office up and running. This phase of the project is to refine the design and develop the Project Alliance Agreement (PAA). The agreement defines the terms and conditions, including price, for the alliance to implement the RiverLink project. At week 7 of the Alliance programme, 50 Tender Advice Notices (TANs) were issued by the Alliance for review, by project partners. A TAN is a summary of progress to date, includes key issues, and identifies areas where changes from the reference/consented design are being signalled.
8. The Project Design Liaison Group (PDLG), required as part of the consent conditions, had its first introductory meeting. The Alliance's Construction and Design managers attended along with RiverLink partners and cycling, walking and disability group representatives.
9. As previously reported approval of the final Project Alliance Agreement (PAA) and supporting Partner Agreements will be sought by all three funding partners in October 2023. The PAA will be between Waka Kotahi as the single principle representing all five project partners. A separate Riverlink Partnership Agreement (RPA) will be developed in parallel to the PAA that will be between each partner and Waka Kotahi reflecting that partners input into the PAA.

Te Wai Takamori o Te Awa Kairangi: New name for next stages of RiverLink project

10. Mana Whenua have gifted the cultural narrative and name of Te Wai Takamori o Te Awa Kairangi – The Soothing Waters of Te Awa Kairangi to the Alliance that will deliver the project previously delivered under the name RiverLink. Elements of the RiverLink programme being delivered by the Alliance will be delivered under this new name.
11. The RiverLink website will be rebranded, and a new Facebook page set up. There was a press release on 19 June 2023.
12. There will be a briefing on the new name at Te Awa Kairangi / Hutt River Valley Subcommittee.

Greater Wellington

Property

13. A total of 143 properties need to be acquired for the RiverLink Project.
 - a 138 properties acquired with 5 land acquisitions remaining.
 - b 60 commercial rights (leases, compensation agreements, business closures and business relocations) have been obtained with 15 lease acquisitions remaining

- c Responsibility for site security and health and public safety risks now lies with the Project Management Office (PMO) and Project Governance Group (PGG).
 - d Vacant possession secured for 96 properties
 - e Area E (85-103 Pharazyn St)
 - f Area B (even #'s 50-90 Marsden St)
 - g Area I (7-12 Daly St)
14. In progress Vacant possession for 22 properties – various stages in next month
- a Area H (Mills St 39b-56)
 - b Area A (odd numbers 57-75 Marsden St)
 - c Area C (64-84 Pharazyn St)

Early Works

15. The Design Philosophy Statement for early works design for the Mills Street stopbank was completed and provided to the Alliance.

RiverLink Walk

16. A walk and talk about Riverlink has been organised for 7 July 2023 between 10.00-12.00pm. All councillors from Upper Hutt, Lower Hutt and Greater Wellington Regional Council have been invited along with a wider group of staff and interested people. More details will be provided to those attending.

Property Relocation and Demolition

17. Asbestos surveys and utility disconnections for power, gas and fibre internet have been completed on Pharazyn Street and are currently progressing on Marsden Street.
18. Three properties on Pharazyn Street were sold to Brittons house movers and relocated between 7-9 June 2023. A further nine properties on Marsden Street and Mills Street will be relocated in July 2023.
19. A tender for a demolition contractor closed on 16 June 2023. The team will assess submissions and look to commence demolition works on site in mid- July 2023.

Greater Wellington Transport Committee Presentation

20. The RiverLink project partners and wider Greater Wellington staff presented to a workshop of the Transport Committee in May about the Transport benefits of RiverLink.

Te Whanganui a Tara Whaitua Outcomes and RiverLink

21. A separate report to this meeting (Whaitua Implementation Information – Report 23.262) has been prepared on the implementation of the Te Whangannui a Tara Whaitua outcomes. We will continue to work with the Whaitua Implementation Team on the opportunities that have been programmed into the Riverlink project which directly help achieve those outcomes. We will prepare a report on these specifically at the next Subcommittee meeting.

Hutt City Council

22. Following the success with the Infrastructure Acceleration Funding bid, HCC have formed a team to manage the delivery of the stormwater and wastewater upgrades. An appraisal of the procurement and delivery options for the project has been carried out and the design of these projects will be delivered using an Early Contractor Involvement (ECI) model working in partnership with the RiverLink Alliance.
23. Most of the construction work is outside of the footprint of the RiverLink project and will be constructed by the ECI team. The construction of the elements of the project within the footprint of the RiverLink project will be delivered by the RiverLink Alliance. The stormwater elements which are within the footprint are already consented through the RiverLink consent.

Ngā hua ahumoni Financial implications

Greater Wellington

24. Greater Wellington has, through its 2021-31 Long Term Plan and subsequent annual planning processes, committed funding of \$295 million to delivery of the flood protection benefits of RiverLink. The current forecasts for delivery of the flood protection benefits are being reviewed through the projects IPAA processes. Further changes to this funding commitment may be necessary prior to signing the funding agreement in October 2023.
25. These budgets do not include allowances for improvements to facilities related to public transport associated with the relocation of Melling Train Station, as Waka Kotahi are responsible for its relocation.
26. Inflation and escalation will need to be adjusted for, during the project life. The next formal opportunity for this will be through the 2024-34 LTP (Long Term Plan).

Hutt City Council

27. HCC voted in favour of increasing its 2021-2031 Long Term Plan funding for RiverLink to \$129.7 million, with a net cost of \$88.5 million after revenue from subsidies and land sales. This funding will allow HCC to deliver key RiverLink scheme components including a pedestrian cycle bridge, a riverbank park, city centre urban revitalisation, intersection improvements, strategic property purchases and parking areas.

Ngā Take e hāngai ana te iwi Māori Implications for Māori

28. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the RiverLink Project Management Board.
29. The Mana Whenua Steering Group established between Waka Kotahi and Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika to oversee Te Ara Tupua, Eastern Bays Pathway has been expanded to include RiverLink.

**Ngā āpitihanga
Attachments**

Number	Title
1	Report of the Project Director, Rod James RiverLink PMO

**Ngā kaiwaitohu
Signatories**

Writers	Tracy Berghan – Owner Integration Lead RiverLink Tom Biggin – HCC Riverlink Lead
Approvers	Wayne O'Donnell – Programme Director

<p>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>Te Awa Kairangi subcommittee's specific responsibilities include to "review periodically the effectiveness of implementation and delivery of floodplain management plans for the Te Awa Kairangi/Hutt River floodplain", of which the RiverLink project is part of.</p>
<p><i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i></p> <p>RiverLink contributes to the delivery of Greater Wellington's strategic priorities of Regional Resilience, Freshwater Quality and Biodiversity, and Public Transport.</p>
<p><i>Internal consultation</i></p> <p>There was no internal consultation beyond the RiverLink team in preparing this report.</p>
<p><i>Risks and impacts - legal / health and safety etc.</i></p> <p>Escalation and general uncertainties in the construction market will continue for some time and cost pressure on construction will remain.</p> <p>Potential affects in relation to Procurement, Greater Wellington property purchase programme, and the associated reputational risk and costs incurred by early termination of leases and business relocations if construction start delayed.</p>

Report of the Project Director - RiverLink

Date: 16 June 2023

RiverLink – Project Update Report

1. Purpose

This report provides an update on current progress with the RiverLink programme. The report builds on previous reports to the Te Awa Kairangi Hutt Valley Subcommittee (the Subcommittee). The last of these reports was provided in March 2023.

This report should be read in conjunction with a covering report on the Subcommittee's agenda, which provides an update on specific matters as they relate to Greater Wellington Regional Council and Hutt City Council.

2. Background

RiverLink is a partnership between Greater Wellington Regional Council (Greater Wellington), Hutt City Council (HCC), Waka Kotahi NZ Transport Agency (Waka Kotahi), Ngāti Toa Rangitira and Taranaki Whānui.

This report covers an update on progress with key current workstreams including:

- Schedule
- Procurement
- Planning and consenting
- Advance works and investigations
- Partner agreement
- Property
- Communications and engagement

3. Schedule

An overall schedule for RiverLink has been developed by the Programme Office which includes all programme delivery elements and milestones.

An Alliance partner has now been selected and formally appointed in April.

Key milestones from the current programme schedule include:

- Completion of pricing design and target outturn cost (October 2023)
- Completion and execution of full partner agreement (October 2023)
- Start of advance works construction (October 2023)

Over the past 8 weeks the Alliance team has been forming, and establishing their detailed program for the Interim Project Alliance Agreement (IPAA) work, while also progressing in parallel with early stages of this work.

4. Procurement

The procurement process for our Alliance partner was completed in April with the appointment of the Fletcher/Aecom team. This followed a detailed evaluation of tenders, that included a series of interactive sessions with three shortlisted teams, and selection workshops with two shortlisted teams.

5. Planning and Consenting

In November 2022 the Environment Court granted final resource consents for RiverLink, clearing the way for the programme to proceed as planned. This was a significant milestone for the RiverLink team, representing the conclusion of more than 5 years' work covering implementation planning and design, community engagement, and more recently public hearings and submissions of evidence to the Environment Court.

The preparation of time sensitive management plans has been prioritised to avoid delay with the construction timetable. Any management plans that require baseline monitoring or must be in place prior to construction (such as ecological monitoring, the ecological management plan, or ground water management plan) are currently being prepared so that these are ready once our Alliance partner is confirmed.

The Regulatory authorities have provided feedback on the Enabling Works Management Plans which has been worked through and plan revisions submitted to Council for certification. The feedback comprised points of clarification needed from Council specialists around construction, and contamination and air quality mitigation. The Councils are now reviewing the revised plans with certification expected the week of 19 June.

Archaeological recording of a representative sample of buildings (as outlined in the Archaeology and Heritage Management Plan) has commenced ahead of building demolition and is now well advanced.

The enabling works management plan, enabling works contaminated land management plan, enabling works noise and vibration management plan, site-wide air quality management plan, and Stage 1 archaeology and heritage management plans have been submitted to GW and HCC for certification. Meetings were held with HCC and GWRC regulatory teams prior to their submission to present these plans and answer questions. Certification of these plans is expected no later than 26 May.

The methodology for the parking review has been confirmed which has significantly reduced the scope and therefore budget for this work. The reduced scope was a result of discussions between RiverLink traffic specialists and the Head of Transport at HCC, and refining the review required to meet the intent of the conditions. The parking review is now underway and is expected to be complete by the end of June. Work will then get underway to prepare the transitional parking plan based on this review.

A meeting has been held with the HCC, Head of Transport to confirm the methodology and scope of the Parking Review. Now that the methodology has been confirmed, the Alliance is mobilizing resources to undertake the survey component and commence engagement. Discussions are also being held with HCC transport engineers regarding wider city improvement works and whether there is room for efficiencies with both projects.

On going discussions have been had around the ability to undertake baseline ecological monitoring has been unable to proceed due to high river flow. Previous baseline monitoring has been obtained from GW (Delivery) which has been analysed. Following these discussions and the receipt of historical monitoring data, a paper is being written for GW regulatory team setting out an approach to meet the condition.

A programme is being prepared by the Alliance for the remaining management plans for the project in line with the scheduled programme of works. Specialists required for these plans have been briefed and work is to commence. Early discussions have been held with HCC/GW regulatory teams regarding the potential to circulate drafts as they progress to avoid a resource issue later in the year which has been welcomed.

The Alliance Environmental Manager attended the last Mana Whenua Steering Group meeting to provide a visual presentation on the forward work programme for the management plans. The site wide archaeology and heritage management plan will be going to the next MWSG for endorsement.

6. Advance works and investigations

To progress advance works and related investigations, an Enabling Works Plan is being prepared to enable demolition, geotechnical investigations, contaminated land remediation, location of services and establishment of site offices. This Enabling Works plan requires various inputs from the management plans summarised under 5 above. Including:

- Air Quality Management Plan
- Construction Noise Management Plan
- Contaminated land site Management Plan, and
- Archaeology and heritage Management Plan

Stopbank and Riverwork

Delivery of the Mills Street design has been separated into five Work Packages with the goal to enable construction by October 2023. This approach offers flexibility to best align with the Alliance establishment. The first work package investigations are focused on Services, Geotech, Demolition (this includes a Design Philosophy Statement for future packages).

Investigations

Geotechnical, Seismic and utilities investigations have been progressing for several months and continue. These will assist in providing the Alliance team with up-to-date information on key site conditions to help progress detailed design more quickly once they are appointed.

7. Partner Agreement

In order to further develop the partnership MoU between the five partners, a detailed RiverLink Partner Agreement (RPA) is currently being prepared. This agreement will expand the current MoU to ensure that all commercial and legal aspects of the agreement are fully documented and structured to ensure the intent of the agreement is properly reflected.

To assist with this process KPMG have been engaged to draft the commercial elements of the agreement, along with the partners respective legal representatives.

This agreement will also include the Governance and decision-making frameworks that will be used through the delivery of the works.

8. Property

143 properties need to be acquired for the RiverLink Project.

Currently:

- 131 properties have been acquired and 12 acquisitions remain.

Attachment 1 to Report 23.203

- 51 commercial rights (leases, compensation agreements, business closures and business relocations etc) have been obtained, with 9 identified as remaining.
- 77 tenants have now fully vacated properties acquired for the project. Responsibility for site security and health and public safety risks for Area E (North Pharazyn Street) and H (Daly Street) now lies with the Project Board.

9. Communications and engagement

The Project Governance Board (PGG) continues to receive regular updates on the delivery of the communications and engagement strategies. The appointment of our Alliance team has increased available resources to further develop and deliver these.

Across the community, the programme team continue to meet regularly with the Hutt Valley Chamber of Commerce, and other related subgroups. These will increase significantly now the Alliance team are appointed.

The first meeting of our Project design Liaison Group (PDLG) has been held to establish the group and set our planned approach.

This group includes:

- Mana Whenua Steering Group (MWSG)
- Port Nicholson Ponoke Cycling Club Inc
- Hutt Cycle Network
- Disabled Persons Assembly
- Living Streets Aotearoa

Te Awa Kairangi / Hutt River Valley Subcommittee

27 June 2023

Report 23.204



For Information

TE AWA KAIRANGI/HUTT VALLEY FLOOD RISK MANAGEMENT REPORT

Te take mō te pūrongo

Purpose

1. To advise the Te Awa Kairangi/Hutt River Valley Subcommittee (the Subcommittee) of progress made to June 2023 in implementing the Hutt River and Pinehaven Stream Floodplain Management Plans.

Te tāhū kōrero

Background

2. Greater Wellington Regional Council (Greater Wellington) has an ongoing programme of projects within the catchments of Te Awa Kairangi/Hutt River and the Pinehaven Stream. The projects are included in or guided by the floodplain management plans and river management schemes for the rivers and streams within these catchments.

Te tātaritanga

Analysis

Forward Work Programme

3. The terms of reference of this subcommittee have been expanded from the oversight of the Hutt River Floodplain Management Plan (FMP) to also include a purpose of: *“Consider potential arrangements for a catchment-based governance approach for the Hutt Valley, and recommend to Council (as appropriate)”*
4. As part of the initial consideration of this expanded purpose of the Subcommittee a draft forward work programme has been developed. Officers will develop a programme of work to cover off the items below and any further matters of interest Subcommittee members raise. Future work items are:
 - a Te Awa Kairangi/Hutt River catchment flood and erosion hazard mapping and residual risk
 - b More detail on the watercourses agreement and how this works, e.g., for Stokes Valley
 - c Scheme extensions and criteria/implications for any extensions
 - d Use of willows and poplars
 - e Session on what early flood warning could look like

- f The river management Operations and Maintenance Consent and how it operates (including the change to flexible buffers, and where this approach can and can't be used)
- g Further Hutt River Trail development and seeking input from interest groups
- h Major river works forward work programme and key operational activities
- i Melling Sub Station and consequential risk of flooding
- j Asset Management and Implementation Progress Reporting
- k Overview of the new Environment Group
- l Reviewing of the FMP
- m Waiwhetu FMP (Progress in developing a FMP for the Waiwhetu Floodplain)
- n Wainuiomata Flood and Erosion Hazard Assessment (the programme for updating the current flood and erosion hazard mapping)

Te Awa Kairangi/Hutt River

5. Projects being completed within the managed extent of Te Awa Kairangi/Hutt River are outlined in the Hutt River Floodplain Management Plan (HRFMP), and Hutt River Environmental Strategy. The HRFMP recommends structural, non-structural and environmental measures to reduce the flood risk to the floodplain with improvement to the environment. Greater Wellington has adopted a 40-year time frame to fully implement the HRFMP. Currently, the major focus area is RiverLink - the length of river between Kennedy Good Bridge and Ewen Bridge near to Lower Hutt Central Business District. The projects in this section have been combined into the RiverLink project.
6. RiverLink is a multi-partner project to improve flood protection, regenerate Lower Hutt and improve transport choices. It is the major focus for implementation of the HRFMP. The project is forecast to complete implementation in 2028. Detail about the project is contained in a separate report at this meeting (RiverLink Project Update Report – Report 23.203).
7. Government funding has been secured through Kānoa within the Ministry of Business, Innovation and Employment (MBIE) for flood protection projects through the Government's stimulus package. The funding was focussed on climate resilience and infrastructure development to help rebuild the economy following COVID-19 alert levels lockdown periods. Projects supported by Kānoa are subject to a funding agreement with two broad outcomes:
 - **Engineering outcomes** – Building infrastructure to protect communities against flood damage and the impacts of climate change.
 - **Social Procurement Outcomes** – Inclusion of environmental enhancement and societal improvement alongside delivery of engineering outcomes.
8. Social Procurement outcomes include promotion of the use of local businesses, supplier diversity including owned/operated Māori and Pasifika businesses and organisations and targeting female and youth employment.
9. Greater Wellington's programme of work funded through Kānoa has projects located in the Te Awa Kairangi /Hutt River, the Porirua Stream and the Ruamāhanga River. Within

the programme there are fifteen separate work sites. The works comprise flood and erosion protection in Te Awa Kairangi/Hutt River, Seton Nossiter culvert repair on the Porirua Stream and landfill erosion protection in the Ruamāhanga River. The Te Awa Kairangi/Hutt River specific projects are reported on below under the “Climate Resilience Programme” heading.

Climate Resilience Programme

10. There were 15 projects to be completed under the overall work programme. 13 have been completed and two are in their final stages of work. One of these is Site 1: Stokes Valley Weir Construction and Fish Passage, as reported below, and the other is the River Road, Ruamahanga project in the Wairarapa. The \$23.8 million programme will be substantially complete by 30 June 2023.
11. The Floodplain Management Plan Implementation Teams Climate Resilience Programme team received the Highly Commended award for “Te Tohu Waka Hourua – the Buddle Findlay Award for Māori-Council Partnerships” at the Taitaurā Local Government awards on 8 June 2023. The category was won by Tauranga City Council. The Climate Resilience Programme team's entry can be viewed on Taituarā’s website.¹
12. The Floodplain Management Plan Implementation Team’s ‘Climate Resilience Programme – Broader Outcomes’ is a finalist at the Engineering New Zealand Te Ao Rangahau ENVI Awards. The awards are held every two years and are spread across nine categories. The winner of each category will be announced at a ceremony on Friday 28 July 2023 and will also be in the running for the Supreme Award announced at the end of the night.
13. Project-specific tasks which are underway are as follows:

Site 1: Stokes Valley: Weir reconstruction and fish passage

14. Construction started in May 2023. Construction is scheduled to be completed by the end of June 2023. The project required temporary diversion of the Stokes Valley Stream to enable repair of the damaged weir and construction of fish passage which will enable fish to access the stream bed above the weir. The stream diversion will be removed, and the stream training bank reinstated when the fish passage is completed.

¹ <https://taituara.org.nz/building-climate-resilience>



Figure 1: Site 1 Stokes Valley – Showing the stream diversion, with the weir repair area to the left of the photo



Figure 2: Site 1 Stokes Valley – Photo of the weir reconstruction

Sites 3, 4, 5, 6, 7: Rock revetment and groyne construction

15. Sites tidy-up is now complete and the final steps of handover and financial close out are underway.

Site 10 Awakairangi Park: Bed recontouring

16. Improvement in the weather finally allowed work to be completed in April 2023, and handover and financial close out is being carried out. This bed-recontouring work moved the active river channel away from a bank erosion area which was eroding into Awakairangi Park. These works were originally programmed to start in December 2022 but were delayed as a result of weather and contractor availability. The works were started in Jan 2023 but put on hold due to consent compliance matters and complaints from the public about sediment loading in the water during the works. Much has been learned through this matter about the undertaking of in-channel works, which will guide how future work is undertaken.



Figure 3: Site 10 Awakairangi Park work complete

Site 11: Port Road: Rock revetment construction

17. Work to construct rock revetment at Port Road to remove existing concrete demolition erosion protection material and construct a new 440-metre-long rock revetment was completed in May 2023. As well as the rock revetment, 3 penguin motels were installed, two fishing platforms added at the top of the works, the pedestrian/cycle trail reinstated and plants put in, including Pohutukawa trees removed as part of the works. Site handover and project close out is underway.
18. Of interest during the works, is that the Port Road site, in the Coastal Marine area at the mouth of Te Awa Kairangi/Hutt River, is a nesting site for little blue penguins (kororā). A 'penguin protocol' was followed for the works to ensure that no penguins were disturbed or harmed. This required confirming penguin presence by use of a 'sniffer dog', trained in penguin detection, and ensuring that any penguin locations were not disturbed during key penguin events such as hatching chicks and fledging. In both cases, penguin fatality can result if unfledged chicks or mid-moult penguins try to swim, as penguins without a full coat of feathers will sink and drown. The 'penguin protocol' being followed ensured that sufficient clearance was provided between any penguin burrows and the work face.
19. Penguin 'motels' were re-established in the revetment as part of the works. Advice about penguins was provided by an external penguin expert, and this person worked with Mill Albert Ltd (MAL), Greater Wellington's contractor for the site, to develop methodology to form the burrows. Forming the burrows from revetment rock placed to form a tunnel was unsuccessful, so MAL thought 'outside the square' and used precast drainage channel placed upside down, as shown in Figure 5. As well as forming a stable tunnel of sufficient length, this has the added advantage of allowing the base of the tunnel to be natural dirt, which penguins apparently like to have beneath their feet.



Figure 4: Site 11 Port Road, Seaview – Rock revetment and cycle trail



Figure 5: Site 11 Port Road, Seaview – Penguin motel

Site 13: Poets Park: Park development

20. Final works were completed in May 2023, and the site is undergoing handover and financial close out.

Site 14: Taita Park- park enhancement project and Site 16: Hulls Creek: Pedestrian/cycleway bridge construction

21. Both sites in the final steps of the handover and close out process.

Pinehaven Stream

22. The objective of the planned Pinehaven Stormwater Improvements project is to improve flood level protection by increasing the capacity of the watercourse to achieve a 4% AEP flow capacity for the upgraded sections and to provide a 1% AEP level of protection for habitable floor levels.
23. The project is being delivered in three distinct sections:
- a Upgrading culverts at Sunbrae Drive and Pinehaven Road (this is an Upper Hutt City Council roading renewal project)
 - b Enabling works – includes house removal and service relocation/upgrades
 - c Stream capacity and environmental improvement works – widening the stream, planting, bank stabilisation, retaining walls and earthworks (twelve stages)
24. An update on the Pinehaven Stream FMP Implementation has been received from Wellington Water Ltd (WWL), who are carrying out this project on behalf of Upper Hutt City Council (UHCC) and Greater Wellington.
25. *Summary - Phase 2: Downstream and Willow Park: Physical stream works for Stage 2 is still on hold. Although the engagement with Mana Whenua on the Kaitiaki monitoring strategy has been resolved, our application for a winter works permit has been declined. A new application has been submitted, based on feedback from Greater Wellington. We expect feedback by mid-June.*
26. *Programme: As per the above Stage 2 physical works have not been able to commence and there is currently no clear expected timeframe to commence works. The project team are continuing engagement with Greater Wellington consent team with regards to winter works, weather permitting. We expect that once we get feedback by mid-June, we will need to make a decision if the project needs to be put on hold until the end of the winter and recommence works in October 2023.*
27. *Financial: The current contract price is within budget and engineers estimate. However, this will need to be repriced once we have a commencement date confirmed. The award is currently on hold until we have a clearer view on the timeframes at which we can commence work. This has impacted the cashflow. We have significantly reduced the forecast spend for this Financial Year (2022-23).*
28. *Risks: The major risk for these works raised previously relating to the Kaitiaki monitoring strategy has been resolved. However, we do not yet have a clear timeframe on when we can commence works as have not yet got an approved winter works permit. This is currently having an impact on our programme and cashflow. We may need to consider*

putting the physical works on hold and releasing the contractor to commit to other projects once we have a decision on the permit from GWRC in mid-June.

29. *Stakeholders:* The community has been notified of the imminent commencement of works so revised communication will be required with UHCC and Greater Wellington. Work with directly affected property owners is continuing
30. *Health & Safety:* No physical works have commenced. All construction plans have been issued to UHCC.
31. *Future Phases - Upstream of Sunbrae:* An estimate for the full scope of works will be provided in July, with the scope and phasing report. This was due in May 2023. However, focus has been on winter works applications and approvals of pre-construction plans for Phase 2. A draft "phased" modelling report for the full scope of works is in preparation with estimating (with the contractor) also underway. We are concerned if winter works is not permitted that the full "optimised" scope of works may not be achievable within the 5-year consenting timeframe."

Operations Delivery

32. Recent weather events have further exacerbated erosion of the riverbank between Melling Link and Kennedy Good Bridge, which is now close to the Hutt River Trail and the Harcourt Werry Drive carriageway. River management work (bed recontouring) is planned as an interim solution until permanent works take place as part of the RiverLink project. Work is expected to start soon, once we have worked through consenting requirements, and will take approximately four weeks to complete. Signs will be erected, and communications campaign conducted to inform the public.
33. Extensive weed clearing in the surrounding areas of the Belmont wetlands area has been undertaken. A concerted effort on the blackberry has been successful in controlling the infestation and releasing the native trees and shrubs that complement the Belmont wetlands. Discussions to install educational signage and media coverage, including drone footage, is planned for the wetland at Belmont. An Ecological Monitoring Plan is being prepared to allow maintenance activities within the wetland structure.
34. Signage – a new raft of Greater Wellington Te Awa Kairangi 'welcome entry' signage is underway. This is part of a signage overhaul on the Hutt River and takes stock of trail signage and berm signage, with some being replaced and some renewed. Wayfinding bollards and maps are also in process.
35. Native gardens restoration and maintenance is underway, with winter planting at numerous sites and community group work being carried out to complement these efforts at several key locations.
36. Contractor management and liaison with the local councils across new projects, such as the Wellington Water Pipe bridge at Silverstream is ongoing and cycling and walking advocacy and environmental recommendations continue to be provided.
37. New areas of development within the river corridor have been showcased by biking and running events, and the 'Scooter Safari' at Poets Park, Whakatikei.

38. Work to maintain the drainage systems (culverts and floodgates) that pass through our stopbanks is almost complete; these structures are critical assets, and this work ensures the performance of our flood defence network.
39. Ongoing river ranger patrols, litter enforcement and fly tipping controls have continued. A spatial intelligence web-app to log fly tipping incidents, including geo-locations and incident date, has been developed for (primarily) River Ranger use. This app will enable better coordination for follow-up with other authorities as necessary, and for planning management changes to sites that are dumping 'hot-spots'. A presentation ([Attachment 1](#)) will be presented at the Subcommittee meeting will give more detail on the app.²
40. Illegal motorbike use on the river trails is an ongoing issue, and a dog was killed by a 'hit and run' motorbiker in May 2023 at the Melling area of the river right berm south of Block Road. Officers are supporting police with their investigation. River Rangers are also monitoring motorbike use and informing police for follow-up, and discussions are ongoing regarding bylaws and compliance. More regulatory signage has been installed.
41. The river berms are a popular dog-exercise area, which is resulting in some conflict between users and dogs, and issues with dogs not under control. Greater Wellington has also received a report of a cyclist requiring 12 stitches after being bitten by a dog. Dog management bylaws are a territorial authority responsibility, and Greater Wellington officers are reaching out to the relevant councils' dog control officers to see what measures may be used to help manage the issue.

Melling Substation

42. Flood resilience of the Melling substation has been raised with Transpower through the RiverLink project and other avenues. The most recent response from Transpower has indicated that they are comfortable with the risk of damage to the facility during a major flood. We are concerned that they still do not fully understand the risk from floodwaters and debris during a major flood event and will continue to liaise with them on this matter. A meeting is proposed with the appropriate personnel in Transpower when they are next in Wellington, likely in July 2023.

Flood Hazard Modelling

43. The flood hazard modelling for the Te Awa Kairangi/Hutt River and Waiwhetū Stream update projects are progressing. Draft flood hazard layers have been provided to HCC for consideration for its district planning process.

Regional Investigations Initiatives

Emergency Management

44. The Pilot Flood Forecast System project completed and was a success. The system is built around Delft-FEWS software. Developed in the Netherlands, the Flood Early Warning System is considered the world's leading flood forecast platform software.
45. The Environment Group is planning the next phase of work which will improve the existing model utilising better input data from the MetService and expand models to

² <https://gwrc.maps.arcgis.com/apps/webappviewer/index.html?id=b374a08c9d2347eaa1c6bbfc6ad36b03>

other catchments in the region. Tools to aid flood response decision makers will be built and the system will be embedded into our processes with further training following this, which will allow an 'operational' system to be achieved.

46. The Environment Group is working on implementing a new flood warning message system. This system will reduce the workload on our Flood Duty Officers and provide greater flexibility in providing automated warning systems to the wider community including recreational users and contractors. Piloting the new system is being worked on with a small group of customers, before fully 'operationalising' it.
47. In early May 2023 Flood Protection and Hydrology undertook the second annual training exercise. This exercise tested the ability of the team to function under pressure in a realistic flood scenario, and the processes and tools for support. Valuable learnings were gained which will be used to inform where capability building is needed in the new financial year.

Ngā hua ahumoni Financial implications

48. For this reporting period, projects are within the current flood protection budgets.
49. Kānoa projects require part funding from Greater Wellington. Long Term Plan funding has been brought forward to accommodate this work.

Ngā Take e hāngai ana te iwi Māori Implications for Māori

50. Greater Wellington is required to manage land and water within a range of statutory requirements, including giving effect to Te Mana o Te Wai and considering Te Tiriti o Waitangi in the development and implementation of the Council's strategies, plans, programmes and initiatives.
51. Implementation with mana whenua partners is guided by Te Whāriki – the new Māori Outcomes Framework as part of Council's Long-Term Plan 2021–31.
52. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the RiverLink Board.
53. Cultural liaison or co-design contracts have been signed by Te Rūnanga o Toa Rangitira Inc., Rangitāne ō Wairarapa Inc., Ngati Kahungunu ki Wairarapa Charitable Trust and Port Nicholson Block Settlement Trust for enhanced involvement and collaboration on programme work for the Climate Resilience Projects.

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

54. 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.

55. 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.
56. The greenhouse gas (GHG) emissions from rock supply vary depending on the quarry source of the rock and transport to the work sites. Quarry sources for projects vary. The emissions from rock supply production and transport are not presently part of the organisation’s GHG inventory.
57. Targeted planting has been carried out to mitigate CO₂ emissions for the Kānoa projects.
58. Carbon sequestration for transport emissions for the Kānoa projects has been investigated. The carbon emissions for Poets and Taitā Park were calculated using available rock transportation information. Mills Albert Ltd and HiRock transportation was estimated at 264 metric tonnes CO₂e. (Mills Albert and HiRock are contractor rock suppliers.) A factor of 2 accounted for other forms of transportation, yielding a total emissions estimate of 528 tonnes of CO₂e.
59. The sequestration capacity over 50 years was 4579 tonnes for Poets Park, 1075 tonnes for Taitā Park, resulting in a combined capacity of 5654 tonnes of CO₂e over 50 years. This will offset calculated transport emissions by 2027. Over 50 years of growth, 5126 tonnes of CO₂e sequestration capacity will remain after offsetting transport emissions.
60. 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 āpitihanga

Attachments

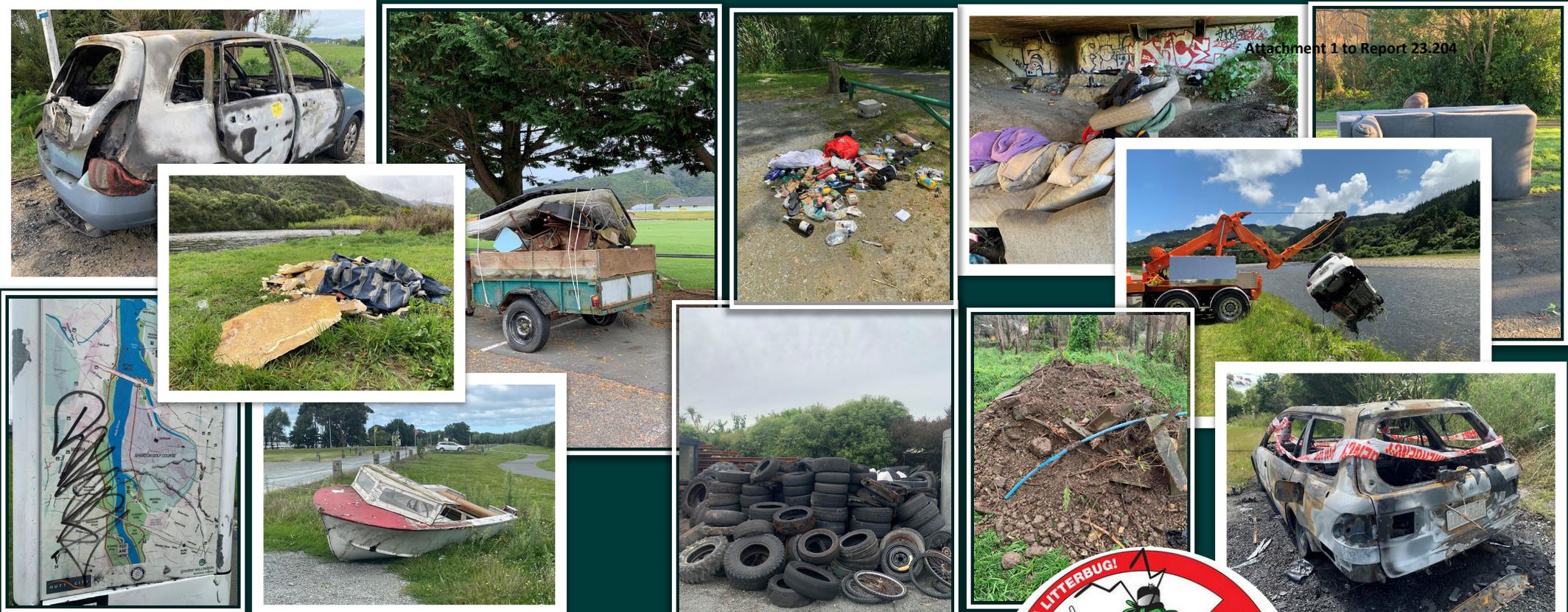
Number	Title
1	Spatial Integration/Trash Trending 2022-2023 presentation

Ngā kaiwaitohu

Signatories

Writers	Sharyn Westlake – Team Leader, Floodplain Management Plan Implementation Andy Brown – Team Leader Knowledge - Water Mike Jensen – Lead Operations Delivery (Wellington and Kapiti) Joby Mills – Senior River Ranger Jacky Cox – Manager Logistics and Resourcing
Approvers	Jack Mace – Director Delivery Lian Butcher – Group Manager, Environment

He whakarāpopoto i ngā huritaonga Summary of considerations
<i>Fit with Council's roles or Committee's terms of reference</i> The Subcommittee's specific responsibilities include "reviewing periodically the effectiveness of implementation and delivery of Floodplain Management Plans for the Te Awa Kairangi/Hutt River floodplain".
<i>Contribution to Annual Plan / Long term Plan / Other key strategies and policies</i> The projects contained within this report deliver on Greater Wellington's strategic priority area of te tū pakari a te rohe/regional resilience, and support delivery of Greater Wellington's strategic priority area of te oranga o te wai māori me te rerenga rauropi/freshwater quality and biodiversity.
<i>Internal consultation</i> Specific projects consult with groups and departments across Greater Wellington where relevant to a project.
<i>Risks and impacts: legal / health and safety etc.</i> The purpose of implementation floodplain management plans is to reduce the risk to communities and improve the region's resilience.



Te Awa Kairangi/Hutt River Spatial Integration / Trash Trending 2022 to 2023

Industrial/Household Dumping,
Stolen/Burnt Vehicles, Theft, Graffiti & Vandalism



Prepared : Phill Cook
Date : 14 June 2023
Source Information : Brad Bulman & Joby Mills



The screenshot shows a web browser displaying a map application. The browser's address bar shows the URL: `gwrc.maps.arcgis.com/apps/webappviewer/index.html?id=b374a08c9d2347eaa1c6bbfc6ad36b03`. The page title is "Te Awa Kairangi / Hutt River Ranger". A search bar contains the text "Find address or place".

A large green banner with yellow text reads "130 Recorded illegal Activities".

The map displays a satellite view of the Hutt River Valley. A series of red dots, representing illegal activities, are plotted along the river and surrounding areas. A "Layer List" panel on the left shows the following layers:

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism
- Fly Tipping (Jan'22 - Jan'23) Graffiti
- Fly Tipping (2021 - June 2023)
- SAP - 2019 (Gate-Seat-Sign)

A "Legend" panel on the right shows a red dot next to the text "Fly Tipping Total (Jan'22 - Jan'23)".

Two circular signs with a red border and a diagonal slash are overlaid on the map. The signs feature a cartoon fly character holding a drink and a trash can, with the text "DON'T BE A LITTERBUG!" around the perimeter.

The bottom right corner of the map shows the logo for "Greater Wellington Te Pane Mātaua" and "Hutt City Council, Earthstar Geographics".

Te Awa Kairangi / Hutt River Ranger

Attachment 1 to Report 23.204

Suspicious Underground Bunker

Layer List

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism
- Fly Tipping (Jan'22 - Jan'23) Graffiti
- Fly Tipping (2021 - June 2023)
- SAP - 2019 (Gate-Seat-Sign)

Legend

Fly Tipping (Jan'22 - Jan'23) Bunker

Greater Wellington
Te Pane Mātaiaiao
Hutt City Council, Earthstar Geographics

esri

DO NOT BE A LITTERBUG!

7 Recorded Cars & Boat

Attachment 1 to Report 23.204

Te Awa Kairangi / Hutt River Ranger

Find address or place

Layer List

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism
- Fly Tipping (Jan'22 - Jan'23) Graffiti
- Fly Tipping (2021 - June 2023)
- SAP - 2019 (Gate-Seat-Sign)

Legend

Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat

Greater Wellington
Te Pane Matua Taiao
Hutt City Council, Earthstar Geographics

esri

37 Recorded (Household Rubbish)

Attachment 1 to Report 23.204

The screenshot displays a GIS web application interface for 'Te Awa Kairangi / Hutt River Ranger'. The main map shows an aerial view of the Hutt Valley with 37 red circular markers indicating recorded household rubbish fly tipping locations. A 'Layer List' on the left side of the map is open, showing various categories of fly tipping, with 'Fly Tipping (Jan'22 - Jan'23) Rubbish Household' selected. A 'Legend' window on the right side of the map shows a red circular marker next to the text 'Fly Tipping (Jan'22 - Jan'23) Rubbish Household'. Several inset photographs are overlaid on the map, showing examples of household rubbish fly tipping: a mattress and other items on a gravel area, a pile of household waste on a dirt path, a pile of household waste on a grassy area, and a pile of household waste on a dirt path. A 'Don't Be a Litterbug!' sign is also visible on the map. The bottom right corner of the map shows the logos for Greater Wellington, Te Pane Matua / Te Awa Kairangi, Hutt City Council, Earthstar Geographics, and Esri.

Attachment 1 to Report 23-204

40 Recorded (Industrial Rubbish)

The screenshot displays a web-based GIS application interface. At the top, the browser address bar shows the URL: <http://gwrc.maps.arcgis.com/apps/webappviewer/index.html>. The application title is "Te Awa Kairangi / Hutt River Ranger".

On the left side, there is a "Layer List" panel with the following items:

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism
- Fly Tipping (Jan'22 - Jan'23) Graffiti

On the right side, there is a "Legend" panel for "Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial", which shows a blue circle icon corresponding to the selected layer.

The main map area shows an aerial view of the Hutt River Valley with 40 blue circular markers indicating the locations of recorded industrial rubbish. Several inset photographs provide visual examples of the waste:

- Top-left: A stack of wooden pallets and debris.
- Top-right: A large pile of grey stones or rubble.
- Bottom-left: A red excavator loading a truck.
- Bottom-center: A pile of broken yellow and blue debris on a gravel surface.
- Bottom-right: A large pile of black tires and wheels.

In the bottom-left corner, there is a circular logo with a green character and the text "DON'T BE A LITTERBUG!".

In the bottom-right corner, there are logos for "Greater Wellington", "Te Pane Matua / Te Awa Kairangi", "Hutt City Council", "Earthstar Geographics", and "esri".

Te Awa Kairangi / Hutt River Ranger

Attachment 1 to Report 23.204

1 Recorded (Offal)

Layer List

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker ...
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat ...
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household ...
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial ...
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism ...
- Fly Tipping (Jan'22 - Jan'23) Graffiti ...
- Fly Tipping (2021 - June 2023) ...
- SAP - 2019 (Gate-Seat-Sign) ...

Legend

Fly Tipping (Jan'22 - Jan'23) Rubbish Bio

DO NOT BE A LITTERBUG!

Greater Wellington
Te Pane Māori
Hutt City Council, Earthstar Geographics, esri

Te Awa Kairangi / Hutt River Ranger

Attachment 1 to Report 23.204

21 Recorded - Vandalism

Layer List

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism
- Fly Tipping (Jan'22 - Jan'23) Graffiti

Legend

Fly Tipping (Jan'22 - Jan'23) Vandalism

Te Awa Kairangi / Hutt River Ranger

Find address or place

Layer List

Legend

Fly Tipping (Jan'22 - Jan'23) Vandalism

Don't Be a Litterbug!

Hutt City Council, Earthstar Geographics

POWERED BY esri

23 Recorded Graffiti
There's more that hasn't been recorded

Attachment 1 to Report 23.204

Te Awa Kairangi / Hutt River Ranger

Layer List

- Fly Tipping Total (Jan'22 - Jan'23)
- Fly Tipping (Jan'22 - Jan'23) Bunker
- Fly Tipping (Jan'22 - Jan'23) Dump Car / Boat
- Fly Tipping (Jan'22 - Jan'23) Rubbish Household
- Fly Tipping (Jan'22 - Jan'23) Rubbish Industrial
- Fly Tipping (Jan'22 - Jan'23) Rubbish Bio
- Fly Tipping (Jan'22 - Jan'23) Vandalism
- Fly Tipping (Jan'22 - Jan'23) Graffiti
- Fly Tipping (2021 - June 2023)

Legend

Fly Tipping (Jan'22 - Jan'23) Graffiti

Greater Wellington
Te Pane Matua / Te Awa Kairangi
Hutt City Council, Earthstar Geographics

Reinstating HRT Marker Posts

Layer List

- 2023
- SAP - 2019 (Gate-Seat-Sign)
- Toilet
- 3D Flythrough - 1939 /2021
- Bridge
- HRT Sign (Jeff Angus 2019)
- HRT Kilometre Markers (2007)**
- HRT Mapboard (2007-2009)
- Car Parking
- GW Survey Mark
- GW River XS
- HRT (Hutt River Trail)

Legend

HRT Kilometre Markers (2007)

KM_MARKER

- Concrete footing
- 1/2 Round, 150 g.
- Hutt River Trail legs 75 mm p.
- KM number, Resene 10E55, "Moon Yellow"
- 1/2 Round RS-900 x 100mm p. 1/2, painted Resene 20E55, "Bondi Blue"
- Concrete footing

WAYMARKER

- Concrete footing
- RS 400 x 100 p.
- Stripe, painted Resene 28G10, "Watercourse"
- Stripe, painted Resene 10E55, "Moon Yellow"
- RS 400 x 100 p. 1/2, painted Resene 20E55, "Bondi Blue"
- Concrete footing

Greater Wellington
Te Pane Mātaua
Hutt City Council, Earthstar Geographics

DON'T BE A LITTERBUG!

Hutt River Ranger

gwr.maps.arcgis.com/apps/webappviewer/index.html?id=b374a08c9d2347eaa1c6bbfc6ad36b03

Attachment 1 to Report 23.204

Reinstating HRT Map Boards

Layer List

- 2023
- SAP - 2019 (Gate-Seat-Sign) ...
- Toilet ...
- 3D Flythrough - 1939 /2021 ...
- Bridge ...
- HRT Sign (Jeff Angus 2019) ...
- HRT Kilometre Markers (2007) ...
- HRT Mapboard (2007-2009) ...
- Car Parking ...
- GW Survey Mark ...
- GW River XS ...
- HRT (Hutt River Trail) ...

Legend

HRT Mapboard (2007-2009)

M

INFORMATION/MAP BOARD

- Metal signboard
- Anodized signs
- 200g tube frame - coated 200g or greater content
- Mapboard
- Concrete footing

Note: Information Mapboard available as a standard design from Concrete Design Manufacturing

Greater Wellington Te Pane Mātaua

Hutt City Council, Earthstar Geographics

esri

Te Awa Kairangi / Hutt River Valley Subcommittee
27 June 2023
Report 23.262



For Information

WHAITUA IMPLEMENTATION INFORMATION

Te take mō te pūrongo

Purpose

1. To advise the Te Awa Kairangi/Hutt River Valley Subcommittee (the Subcommittee) of progress made to May 2023 in implementing the Te Whanganui-a-Tara Whaitua.

Te tāhū kōrero/Te horopaki

Background/Context

2. Greater Wellington Regional Council (Greater Wellington) has an ongoing programme of recommendations contained within the Te Whanganui-a-Tara Whaitua Implementation Programme (WIP). Many of these require multiple agencies to work together to implement the recommendation.
3. This report provides an update on progress made with implementing the recommendations of the WIP, developed by the Whaitua Te Whanganui-a-Tara Committee, and received by Greater Wellington in September 2021.

Te tātaritanga

Analysis

1. Under the new Greater Wellington Rōpū Taiao Environment Group, the Catchment function will be providing a progress update every six months to the Environment Committee. The progress update will include a summary, along with the other WIPs, and identifying successes, issues, and risks. In time, this report will be retired as Greater Wellington moves to integrated Catchment reporting with these recommendations picked up alongside the wider range of environmental programmes Greater Wellington and others are committed to delivering.
2. This analysis is from the June 2023 Te Whanganui-a-Tara Whaitua Progress Report as [Attachment 1](#).
3. The next report will also include more detail on how the regulatory recommendations are being implemented through the development of plan changes to the Natural Resources Plan.
4. Initial assessments of how Greater Wellington is supporting the implementation of the recommendations in Te Mahere Wai (the companion document to the WIP developed

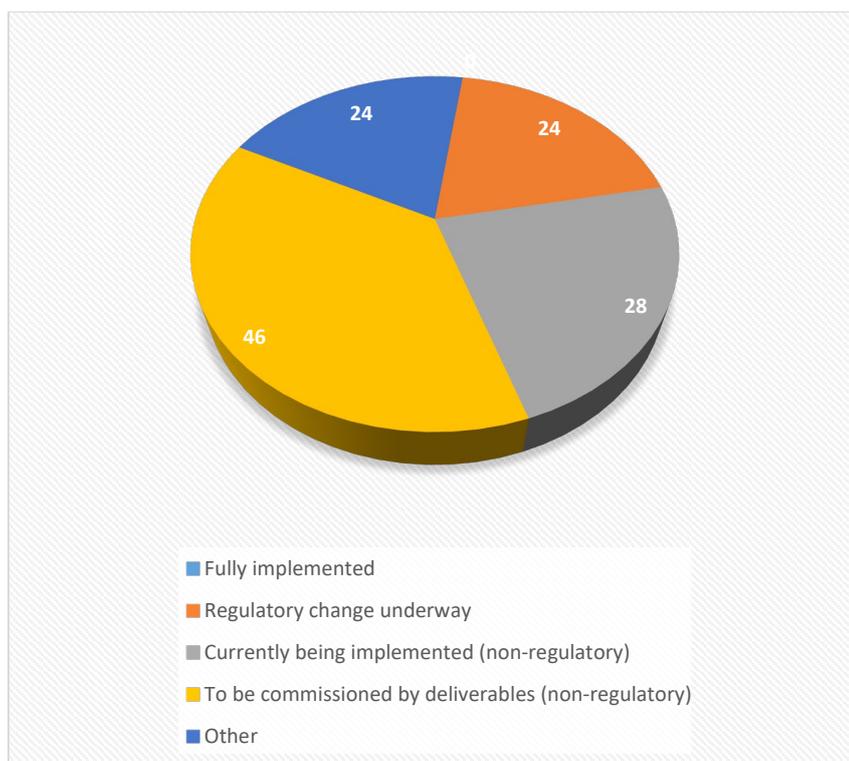
by Te Kāhui Taiao) have recently been completed and will also be provided as part of future updates.

5. In Te Whanganui-a-Tara, a higher proportion of the recommendations need work to be commissioned compared to other WIPs. This is because it was completed more recently and there has been less time for recommendations to be picked up as part of business-as-usual work.
6. There are gaps in this reporting where agencies haven't had the capacity to engage with Greater Wellington and therefore this report does not yet contain the full picture of work being undertaken. This is reflected in the higher number of 'Other' recommendations that still require joint assessment and are identified as 'TBC' (to be confirmed) within the progress report entries.

Implementation progress of WIP by category

Implementation Category	Number of recommendations
Fully implemented	0
Regulatory change underway	24
Currently being implemented (non-regulatory)	28
To be commissioned by deliverables (non-regulatory)	46
Other	24
Total	122

Note: The numbers in the table exceed the number of recommendations in the WIP as some recommendations have multiple sub-recommendations to be implemented through different mechanisms.



7. Greater Wellington is in the process of establishing a community-led reference group tasked with monitoring progress on the implementation of WIP for Whaitua Te

Whanganui-a-Tara and to support the council’s reporting on progress to the wider community in meaningful ways.

8. Discussions about the reference group have been held with the former Whaitua Committee’s Co-chairs. A terms of reference has been approved by Council at its meeting on 15 June 2023 and is attached as [Attachment 2](#).

Ngā hua ahumoni
Financial implications

4. There are no direct financial implications from this report.
5. Regulatory components of the WIPs will enter into the existing Regional Policy Statement/Natural Resources Plan Change Programme, which is already funded. Non-regulatory elements will need to be prioritised and resourced through the Long Term Plan and Annual Plan processes and internal change control management considerations as part of wider funding and prioritisation requirements.

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

6. Development of the WIPs has included substantial input from mana whenua over many years. Mana whenua have led development of the Ngāti Toa Rangatira Statement and Te Mahere Wai o Te Kāhui Taiao.
7. This relationship creates space for mana whenua to reiterate their obligations as kaitiaki and recognises a need for Greater Wellington to create space to enable mana whenua the opportunity to determine their rangatiratanga. Partnership with mana whenua remains paramount for the organisation.
8. As we move away from engagement with mana whenua on Whaitua implementation towards a space where we partner, the role of mana whenua and their solutions will become clearer. Kaupapa funding will support their aspirations.
9. Mana whenua representation at all levels of this work, from governance to implementation, is key to achieving successful outcomes for the environment and in giving effect to our responsibility to Te Tiriti o Waitangi.

Ngā āpitihanga
Attachments

Number	Title
1	Whaitua Te Whanganui-a-Tara Whaitua Implementation Programme (WIP) Progress Report, June 2023
2	Terms of Refence Te Whanganui-a-Tara Reference Group, June 2023

**Ngā kaiwaitohu
Signatories**

Writer	Jimmy Young – Catchment Manager - Te Awarua-o-Porirua
Approvers	Nicola Patrick – Director, Catchment Lian Butcher– Group Manager, Environment Group

He whakarāpopoto i ngā huritaonga Summary of considerations
<p><i>Fit with Council’s roles or Committee’s terms of reference</i></p> <p>The Subcommittee’s specific responsibilities include “reviewing periodically the effectiveness of implementation and delivery of Floodplain Management Plans for the Te Awa Kairangi/Hutt River floodplain”, which can also have implications for delivery of Whaitua recommendations.</p>
<p><i>Contribution to Annual Plan / Long term Plan / Other key strategies and policies</i></p> <p>Implementing the WIPs and companion mana whenua documents are core activities in the Long Term Plan for Rōpū Taiao Environment Group.</p>
<p><i>Internal consultation</i></p> <p>Nearly all business units in Rōpū Taiao Environment Group and Te Hunga Whiriwhiri have contributed to the progress reports over time as implementation requires work from across the groups.</p>
<p><i>Risks and impacts: legal / health and safety etc.</i></p> <p>The purpose of Whaitua Implementation Plans is to reduce the risk to communities and improve the region’s water quality and biodiversity. There is significant environmental, reputational and legal risk if the WIPs and companion mana whenua documents are not implemented. Environmental risks include that water quality and biodiversity will continue to decline. Reputational risk includes that our partners, stakeholders and communities consider that implementation has not been given sufficient priority. Whaitua committees and mana whenua have invested significant time and knowledge to the development of WIPs and companion mana whenua documents. There is a legal risk to Council if the statutory obligations of the NPS-FM 2020 are not met.</p>

Whaitua te Whanganui-a-Tara Whaitua Implementation Programme (WIP) Progress Report

June 2023

Report Purpose

This report provides an update on progress made with implementing the recommendations of the Whaitua Implementation Programme (WIP), developed by the Whaitua te Whanganui-a-Tara Committee, and received by Greater Wellington (GW) in September 2021.

It will be updated every six months and presented at a GW Environment Committee meeting. It will be accompanied by a paper summarising the report, along with the other WIPs, and identifying successes, issues, and risks. In time, this report will be retired as GW moves to integrated Catchment reporting with these recommendations picked up alongside the wider range of environmental programmes GW and others are committed to delivering.

The next progress report may be provided earlier than the proposed six-monthly update as a one-off as the stand-up of the new Rōpū Taiao Environment Group in GW means there is fresh thinking happening on how to consider the outstanding recommendations. The next report will also include more detailed commentary on how the regulatory recommendations are being implemented through the development of plan changes to the Natural Resources Plan.

Initial assessments of how Greater Wellington are supporting the implementation of the recommendations in Te Mahere Wai (the companion document to the WIP developed by Te Kāhui Taiao) have been completed and will be provided as part of future updates.

Te Mahere Wai can be accessed here: <https://www.gw.govt.nz/environment/freshwater/protecting-the-waters-of-your-area/whaitua-te-whanganui-a-tara/te-mahere-wai-recommendations/>

Important note on the limitations of this data

Information provided here is provisional until it has been reviewed and endorsed by reference groups and/or governance groups which are to be established. It includes implementation attributed to organisations other than Greater Wellington and in some cases their agreement has not yet been obtained and therefore may be revised.

The interpretation of some of the more generally worded recommendations, and therefore their implementation category (and any other details provided regarding their implementation), may also be changed by reference groups and/or governance groups.

Interpreting this report

The table below is broken down by recommendation as recorded in the WIP.

Some recommendations in the WIP list multiple actions to be completed. Where these actions require different mechanisms to implement them, the recommendation is broken down in the table as sub-recommendations, reflecting the distinct pieces of work to be implemented.

An example is when a recommendation has multiple bullet points within it and only some of those bullets can be grouped under a single implementation mechanism.

Attachment 1 to Report 23.262

Where this occurs, the wording of the recommendation is shown in full but the non-applicable parts are shown as crossed out. These parts that are crossed out are not lost – they are repeated against a different implementation mechanism.

Implementation Category

The report includes a column showing Implementation Category. This is a high-level grouping used by GW for reporting purposes.

The category 'NRP Plan Change by 2024' means a change to the Natural Resources Plan (GW's regional plan) to be undertaken by 2024. This is underway.

Note that the category 'To be commissioned by deliverables' indicates that the work is not currently being implemented so needs to be commissioned. This means an assessment has been made that a new deliverable is required to implement the recommendation, including identifying which organisation will lead its implementation. These are the outstanding recommendations that need resourcing and need to go through the relevant lead agency's business planning and prioritisation processes to be confirmed.

Summary of Progress

The table and pie chart below show progress towards implementation of the WIP.

Many of the WIP recommendations require multiple agencies to work together to implement the recommendation. In some cases, this has meant implementation has been slower but is considered worthwhile to create more integrated practices.

In Te Whanganui-a-Tara a higher proportion of the recommendations need work to be commissioned compared to other WIPs. This is because it was completed more recently and there has been less time for recommendations to be picked up as part of business-as-usual work.

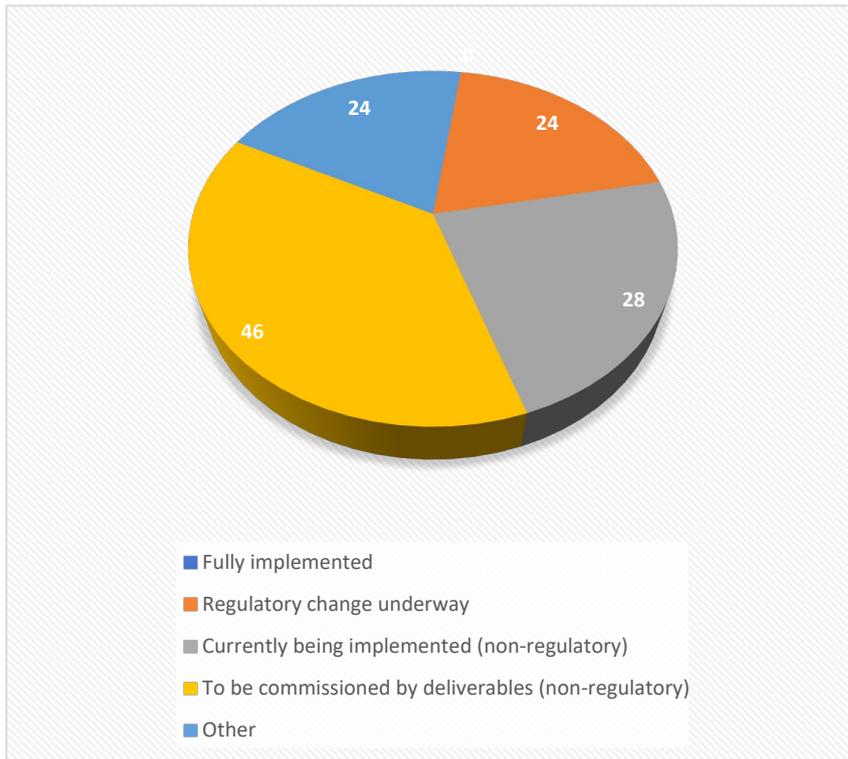
There are gaps in this reporting where agencies haven't had the capacity to engage with GW and therefore this report does not yet contain the full picture of work being undertaken. This is reflected in the higher number of 'Other' recommendations that still require joint assessment and are identified as 'TBC' (to be confirmed) within the progress report entries.

The challenge of implementing all GW-led deliverables within the WIP has been accepted with the receipt of the WIPs; however, the outstanding recommendations are subject to prioritisation within a business planning cycle. This has meant that some recommendations with a timeframe of 2022 have not yet been fully implemented as recommended in the WIP. Progress towards these recommendations will continue and will be tracked through these reports.

Implementation Category	Number of recommendations
Fully implemented	0
Regulatory change underway	24
Currently being implemented (non-regulatory)	28
To be commissioned by deliverables (non-regulatory)	46
Other	24
Total	122

Attachment 1 to Report 23.262

Note: The numbers in the table exceed the number of recommendations in the WIP as some recommendations have multiple sub-recommendations to be implemented through different mechanisms.



Accessing the WIP

This report needs to read in conjunction with WIP which can be accessed here: [Greater Wellington Regional Council — Whaitua te Whanganui-a-Tara \(gw.govt.nz\)](http://GreaterWellingtonRegionalCouncil.govt.nz/Whaitua-te-Whanganui-a-Tara). The WIP provides the context to each recommendation.

Te Whanganui-a-Tara - Progress by Individual Recommendation

Recommendation	Recommendation wording	Implementation category	Comment
1	Greater Wellington adds all 'first steps' attribute states (short term and generational) identified in the catchment chapters of the WIP into the PRNP as part of the 2022 and 2024 plan changes.	Natural Resources Plan (NRP), Plan Change by 2024	Being managed by Greater Wellington (GW) through its regulatory programmes of work.
2	Greater Wellington works with Mana Whenua to complete Te Oranga Wai attributes for freshwater and coastal receiving environments for inclusion in the PNRP as part of the 2022 and 2024 plan changes.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
3	Greater Wellington proactively communicates the WIP and Te Mahere Wai with stakeholders, community groups and partners through a variety of channels to ensure there is adequate awareness in our whaitua to support ongoing dialogue and accountability for implementation.	Currently being implemented	<p>GW led. Many activities have been undertaken:</p> <ul style="list-style-type: none"> • Launch event in November 2021 and recording made available on whaitua website. • Newsletter sent to online mailing list advising on completion of Whaitua Implementation Programme (WIP) and Te Mahere Wai (TMW). • Interactive catchment tool developed and made available on the whaitua webpage. • Marketing campaign promoted WIP, TMW and catchment tool from April-August 2022 through google ads, social media, radio, and newspapers. • Updates to meetings are being provided to other organisations as requested e.g., Sanctuary to Sea. <p>Further communications activities are planned, including activities related to the sharing of this progress report.</p>
4	Greater Wellington establishes a community-led reference group tasked with monitoring progress on the implementation of WIP for Whaitua Te Whanganui-a-Tara and ensures that the council is reporting on progress to the wider community in meaningful ways.	Currently being implemented	Greater Wellington is in the process of establishing the group. Discussions have been held with the former Whaitua Committee's Co-chairs. A terms of reference has been developed and Council approval is currently being sought for this.
5	Greater Wellington, Mana Whenua and territorial authorities work with communities located around piped and above-ground streams to share those streams' stories through visual images, signs, sculptures, temporary artworks or other interactive ways that the communities design.	To be commissioned by deliverables	<p>New deliverable name: Streams stories visibility community package.</p> <p>GW led.</p> <p>Intended to include signs and other visual indicators of streams which show that a stream exists there in a way that connects people to piped streams and open streams.</p>
6	Greater Wellington works with Mana Whenua to name unnamed streams, including those currently piped underground, starting with large streams and then smaller streams within the whaitua (by 2026).	To be commissioned by deliverables	<p>New deliverable name: Stream naming assessment and implementation.</p> <p>GW to facilitate with Ngāti Toa and Taranaki Whānui.</p> <p>Proposed to include the following:</p> <ul style="list-style-type: none"> • Desktop exercise to identify unnamed streams to prioritise (GW led).

			<ul style="list-style-type: none"> • Unnamed streams prioritised for naming and re-named (Ngāti Toa and Taranaki Whānui). • Names determined by mana whenua (Ngāti Toa and Taranaki Whānui). • Geographic Board submission/approved (GW led). • GIS update (GW led).
7	Greater Wellington and territorial authorities add information to property Land Information Memorandum (LIM) reports about wetlands and streams that a property drains to and its pathway to the sea; the source of the property's water supply; and the treatment of its wastewater.	To be commissioned by deliverables	<p>New deliverable name: Adding water information to LIMs.</p> <p>WCC, UHCC and HCC led.</p> <p>Work programme to develop a process to identify information to be applied to LIMs – the recommendation is for wetlands, streams the property drains to, it's pathway to the sea, the source of the properties water supply and the treatment of wastewater.</p> <p>Then implement and notify the changes.</p>
8	Mana Whenua, community groups and Greater Wellington take advantage of opportunities to get involved in the refresh of the National Curriculum, which guides teaching and learning in schools, with a focus on how well it identifies and grows capabilities that will help realise aspirations for communities that care for wai and te taiao.	To be commissioned by deliverables	<p>New deliverable name: Assist National Curriculum Refresh.</p> <p>GW led.</p> <p>Intended to provide input to Ministry of Education National Curriculum Refresh, format determined by Ministry of Education.</p>
9	Mana Whenua, community groups and Greater Wellington work with early learning centres, schools and kura to develop local resources and supports that help teachers and kaiako to provide teaching and learning that connect tamariki with their local waterways, including piped streams, and grow their understanding of the interconnectedness of the wellbeing of our communities and Whaitua Te Whanganui-a-Tara	To be commissioned by deliverables	<p>New deliverable name: Mountains to the Sea programme in Whaitua te Whanganui-a-Tara.</p> <p>GW led.</p> <p>Intended approach is a programme funded by GWRC but delivered by Mountains to Sea (would need to review their work in this whaitua to understand the need for additional work/funding first).</p> <p>GWRC currently fund this programme in Porirua and Ruamāhanga catchments.</p> <p>GWRC might have a supporting role rather than main funder.</p>
10	<p>Greater Wellington, Mana Whenua and territorial authorities establish services to support new and existing catchment or community groups (by 2025), including for:</p> <ul style="list-style-type: none"> • Providing access to easy-to-use data from all relevant sources, including citizen science, especially data that is relevant to each group's locations and needs • Inspiring and supporting the formation of new groups • Funding ongoing organisational and technical support, including lab analysis • Supporting citizen-led science and monitoring with appropriate training and tools • Mātauranga monitoring » Providing specialist support (such as engineering and legal support, help with navigating local government politics, and communication guidance) • Supporting catchment coordinators for catchment-scale projects and help with project management, people facilitation and fundraising (it includes tapping into the wider volunteer base) 	To be commissioned by deliverables	<p>New deliverable name: Community Group Support Service.</p> <p>GW led.</p> <p>Envisaged as a service for community groups that is hosted within GW but may coordinate with Territorial Authorities (TAs). Resourcing of the service may be jointly funded with TAs and informed with Mana Whenua.</p> <p>To provide the services listed across recommendations 10, 11 and 12.</p>

	<ul style="list-style-type: none"> Offering guidance on where to put the best efforts and take actions, consistent with the kawa and Te Mana o te Wai. 		
11	<p>Greater Wellington creates cross-whaitua structures and services that support a coherent and connected approach to local action knowledge-sharing. These should include:</p> <ul style="list-style-type: none"> Spatial and catchment-level planning that helps coordinate efforts aimed at meeting Te Mana o te Wai and community goals, and makes roles and responsibilities clear Community-to-community knowledge exchange and connecting groups The provision of transparent and clear mechanisms for accessing and allocating funding and services, including expert knowledge The provision of frameworks and supports that give community groups confidence that they are working in the interests of Mana Whenua A strategic approach to the use of council support services (such as Mountains to Sea Wellington) Providing a single contact point for questions and advice for all the agencies involved. 	To be commissioned by deliverables	<p>New deliverable name: Community Group Support Service.</p> <p>Refer to comment for Recommendation W10 as the same deliverable includes implementation of recommendations 10, 11 and 12.</p>
12	<p>Greater Wellington and Mana Whenua develop resources (by 2024) that community groups can use and adapt for their own communication with local communities, to help build understanding, connections and involvement that complement messages and campaigns by councils and water agencies.</p> <p>Specific themes to include are:</p> <ul style="list-style-type: none"> Where drinking water comes from, and the relationships between activities in the Hutt Valley and risks to the Waiwhetū aquifer Awa as tipuna, living entities of distinctive mana and whakapapa Our responsibility to respect the awa and their mana, and act on this in our behaviour with water The state of our waterways, including for different places Action being taken, including for different places Actions people can take, including those specific to their local areas. 	To be commissioned by deliverables	<p>New deliverable name: Community Group Support Service.</p> <p>Refer to comment for Recommendation W10 as the same deliverable includes implementation of recommendations 10, 11 and 12.</p>
13	<p>Greater Wellington, Mana Whenua and territorial authorities partner with communities in developing catchment plans, co-designing their journeys and sharing the delivery process and roles required to achieve Te Mana o te Wai and local outcomes. This will help groups to know where to put their best efforts and provide clear resourcing strategies to follow through with their plans.</p>	Currently being implemented	<p>This will be delivered via catchment plans being introduced through the new Rōpū Taiao Environment Group that was stood up in May 2023.</p> <p>Note that it may be necessary to develop additional implementation at a sub-catchment level to fully implement this recommendation once the new group is stood up.</p>
14	<p>Greater Wellington works with Mana Whenua and catchment groups to make data easily available and accessible in a user-friendly way, including through the use of aggregated data.</p>	To be commissioned by deliverables	<p>New deliverable name: Whaitua Monitoring Plan encompassing each FMU.</p> <p>GW led.</p> <p>This is a broad deliverable which will span all three WIPs received to date. Within WIPs there are numerous stand-alone monitoring and evaluation recommendations which need to be coordinated rather than implemented in an ad hoc manner, and which also need to be aligned with an even broader GW monitoring and evaluation improvement work programme.</p>

			<p>This deliverable ensures that the relevant recommendations across the WIPs are identified for that wider monitoring and evaluation improvement work programme.</p> <p>This is also the deliverable for W15.</p>
15	<p>Greater Wellington provides more specific, local information on water quality to communities – through making existing data more readily available and collecting new data, including via citizen science programmes, Greater Wellington monitoring programmes and the integration of the two (where appropriate).</p>	To be commissioned by deliverables	<p>New deliverable name: Whaitua Monitoring Plan encompassing each FMU.</p> <p>GW led.</p> <p>See details in comment for recommendation 14.</p>
16	<p>Greater Wellington, with Mana Whenua and communities, develops a toxic algal bloom action plan that includes:</p> <ul style="list-style-type: none"> • Management actions • A monitoring plan specific to toxic algae • Research priorities • Climate change adaptation • A communications approach that supports community and Mana Whenua visions and outcomes. 	To be commissioned by deliverables	<p>New deliverable name: Toxic algae action plan.</p> <p>GW led.</p> <p>Intended to be an action plan that focuses on monitoring, communications, and research specific to toxic algae (noting monitoring and communication aspects are already being implemented).</p> <p>It will need to bring together all the current work which refers to management actions (e.g., setting limits, improving river health etc. which will improve the prevalence of toxic algae).</p>
17	<p>Greater Wellington amends regulatory documents to require the relevant three waters agency to develop a stormwater strategy (by 2023), within the global stormwater network resource consent, to contribute to achieving the relevant first steps in each of the catchment tables under the heading 'Journey from current state to wai ora'.</p>	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
18	<p>Greater Wellington amends regulatory documents to require the relevant three waters agency to develop a strategy/plan (by 2023), within the wastewater network resource consents, to contribute to achieving the relevant first steps in each of the catchment tables under the heading 'Journey from current state to wai ora'.</p>	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
19	<p>The relevant three waters agency increases the number of repairs and renewals in the public wastewater infrastructure (aligning with the strategy in Recommendation 18) to ensure that:</p> <ul style="list-style-type: none"> • By 2033, no more than approximately 22 per cent of the wastewater pipe network will be worse than grade 3 (average condition) • By 2040, no more than ~12 per cent of the wastewater pipe network will be worse than grade 3 (average condition) • By 2050, no wastewater pipe assets will be below grade 3, and asset management plans will be actively identifying and replacing ageing pipes or pipes in poor condition. 	TBC	Requires conversations between GW and Wellington Water regarding timeframes.
20	<p>Territorial authorities and the relevant three waters agency prioritise the repair and replacement of public wastewater assets that lead to overflows on private or public land.</p>	Currently being implemented	<p>Wellington Water led.</p> <p>Greater Wellington understands Wellington Water are implementing this through their wastewater network overflow resource consent applications which they are currently in the process of lodging for different areas (mid 2023).</p>

<p>21</p>	<p>A target of zero wastewater overflows (by 2060) is achieved, except in infrequent situations (such as pump failures or rainfall events) with a >25-year average return period (ARI).¹⁻²</p> <p>To meet this goal, we recommend implementing six-yearly targets for reducing wastewater overflows set out in the relevant three waters agency's 2024 wastewater strategy and resource consent. These overflow reductions must align with our obligation to achieve the relevant first steps in each of the catchment tables under the heading 'Journey from current state to wai ora' and the primary contact recreation national bottom lines set by central government by 2040</p> <p>Footnotes:</p> <p>1 While we appreciate flooding events can result in wastewater contamination in the environment, we should not accept this as 'normal practice' for the wastewater network. By 2060, we expect the wastewater network to be of such a standard that it does not leak wastewater and that overflows only happen under unplanned or extreme events.</p> <p>2 A 25-year average return period (ARI) is a storm of a certain size and duration that could be expected to occur once in a generation, which has a four per cent probability of occurring every year. While historical records indicate this storm should occur every ~25 years, it could occur more than once over this period, but the probability would be low. Similarly, a 100-year ARI storm could occur twice in one year, but the probability would be very low.</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water for latest information.</p>
<p>22</p>	<p>The relevant three waters agency investigates, and reports to, Greater Wellington and Mana Whenua (by 2022) on the feasibility of pre-treating wastewater overflows and any locations where this could be prioritised for upcoming Long Term Plan reviews.</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water for latest information.</p>
<p>23</p>	<p>The relevant three waters agency increases its monitoring of wastewater overflows across the network, with the aim of identifying faults through increased data collection (by 2025). The identified faults are to be repaired in line with the timelines specified in Recommendations 19, 27 and 28</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water for latest information.</p>
<p>24</p>			
<p>24.1</p>	<p>Greater Wellington amends the relevant regulatory documents, and the relevant three waters agency increases its investigations of, the public/private water networks (by 2030) to identify all cross-connections (wastewater connected to stormwater) and inflow faults (stormwater connected to wastewater).</p> <p>The assessed pipe conditions and any faults are to be recorded on the relevant properties' LIMs and updated as repairs are made.</p> <p>[Note: text shown as crossed out shows which parts of a recommendation are being implemented through other sub-recommendations. The text that has been crossed out here in sub-recommendation 24.1 can be found in sub-recommendations 24.2 and 24.3]</p>	<p>NRP Plan Change by 2024</p>	<p>Being managed by Greater Wellington through its regulatory programmes of work.</p>
<p>24.2</p>	<p>Greater Wellington amends the relevant regulatory documents, and the relevant three waters agency increases its investigations of, the public/ private water networks (by 2030) to identify all cross-connections (wastewater connected to stormwater) and inflow faults (stormwater connected to wastewater).</p> <p>The assessed pipe conditions and any faults are to be recorded on the relevant properties' LIMs and updated as repairs are made.</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water for latest information.</p>

24.3	<p>Greater Wellington amends the relevant regulatory documents, and the relevant three waters agency increases its investigations of, the public/ private water networks (by 2030) to identify all cross-connections (wastewater connected to stormwater) and inflow faults (stormwater connected to wastewater).</p> <p>The assessed pipe conditions and any faults are to be recorded on the relevant properties' LIMs and updated as repairs are made.</p>	TBC	Requires conversations with Wellington Water for latest information then other TAs.
25			
25.1	<p>Greater Wellington amends the relevant regulatory documents on, and the relevant three waters agency increases its investigations of, the public/ private water networks (by 2040) to identify all groundwater infiltration (to the wastewater network) and wastewater leakage (exfiltration).</p> <p>The assessed pipe conditions and any faults are to be recorded on the relevant properties' LIMs and updated as repairs are made.</p>	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
25.2	<p>Greater Wellington amends the relevant regulatory documents on, and the relevant three waters agency increases its investigations of, the public/ private water networks (by 2040) to identify all groundwater infiltration (to the wastewater network) and wastewater leakage (exfiltration).</p> <p>The assessed pipe conditions and any faults are to be recorded on the relevant properties' LIMs and updated as repairs are made.</p>	TBC	Requires conversations between GW and Wellington Water for latest information.
25.3	<p>Greater Wellington amends the relevant regulatory documents on, and the relevant three waters agency increases its investigations of, the public/ private water networks (by 2040) to identify all groundwater infiltration (to the wastewater network) and wastewater leakage (exfiltration).</p> <p>The assessed pipe conditions and any faults are to be recorded on the relevant properties' LIMs and updated as repairs are made.</p>	TBC	Requires conversations between GW, Wellington Water, and territorial authorities for latest information.
26	<p>All territorial authorities provide financing mechanisms (subject to appropriate terms and conditions) no later than 2024 to assist landowners to fix faults in private laterals. These mechanisms could be deferred payments collected through rates, or territorial authorities could recover the costs when the properties are sold.</p> <p>Territorial authorities and the relevant three waters agency also provide supporting advice to private landowners on their rights and responsibilities regarding private laterals.</p>	TBC	Requires conversations between GW and each TA.
27	<p>Territorial authorities apply their existing powers under the Local Government Act 1974 and Health Act 1956 to ensure landowners repair all faults related to cross-connections (wastewater to stormwater) and inflows (stormwater to wastewater) within two years of their identification.</p> <p>Cross-connection and inflow fault repairs on private land may be undertaken by the relevant three waters agency. However, the costs are to be covered by the landowners either directly or through other funding mechanisms (see Recommendation 26).</p>	TBC	Requires conversations between GW and each TA.

<p>28</p>	<p>Territorial authorities, through the relevant three waters agency, apply their existing powers under the Local Government Act 1974 and Health Act 1956 to ensure that:</p> <ul style="list-style-type: none"> All identified leaky private wastewater laterals, including infiltration and/or exfiltration leaks, are fixed within five years of identification. Enforcement action is to be taken if the fixes are not made in this timeframe By 2045, all identified leaky private wastewater laterals have been fixed and an ongoing cycle of maintenance is in place <p>A database is developed and maintained of the conditions and ages of all private and public assets in the three waters network.</p>	<p>TBC</p>	<p>Requires conversations between GW, Wellington Water and TAs for latest information.</p>
<p>29</p>	<p>By 2025, territorial authorities and the relevant three waters entity develop a process (such as a 'warrant of fitness'), through which the condition of private laterals is assessed at the point of a property's sale or when a building consent application is lodged. The costs are to be covered by the property owners.</p> <p>The condition of these laterals, and any faults revealed through the process, are to be recorded on the properties' LIMs with the information updated as repairs are made (aligning with the timelines in Recommendations 27 and 28). Once the repairs are complete, an ongoing cycle of inspection and maintenance should be established.</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water and TAs for latest information.</p>
<p>30</p>	<p>By 2024, territorial authorities establish a complete set of regulatory and policy measures that:</p> <ul style="list-style-type: none"> Require landowners to repair all failed private laterals and record these failures on their LIMs until the repairs are complete <p>Provide a funding mechanism to support landowners in making these repairs (such as instalments on their rates bills or councils recovering the costs when properties are sold).³</p> <p><small>Footnote 3: Modified from WCC Mayoral Task Force Review on three waters, Recommendation 23.</small></p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water and TAs for latest information.</p> <p>Too detailed for RPS, etc.</p>
<p>31</p>	<p>Relevant three waters agency investigates methods (by 2025) to significantly reduce sludge going to landfills from wastewater treatment plants.</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water and TAs for latest information.</p>
<p>32</p>	<p>Greater Wellington and territorial authorities provide good-practice information and advice to septic tank owners.</p> <p>They also develop a programme for regular septic tank investigations undertaken in rural/lifestyle areas in the whaitua, with the aim of improving their understanding of the impact of septic tanks on water quality, ecology and public health.</p> <p>Where septic tanks are identified as affecting water quality, ecology or public health, territorial authorities or Greater Wellington are to work with the relevant landowners to reduce these effects by repairing, replacing or enhancing their septic systems and having an ongoing cycle of maintenance.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Septic tanks communication stocktake and communications package.</p> <p>GW led overall but see details below.</p> <p>Intended to include an initial stocktake to identify what initiatives are in place across GW and TAs in the whaitua to communicate septic tank requirements and gaps to be filled for landowners.</p> <p>Communications package would likely include information on maintenance requirements and permitted rule activity requirements and ensure that initiatives reach relevant occupiers across all TAs.</p> <p>GW to be initial lead for stocktake but communications may be led by individual TAs, including to recognise/build on work already underway.</p>

<p>33</p>	<p>Greater Wellington provides sufficient Land Management advisory resources and funding to:</p> <p>Support the implementation of actions at property and catchment levels to achieve catchment plan objectives</p> <p>Support landowners' implementation of national stock exclusion rules</p> <ul style="list-style-type: none"> • Help link farmers' action (including through their Freshwater Farm Plans) to catchment plans, and help small block owners to link their actions to catchment plans • Support the implementation of Freshwater Farm Plans to ensure quality delivery of farm planning services and effective connections to catchment plans • Promote the uptake of best management practice, and ensure open communication between landowners and Greater Wellington to keep best practices up to date • Integrate advice to landowners with other relevant objectives to achieve co-benefits (e.g., carbon sequestration, biodiversity) 	<p>Currently being implemented</p>	<p>Led by GW.</p> <p>Additional Land Management roles were appointed prior to stand up of the new Rōpū Taiao Environment Group.</p> <p>The new Rōpū Taiao Environment Group is likely to provide more support and help to ensure these functions are included in catchment planning (but will require confirmation following implementation).</p>
<p>34</p>			
<p>34.1</p>	<p>Greater Wellington supports landowners to exclude livestock from waterways by:</p> <ul style="list-style-type: none"> • Helping them to develop and implement practices that minimise stock access to streams not covered by regulations • Investigating the specific impacts of horses on water quality and considering further stock exclusion regulations if they are identified as a significant source of contaminants. 	<p>Currently being implemented</p>	<p>GW led.</p> <p>Being implemented via farm plans.</p>
<p>34.2</p>	<p>Greater Wellington supports landowners to exclude livestock from waterways by:</p> <ul style="list-style-type: none"> • Helping them to develop and implement practices that minimise stock access to streams not covered by regulations • Investigating the specific impacts of horses on water quality and considering further stock exclusion regulations if they are identified as a significant source of contaminants. 	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Impacts of horses on water quality investigation.</p> <p>GW led.</p> <p>Intended to include an investigation culminating in a report which quantifies the impact of horse activities (including but not limited to grazing) on water quality in Te Whanganui-a-Tara whaitua.</p> <p>Report will include recommendations on regulatory (including stock exclusion) and non-regulatory options to mitigate any identified water quality issues.</p>
<p>35</p>	<p>Greater Wellington investigates alternative incentives (e.g., rates rebates) to increase landowners' uptake of revegetation projects, including projects using native plant species.</p> <p>This applies particularly to landowners with marginal and erosion-prone land (to reduce erosion and sediment loss), wetlands (for nutrient stripping, etc), and rural catchments generally (to slow flood flows further down the catchment).</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Alternative incentives for landowner revegetation projects options paper.</p> <p>GW led.</p> <p>Intended to be an options paper based on research including other council initiatives, ETS opportunities for administrative support by GW, rates rebates, etc.</p> <p>To identify current barriers to change.</p> <p>To recommend any options to be progressed and next steps for this.</p>

36	Greater Wellington supports the development of property-specific information to inform Freshwater Farm Plan development, particularly for managing diffuse discharges, CSA (Critical Source Area, i.e., hotspot) management, riparian planting (to complement stream fencing regs), and management methods for those streams where stock exclusion rules do not apply	Currently being implemented	GW led. Will be incorporated into freshwater farm plans. These things are already being undertaken currently through non-regulatory farm plans.
37	Greater Wellington provides enough staff and resources to: <ul style="list-style-type: none"> • Work with forestry groups (New Zealand Farm Forestry Association, New Zealand Forest Owners Association) and contractors to provide proactive advisory support that includes ensuring all forestry operators are aware (by 2023) of relevant regulatory requirements and good practice • Ensure all forestry operators in the whaitua are monitored for compliance with the National Environmental Standard for Plantation Forestry (NES-PF) and other relevant requirements from 2023 onwards, and share this monitoring information with the community • Take enforcement action on non-compliance. 	Currently being implemented	New compliance roles are being established which will increase GW's capacity and resourcing to perform this. Review will be needed to ensure this is sufficient resource to fully implement this recommendation.
38			
38.1	Greater Wellington and territorial authorities: <ul style="list-style-type: none"> • Are exemplars of good practice on all council-owned land and infrastructure, including contaminated land, farms, forestry land, wetlands and golf courses. • Provide information on how good-practice decisions have been made. • Report publicly on their year-on-year improvements. 	Currently being implemented	GW led. 38.1 relates to GW being named (versus 38.2 "and territorial authorities" being named) Currently being implemented for GW through Parks Networks Plan (10 year plan on managing parks), including reporting; Reclothing Papatūānuku Restoration Plan (retiring farm parks except Battle Hill); Forestry advisory service roles being established.
38.2	Greater Wellington and territorial authorities: <ul style="list-style-type: none"> • Are exemplars of good practice on all council-owned land and infrastructure, including contaminated land, farms, forestry land, wetlands and golf courses. • Provide information on how good-practice decisions have been made. • Report publicly on their year-on-year improvements. 	TBC	Requires conversations between GW and each TA.
39			
39.1	Greater Wellington, territorial authorities and the relevant three waters agency set an example by ensuring that (from 2022), their fleet vehicles are renewed with copper-free brake pads or replaced by vehicles with these pads.	Currently being implemented	This recommendation is being managed by Greater Wellington as part of a wider work programme of zinc and copper related recommendations. It includes liaising with the Greater Wellington fleet manager.
39.2	Greater Wellington, territorial authorities and the relevant three waters agency set an example by ensuring that (from 2022), their fleet vehicles are renewed with copper-free brake pads or replaced by vehicles with these pads.	Currently being implemented	Included as a programme in the Stormwater Management Strategy being developed by Wellington Water around leading by example. Unknown whether WCC, HCC and UHCC are taking actions to implement this recommendation.

<p>40</p>	<p>Territorial authorities review and strengthen their plumbing consent and code compliance processes (by 2024), to ensure there are clear accountabilities and consequences for compliance transgressions and ultimately a low risk of future illegal cross-connections. ⁴</p> <p><small>Footnote 4: Adapted from WCC Mayoral Task Force Review on three waters, Recommendation 22.</small></p>	<p>Currently being implemented</p>	<p>Wellington Water led.</p> <p>GW understands that Wellington Water have implemented a number of changes to implement this recommendation via updating regional Standards for Water Services which took effect in December 2021. For example, colour coding of pipes. Sign-off procedures have been updated.</p>
<p>41</p>	<p>Greater Wellington and the relevant three waters agency engage with and express the importance of environmental consequences to the Plumbers, Gasfitters and Drainlayers Board, relevant professional regulatory bodies and industry organisations. These organisations shall:</p> <ul style="list-style-type: none"> • Together improve their systems of communication and reporting for disciplinary complaints • Become active and consistent in reporting discovered evidence of sub-standard tradesperson work, especially for instances of illegal wastewater to stormwater connections • Apply disciplinary action as set out under the defined offences in section 89 of the Plumbers, Gasfitters, and Drainlayers Act 2006. 	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Letter to Plumbers, Gasfitters and Drainlayers Board</p> <p>GW led.</p> <p>Letter from GW at GM or higher level to CE of Chair of the Board.</p>
<p>42</p>	<p>The relevant three waters agency works with industry organisations to reinforce or improve standards, communication and training for best industry practice. Priority should be given to industries where there is high interaction with the stormwater and wastewater network (e.g., painters and cleaners).</p>	<p>TBC</p>	<p>Requires conversations between GW and Wellington Water for latest information.</p>
<p>43</p>	<p>Greater Wellington investigates and considers adopting new mechanisms to improve compliance (such as restorative processes and requiring bonds for earthworks and forest harvesting).</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Options paper for New Compliance Mechanisms.</p> <p>GW led.</p> <p>Paper which notes options for meeting the description in recommendation 43.</p> <p>To include recommendations on which options should be implemented and which are not feasible. To include, but not necessarily, be limited to examples listed in recommendation 43.</p> <p>Could include non-regulatory recommendations.</p> <p>May include permitted activities.</p>
<p>44</p>	<p>Greater Wellington and Mana Whenua work with territorial authorities to ensure that all large green spaces (e.g., parks, school grounds, golf courses) are managed to reduce the infiltration of fertiliser into groundwater and waterways, with plans in place (by 2023) that include public reporting.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Stocktake and mitigation of fertiliser leeching in green spaces.</p> <p>GW led.</p> <p>1. Intended as a workshop on current fertiliser application, including GW, Wellington Water, WCC, HCC, UHCC. To include:</p> <ul style="list-style-type: none"> a. assessing awareness of and compliance with current PNRP rules b. current information available on fertiliser use and potential leeching risk c. area of land fertiliser is being applied to/mapping <p>2. To include TA managed land and privately owned green spaces such as golf courses</p>

			3. Workshop to provide written findings and recommend any next steps for mitigation and how these will be followed up.
45	<p>With input from the relevant three waters agency (by 2026), Greater Wellington and territorial authorities develop or amend regulatory instruments to help reduce the risk of contaminants entering the stormwater system.⁵ These could include:</p> <ul style="list-style-type: none"> • Painting and/or replacing old roofs to reduce the prevalence of heavy metals • Washing paint brushes or cars • Treating runoff from carparks and roads. <p>Footnote 5: Modified from WCC Mayoral Task Force Review on three waters, Recommendation 12.</p>	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
46	<p>Greater Wellington and territorial authorities develop a scheme to support the painting or replacing of large-scale high zinc-yielding roofs, which could include education, advice and incentives.</p>	To be commissioned by deliverables	<p>Two new deliverables, names:</p> <ul style="list-style-type: none"> • Promoting good practice by community and industry. • Reinstating Take Charge Programme. <p><i>Promoting good practice by community and industry</i></p> <p>Note: Promoting good practice by community and industry has been discussed between GW and PCC as the deliverable is also applicable for Te Awarua-o-Porirua WIP. This has identified that clarification with the former Whaitua Committee for Te Awarua-o-Porirua would be useful to define the good management practice intended in that WIP. This may result in a revision of the deliverable and potentially a different deliverable may need to be applied for just Te Whanganui-a-Tara.</p> <p><i>Reinstating Take Charge Programme</i></p> <p>GW led</p> <p>Take charge is the name of a previous education programme.</p> <p>The deliverable recognises that a number of education focussed activities could sit with this programme if reinstated. However, it would not necessarily need to be delivered via the former Take Charge programme exactly as it was, so this description should be considered a starting point rather than the final deliverable to be commissioned.</p>
47	<p>Greater Wellington and territorial authorities develop a scheme to reduce the impacts on waterways from the washing of cars.</p>	To be commissioned by deliverables	<p>New deliverable name: Car Washing Scheme</p> <p>GW led (to facilitate with TAs, Taranaki Whānui and Ngāti Toa)</p> <p>Intended to initially be a workshop with next steps to be identified and documented.</p>
48	<p>Greater Wellington and territorial authorities investigate options to minimise the impacts of agricultural sprays on waterways and report on options (by 2025).</p>	To be commissioned by deliverables	<p>New deliverable name: Report on Sprays Impact on Waterways</p> <p>GW led.</p>

			<p>Intended to be a report which includes a stocktake of current information on use of agrichemical sprays in waterways in the whaitua. Could include discussion with spraying contractors, possibly non-commercial users.</p> <p>To identify current state (including regulatory measures) and options for minimising impacts.</p> <p>To focus on non-regulatory options and to make recommendations on options to be implemented.</p> <p>This deliverable spans both W48 and W49.</p>
49	<p>Greater Wellington, territorial authorities, the relevant three waters agency and relevant industry groups develop and implement a pollution prevention programme. This will be outlined, delivered and monitored through various mechanisms.</p> <p>The programme must:</p> <ul style="list-style-type: none"> » Raise the awareness of the public about what they can do to reduce their impacts on harbour and stream health » Promote and incentivise industry good management practice, targeting high-risk land-use activities that contribute relatively high levels of contamination » Identify and target priority areas for contaminant reduction based on the identification of catchments that contribute to localised hotspot areas » Investigate opportunities to enable change by streamlining regulatory processes and removing barriers to businesses and industries initiating change » Work with specific industries/suppliers to increase understanding around risks from exterior chemical cleaning products, with an aim to reduce usage through point-of-sale warnings and changes in product care advice. 	To be commissioned by deliverables	<p>New deliverable name: Report on Sprays Impact on Waterways</p> <p>GW led</p> <p>See details in comments for W48.</p>
50	<p>Territorial authorities and the relevant three waters agency work together in high-risk areas to increase and prioritise regular street sweeping and sump clearance. They also need to investigate other opportunities to capture and clear contaminants from stormwater drains, including those to increase awareness and education with residents and businesses about how they can reduce contaminants (e.g., litter ending up in waterways).</p>	Currently being implemented	<p>Wellington Water has an education programme as part of the Stormwater Management Strategy. Looking to create memorandums of understanding to undertake street sweeping for water quality purposes.</p>
51	<p>Greater Wellington works with territorial authorities, Mana Whenua and landowners to identify and document (by 2026) the locations of potentially contaminated land, including landfills, and the risks to water quality and aquatic ecosystems.</p>	To be commissioned by deliverables	<p>New deliverable name: Contaminated Site Investigation and Remediation Plans Project.</p> <p>GW led.</p> <p>The first part of this is likely already being implemented via the SLUR database (including the HAIL database within this) but the component “and the risks to water quality and aquatic ecosystems” may not be implemented via this. To be discussed further within GW.</p>

			<p>Landfills - Identified 7 high priority closed landfill sites based on risk to water quality. Undertaking desktop assessment using risk assessment tool to assess climate change risk (which relates to water quality).</p> <p>This deliverable has been identified as requiring further assessment within GW.</p> <p>This deliverable spans W51 and W52.</p>
52	<p>Greater Wellington, territorial authorities and Mana Whenua work with owners of land with contaminated sites to further investigate, monitor, develop and implement remediation plans for those that pose medium-to-high risks to water quality and aquatic ecosystems. These plans are to be developed within five years of the identification of these sites, and those posing high risks to water quality are to be prioritised for remediation.</p>	To be commissioned by deliverables	<p>New deliverable name: Contaminated Site Investigation and Remediation Plans Project.</p> <p>GW led.</p> <p>See comments in W51 for details.</p>
53	<p>Agencies involved in the remediation of contaminated land affecting water quality and aquatic ecosystems include Mana Whenua in decision making and involve, consider and contain the visions and ideas of community groups in the planning and implementation, including as part of developing catchment plans (see Recommendation 13).</p>	Currently being implemented	<p>Will be included in the development of catchment plans.</p> <p>If a consent is involved, which it will be if affecting water quality and aquatic ecosystems, Mana Whenua will be involved via the regulatory process.</p>
54	<p>Greater Wellington, Mana Whenua, Hutt City Council, Upper Hutt City Council, the relevant three waters agency and the community actively work together to better protect the current and future sources (surface water and groundwater) of human drinking-water from emerging threats. They do this by investigating the risks associated with water quality and quantity and managing activities that may adversely affect this (such as land use and contaminant discharges). This may include developing district and regional plan provisions and other methods.</p>	NRP Plan Change by 2024	Being managed by GW through its regulatory programmes of work
55			
55.1	<p>The relevant three waters agency's (currently Wellington Water) Regional Standard for Water Services should incorporate WSUD stormwater and water conservation interventions. ⁽⁶⁾</p> <p>⁽⁶⁾ Modified from WCC Mayoral Task Force Review on three waters, Recommendation 7.</p>	NRP Plan Change by 2024	<p>Being managed by Greater Wellington through its regulatory programmes of work.</p> <p>Relates to first paragraph of the recommendation.</p>
55.2	<p>Also, territorial authorities' codes of practice and district plans should be amended to refer to the Regional Standard for Water Services (where applicable) by 2025, and should be mandatory for all developments (greenfield, infill/brownfield and re-development, including infrastructure). It should be supported through education programmes for contractors, community groups, and the design and engineering community.</p>	To be commissioned by deliverables	<p>New deliverable name: WSUD Education Programme</p> <p>Relates to second paragraph of the recommendation.</p> <p>GW led.</p>
56	<p>By 2022, Greater Wellington convenes a WSUD working group with Mana Whenua, territorial authorities, the relevant three waters agency and Waka Kotahi. The group will need to be funded to cover its wide-ranging work, which will aim to:</p> <ul style="list-style-type: none"> » Resolve barriers to WSUD in the Wellington Region » Identify opportunities to retrofit WSUD and green infrastructure into the existing urban environments, incorporating communities and catchment-level planning 	To be commissioned by deliverables	<p>GW led.</p> <p>Regional Stormwater Forum/Working Group set up – made up of GW, mana whenua, TAs, Waka Kotahi and Wellington Water.</p>

	<p>» Identify opportunities to ‘daylight’ piped streams and restore existing streams to promote community connection, habitat restoration and flood mitigation</p> <p>» Lead by example in promoting new WSUD initiatives. The working group should be part of Greater Wellington’s newly established regional stormwater forum. It should also collaborate with key stakeholders (such as developers and commercial, industrial and residential community groups), and help provide education and training material/ programmes for contractors.</p>		
57	By 2025, Greater Wellington, Mana Whenua and territorial authorities amend the relevant planning documents to retain, restore and enhance the natural drainage system – so that they require hydraulic neutrality and water-quality treatment in urban catchments through WSUD.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
58			
58.1	Greater Wellington and Mana Whenua, together with territorial authorities and the relevant three waters agency, develop (by 2025) a comprehensive suite of regulatory and non-regulatory interventions for new property developments and infrastructure, to be implemented through WSUD via a catchment-management approach.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work. Covers regulatory aspects of this recommendation, versus non-regulatory is W58.2.
58.2	<p>These interventions would include water impact assessments, rainwater/stormwater harvesting, rain gardens, constructed wetlands, green roofs, improved sump maintenance, strategic street sweeping and permeable pavements to reduce water-quality impacts and reduce peak wet weather flows. (7). Existing properties and infrastructure should be retrofitted using this WSUD approach whenever opportunities arise (e.g., at the end of an asset’s life).</p> <p>(7) Modified from WCC Mayoral Task Force Review on the three waters, Recommendation 6.</p>	To be commissioned by deliverables	<p>New deliverable name: Expanded Wellington Water’s Water Sensitive Design Guidelines 2019.</p> <p>Wellington Water led (but subject to discussion/confirmation with them).</p> <p>Proposed that the existing guidelines be updated if Wellington Water agree.</p>
59	<p>The relevant three waters agency:</p> <p>» Develops a standardised tool (by 2025) that can be used to assess a development’s potential contributions of contaminants and hydrological impacts</p> <p>» Recommends potential options to mitigate these effects using site-appropriate WSUD green infrastructure. This supports the global stormwater strategy (Recommendation 56) and Recommendation 58.</p>	Currently being implemented	GW understands that this work is already underway at Wellington Water regarding this.
60	<p>By 2025, Greater Wellington and territorial authorities amend the relevant planning documents so that all resource consents for property developments and infrastructure upgrades/repairs require the minimisation of stormwater effects and achieve hydraulic neutrality on-site. Where this is not possible or practical on development sites, a formal stormwater offsetting programme could be adopted to fund more efficient centralised systems in the public realm. (8)</p> <p>(8) Modified from WCC Mayoral Task Force Review on three waters, Recommendation 8.</p>	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
61	Territorial authorities amend regulatory documents, while working with the relevant three waters agency, to (by 2035) reduce the effects of stormwater flooding on public health, safety and property by further integrating the use of roads and open spaces (such as parks and sports grounds) to act as overland flow paths and flood storage. (9)	To be commissioned by deliverables	<p>New deliverable name: District Plan Flood Hazard Mapping and Rules</p> <p>UHCC, HCC, WCC led (subject to GW confirming this with them).</p>

	(9) Modified from WCC Mayoral Task Force Review on three waters, Recommendation 14.		GW anticipates that this recommendation will be implemented by updates to District Plans. GW has ongoing work providing up to date flood hazard mapping to all TAs for the Flood Protection Scheme areas. This deliverable spans W61 and W65.
62	By 2024, territorial authorities work with the relevant three waters agency to develop an approach to the ownership and management of green infrastructure for property developments, and ensure this infrastructure meets appropriate standards when being vested to council ownership. (10) (10) Modified from WCC Mayoral Task Force Review on three waters, Recommendation 10.	TBC	Requires conversations between GW and Wellington Water for latest information.
63	Territorial authorities ensure that (by 2024) all green infrastructure is adequately capitalised and depreciated to provide funding for ongoing maintenance and renewals. (11). (11) Modified from WCC Mayoral Task Force Review on three waters, Recommendation 11.	TBC	Requires conversations between GW and Wellington Water for latest information.
64	Greater Wellington works with Mana Whenua, community groups and territorial authorities to amend (by 2024) all relevant regulatory documents to ensure: » That river management enhances habitat restoration and stormwater treatment along the full length of developed rivers » The protection of swimming holes. Specifically, for Te Awa Kairangi/Hutt River, these objectives should be accounted for when undertaking flood protection works	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
65	Territorial authorities update the relevant regulatory documents (by 2025) to ensure they incorporate up-to-date flood hazard mapping and are supported by rules that prevent property development in high-risk areas.	To be commissioned by deliverables	New deliverable name: District Plan Flood Hazard Mapping and Rules. UHCC, HCC, WCC led (subject to GW confirming this with them) This deliverable spans W61 and W65. See comments in W61 for details.
66			
66.1	By 2024, Greater Wellington amends the relevant regulatory documents to include policies that aim to avoid unsuitable property development, with reference to setbacks from stream/river margins and hydraulic neutrality.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
66.2	By 2025, territorial authorities incorporate rules in their district plans that: » Require WSUD, including hydraulic neutrality in any developments » Provide for buildings to be set back from river and stream margins (these setbacks are to provide for āhua and natural character) » Restrict development in known overland flow paths (in line with Recommendation 61).	To be commissioned by deliverables	New deliverable name: District Plans set backs and restrictions. UHCC, HCC, WCC led (subject to GW confirming this with them) GW anticipates that this recommendation be implemented by updates to District Plans.

67	<p>Greater Wellington amends the relevant regulatory documents by 2023, while working with Mana Whenua and territorial authorities to co-design operational guidelines for undertaking flood works on small urban streams, including those on private property. These guidelines would:</p> <ul style="list-style-type: none"> » Leave room for the river, floodwater and natural processes » Establish native riparian vegetation, which also gives effect to the values in the NPS-FM 2020. 	TBC	<p>GW led.</p> <p>GW is identifying any non-regulatory components as the recommendation is already covered under the PNRP.</p>
68	<p>Greater Wellington, territorial authorities, Mana Whenua and the relevant three waters agency develop plans (by 2030) for the managed retreat and adaptation of three waters infrastructure due to rising sea level.</p>	To be commissioned by deliverables	<p>New deliverable name: Three Waters Infrastructure Managed Retreat Plan.</p> <p>Wellington Water led (but subject to discussion/confirmation with them).</p> <p>GW anticipates that this will be a plan identifying all key infrastructure under threat and how its managed retreat (or adaptation) will be managed and funded.</p> <p>GW notes that this will be dependent on the Climate Change Adaptation Act and the Three Water Reforms implemented, although preliminary work could commence prior to this.</p>
69	<p>Greater Wellington supports and incentivises landowners wanting to restore wetlands and removes barriers for best-practice restoration of the mauri of degraded wetlands.</p>	To be commissioned by deliverables	<p>New deliverable name: Complex wetland restoration resource.</p> <p>GW led.</p> <p>An additional staff member at 1 FTE across the region.</p>
70	<p>Greater Wellington increases the resourcing available to implement and enforce the NPS-FM 2020, National Environment Standards and PNRP provisions about wetland identification, protection and restoration.</p>	Currently being implemented	<p>GW led.</p> <p>GW could support more complex wetland restoration activities if we had more inhouse expertise to support consent holders to get consent. The barrier is the information gathering and putting together the consent application.</p> <p>Need focus on wetland compliance (compliance monitoring for NES-F) and wetland identification.</p> <p>To be followed up once further prioritisation occurs within the new Rōpū Taiao Environment Group.</p>
71	<p>Greater Wellington supports positive relationships with wetland owners, including those with wetlands above the Parangārehu Lakes and at Mangaroa. It also provides assistance to protect and restore those wetlands.</p>	Currently being implemented	<p>GW led.</p> <p>Parangārehu Lakes - Parks and Land Management are engaging with the key landowner.</p> <p>GW is reviewing its communication and engagement and policy settings in relation to wetland owners.</p>
72	<p>Greater Wellington and Mana Whenua seek opportunities to develop and restore wetland habitat when managing and designing flood protection works and developing green spaces.</p>	TBC	<p>GW led.</p> <p>GW is identifying the extent to which this recommendation is being implemented through existing work including farm management plans and Riverlink.</p>

73	Greater Wellington maps all natural wetlands in the whaitua, as required by the NPS-FM 2020. This is to be completed by 2024, rather than the NPS-FM deadline of 2030.	Currently being implemented	GW led. Work is underway. Mapped wet areas have been identified using aerial imagery across Kapiti Coast, Porirua and Wellington. These areas still need to be ground truthed to confirm which of the wet areas qualify as natural wetlands.
74	Greater Wellington addresses the issues raised in Te Mahere Wai on the recommendations about the Parangārehu Lakes area.	No applicable deliverables	Te Mahere Wai is being assessed and will be implemented, so there is not a separate WIP deliverable to commissioned/managed here as part of Te Whanganui-a-Tara WIP.
75	Greater Wellington identifies all fish passage barriers on public land by 2025 and private land by 2030.	Currently being implemented	GW led. This work is underway. Barriers on GWRC land have been identified.
76	Greater Wellington, together with Mana Whenua, community groups and territorial authorities, works with owners of fish passage barriers to remediate the highest-risk sites by 2040 and all other sites as soon as practical, but no later than 2045. Catchments highly valued for their indigenous fish and mahinga kai species are prioritised and Greater Wellington reports publicly on the identification and remediation progress.	Currently being implemented	GW led. This work is underway. It is being implemented through the Improving fish passage in the Wellington Region programme. The programme has GWRC funding, and Ministry for the Environment funding from the Freshwater Improvement Fund until June 2026.
77			
77.1	Greater Wellington and Mana Whenua work with territorial authorities to identify (by 2025) the spawning habitats of indigenous fish and mahinga kai species (e.g., inanga) in their rohe.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
77.2	Greater Wellington and Mana Whenua work with territorial authorities to restore (by 2035) the spawning habitats of indigenous fish and mahinga kai species (e.g., inanga) in their rohe.	To be commissioned by deliverables	New deliverable name: Spawning habitat restoration project GW led. A new project which will need to be scoped to meet the requirements of the recommendation.
78	Mana Whenua and Greater Wellington work together and with input from relevant interested parties, including the three waters agency, to design a new water allocation regulatory regime that: » Gives effect to our understanding of Te Mana o te Wai » Provides for Mana Whenua rights and interests, which may include a specific allocation for iwi » Includes mātauranga Māori in its development and monitoring	NRP Plan Change post 2024	Being managed by GW through its regulatory programmes of work
79	Greater Wellington investigates options for iwi allocation in the current regulatory regime.	NRP Plan Change by 2024	Being managed by GW through its regulatory programmes of work
80	Mana Whenua and Greater Wellington work together to develop a framework of how Te Mana o te Wai (for water quantity) can be achieved and demonstrated. This includes agreeing on the process, measures and indicators of success. Note: This links to wider attribute work, as the measures can't sit with water quantity alone	NRP Plan Change by 2024	Being managed by GW through its regulatory programmes of work

81	Greater Wellington supports Mana Whenua to develop mahinga kai measures related to water quantity.	NRP Plan Change by 2024	Being managed by GW through its regulatory programmes of work
82	Greater Wellington, Mana Whenua and territorial authorities (including Porirua City Council) recognise, promote and provide for the mana of the Te Awa Kairangi/Hutt, Wainuiomata and Ōrongorongo Rivers as awa tupuna for Taranaki Whānui and Ngāti Toa Rangatira. They are treasured taonga and providers of wai ora and hauora (health and wellbeing) for the whole Whaitua Te Whanganui-a-Tara community and Te Awarua-o-Porirua community.	To be commissioned by deliverables	New deliverable name: Hui with mana whenua on how to recognise and provide for the mana of Te Awa Kairangi, Wainuiomata and Ōrongorongo Rivers. GW led (to facilitate with Ngāti Toa and Taranaki Whānui). To be a hui with Ngāti Toa and Taranaki Whānui with actions agreed, documented and implemented.
83	Greater Wellington includes in the PNRP the following water allocation limits for the Te Awa Kairangi/Hutt, Wainuiomata and Ōrongorongo Rivers: » Increase the minimum flows over time to 80 per cent of MALF in 50 years' time: <ul style="list-style-type: none"> • The first minimum flow increase must be included in the upcoming plan changes to be notified by 2024 and will apply from the mid-2030s, or whatever date is most appropriate, to ensure that the new minimum flow applies when the bulk water consents to take surface water in the major water supply catchments are renewed • Future increases in minimum flow must be stepped out in line with the bulk water consent renewals • We expect this pathway for increases in minimum flows to be revised as a result of further investigative work to understand the limits that would achieve Te Mana o te Wai, outlined in Recommendation 107. » Cap the amount of water available to be allocated through consents at the existing consented use.	NRP Plan Change by 2024	Being managed by GW through its regulatory programmes of work
84	Greater Wellington includes in the PNRP the following water allocation limits for all streams (outside the three major water supply catchments): » 100 per cent of MALF for the minimum flow » 30 per cent of MALF for the allocation limit.	NRP Plan Change by 2024	Being managed by GW through its regulatory programmes of work
85	Greater Wellington retains the current policy settings that allow the reallocation of any water that becomes available within the allocation limit to be reallocated.	No applicable deliverables	As this recommendation is to retain the status quo there are no deliverables to be commissioned to implement it.
86	Greater Wellington amends the PNRP policy and rule framework in Whaitua Te Whanganui-a-Tara so the region-wide permitted activity rule (R136) no longer applies to this whaitua. Note: Water takes for reasonable domestic use and animal drinking water are still authorised under section 14(3)(b) of the Resource Management Act. All other takes will require a resource consent.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.
87	Greater Wellington amends the PNRP through a plan change (by 2022) to ensure that all water takes requiring resource consent within Te Whanganui-a-Tara require metering. Electronic metering is required by 2027.	NRP Plan Change by 2024	Being managed by Greater Wellington through its regulatory programmes of work.

88	<p>Greater Wellington reviews all existing consents in catchments outside the major water supply catchments that haven't expired within five years of the whaitua plan change, to ensure that any updated allocation limits are applied to consents.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Water Take Consent Review.</p> <p>GW led.</p> <p>Per s128 of RMA.</p> <p>May also need to include a review/update of the GW charging policy if consent holders who were intended to be charged for the cost of the review.</p> <p>May require supporting hydrological model to identify MALF limits.</p> <p>Note that this work would ideally happen after limits have been amended in the PNRP.</p>
89	<p>In collaboration with catchment communities, Greater Wellington develops a work programme designed for and with landowners (particularly for lifestyle block owners), to ensure they are aware of regulations on the use of water.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Education Programme for rural land owners</p> <p>GW led.</p> <p>Communication/engagement based activities to include lifestyle block owners and to be per the wording of the recommendation.</p> <p>Should also encompass other regulations relevant to rural owners, e.g. sediment and erosion.</p>
90	<p>Greater Wellington undertakes assessments (e.g., through rural engagement surveys and targeted catchment investigations) to understand any potential changes in the way people are taking unconsented water (section 14(3)(b) of the Resource Management Act about takes).</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Unconsented Water Use Assessments.</p> <p>GW led.</p> <p>Deliverable is still to be designed and agreed within GW but will need to be sufficient to inform decision making.</p>
91	<p>Greater Wellington increases its flow monitoring in small streams in catchments where land use is changing significantly, or there is thought to be a relatively high potential for change (e.g., rural intensification). This is to establish whether any increase in water use is affecting flows and therefore values.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Whaitua Monitoring Plan encompassing each FMU.</p> <p>GW led.</p>
92	<p>Territorial authorities and the relevant three waters agency implement universal residential metering to identify water wastage, reduce demand and enable more effective network management. To enable metering:</p> <ul style="list-style-type: none"> » Territorial authorities will consult on how to fund water meters by 2025 » The relevant three waters agency will install water meters. The whaitua committee recognises that water metering enables a range of mechanisms for reducing demand. These include, for example: leak detection; information provision; the identification of potential excessive users for advice, support and/or fines; and volumetric charging. <p>Agreement could not be reached on whether volumetric charging should be introduced as a lever for reducing demand. However, if it is, it will be important to ensure that:</p>	<p>Currently being implemented</p>	<p>Wellington Water are undertaking feasibility assessments and developing an indicative business case. Greater Wellington has funded the economic case.</p> <p>Has been added into the 30-year investment plan for the metropolitan councils. Some Councils have money in their LTPs for water meters.</p> <p>The emphasis should be on Wellington City due to the overall amount of water use.</p>

	<ul style="list-style-type: none"> » Water assets remain in public ownership » People can access enough water to flourish » Vulnerable communities are not disadvantaged » Water is respected as the giver of life and doesn't become a commodity » It prevents exploitation and excessive use by people who can afford it. 		
93	<p>The relevant three waters agency provides the community (by 2022) with information on and practical support for being more efficient with water. The information might cover:</p> <ul style="list-style-type: none"> » Technological solutions (such as the different uses of rainwater tanks) » Water-saving tips » The natural water cycle and where our water comes from. <p>The support could be provided through partnerships with catchment groups, through the Mangai Wai Ora (kaitiaki) programme (see Recommendation 101), professional associations and enterprises (e.g., a Sustainability Trust model).</p>	To be commissioned by deliverables	<p>New deliverable name: Additional funding to improve efficiency of water use by community.</p> <p>Wellington Water led.</p> <p>Will involve a request for funding through the GW LTP 2024 process.</p> <p>Note: Wellington Water are already undertaking work in this area with funding from WCC and HCC, but funding is not sufficient for full implementation.</p>
94	<p>The relevant three waters agency develops a programme by 2023 that engages with commercial water users (and starts with identifying the top 100).</p> <ul style="list-style-type: none"> » The programme: Identifies how water is used » Helps users to understand how their use compares to that of similar industries nationally and globally » Supports businesses to improve water efficiency and/or lower their demand. 	To be commissioned by deliverables	<p>New deliverable name: Additional funding to improve the water efficiency of commercial water users.</p> <p>Wellington Water led.</p> <p>Will involve a request for funding through the GW LTP 2024 process.</p> <p>Note: Wellington Water are writing a strategy that will lead to pilots with the small amount of funding they have. Likely to start with top 10 water users, including customer groups e.g., schools. Not enough to fully implement this recommendation unless it is expanded.</p>
95	<p>Greater Wellington and the relevant three waters agency investigate the current pricing for commercial water users (by 2023), to determine if changes in pricing mechanisms could help improve their water-use efficiency and identify the possible economic implications.</p>	TBC	<p>Requires conversations between GW and territorial authorities for latest information. Will need to be implemented by TAs as they issue water bills to commercial users.</p>
96	<p>Territorial authorities promote the use of rainwater tanks or alternative water-storage solutions for non-potable uses in new commercial and residential developments.</p> <p>Note: The majority of the committee strongly supported rainwater tanks being mandatory for new developments, but there was not consensus agreement. The committee did agree that more rainwater tanks in new developments would be beneficial and their use should be promoted.</p>	To be commissioned by deliverables	<p>New deliverable name: Promote use of Rainwater Tanks.</p> <p>GW led (to follow up with TAs).</p> <p>Will involve following up with TAs to ensure that existing RPS rainwater tanks requirements (policy 42) are incorporated into their respective District Plans or through some other mechanism.</p>
97	<p>Greater Wellington, territorial authorities and the relevant three waters agency incentivise (and support with educational material) the retrofitting of rainwater tanks to reduce demand and/or</p>	To be commissioned by deliverables	<p>New deliverable name: Rainwater Tank promotion and incentivisation initiatives.</p> <p>GW led (to initiate with TAs).</p>

	attenuate stormwater, prioritising suburbs that are prone to flooding due to capacity issues in the stormwater network. Territorial authorities provide a funding mechanism for willing property owners.		Will involve WCC, HCC and UHCC to each identify a project or suite of initiatives to meet recommendation 97 within their jurisdiction. TAs could request Wellington Water to come up with a consistent suite of initiatives across the TAs.
98	<p>The relevant three waters agency ensures that 100 per cent of the public drinking-water network is assessed for leakage (by 2030) and a plan (publicly available with progress reporting) is developed to repair and replace assets in the Wellington drinking-water network so that:</p> <ul style="list-style-type: none"> » By 2030, the network will have an Infrastructure Leakage Index (ILI) of 4.5 or lower » By 2040, the network will have an ILI of 3.5 or lower » By 2050, an ILI target of 2 or less will have been achieved and an ongoing cycle of maintenance will be in place to ensure this continues. 	Currently being implemented	Wellington Water are working with Councils to take a proactive approach to leaks. Wellington Water are asking for additional funding from Councils to reduce leakage. Uncertainty around funding will impact on meeting the targets in this recommendation.
99	The relevant three waters agency investigates additional water storage and harvesting water at high flows as soon as possible to ensure continued security of supply for municipal use.	Currently being implemented	Wellington Water led. These options are being considered as part of the water supply strategy work to be completed in 2023.
100	<p>The relevant three waters agency engages with the community and Mana Whenua (by 2023) on implementing community-scale, urban-water recycling for uses such as firefighting, the irrigation of parks and industrial/commercial applications. Initiatives to be considered should include:</p> <ul style="list-style-type: none"> » Collecting and storing community stormwater in public spaces for non-potable purposes » Using the continuous supply of treated wastewater for non-potable purposes. <p>Continued public education and long-term three waters strategies should also encourage a greater use of recycled urban water, and evaluate where existing networks can be optimised, replaced or retrofitted to make greater use of recycled water.</p>	Currently being implemented	Options for urban water recycling are being considered by Wellington Water as part of their demand management programme. Investment will be requested in the future. This is currently low priority.
101	<p>Greater Wellington provide resourcing for a Mangai Wai Ora (kaitiaki) programme (as outlined in Te Mahere Wai), to be developed and led by Taranaki Whānui and Ngāti Toa, alongside relevant industry bodies to train a workforce of kaitiaki to support the ongoing delivery of work on freshwater projects in the whaitua. The scope of the role could include:</p> <ul style="list-style-type: none"> » Freshwater and coastal monitoring using a range of scientific information, including mātauranga Māori, citizen science and community knowledge to inform the current state of water and the environment » Leadership in freshwater policy and plan development » Providing for cultural relationships with freshwater and coastal environments » Monitoring of mahinga kai and Māori customary use » Checking wastewater and stormwater infrastructure on private and public land, in support of three waters agency roving crews » Providing advice and support for industries on their potential impacts on water quality and mitigations 	Currently being implemented	<p>GW led.</p> <p>Kaiwhina Taiao positions were being progressed through kaupapa funding programme. Internships working with different people in the organisation. Currently under review pending Rōpū Taiao Environment Group implementation.</p> <p>Funding coming for specific mana whenua roles related to monitoring for 5 years. Roles could grow over time to encompass more activities. Under discussion with iwi on funding arrangements.</p> <p>This recommendation references Te Mahere Wai which is being assessed and implemented so may move to there to track implementation.</p>

	<p>» Supporting education on local streams, water quality and water usage in schools and the community</p> <p>» Clearing waterways of rubbish, riparian planting and reporting pollution.</p>		
102	<p>Mana Whenua, Greater Wellington and territorial authorities engage with relevant Workforce Development Councils (WDCs) to identify how the WDCs can best contribute, through their leadership roles in vocational education and training, to growing the workforce needed to take care of water.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Workforce Development Councils workshop.</p> <p>GW led.</p> <p>Workshop involving the parties identified in recommendation 102. Content and format to be agreed with the parties in advance and an alternative mechanism may be identified as more appropriate.</p>
103	<p>Greater Wellington and territorial authorities continue to advocate and petition central government for new regulations to restrict the supply of water for water-bottling activities.</p>	<p>No applicable deliverables</p>	<p>Prior to the WIP being submitted, GW and TAs have supported the need for new regulations, via Local Government NZ and submissions on central government proposals. This is expected to continue.</p> <p>As the recommendation is to continue current approaches and does not identify any additional specific work to commission or manage, it has been classified as no applicable deliverables.</p>
104	<p>Greater Wellington advocates to central government in 2022 for the Emissions Trading Scheme to include the protection and restoration of natural wetlands, whether or not they are currently functioning wetlands.</p>	<p>To be commissioned by deliverables</p>	<p>New deliverable name: Letter to Minister of Climate Change advocating for wetlands inclusion in ETS.</p> <p>GW led.</p> <p>Letter from Chair GWRC to Minister for Climate Change requesting inclusion of wetlands in the ETS and outlining the benefits of this.</p>
105	<p>By 2022, Greater Wellington, Mana Whenua and territorial authorities (through the regional stormwater forum – see Recommendation 56) will advocate to central government to introduce with urgency rules that will phase out copper brake pads in vehicles by 2030 or earlier.</p>	<p>Currently being implemented</p>	<p>This recommendation is being managed by Greater Wellington as part of a wider work programme of zinc and copper related recommendations. It includes liaising with other Councils with similar concerns and jointly engaging with Ministry for the Environment to seek abolition of copper brake pads.</p>
106	<p>Greater Wellington partners with Mana Whenua to use mātauranga Māori in developing an understanding of water quality and quantity within the whaitua (e.g., our understanding of springs, aquifers and wetlands, and stream water-quality monitoring).</p>	<p>Currently being implemented</p>	<p>GWRC are employing three mātauranga Māori roles that will sit in Te Hunga Whiriwhiri that will work across the new Rōpū Taiao Environment Group looking at how we incorporate mātauranga Māori across our work programmes and decision making.</p>
107	<p>Greater Wellington partners with Mana Whenua to develop a comprehensive approach to understanding, managing and allowing for mahinga kai values throughout the whaitua. This should build on existing work by Mana Whenua and include:</p> <p>» Developing attributes for understanding whether the values are being provided for with Mana Whenua</p> <p>» Designing and implementing a comprehensive monitoring programme to provide information on current state and trends</p> <p>» Developing targets for mahinga kai throughout the whaitua</p>	<p>NRP Plan Change by 2024</p>	<p>Being managed by GW through its regulatory programmes of work</p>

	» Determining any management methods beyond those already recommended in this WIP that are required to achieve the targets.		
108	<p>Greater Wellington works with Mana Whenua and communities to develop measures for community participation in and connection to their water bodies – and in doing so build on the kaupapa framework, Te Oranga Wai, being developed by Mana Whenua (as outlined in Te Mahere Wai). ‘Community connection’ is important beyond narrow in-stream measures of environmental outcomes. It spans participation, mental health, spiritual connection, identity, sense of place, story and culture, and physical health needs.</p> <p>Note: This recommendation should only be undertaken once the kaupapa framework, Te Oranga Wai, being developed by Mana Whenua is complete and only if there are identified gaps in meeting wider community needs</p>	To be commissioned by deliverables	<p>New deliverable: Community Connection Measures Workshop.</p> <p>Workshop with subsequent implementation actions identified, agreed and carried through.</p> <p>As noted in the WIP recommendation 108, this work cannot take place until the Te Oranga Wai framework is complete.</p>
109	<p>Greater Wellington, Mana Whenua and the relevant three waters agency undertake, or continue to undertake, investigations to determine the changes in minimum water flows and allocation required to meet the long-term whaitua vision and Te Mana o te Wai. Investigations are to begin by 2022 and to be completed by 2027. These investigations should lead to a package of actions and a timetable for implementation. Their scope should be defined in detail and include, but not be limited to:</p> <p>» Prioritising catchments based on information requirements, values and pressures, which includes any catchment focal points for small stream investigations beyond the main water supply catchments</p> <p>» Mātauranga Māori and quantifying water flows to support Mana Whenua values and outcomes for catchments of interest</p> <p>» Testing alternative minimum water flow and allocation regimes alongside a range of municipal water supply infrastructure options</p> <p>» Facilitating the implementation of any new allocation regime and detailed assessments of its implications for municipal water supply infrastructure</p> <p>» Assessments of the implications of climate change on stream flows » Ecosystem function modelling</p> <p>» A review and revision of the Waiwhetū aquifer’s management</p>	NRP Plan Change post 2024	Being managed by Greater Wellington through its regulatory programmes of work.
110			
110.1	<p>Greater Wellington supports and invests in research (to begin by 2023) to better understand our aquifers. This includes investigations of the:</p> <p>» The hydrogeology of aquifers (such as groundwater sources and flow paths, and water availability)</p> <p>» Indicators of aquifer ecosystem health, such as stygofauna</p> <p>» Stressors on aquifer ecosystem health, such as contamination from E. coli and land uses</p> <p>» Risks to the sources of human drinking water, including from emerging contaminants.</p>	Currently being implemented	<p>Wellington Water led.</p> <p>We understand that Wellington Water is implementing the first bullet point. Undertook a drilling campaign across the aquifer to understand more about the hydrology and hydrogeology. Results captured in updated Hutt Aquifer Model (HAM5). It’s being used by Wellington Water for optimising use of the resource and enhancing infrastructure and supply resilience.</p> <p>Wellington Water has developed a GIS catchment risk tool that includes sites (e.g., HAIL sites, closed landfills) to understand the risks to the sources of drinking water across the aquifer.</p>

	Note: Ecosystem health encompasses the five elements of the NPS-FM 2020 – water quality, water quantity, habitat, aquatic life and ecological processes.		We understand Wellington Water is implementing the fourth bullet point. Wellington Water has lodged a source water risk management plan with Taumata Arowai around the risks to the sources of human drinking water. GW sampled for emerging contaminants after the Kaikoura earthquake (2017 & 2018). We may sample again in the future for the state of the environment reporting.
110.2	To support this research, Greater Wellington develops a monitoring network for aquifer ecosystem health by 2023.	To be commissioned by deliverables	New deliverable name: Aquifer ecosystem health monitoring (e.g. stygofauna). GW led. To have three stages: 1) Set up monitoring bores to sample what’s in the groundwater (set up bores suitable for this – can’t use current bores). 2) Research work to input into overall national conversation to develop indicators for groundwater. 3) Research work to follow on to identify the stressors to the indicators on groundwater dependent ecosystems.
111	Greater Wellington initiates (by 2025) and carries out more investigations into the nutrient sources of Te Awa Kairangi/Hutt River, to help in developing the actions needed in future to manage toxic algae. These investigations may include: » Nitrogen coming from tributaries and groundwater in the Pakuratahi and Mangaroa River catchments » Nitrogen entering the shallow, unconfined Upper Hutt aquifer » The contribution of sediment-bound phosphorus » Identifying the sources of fine sediment and its role in toxic algal bloom formation.	To be commissioned by deliverables	New deliverable name: Nutrient sources of Te Awa Kairangi/Hutt River Investigation. GW led. Will likely need to include substantial field work, collecting data and a spatial map of nutrient loads, etc. To culminate in a report. Could potentially be a PhD thesis.

Whaitua Te Whanganui-a-Tara Reference Group – Terms of Reference

Purpose and function

The Whaitua Te Whanganui-a-Tara Implementation Programme (WIP) was received by Greater Wellington Regional Council on 23 September 2021 (Report 21.422).

Recommendation 4 of the WIP proposes that a reference group be established as follows:

“Greater Wellington establishes a community-led reference group tasked with monitoring progress on the implementation of the WIP for Whaitua Te Whanganui-a-Tara and ensures that the council is reporting on progress to the wider community in meaningful ways.”

This Terms of Reference implements Recommendation 4 through establishing the Whaitua Te Whanganui-a-Tara Reference Group (Reference Group) and sets out how the Reference Group will operate.

Greater Wellington is establishing a Catchment function that will coordinate Greater Wellington’s planning and prioritisation for whaitua/catchments, including working with mana whenua and community groups to guide planning and work prioritisation.

Coordination of WIP implementation, including the Whaitua Te Whanganui-a-Tara Implementation Programme, will be coordinated by the Catchment function, although implementation of the WIPs involves multiple parts of Greater Wellington and other organisations.

Status of the Whaitua Te Whanganui-a-Tara Reference Group

The Reference Group is an advisory body established to inform and provide feedback on Greater Wellington’s implementation of the recommendations of the Whaitua Te Whanganui-a-Tara Implementation Programme.

Specific responsibilities

The Reference Group is responsible for providing scrutiny of the implementation progress of the WIP, on behalf of the community.

The Reference Group will also provide a ‘sounding board’ for Greater Wellington to seek clarification on the former Whaitua Te Whanganui-a-Tara Committee’s intent when developing recommendations in the WIP. This will allow Greater Wellington to seek clarity, when needed, as to whether its own and other organisations’ work programmes will effectively implement a recommendation.

Whaitua Te Whanganui-a-Tara Reference Group membership and operation

1. Whaitua Te Whanganui-a-Tara Reference Group membership

1.1. The Whaitua Te Whanganui-a-Tara Reference Group will have the following membership:

- the community and mana whenua members of the former Whaitua Te Whanganui-a-Tara Committee who choose to participate;
- local government members of the former Committee who remain in their elected member roles, who choose to participate; and
- two current Greater Wellington Councillors.

2. Co-Chairs

2.1. The Whaitua Te Whanganui-a-Tara Reference Group shall have (up to two) Co-Chairs, being drawn from the Reference Group's membership, appointed by Council on the recommendation of the Reference Group.

3. Quorum

3.1. A majority of the membership of the Whaitua Te Whanganui-a-Tara Reference Group shall be present to form a quorum.

4. Alternate members

4.1. No alternates/proxies shall take the place of Whaitua Te Whanganui-a-Tara Reference Group members.

5. Reference Group meetings

5.1. The Whaitua Te Whanganui-a-Tara Reference Group will meet approximately every two months.

5.2. Meeting times and duration will be by arrangement with the Reference Group and will default initially to two to four hours long.

6. Consensus

6.1. The Whaitua Te Whanganui-a-Tara Reference Group will make recommendations by consensus whenever possible and by majority if necessary.

Attachment 2 to Report 23.262

7. Remuneration

- 7.1. The community and mana whenua members of the Whaitua Te Whanganui-a-Tara Reference Group will be eligible to receive standard mileage allowances or reimbursement of travel expenses as determined by Greater Wellington, as well as a taxable honorarium.
- 7.2. Members of the Reference Group who are representatives of one of Greater Wellington's mana whenua partners may, prior to the payment of any honoraria, advise Greater Wellington in writing that either:
- a) The mana whenua representatives each receive an annual taxable honorarium; or
 - b) The mana whenua entity receives a GST exclusive payment of the amount equivalent to the taxable honorarium otherwise payable to their representatives.
- 7.3. The taxable honorarium, which does not apply to the elected members of the Group, is as follows:
- a) Appointed member (excluding a member appointed as Co-Chair): \$2,500 per annum each
 - b) Co-Chair (two): \$3,000 per annum each.

8. Duration of the Whaitua Te Whanganui-a-Tara Reference Group

- 8.1. The Whaitua te Whanganui-a-Tara Reference Group shall exist until June 2024 but may be extended for a further 12 months by Greater Wellington's Chief Executive in consultation with the Reference Group.

Te Awa Kairangi / Hutt River Valley Subcommittee
27 June 2023
Report 23.287



For Information

FLOOD WARNING IN THE HUTT VALLEY

Te take mō te pūrongo

Purpose

1. To brief the Subcommittee on the status of flood warning systems in the Hutt Valley.

Te horopaki

Context

2. A new flood forecasting system is being developed for the Wellington Region. The system is built around Delft-FEWS software. Developed in the Netherlands, the Flood Early Warning System is considered the world's leading flood forecast platform software.
3. The Environment Group is also working on implementing a new flood warning message system. This system will reduce the workload on our Flood Duty Officers and provide greater flexibility in providing automated warning systems to the wider community including recreational users and contractors.
4. The verbal update will cover:
 - a The status of the flood forecasting system
 - b The status of the flood warning message system
 - c How (a) and (b) relate to the Hutt Valley

Ngā Take e hāngai ana te iwi Māori

Implications for Māori

5. The implementation of any new warning system will involve engagement with Māori. The experiences from Hawkes Bay have shown that warnings need to be better messaged and targeted to Māori specifically to ensure appropriate actions are taken at the appropriate time.

Ngā tūāoma e whai ake nei

Next steps

6. Once the new systems have been developed to a reasonable level of detail, a report will be prepared for the Subcommittee setting out what is being proposed the programme to completion.

**Ngā kaiwaitohu
Signatories**

Writer	Graeme Campbell – Principal Advisor, Flood Resilience
Approvers	David Hipkins – Director, Knowledge and Insights Lian Butcher – Kaiwhakahaere Matua Taiao Group Manager Environment

<p>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 Subcommittee's specific responsibilities include "reviewing periodically the effectiveness of implementation and delivery of Floodplain Management Plans for the Te Awa Kairangi/Hutt River floodplain". The projects referenced in this report relate to implementing emergency management aspects of the Hutt River Floodplain Management Plan.</p>
<p><i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i></p> <p>The projects referenced within this report deliver on Greater Wellington's strategic priority area of te tū pakari a te rohe/regional resilience</p>
<p><i>Internal consultation</i></p> <p>These projects consult with groups and departments across Greater Wellington where relevant.</p>
<p><i>Risks and impacts - legal / health and safety etc.</i></p> <p>The purpose of improving flood warning systems is to reduce the risk to communities and improve the region's resilience.</p>

Te Awa Kairangi / Hutt River Valley River Subcommittee
27 June 2023
Report 23.293



For Information

BIRCHVILLE DAM

Te take mō te pūrongo

Purpose

1. To update the Te Awa Kairangi / Hutt River Valley River Subcommittee on current works regarding Birchville Dam.

Te horopaki

Context

2. This follows a Greater Wellington Facebook post on 19 June 2023 regarding planned works at the dam that was responded to with a briefing document to Councillor Connelly ([Attachment 1](#)).
3. To enable contractors to undertake a regular bathymetric survey of the sediments contained in the reservoir of Birchville Dam, the Parks Maintenance team plan to reduce the volume of water in the dam to approx. 1.5m below the spillway crest. This would be done using the outlet valve, the intake of which is in clear water above the level of the reservoir sediments, and result in a discharge of clean reservoir water to the stream.

The update will cover the following topics:

- a Legislative requirement for the management of Birchville Dam;
- b 2019 prosecution and follow up actions;
- c Current management and monitoring of the dam;
- d Resource consent requirements and measures to be implemented during works.

Ngā Take e hāngai ana te iwi Māori

Implications for Māori

4. The Delivery team recognises and supports the Crown's formal recognition of the mana and the particular cultural, spiritual, historical and traditional associations that Ngāti Toa Rangatira and Taranaki Whānui ki Te Upoko o Te Ika have with Te Awa Kairangi.

Ngā tūāoma e whai ake nei

Next steps

5. Delivery staff will continue to manage and monitor the Birchville Dam.

**Ngā āpitihanga
Attachment**

Number	Title
1	Birchville Dam - briefing to Councillors 21.06.2023

**Ngā kaiwaitohu
Signatories**

Writers	Steven Fargher – Team Leader, Parks Maintenance Rachael Boisen Round – Parks Resource Management Advisor
Approvers	Jack Mace – Director Delivery Lian Butcher – Group Manager Environment

He whakarāpopoto i ngā huritaonga Summary of considerations
<i>Fit with Council's roles or with Committee's terms of reference</i> The Subcommittee's specific responsibilities include "overseeing the public involvement process during developing or review of FMPs for the Te Awa Kairangi / Hutt River Valley River Subcommittee."
<i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i> Development and implementation of related work programmes falls under the core activities of the 2021-2031 Long Term Plan. This update specifically speaks to the potential for impacts on freshwater quality relating to the management of Birchville Dam.
<i>Internal consultation</i> There was internal consultation between the Delivery and Regulation teams.
<i>Risks and impacts - legal / health and safety etc.</i> There are no known risks and impacts related to this report.

Birchville Dam - briefing to councillors 21.06.2023

Context

Birchville Dam is a 15m high single curvature arch dam on Clarkes Creek/Birchville Stream, which is a west bank tributary of Te Awa Kairangi/Hutt River. The dam is located on the Cannon Point trig track within the Akatarawa Regional Park. On behalf of the landowner GWRC, it is managed by the Delivery function within the Environment Group (previously Parks). The dam was built as part of Upper Hutt's water supply in 1930 but is now a public amenity used for recreational purposes.

There are two valves in the dam structure:

- a. the **scour valve** in the lower true left side of the dam face, which is no longer maintained/used as it is located below the reservoir's sediment level; and
- b. the **outlet valve** on the true right side of the dam, which takes water via the intake tower structure from the upper/middle water column of the lake i.e. clean water, not within the lake sediments.

The current normal operating situation at the dam is that all valves are closed off and water is allowed to overtop the dam spillway naturally (i.e. we do not control the water discharged via the dam).

Legislative requirement for the management of Birchville Dam

Up until May 2022 when the Government released new regulations¹, the safety and resilience of dams was managed using the Dam Safety Guidelines produced by the New Zealand Society on Large Dams (NZSOLD). These regulations ensure that classifiable dams are well operated, maintained and regularly monitored. They also ensure that potential impacts of dam incidents and failures are reduced, protecting people, property, and the environment. To be a classifiable dam, a dam must be >4m in height and >20,000L storage of fluid, or >1m height and >40,000L storage.

Parks have had several Dam Safety Reviews (DSR) done for Birchville Dam over the years, with the most recent being a Comprehensive Dam Safety Review (CDSR) in June 2021. This assessment, supported by dam break analysis, changed the Potential Impact Classification (PIC) from Medium to Low. The CDSR stated that the dam is in great shape, and we are not putting any property or life at risk with the volume of water stored in the dam, including while the reservoir is full and overtopping the dam crest. The 2021 CDSR is **available on request** if required.

2019 prosecution and follow up actions

The 2016 DSR classified the dam as Medium PIC due to the possibility that if the dam failed it may damage two houses downstream. Over the next two years and on the advice of dam safety experts, work was completed to get our systems up to speed with managing a Medium PIC dam. This included reducing the volume of water (lowering level) in the dam reservoir by having the outlet valve permanently open, and the monthly exercising (opening fully then

¹ [Building \(Dam Safety\) Regulations 2022 \(SL 2022/133\) – New Zealand Legislation](#)

Attachment 1 to Report 23.293

closing) of the two dewatering valves (scour and outlet) to ensure that if there was an emergency, we would be able to operate them.

During one of the monthly valve exercise tests in mid-2019, a large tree branch became stuck in the opening of the scour valve on the reservoir side. The decision was made to empty the reservoir to ensure safe working conditions to unblock the scour valve. The scour valve was left open, and a significant amount of sediment was released into the stream. Following an enforcement investigation, GWRC Environment Regulation (EReg) prosecuted GWRC Parks, with a resulting \$90,000 fine.

Throughout 2020 several options were investigated to address the scour valve, which was/is closed but still partially blocked and positioned under a significant amount of silt in the bottom of the reservoir. This included various discharge proposals, engineering options, consenting requirements and longer-term dam and/or sediment removal options. We fitted a steel cage over the inlets into the tower that feeds the outlet valve to ensure the pipework and valve doesn't get blocked by debris.

Then, in conjunction with the 2021 CDSR and on the advice of experts, we had:

- a. the reservoir's sediments surveyed using bathymetry to enable a comparison against subsequent surveys (at two-yearly intervals) to assess if the sediment levels behind the dam are increasing at a faster rate than that assumed in the 2006 stability analysis; and
- b. the valley below the dam surveyed and a dam break analysis completed i.e. what level any water and sediment released in a dam failure might reach at the two houses adjacent to the confluence of Clarkes Creek and Te Awa Kairangi.

The dam break analysis estimated that any potential dam failure would result in a flow of water and sediments that would reach no higher than approx. 1.5m below the finished floor height of the lowest house. Based on the expert's assessment of several factors, Birchville dam was classified as a Low PIC. The experts advised us that the Low PIC rating meant there was no reason to exercise the scour valve (i.e. not required in an emergency), and no reason against closing the outlet valve and allowing water to overtop the dam crest again, which we have done.

Current management and monitoring of the dam

There are different management and monitoring requirements for each PIC level. To manage the Birchville Dam to meet the requirements of a Low PIC dam we undertake the following:

- Maintenance plan to include:
 - Two-yearly bathymetry survey, next in 2023.
 - Intermediate DSR every two years, next in 2023 / after bathymetry survey
 - Comprehensive DSR every 10 years, next in 2031
 - Visual inspections by trained internal staff, quarterly and after any significant earthquakes – emphasis on regular monitoring of the abutments to ensure that indications of instability are quickly identified
 - Regularly clearing/spraying of vegetation on abutments to enable visual inspections
- Ongoing action: update/finalise a GWRC-wide Dam Safety Management Strategy (DSMS) and Emergency Action Plans (e.g. including Flood Protection dams).

Proposed works relating to the GWRC Facebook post 19.06.2023

We have contracted consultants to undertake a follow-up bathymetric survey of the sediment levels in the dam reservoir in preparation for the Intermediate DSR. This is done by boat using non-intrusive surveying equipment. To ensure cost-effectiveness, ease of measurement and comparison with the survey completed in 2021, we planned to lower the level of water behind the dam to a similar level to what was in 2021 (when the outlet valve was fully open).

Therefore, we planned to open the outlet valve in the true right side of the dam, which draws water from approx. 1.5m below the crest of the dam in clear water, about 3m above the sediment level. Once the reservoir reduced to the appropriate level of the survey, the valve would then be partially closed to keep the lake water level constant, while still allowing water to discharge so the stream downstream of the dam doesn't run dry. The scour valve would not be opened.

We estimated it would take 1-2 days of discharge from the outlet valve pipe to drop the water level behind the dam structure to a level approx. 1.5m below dam spillway. The outlet valve would then be left partially open for up to two weeks to allow the bathymetric survey to be done, dependent on weather conditions. The valve would not be completely closed again until the dam has re-filled, and water overtops the spillway as per the current situation (i.e. the stream will not be allowed to run dry at any time).

Resource consent requirements for this activity

Opening the outlet valve would discharge water from the dam reservoir and it's contributing streams into Clarkes Creek and ultimately Te Awa Kairangi / Hutt River. For an initial period, this discharge would be in addition to the water that overtops the dam spillway into the stream. Following discussions with EReg in May 2023, we consider that this meets the permitted activity rule R43 in the proposed Natural Resources Plan for the Wellington region (pNRP). Therefore, no resource consent is required to discharge water through the outlet valve, provided the permitted activity conditions can be met.

Note: in follow-up discussion with EReg², we agreed that a reasonable time period within which any minor residual sediment settled in the tower and outlet valve pipework could be discharged (until the water was running clean/clear) would be a maximum of 5mins, provided that two people onsite were in radio contact and could communicate whether or not the R43 effects were being observed in the stream beyond a zone of reasonable mixing (50m downstream). If the R43 effects are observed beyond 50m downstream at the 5min post-opening time period, the valve would be immediately closed.

Measures that will be in place during any opening of the outlet valve

During any opening of the outlet valve, the Parks Maintenance team (led by Steven Fargher) would ensure:

² Between Rachael Boisen Round (Delivery) and Genevieve Walker (Regulation) on 19.06.2023

Attachment 1 to Report 23.293

1. Before lowering the level of the dam, a leaflet drop, including contact information, to be delivered to the residence of Bridge Road
2. At the initial opening of the valve, there is at least two people onsite:
 - a. one person manually opening the outlet valve gradually (flow rate can be increased or decreased but is ultimately limited by the pipe size) and
 - b. a second person 50m located approx. 50m downstream of the pipe outlet (beyond a zone of reasonable mixing) to monitor the effects of the discharge against the pNRP permitted activity rule R43 conditions.
3. The flowrate through the outlet would be adjusted to ensure there is:
 - a. no greater flow in the stream than during an average rainfall event (when a greater volume of water overtops the dam crest) and
 - b. no overtopping of banks at downstream neighbours' properties.
4. While the lake level is dropping using the outlet valve, the team will monitor the stream and the dam at least twice daily for any R43 effects and to check water levels in the dam.
5. While the outlet is open and level is lowering, if any of the R43 effects are observed, the outlet valve will be mostly closed and flows reduced to a minimum until the water naturally flows back over the dam, then the valve will be fully closed. Leaving the outlet valve open slightly will allow the stream to have some residual water flow until the water reaches overtopping level.

Prepared by:

Steven Fargher
Team Leader - Parks Maintenance
Environment Operations

Rachael Boisen Round
Parks Resource Management Advisor
Logistics & Resourcing