



If calling, please ask for Democratic Services

Te Awa Kairangi/Hutt River Valley Subcommittee

Tuesday 6 August 2024, 2.00pm

Council Chamber, Hutt City Council, 30 Laings Road, Lower Hutt

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

Members

Ros Connelly, Councillor (Chair)	Greater Wellington Regional Council
Quentin Duthie, Councillor (Deputy Chair)	Greater Wellington Regional Council
Simon Edwards, Councillor	Hutt City Council
Wayne Guppy, Mayor	Upper Hutt City Council
Bill Hammond, Councillor	Upper Hutt City Council
Ken Laban, Councillor	Greater Wellington Regional Council
David Lee, Councillor	Greater Wellington Regional Council
Tui Lewis, Deputy Mayor	Hutt City Council
Caleb Ware	Te Rūnanga o Toa Rangatira Inc
Benjamin Wynyard-Terry	Port Nicholson Settlement Block Trust

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 6 August 2024, 2.00pm

Council Chamber, Hutt City Council, 30 Laings Road, Lower Hutt

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 6 June 2024	24.307	5
5.	Hutt Valley Flood Risk Management Update	25.353	8
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Please note these minutes remain unconfirmed until the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 6 August 2024.

Report 24.307

Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on Thursday 6 June 2024

Council Chamber, Upper Hutt City Council
838 Fergusson Drive, Upper Hutt, at 2.06pm

Members Present

Councillor Connelly (Chair)	Greater Wellington Regional Council
Councillor Duthie (Deputy Chair)	Greater Wellington Regional Council
Councillor Edwards	Hutt City Council
Mayor Guppy	Upper Hutt City Council
Councillor Hammond	Upper Hutt City Council
Deputy Mayor Lewis (until 3.22pm)	Hutt City Council
Caleb Ware	Te Rūnanga o Toa Rangatira Inc

Deputy Mayor Lewis and Caleb Ware participated at the meeting remotely via Microsoft Teams and counted for the purpose of quorum in accordance with clause 25B of Schedule 7 to the Local Government Act 2002.

Karakia timatanga

The Subcommittee Chair opened the meeting with a karakia timatanga.

Public Business

1 Apologies

Moved: Cr Duthie / Mayor Guppy

That the Subcommittee accepts the apologies for absence from Councillors Laban and Lee.

The motion was **carried**.

2 Declarations of conflicts of interest

There were no declarations of conflicts of interest.

3 Public participation

Kevin Braddock, Mawaihakona Stream Restoration Group, spoke on the work of the Group to clean up and restore the Mawaihakona Stream, noting the need for weed control and rabbit control.

Noted: The Subcommittee requested officers to provide the maps of the genesis of the Mawaihakona Stream.

John Simes spoke to a presentation on the rescue of heritage podocarps in the space required for the RiverLink project on the western side of Te Awa Kairangi/Hutt River.

Noted: The Subcommittee requested a future report on the effect of river reshaping on the Belmont wetland.

Noted: The Subcommittee requested that officers consider whether individual trees could be dug up and replanted as part of the RiverLink works.

Stephen Pattinson, Save Our Hills (Upper Hutt Inc.), was prevented by technical difficulties from speaking on upgrading the Pinehaven flood model.

Noted: The Subcommittee requested that officers circulate Stephen Pattinson's presentation to members.

Dale Harlen spoke on the safety for cyclists on the river trail, particularly in Stokes Valley, and the need for safe cycling areas on the road before joining or leaving the river trail.

Dr David Tripp spoke on the survey of users of the river trail and the barriers stopping people from using the trail. Doctors for Active Safe Transport encourage active modes of transport as a contributing factor to cancer prevention.

4 Confirmation of the Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 12 March 2024 – Report 24.114

Moved: Cr Duthie / Cr Edwards

That the Subcommittee confirms the Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 12 March 2024 – Report 24.114 as corrected.

The motion was **carried**.

Noted: The minutes were corrected by replacing the first paragraph in item 3 Public Participation with the following: "Karen Yung spoke to the importance of community engagement on the Waiwhetū flood risk modelling (item 6 on the agenda). The focus on Waiwhetū Stream may mean that residents elsewhere in the catchment, such as Moera, are not aware they are also affected."

5 Te Awa Kairangi / Hutt River and Valley Flood Risk Management Report – Report 24.213 [For Information]

Tina Love, Team Leader Infrastructure Projects, spoke to the report.

6 Waiwhetū Flood Modelling Update – Report 24.254 [For Information]

Andy Brown, Team Leader Knowledge – Water, and Francie Morrow, Senior Project Manager – Investigations, spoke to the report.

7 Te Wai Takamori o Te Awa Kairangi Project Update – Report 24.232 [For Information]

Tracy Berghan, Manager Riverlink, and Matt Trlin, Programme Director Waka Kotahi, spoke to the report.

8 Te Awa Kairangi / Hutt River Corridor User Study – Report 24.212 [For Information]

Ross Jackson, Landscape Advisor Implementation, and Joby Mills, Senior River Ranger, spoke to the report.

Deputy Mayor Lewis left the meeting at 3.32pm during the above item and did not return.

9 Stokes Valley Stream Update – Report 24.274 [For Information]

Tim Sharp, Catchment Manager – Te Whanganui-a-Tara, spoke to the report.

Karakia whakamutunga

The Subcommittee Chair closed the meeting with a karakia whakamutunga.

The public meeting closed at 4.17pm.

Councillor R Connelly

Chair

Date:

Te Awa Kairangi / Hutt River Valley Subcommittee
6 August 2024
Report 24.353



For Information

HUTT VALLEY FLOOD RISK MANAGEMENT UPDATE

Te take mō te pūrongo

Purpose

1. To advise the Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) of progress on flood risk management activities in the Hutt Catchment.

Te tāhū kōrero/Te horopaki

Background/Context

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

Te Awa Kairangi / Hutt River

3. Currently, the major focus area within Te Awa Kairangi 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.

Climate Resilience Programme

4. The final steps of handover and financial close out are continuing for a small number of sites (Site 1 – Stokes Valley and Site 13 – Poets Park), and a maintenance contract has been signed for until 2025/26 for Site 13 – Poets Park.

Operations Delivery

5. All planned minor water course blockage and vegetation maintenance has been completed ahead of seasonal rain fall increasing over the autumn and winter months.
6. Routine mowing on the river berm and stopbanks has continued through the autumn months.
7. A specific work programme for river berm tree pruning and removal for the entire length of the Hutt River corridor has been completed.

8. Planting sites have been identified and planning and preparation is underway for the coming planting session between June and August 2024.
9. The rock asset maintenance programme is complete. This work involved re-stacking and placing new rock to 32 rock assets in both the dry and wet channel.
10. During the rock asset maintenance work a large native rakau (log) was unearthed. The flood operations delivery team were able to gift the rakau to Ihaia Puketapu of the Waiwhetū Marae, to be used for whakairo (carving). This supports a good outcome for the rakau, along with the building of an important relationship for the future.
11. The flood operations delivery team has been working with Upper Hutt City Council on construction of a path access way from McLeod Park to the stopbank. The new access way is now complete and is in use.
12. New Zealand Transport Agency – Waka Kotahi (NZTA) has approached Greater Wellington for approval to build a new bridge and sealed path between Speedy’s Stream at the Kennedy Good Bridge and Carters St in Belmont. Greater Wellington is satisfied with the design but have requested an asset ownership and maintenance agreement is put in place before final approval is given.

Belmont wetland

13. The Belmont Wetland was constructed as part of Te Wai Takamori o Te Awa Kairangi (RiverLink). The wetland consists of two forebays, an upper wetland compartment, a lower wetland compartment and a perennial stream that bypasses forebay 2 and the upper wetland and is connected to the lower wetland. The lower wetland is connected to the Hutt River.
14. The two forebays are intended as sediment deposition areas preventing sediment build-up with the upper wetland. Levelled outflows within forebay one direct normal flow into the perennial stream and divide stormwater flows between the perennial stream and the upper wetland (through forebay 2). The upper wetland is intended to improve water quality of stormwater flowing through the upper wetland by facilitating sedimentation and filtration of suspended particles, and absorption of dissolved contaminants. The lower wetland is a confluence area for water flowing through the perennial stream and the upper wetland while providing additional habitat and a stable connection point with Te Awa Kairangi / Hutt River. The lower wetland may improve water quality; however, this compartment is not specifically designed to optimise/increase performance of this ecosystem service.
15. The main water quality improvements should occur within the upper wetland compartment which only receives inflow during high flow events. During high flow events less than 50% of the stormwater will be flowing through the upper wetland compartment while the rest of the stormwater would flow through the perennial stream, where the two flows mix again. Effectiveness of constructed wetland in water quality improvements is related to the retention time of the water within the treatment compartment (upper wetland) and will therefore vary between high flow events depending on the magnitude of the flow event (more inflow meaning shorter residence time). Expect efficiency is therefore expected to be variable per high flow event.

16. The wetland has not received maintenance since construction due to the complexity of the consent conditions that must be met. Consequently, sediment has been deposited within the upper wetland compartment reducing the design volume of the compartment and therefore lowering the water quality improvement capacity of the compartment.
17. The requirements of the consent have now been worked through and maintenance is scheduled to occur in spring 2024. Maintenance aims to restore the wetland to the design aspects including compartment volume, gravel deposition capacity and vegetation cover.
18. Prior to and during the maintenance works monitoring of the water and sediment quality are taken alongside fauna relocation efforts to minimise environmental impacts. This monitoring may provide insights into the functioning of the system in providing water quality improvements (contaminant removal), habitat provision and preservation of fish passage. However, given the absence of maintenance to date any results would not reflect designed operating conditions.
19. The above monitoring has been designed to monitor and minimise environmental impacts of scheduled maintenance, not the efficiency of the system directly. Given the set-up of the constructed wetland system (e.g. intermittent flows, variable retention times and perennial stream bypass) direct monitoring of the system effectiveness could be difficult and time consuming.

Flood Hazard Modelling

20. The flood hazard modelling for the Te Awa Kairangi / Hutt River and Waiwhetū Stream update projects are progressing. A report was presented at the previous meeting regarding the Waiwhetū flood hazard modelling public engagement that occurred in March 2024 (Report 24.254).
21. Updated flood hazard overlays for Te Awa Kairangi / Hutt River and the Waiwhetū Stream will be provided to Hutt City Council (HCC) for inclusion in the proposed District Plan in September 2024. The information can be used to direct new development away from areas where water would flow across the floodplain in the event of overtopping or failure of the stopbanks.

Update from Hutt City Council

22. HCC is reviewing its District Plan, with a new proposed District Plan scheduled for notification early 2025. The proposed District Plan will include a new Three Waters chapter and Natural Hazards chapter. HCC officers have been engaging with officers of Greater Wellington and Wellington Water in the development of these chapters, with these agencies providing valuable input in the development of those chapters.
23. HCC is developing a spatial plan that addresses a range of issues for Lower Hutt, including in relation to rivers and tributaries. This is still being prepared, with engagement planned for early 2025.

Flood Knowledge Investigations

24. The Knowledge Water team is currently planning the review of the Hutt FMP capital projects prioritisation. This project will take the latest modelling and review the level of service of current assets against the intended design standard and re-prioritise the remaining works identified in the Hutt FMP. An indicative completion date of December 2024 has been applied to this project. This will be refined as the planning process is completed.
25. The Knowledge Water team is planning the next stages of the Moonshine Stopbank investigation. This project will identify and assess options for addressing the identified asset level of service issues between the Moonshine Road and Whakatiki Street.

Ngā hua ahumoni Financial implications

26. For this reporting period, projects are within the current budgets.

Ngā Take e hāngai ana te iwi Māori Implications for Māori

27. 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.
28. Implementation with mana whenua partners is guided by Te Whāriki – the Māori Outcomes Framework as part of Council's Long-Term Plan 2021–31.
29. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the RiverLink Board.
30. A significant number of Māori, both mana whenua and mātāwaka, live and work in flood prone areas within Te Awa Kairangi. There are also numerous sites of cultural and spiritual significance potentially at risk from flooding. Effective delivery of our flood risk management programme helps to protect Māori communities and their values across the four wellbeings.

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

31. 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.
32. 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.
33. The greenhouse gas 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 greenhouse gas inventory.

34. Greater Wellington currently assesses options to address flood risk based on the predicted impacts of climate change over the next 100 years. Increased rainfall and sea level rise predictions are assessed on a catchment-by-catchment basis.

Ngā kaiwaitohu

Signatories

Writers	Tina Love – Team Leader Infrastructure Projects Bram Mullings – Senior Environmental Scientist, Freshwater Francie Morrow – Senior Project Manager – Investigations Andy Brown – Team Leader, Knowledge Water Hamish Fenwick – Team Leader, Flood Operations Delivery
Approvers	Megan Oliver – Hautū Whai Māramatanga Director Knowledge and Insights (Acting) Jack Mace – Hautū Whakatutuki Director Delivery Lian Butcher – Kaiwhakahaere Matua, Taiao 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 “ <i>reviewing periodically the effectiveness of implementation and delivery of Floodplain Management Plans for the Te Awa Kairangi/Hutt River floodplain</i> ”.
<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 Valley Subcommittee
6 August 2024
Report 24.352



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 Te Wai Takamori o Te Awa Kairangi (Te Wai Takamori) and introduce the report of the Project Director for Te Wai Takamori ([Attachment 1](#)).

Te tāhū kōrero/Te horopaki

Background/Context

2. Te Wai Takamori is a partnership between Greater Wellington Regional Council (Greater Wellington), Hutt City Council (HCC), NZ Transport Agency Waka Kotahi (NZTA), Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika.
3. Delivery of Te Wai Takamori 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 Te Wai Takamori 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.
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Te tātaritanga

Analysis

Overall Project

6. The Project Director's report (**Attachment 1**) provides an overview of what the programme has been focusing on since the last meeting. The key highlights for Greater Wellington flood risk mitigation delivery are summarised below.

Partner Co-ordinated Delivery Programme

7. Following on from the Council's decision in March 2024 to withdraw its flood mitigation scope, the first steps in a partner co-ordinated Delivery Strategy have been championed by Greater Wellington.
8. During June 2024 several technical meetings between partners have led to an in-principle direction for a coordinated delivery programme. Once agreed by each partner the coordinated programme will be reported back to the Subcommittee.

Property

9. A total of 144 properties are being acquired for the Project.
 - a. 142 properties have now been acquired with 2 land acquisition remaining. (39A Mills & 69-95 High St)
 - b. 62 commercial rights (lessee interests, easement interests, business closures and business relocations) have been acquired with 6 lease acquisitions remain (Millies House and the five retailers at 69-95 High St).
10. Vacant possession has now been secured for:
 - a. Area E (85-103 Pharazyn Street)
 - b. Area B (even numbers 50-90 Marsden Street)
 - c. Area I (7-12 Daly Street)
 - d. Area H (39b-56 Mills Street) note that 39A Mills is now in the scope for this area and unlikely to be secured until Q1/Q2 next year
 - e. Area A (22-77 Marsden Street)
11. Further tenants in lower Daly Street/High Street vacant possession in September 2025 (nine lessees). Millies House (5 Daly), Vibe and The Call Centre (4 Daly St) and the six retailers at 69-95 High St.
12. Little Footprints has now been relocated and final handover was achieved on 27 June 2024. An official opening was held on 11 July 2024.

Property Relocation and Demolition

13. Since the last report CERES NZ has completed the majority of Pharazyn Street and Marsden Street demolitions. CERES has completed demolition of the Carpet Court building and reconstruction for Repco. Greater Wellington is also now leading the underground demolition across the site which is on track to start in July 2024.

Mills Street Stopbank Construction

14. Several vibration complaints have been received, with four complaints of damage. Monitoring has confirmed that vibration is not above the upper consent levels. Mobile vibration monitors are in place. Minor remedial works will be undertaken at a nearby property due to vibration damage sustained during pre-load work last year.
15. With the agreed reduction in scope to remove stormwater outlet 40 and adjustments to programme, MSSB stage 1 is expected to be completed on time (November 2024), albeit with less scope completed.
16. Gravel extraction will move from stage 2a to 2b in the coming weeks, to extract the remaining ~15,000m³ required.

Next Steps Mills Street Stopbank

17. Mills Street stopbank is now being delivered in three stages. Stage 1: Stopbank and temporary stopbank being constructed now. Stage 2: Remaining stopbank and maintenance accesses and Stage 3: Shared path, landscape and urban design will be delivered once the Wellington Electricity KV cables are removed, starting in late 2025 at the earliest.
18. Further work is planned this construction season (from October) to construct river works and rock lines. The anticipated scope that could be delivered in the 2024/2025 earthworks season includes:
 - River alignment at Kennedy Good Bridge – potential meander flip
 - Lowering of berm levels in the upper reach to enable bioengineering to commence at right height
 - Rockline at the current Melling Link Bridge
 - Rockline at Transpower
 - Rockline between current Melling Link Bridge and Transpower on the true right bank
19. Continuing work within the current Mills Street construction site makes sense, utilising the existing site establishment. New works would not conflict with Alliance delivery downstream, but it would mean that access continues to be restricted through this reach until work has been completed in March/April 2025.

Ngā hua ahumoni

Financial implications

Greater Wellington

20. 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 Te Wai Takamori o Te Awa Kairangi. Further changes to this funding commitment may be necessary prior to signing the funding agreement.
21. These budgets do not include allowances for improvements to facilities related to public transport associated with the relocation of Melling Train Station, as NZTA are responsible for its relocation.

22. Inflation and escalation will need to be adjusted during the project life.

Hutt City Council

23. Hutt City Council’s (HCC) 2024-2034 Long Term Plan (LTP) has been finalised and published. It includes additional funding for Te Wai Takamori. HCC is progressing with the design and delivery of Te Wai Takamori scope brought in-house, to reflect affordability.

**Ngā Take e hāngai ana te iwi Māori
Implications for Māori**

24. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the Te Awa Kairangi Project Governance Group.
25. 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 Te Wai Takamori o Te Awa Kairangi.

**Ngā ā Te huritao ki te huringa o te āhuarangi
Consideration of climate change**

26. Riverlink considers and responds to the predicted impacts of climate change when considering the appropriate response to the issue the project seeks to address.
27. This programme aligns with the 2015 Climate Change strategy, which states ‘we will help the region adapt to climate change’. The project increase climate change adaptation and resilience to natural disasters in the region.
28. Greater Wellington currently assesses options to address flood risk based on the predicted impacts of climate change over the next 100 years. Increased rainfall and sea level rise predictions are assessed on a catchment-by-catchment basis.

**Ngā āpitihanga
Attachments**

Number	Title
1	Report of the Project Director, Matt Trlin Te Wai Takamori o Te Awa Kairangi PMO

**Ngā kaiwaitohu
Signatories**

Writers	Tracy Berghan – Manager Te Wai Takamori o Te Awa Kairangi Orla Harkin – Programme Manager HCC
Approvers	Wayne O’Donnell – Programme Manager, GW Sponsor Lian Butcher – Kaiwhakahaere Matua, Taiao Group Manager, Environment

He whakarāpopoto i ngā huritaonga Summary of considerations
<p><i>Fit with Council’s roles or with Committee’s terms of reference</i></p> <p>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 Te Wai Takamori o Te Awa Kairangi project is part of.</p>
<p><i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i></p> <p>Te Wai Takamori o Te Awa Kairangi 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 Te Wai Takamori o Te Awa Kairangi 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>

Attachment 1 to Report 24.352

Report of the Programme Director – Te Wai Takamori o Te Awa Kairangi

Date: 23 July 2024

Te Wai Takamori o Te Awa Kairangi – Programme Update Report

1. Purpose

This report provides an update on current progress with Te Wai Takamori o Te Awa Kairangi programme - formerly known as Riverlink.

The report builds on previous reports to Subcommittee, the last being provided in June 2024.

This report should be read in conjunction with the 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

Te Wai Takamori o Te Awa Kairangi is a partnership between Greater Wellington Regional Council (Greater Wellington), Hutt City Council (HCC), Waka Kotahi NZ Transport Agency (Waka Kotahi), Taranaki Whānui ki te upoko o te Ika and Ngāti Toa Rangatira.

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

- Overall progress
- Advance works and investigations
- Communications and engagement

3. Overall progress

Coordinated Delivery Plan

As reported in June the programme's delivery model has shifted from a single Alliance delivering all programme works, to a partner led delivery model.

Under the partner led delivery model:

- NZTA-Waka Kotahi will, using its existing Te Wai Takamori o Te Awa Kairangi Alliance, lead delivery of the Melling Transport Improvements package. This includes the design and delivery of the new Melling Bridge, SH2 interchange, Melling Railway station relocation, existing Melling bridge removal, and walking and cycling.
- Hutt City Council will deliver, working with NZTA and the Te Wai Takamori o Te Awa Kairangi Alliance, the City Link Bridge (the walking and cycling link between the relocated Melling railway station and the city centre), along with specified key local road intersections.
- Hutt City Council will also separately lead, through its new City Development Unit, substantive local street intersection, streetscape, and landscape works.

Attachment 1 to Report 24.352

Report of the Programme Director – Te Wai Takamori o Te Awa Kairangi

- Greater Wellington will lead delivery of programme river and flood protection works.

Programme partners are currently working to finalise a Coordinated Delivery Plan (CDP) for this programme of partner-led works. The CDP will confirm each partner's respective work scope, and a sequence and schedule for coordinated works management and delivery. This is expected to be confirmed in late August and will include arrangements for managing interfaces and transitions between partner works.

The CDP will underpin the development of an updated Te Wai Takamori o Te Awa Kairangi programme partner agreement.

All partners are continuing to target the start of substantive site preparation and construction works in early 2025.

Affordability challenge

The programme continues to be challenged by affordability.

Partners are, working together and with their respective works, continuing to explore opportunities for managing and minimizing costs across all facets of procurement, design and construction. Cost management and minimisation, and achieving value for money, are a core focus for all programme partners.

Programme Partnership Agreement

Work on an updated Te Wai Takamori o Te Awa Kairangi programme partner agreement (partner agreement) is underway. An updated agreement will be confirmed prior to partners considering the award of further major construction works later in 2024.

4. Advance works and investigations

The programme's advance works activities, including essential site investigations, and property demolition and site clearance works, is progressing well, largely meeting budget and timeline expectations.

Demolition

Demolition activities are continuing to run on time and to budget.

Above ground demolition works are scheduled to be completed by September 2024.

Below ground demolition works are commencing within GW scope areas in July.

Skate Park

The new Avalon Park skatepark is proceeding to schedule.

The skatepark design and construction contract has been awarded, with work scheduled to commence in August. A site blessing was held on the 18th July to launch site works. Skatepark work is anticipated to be completed by January 2025.

Demolition of the existing Avalon skatepark is scheduled to commence in July.

Mills Street Stopbank

Attachment 1 to Report 24.352

Report of the Programme Director – Te Wai Takamori o Te Awa Kairangi

Mill Street stopbank works have benefited from relatively dry and favourable weather conditions and are on schedule to be completed by November 2024.

5. Communications and engagement

Communications and engagement activities have included:

- **Skatepark:** Final design released. Site blessing held in July in support of works commencement.
- **Project Design Liaison Group:** Meetings held with the Project Design Liaison Group (PDLG) on redeveloped concept design for Melling Interchange.
- **Alliance Ground Investigations Programme:** Letters are continuing to go out to residents on an area-by area basis to give sufficient notification of geotech and utilities investigations. This includes traffic management activities and comms where required.
- **Property and demolition:** Asbestos removal from buildings in Marsden St is impacting on access to neighbouring buildings. Engagement with stakeholders and local community is ongoing.
- **Mills Street Stopbanks:** Residents are being engaged on vibration management.
- **Hutt Valley Chamber of Commerce:** A Hutt Valley Chamber of Commerce breakfast held on 18 June providing an update on redeveloped concept design for the Melling Interchange. Presentation well received.
- **Media coverage and Councillor updates:** Media engaged on release of redeveloped concept design for Melling interchange. Dom Post coverage provided for Minister Bishop opening of Little Footprints childcare centre, and programme progression toward construction commencement in early 2025.
- **Social media:** The programme is continuing to provide regular posts about work on project progress -Melling interchange concept and Mill Street stopbanks.

Te Awa Kairangi / Hutt River Valley Subcommittee
6 August 2024
Report 24.365



For Decision

PINEHAVEN FLOOD MANAGEMENT PLAN IMPLEMENTATION – PROJECT UPDATE REPORT

Te take mō te pūrongo

Purpose

1. To advise the Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) of progress made in implementing the Pinehaven Flood Management Plan (FMP) via the Pinehaven Stream Improvements project.

He tūtohu

Recommendations

That the Subcommittee

- 1 **Endorses** a review of the three remaining phases of the Pinehaven Flood Management Plan (FMP) with delivery agent Wellington Water Limited to interrogate the significant cost escalation and explore alternative options to mitigate flood risk and achieve the objectives of the Pinehaven FMP.
- 2 **Notes** that the outcome of the review of the three remaining phases of the Pinehaven FMP will be reported back to a future Subcommittee meeting.

Te tāhū kōrero

Background

2. In 2017, Greater Wellington Regional Council (Greater Wellington) and Upper Hutt City Council (UHCC) agreed to work together to implement the Pinehaven Stream Floodplain Management Plan (FMP 2016), with costs to be shared 50% to UHCC and 50% to Greater Wellington.
3. The Pinehaven Stream has a long history of regular flooding, with the largest flood occurring in 1976. Streets and properties alongside the stream have since been flooded in 2004, 2005 and 2009 and 2019. Greater Wellington and UHCC have partnered to address the risk of flooding. Led by Greater Wellington, the Pinehaven FMP project has two primary objectives:
 - a Provide in-channel capacity to accommodate a 1-in-25-year return period flood event (4% Annual Exceedance Probably (AEP)); and
 - b Protect habitable homes within the catchment from flooding up to a 1-in-100-year (1% AEP) return period event.

4. Implementation of the Pinehaven FMP is being led by UHCC as they will own and maintain the assets upon completion of the works. UHCC appointed Wellington Water Limited (WWL) as its agent to undertake the implementation of the structural measures on behalf of both councils.
5. The works area extends over a length of approximately 1,200m in the lower catchment of the Pinehaven Stream. This extends from the Pinehaven Reserve to the inlet where the Pinehaven Stream is piped to Hulls Creek.
6. In addition to the project's primary objectives, the works are designed to reduce risk of injury or harm from flood flows, integrate overland flow paths into the stormwater network, and enable efficient and effective construction and ongoing maintenance of the structures.
7. The consented proposed stream improvement works include:
 - a Creation of natural channel sections with riparian planting
 - b Construction of vertically sided lined stream sections
 - c Securing overland flow paths
 - d Removing, replacing and constructing new bridges
 - e Removing three dwellings (4 Sunbrae Drive, 28 and 48 Blue Mountains Road)
 - f Upgrading stormwater system inlet pipes and fitting with debris screens
 - g Construction of a low wall along the boundary of Willow Park and 10a Blue Mountains Road to divert floodwaters
 - h Construction of a private road access to 30, 32, 34 and 36 Blue Mountains Road
 - i Relocation of utilities which cross the stream.
8. The Hearing Panel issued their decision on the resource consent application and recommendation on the Notice of Requirement on 4 September 2020. At that time, it was anticipated that construction for stream improvement works would occur over 70 weeks but may take up to two years to complete.
9. The project is separated into three distinct sections:
 - a Upgrading culverts at Sunbrae Drive and Pinehaven Road (UHCC roading 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).

10. The structural works are to be completed in five phases:

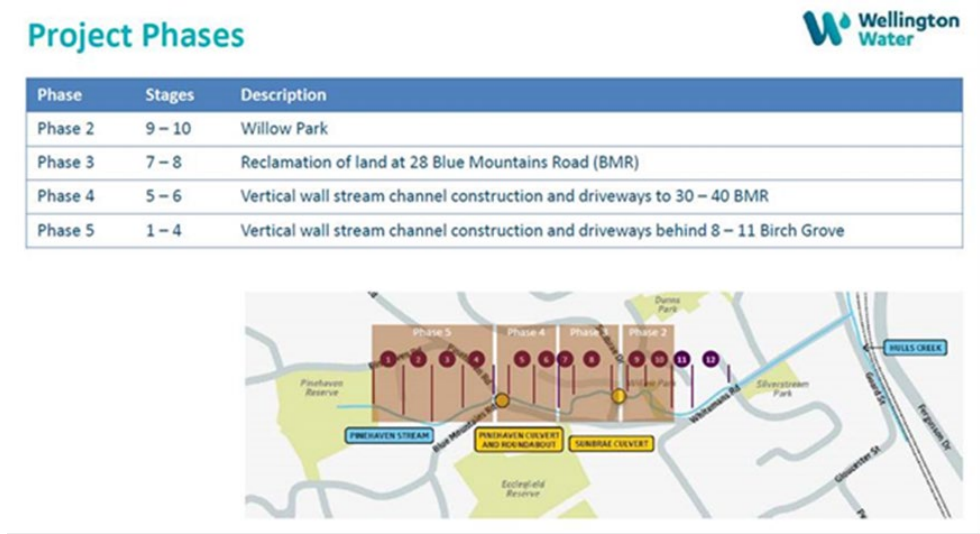


Figure 1: Phase location plan

- 11. Physical works are nearing completion for Phase 2, which have focused on improvements to the Willow Park section of the stream. Planning is also under way for the reclamation of land at 28 Blue Mountains Road (Phase 3).
- 12. Currently under the Watercourses Agreement¹, Greater Wellington is responsible for maintaining the stream from the Pinehaven Reserve to the Whiteman’s Valley Road culvert (the extent of the Pinehaven stream project works) with costs shared equally between the two councils.
- 13. Upon completion of the physical works comprised in the Pinehaven FMP, ownership of the assets and future management responsibility for the Pinehaven FMP are intended to be transferred to UHCC.

Te tātaritanga Analysis

- 14. The desired outcome of the works is for the provision of an effective and efficiently functioning stormwater infrastructure in the stream to a 4% Annual Exceedance Probability (AEP) flood event level, which will also contribute to the management of flood risk to habitable floor levels up to the predicted peak 1% AEP flood level.

¹ The watercourses agreement first arose out of the December 1976 flooding in the Hutt Valley and the realisation that a lot of damage could have been prevented if watercourses had been regularly cleared of obstructions. While there were bylaws requiring landowners to keep watercourses clear of obstructions this was not happening in urban areas. In 1976, trees and other material that had fallen into the streams blocked culverts. The consequent overflows caused considerable damage to property. The local authorities of the day decided that to prevent a repeat of 1976, they would collectively take responsibility for “maintaining” certain urban watercourses and developed a watercourses agreement. The agreement determined who is responsible for doing the clearance work on nominated urban streams and who would fund it.

15. Completion of the structural works is expected to minimise the impact of flooding and reduce the number of habitable floors affected by frequent flooding. Currently, in a 4% AEP event at least 64 habitable floors are at risk of regular flooding, with 70 at risk in a 1% AEP event.
16. Project delivery is being done over five phases in accordance with Annual Plan budgets and approvals. Phase 1 is completed; Phase 2 in Willow Park is under contract with construction forecast for completion in 2024. Funding uncertainty has delayed the start of Phase 3, and Phases 4 and 5 are unfunded. These phases are described below.

Phase 1:

- Consenting and procurement strategies (2017)
- Preliminary design (2017)
- ECI contract awarded (2018)
- Initial community engagement (2018 – ongoing)
- 1. Physical investigations work geotechnical/survey (2019)
- 2. Detailed design complete (2020)
- 3. Culverts consent (2020)
- 4. Streamworks consent (2021)
- 5. Culverts construction complete, 4 Sunbrae and 48 BMR removed (2022)

Phase 2:

6. Willow Park works under contract, construction forecast for completion in 2024.

Phase 3:

7. UHCC has provided funding of \$300,000 for Phase 3 planning ahead of exploring alternative options to mitigate flood risk and achieve the objectives of the Pinehaven FMP.
8. Planning work to prepare for contract awarding and to enable works to begin as soon as possible, includes:
 - Contractor procurement (contracting)
9. Preparation of construction plans (construction methodology, erosion & sedimentation, etc)
10. Ecology surveys and permits
11. Kaitiaki monitoring strategy
12. New property access, temporary works, final works and reinstatement agreements

Phases 4 & 5:

13. Currently unfunded.
17. WWL advises that project progress has been limited due to available annual planning budgets and approvals. The consent condition requirements regarding allowable winter working and approval of construction management plans has slowed progress.
18. There are project risks that must be addressed to ensure project continuity:

Resource Consent expiry

19. Soil disturbance, temporary damming and sediment discharge consents expire on 10 July 2028. WWL recommended that an application is submitted six- months before this expiry ahead of an anticipated non-notified process.

Property Reinstatement Agreements expiry

20. Private property access agreements expired in December 2023. Without certainty on the future programme (and scope) renegotiation may be difficult. The legal approach to agreement for permanent works is to be agreed by UHCC and will have a programme and cost impact.

Winter Works permit

21. Winter works permits limit the type of work and scope that can be completed during winter, which impacts programme delivery and the budget. Limited certainty on permitted works for future phases creates programme uncertainty and introduces more contractual risk during construction.
22. Currently, the Greater Wellington Winter Works Permit Review Committee provides approval on a month-by-month basis.

**Ngā hua ahumoni
Financial implications**

23. When the Pinehaven FMP was developed, the agreed budget for the project was \$11.01 million. In 2017, the cost estimate for the project was \$18.2 million and Greater Wellington and UHCC signed a Memorandum of Understanding for the project to be funded 50% by each council.
24. In 2020, the total cost increased to an estimated range of \$37 million to \$45 million. WWL was instructed to continue works within a budget of \$19.25 million (\$18.2 million, 50% UHCC and 50% Greater Wellington plus an additional \$1.05 million from the New Zealand Transport Agency – Waka Kotahi (NZTA)). The Pinehaven Steering Group provided project approval ahead of any physical works progressing.

Date	Estimate Level (including WWL management Fee)	Expected (incl contingency)	Upper Range (including funding risk)	Reason For Change
2017	Level 2 (Concept)	\$18M	n/a	High level estimate provided to GWRC and UHCC for the purposes of budgets
2020	Level 3 (Detail Design & Consenting)	\$37M	\$45M	First cost estimate provided including consent implications and Contractor involvement. "Original" Budget of \$19.25m Approved and included in 2018 LTP. \$10.5M was included in the 2021 LTP.
2023	Level 3 (Detail Design +)	\$57.4M	\$61M	Estimate provided to GWRC and UHCC for the purposes of budgets for the annual plan and 2024 LTP. This revised estimate was prepared by the consultant with Contractor involvement.

25. In 2023, WWL provided a revised project estimate for the full scope of works to the value of \$57.4 million - \$61 million. This means that following completion of Phase 2 (works in Willow Park) the original budget will be exhausted.

	2018 - 2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Grand Total
Pinehaven Stream Improvements Project (incl contingency and funding risk)	\$15,247,336	\$737,173	\$5,600,000	\$9,100,000	\$11,300,000	\$9,640,000	\$9,375,491	\$61,000,000
Phase 1 (Incl Culverts)	\$15,247,336	\$20,118	\$10,000			-	-	\$15,277,454
Phase 2: Willow Park	-	\$717,055	\$4,200,000	\$1,100,000	-	-	-	\$6,070,000
Phase 3	-	-	\$1,390,000	\$4,940,000		-	-	\$6,330,000
Phase 4	-	-	-	\$3,060,000	\$5,570,000	\$2,130,000	-	\$10,760,000
Phase 5	-	-	-	-	\$5,730,000	\$7,510,000	\$5,720,000	\$18,960,000
Funding Risk							\$3,655,491	\$3,655,491

* We require \$5.6M in the FY2023/24 Annual Plan & \$39.5M for FY24/25 to FY27/28 to complete the works.

26. UHCC included \$3.069 million in the 2024-34 Long Term Plan to fund their 50% contribution to complete phase three of the project within year one of the Long Term Plan. This is an uplift of \$415,000 from the amount consulted on in the Draft Infrastructure Strategy and draft Long Term Plan financials. Funding partner Greater Wellington provided for their full 50% share of the significantly increased total cost estimate for the project.
27. Both UHCC and Greater Wellington will work together to review the composition of the new cost estimate and whether there are alternative solutions to achieve the outcomes within the Pinehaven FMP and mitigate risk. Once this work is complete, UHCC proposes to discuss options with the community via the Annual Plan consultation process.

Ngā Take e hāngai ana te iwi Māori Implications for Māori

28. 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.
29. Our partnership with mana whenua partners within Council's Long-term Plan 2024-34 recognises and supports mana whenua as kaitiaki (guardians) of their broad whenua, freshwater and moana interests in their ancestral lands. We continue to work with our mana whenua partners in new ways at all levels of our organisation including governance, management and operations.
30. A significant number of Māori, both mana whenua and mātāwaka, live and work in flood prone areas within Te Awa Kairangi. There are also numerous sites of cultural and spiritual significance potentially at risk from flooding. Effective delivery of our flood risk management programme helps to protect Māori communities and their values across the four wellbeings.

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

31. 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.

Ngā tikanga whakatau
Decision-making process

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

Te hiranga
Significance

33. Officers considered the significance (as defined by Part 6 of the Local Government Act 2002) of these matters, taking into account Council's *Significance and Engagement Policy* and Greater Wellington's *Decision-making Guidelines*. The matters for decision in this report are of low significance as it is part of a decision-making process that will lead to a decision of medium significance. This project impacts one area of the region, has high community interest, is consistent with Council policy and strategy, and has minimal impact on Council's capacity and capability.

Te whakatūtakitaki
Engagement

34. Engagement with the Pinehaven community will form part of the review process, to gather feedback on current delivery of the Pinehaven FMP.

Ngā tūāoma e whai ake nei
Next steps

35. Greater Wellington and UHCC will work together to review the composition of the new cost estimate and whether there are alternative solutions to achieve the outcomes within the Pinehaven FMP and mitigate risk.
36. The joint review will be completed for presentation at a future Te Awa Kairangi / Hutt River Valley Subcommittee meeting.

**Ngā āpitihanga
Attachments**

Number	Title
1	Pinehaven MOU for Implementation - Signed by UHCC and GWRC.pdf
2	Pinehaven Hutt River Valley Subcommittee 6 Aug 2024_Rev 00.pdf

**Ngā kaiwaitohu
Signatories**

Writers	Tina Love – Team Leader, Infrastructure Projects Lyndie McMillan – Project Director, Major Projects, Wellington Water Gen Drake – Principal Advisor, Upper Hutt City Council
Approvers	Jack Mace – Hautū Whakatutuki Director Delivery Gunther Wild – Acting Director of Asset Management and Operations, Upper Hutt City Council. Lian Butcher – Kaiwhakahaere Matua Taiao Group Manager Environment

<p style="text-align: center;">He whakarāpopoto i ngā huritaonga Summary of considerations</p>
<p><i>Fit with Council's roles or Committee's terms of reference</i></p> <p>The Subcommittee has delegated authority to review and monitor periodically the effectiveness and delivery of FMPs for Te Awa Kairangi/Hutt River Floodplain</p>
<p><i>Contribution to Annual Plan / Long term Plan / Other key strategies and policies</i></p> <p>The project contained within this report delivers 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.</p>
<p><i>Internal consultation</i></p> <p>This project consulted with our finance advisors and the Project Management Office.</p>
<p><i>Risks and impacts: legal / health and safety etc.</i></p> <p>The purpose of the implementation of the Pinehaven floodplain management plan is to reduce the risk to communities and improve the region's resilience.</p>



Pinehaven Stream Floodplain Management Plan Implementation Project

Agreement between Greater Wellington Regional
Council and Upper Hutt City Council

FOR FURTHER INFORMATION

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14 September 2016

FMGT-8-728



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1. Introduction

Greater Wellington Regional Council (GWRC) and Upper Hutt City Council (UHCC) have agreed to work together to implement the Pinehaven Stream Floodplain Management Plan (FMP). The implementation project (Project) involves a range of structural and non-structural measures designed to reduce the flood risk to the community in the catchment, which are described in the FMP.

2. Summary

The following are the key features of this Agreement:

- The governance group for the project is the Hutt Valley Flood Management Subcommittee (a subcommittee of GWRC).
- A management group comprising of officers from GWRC, UHCC or their appointed representatives has been formed to oversee the implementation of the project
- The project management for implementation will be provided by UHCC.
- The public spokesperson for the project will be the chair of the Hutt Valley Flood Management Subcommittee.
- The funding arrangement is a 50%/50% split between UHCC and GWRC
- UHCC will take over all assets created by the works which are part of the Project upon completion of those works, and will be responsible for all future maintenance of those works as provided for in the FMP.
- The responsibilities under the watercourses agreement for the maintenance of the Pinehaven Stream will pass to UHCC as the upgrade works for each reach 1,2 & 3 is completed..

3. Purpose of Agreement

The purpose of this Agreement is to set out the responsibilities of GWRC and UHCC in relation to the Project, including for funding, governance and reporting structure, and to ensure the projects are completed according to the programme and budgets as agreed by GWRC and UHCC. This Agreement also provides mechanisms for addressing any necessary changes to the scope of the project to implement the FMP and for resolving disputes between the GWRC and UHCC in relation to the Project.

4. Responsibilities of the Two Councils

4.1 Watercourses Agreement

Under applicable legislation, the GWRC is responsible for addressing flood risk in the Wellington region, while the UHCC is generally responsible for the provision of storm water services in Upper Hutt. In practice, the GWRC manages rivers and larger streams

of regional significance, while the UHCC manages smaller streams and storm water channels.

The Administration of Watercourses Agreement in 1977 (**Watercourses Agreement**) sets roles and responsibilities agreed to by the GWRC and the UHCC for managing and funding works along the Pinehaven Stream. Under the Watercourses Agreement, GWRC is responsible for maintaining the downstream section of the Pinehaven Stream (from the Pinehaven Reserve to the Whiteman's Valley Road culvert), while UHCC is responsible for maintaining upstream of the Pinehaven Reserve. GWRC is only responsible for contributing 50% of the costs for the downstream section, with UHCC responsible for contributing the remaining 50%. However, UHCC is responsible for the full costs of the upstream section.

The actual basis for the Watercourses Agreement is open to interpretation as the original focus of the agreement was for maintenance works. However, GWRC and UHCC have agreed that the principles of the Watercourses Agreement are also the basis for allocating responsibilities and funding for flood minimisation and prevention works. Also it generally aligns with the legal and policy context in that:

- the upper catchment (managed by UHCC) focuses more on storm water management,
- the lower catchment (managed by GWRC) focuses on flood minimisation and prevention.

Further, both GWRC and UHCC communicate the management component of the Watercourses Agreement in their Long Term Plans for 2015-25.

4.2 Funding

The core responsibilities for each party are that; GWRC is responsible for the channel works, and UHCC is responsible for the culverts, bridges and other structures over, under or otherwise crossing the stream. Evaluation of these costs showed that as a total they were approximately 50% for GWRC and 50% for UHCC. It is therefore agreed that the general principle will be for costs [of contract works] relating to the Project to be shared 50% to Upper Hutt and 50% to Greater Wellington. Cost overruns will be dealt with as set out in clause 4.3.

As at [the date of this Agreement], the cost estimates for [the contract works components of] the Project for the different parts of the stream, are as set out in Table 2.

Table 1: Current Proportional allocation of costs for Pinehaven FMP

	Responsible Council	Costs
Upstream of Pinehaven Reserve	UHCC	100% UHCC
Downstream of Pinehaven Reserve	GWRC	50% GWRC, 50% UHCC

Table 2: Proposed allocation of costs for Pinehaven FMP Implementation, based on estimated cost of contract works as at [the date of this Agreement]

Reach	GWRC	UHCC	Total
1	\$1,712,500	\$1,712,500	\$3,425,000
2	\$2,145,000	\$2,145,000	\$4,290,000
3	\$922,500	\$922,500	\$1,845,000
4 Upper Catchment	\$92,500	\$92,500	\$185,000
Total	\$4,872,500	\$4,872,500	\$9,745,000

4.3 Cost Overruns

Cost overruns shall continue to be apportioned on the basis in clause 4.2 up until an increase of 10% above the estimated cost for a portion of works is met. Beyond this the Steering Group are to evaluate the reasons for the cost overrun and agree a different apportionment if necessary, based on the [eventual] ownership of the affected infrastructure. If agreement cannot be reached by the steering group it will be treated as a dispute, and dealt with as detailed in the dispute resolution section of this agreement.

5. Project Management and Governance Structure

5.1 Hutt Valley Flood Management Subcommittee

The Hutt Valley Flood Management Subcommittee (HVFMSc) is responsible for governance of the project and is a subcommittee of GWRC reporting to the Environment Committee of GWRC. Its membership comprises elected members from UHCC, GWRC and HCC and its terms of reference and standing orders are set out in the resolution establishing it.

The Project structure is set out in Attachment 3 and as follows:

The HVFMSc is responsible for:

- Governance of the project
- Providing policy guidance and coordination,
- Oversight of community engagement and consultation
- Recommending to the respective the provision of funding and obtaining consents necessary for the FMP
- Recommending to the Councils any change to the scope of work necessary or desirable to achieve the implementation and efficient operation of the FMP.
- Recommending to the Councils any change to the terms of this Agreement.

- Any recommendation of the HVFMSc pertaining to the Pinehaven Floodplain Management Plan shall be referred to GWRC for decision.
- Any decision made by GWRC pertaining to the Pinehaven FMP shall be referred to UHCC to assist its decision making process.

5.2 Steering Group

The Pinehaven FMP Implementation Project Steering Group (**Steering Group**) shall be responsible to the HVFMSc for:

- Management of delivery of the project
- Reporting to the HVFMSc on the progress of the FMP

Membership of the Steering Group shall comprise of senior officers respectively appointed by both UHCC, GWRC, each senior officer may be represented by their nominated alternate. These officers shall include the Director Asset Management and Operations at UHCC, Manager Flood Protection at GWRC. The appointed members of the Steering Group may co-opt other persons to join the Steering Group from time to time as they consider appropriate. The Steering Group will meet on a two monthly basis or as necessary. Officers from the Steering Group report directly to their respective Councils and Committees on Project matters, as appropriate. Routine decisions of each Council may be implemented through the Project Manager, in accordance with the provisions of each Council's annual plan.

5.3 Project Manager

The Project Manager shall be appointed by the Steering Group and shall have overall responsibility for the project management, control of programmes and implementation. The Project Manager shall be a member of the Steering Group and shall be responsible for the overall FMP implementation management, the coordination of the activities of the FMP outcomes, the preparation and control of programmes and budgets and for the management of any public consultation and engagement process. This includes both structural and non-structural outcomes recommended in the floodplain management plan.

The community and community groups existing or established for the floodplain management plan, will be consulted as part of engagement strategy developed for the implementation Project. This consultation will be led by the project manager.

6. Transfer of assets and management to UHCC

Upon practical completion of each aspect of the physical works comprised in the FMP and following implementation of the FMP, ownership of the assets and future management responsibility for the FMP shall, following a decision by GWRC, be transferred to UHCC in accordance with clause 2

7. Programme

The indicative programme for the implementation and completion of the FMP outcomes is based around the councils respective LTP's is shown in Attachment 4. Under the indicative programme the Project will be completed by 2025.

Commencement of the construction of structural works will not begin until the Pinehaven Plan Change methods/controls outlined in the floodplain management plan have been included in the District plan by way of a decision of Upper Hutt City Council. The process to include these methods is yet to be established by Upper Hutt City Council but it is intended to be notified by way of a plan change in February 2017 (*The current indicative programme has been developed based on this date*).

Any substantive change to the programme recommended by the HVFMSc will require ratification by the two contributing Councils having due regard to their respective LTPs.

8. Budget

The budget to complete the FMP outcomes shall be revised and updated each year as an input to each Council's annual plan, or as necessary as agreed by the two Councils. Available funding is shown within each Council's LTP .

Any proceeds from the sale of parcels of land identified by the floodplain management plan will be used to offset costs within the project.

8.1 Invoicing

UHCC will invoice GWRC following each contract progress payment for its 50% share of the costs. If GWRC or UHCC incur any additional cost considered part of the overall costs, it shall agree these sums in advance with the Steering Group and once agreed offset them against the total annual invoice.

9. Changes to the scope of the project

If the scope of the Project needs to be changed during the course of the Project, any substantive change shall be considered by the HVFMSc. Any changes to the scope of the project recommended by the HVFMSc shall be referred to GWRC for decision and referred to UHCC to assist its decision making processes. The change in scope shall only proceed when approved by the two councils having due regard to the requirements of their respective LTP's. Both Council shall act in good faith and give proper consideration to the recommendations of the HVFMSc and their statutory responsibilities.

10. Changes to this Agreement

Any substantive change to this Agreement shall be ratified by the two Councils (having due regard to the requirements of their respective LTPs) and shall be recorded in writing..

11. Insurance

The Project Manager is to ensure the necessary works and public liability insurances are incorporated as part of the project plan

12. No Liability

12.1 Each Council is liable for costs associated with the Project as outlined in this Agreement only to the extent that there is allocated funding in the Long Term Plan.

12.2 Notwithstanding clause 12.1:

- (a) each Council is liable to pay all amounts properly payable by that Council to a third party in relation to this Agreement,
- (b) if either Council recovers compensation from a third party (including an insurer) in respect of any occurrence that Council would, in the absence of clause 12.1, be liable to the other Council for, then that Council will be liable to pay to the other Council the compensation recovered by that Council, less reasonable costs, and
- (c) the two Councils will co-operate and, share information with a view to assisting each other recover compensation from third parties (including insurers), as anticipated by this clause 12.

The provisions of this clause 12 continue to bind the two Councils after this Agreement has expired.

13. Publicity

The two Councils agree to the following communications protocol for all publicity concerning the FMP outcomes:

- The Chair of the HVFMSc is responsible for making all publicity statements
- The Project Manager will prepare all publicity statements on behalf of the Project Team and the two Councils
- In preparing any such publicity statements the Project Manager shall inform and liaise with, the Communications Managers of the two Councils.

14. Representatives

Each Council appoints the Representative named in clause 14 as its Representative under this Agreement. The Representatives are responsible for the day to day administration of this Agreement on behalf of the Council appointing them (except that the Project Manager is responsible for the day to day delivery of the project.

The Representatives must be available and able to be contacted during normal business hours. A Council must notify the other immediately if its Representative is removed or replaced, together with the contact details of its new Representative, or of any change to its Representative's contact details.

The Representatives are:

Greater Wellington Regional Council
Graeme Campbell
Manager, Flood Protection
Phone: 04 830 4062
Email: graeme.campbell@gw.govt.nz

Upper Hutt City Council
Lachlan Wallach
Director, Upper Hutt City Council
Phone: 04 527 2136
Email: lachlan.wallach@uhcc.govt.nz

15. Councils' regulatory capacities

The two Councils are entering into this Agreement in their respective property owning capacities, solely to work together on the Pinehaven Stream Floodplain management plan implementation Project and for the purpose set out in clause 2 of this Agreement. Accordingly, the two Councils acknowledge:

- They are not entering into this Agreement in their respective regulatory capacities so, for the purposes of clause they cannot and do not grant any consents, approvals or permits required of either Council in its regulatory capacity (as applicable), which consents and approvals must be obtained from Greater Wellington Regional Council and/or Upper Hutt City Council (as applicable) in their respective regulatory capacities, and
- This Agreement does not purport to authorise the two Councils to carry out any activity in relation to the Project for which a statutory consent, approval or permit is required from the responsible territorial authority.

16. Termination

This Agreement terminates on upon completion of the project (unless otherwise agreed in writing by the two Councils, and subject to any clauses or schedules of this Agreement that make provision for early termination of the agreement or continued operation beyond expiry of this Agreement).

17. Disputes

If there is a dispute between the two Councils in relation to this Agreement, the two Councils will actively and openly endeavour to amicably settle the dispute themselves, with a view to prompt resolution.

If there is a dispute, either Council may give written notice to the other requesting a meeting to seek to resolve the dispute. The Representatives must meet within 5 business days of the giving of the notice and endeavour to resolve the dispute in good faith.

If the Representatives' meeting does not take place, or if 5 business days after the meeting the dispute remains unresolved, the dispute must be referred to the Chief Executives of the two Councils who must negotiate in good faith to resolve the dispute.

If 5 business days after the Chief Executives' meeting the dispute remains unresolved, the dispute may be referred to mediation. If the two Councils do not agree on the mediator, then the mediator must be appointed by the President or Vice President for the time being of the New Zealand Law Society. That appointment shall be binding on the two Councils. Unless the two Councils agree otherwise, the mediator's fee and all other costs of the mediation itself must be shared equally between the two Councils, but each Council must pay its own costs of preparing for and participating in such mediation.

Execution and date

Execution as an agreement.

Date: 16 September 2016



Upper Hutt City Council Authorised Signatory

Lachlan Wallach
Director
Asset Management & Operations



Greater Wellington Regional Council Authorised Signatory

Manager
Flood Protection

- Attachment 1 - Project Area (*Pinehaven Floodplain Management plan, Appendix E, 1%AEP flood extent maps*)
- Attachment 2 - Project Funding Allocation
- Attachment 3 - Project Management Structure
- Attachment 4 – Indicative Programme (*Pinehaven Floodplain Management plan, section 7.4, Implementation Schedule, page 44*)



Pinehaven Stream Upgrade

Hutt River Valley Subcommittee
6 August 2024



Our water, our future.

Rev 00 (v4)

Agenda



1. Background
2. Project Scope
3. Project Progress
4. Benefits

Background

The Pinehaven catchment has a long history of flooding events.



1976 Pinehaven Flooding



Approximately 60 habitable floors are expected to be affected by a 4% AEP (Annual Exceedance Probability) and approximately 70 in a 1% AEP event

Floodplain Management Plan

Floodplain Management Plan (FMP)

- In 2017 Greater Wellington Regional Council (GWRC) and Upper Hutt City Council (UHCC) agreed to work together to implement the Pinehaven Stream Floodplain Management Plan (FMP 2016), with costs to be shared 50% to UHCC and 50% to GWRC.

Flood Management Plan Primary Objectives

- To provide capacity in the stream for a 4% AEP (1 in 25-year return period) flood event, and
- To protect floor levels of homes to a 1% AEP (1 in 100-year return period) flood event.

FMP Implementation

- Implementation of the FMP is being led by UHCC.
- Upon completion of the physical works ownership of the assets and maintenance responsibility will be transferred to UHCC.
- Wellington Water are acting as UHCC's agents to undertake the implementation of the structural works.



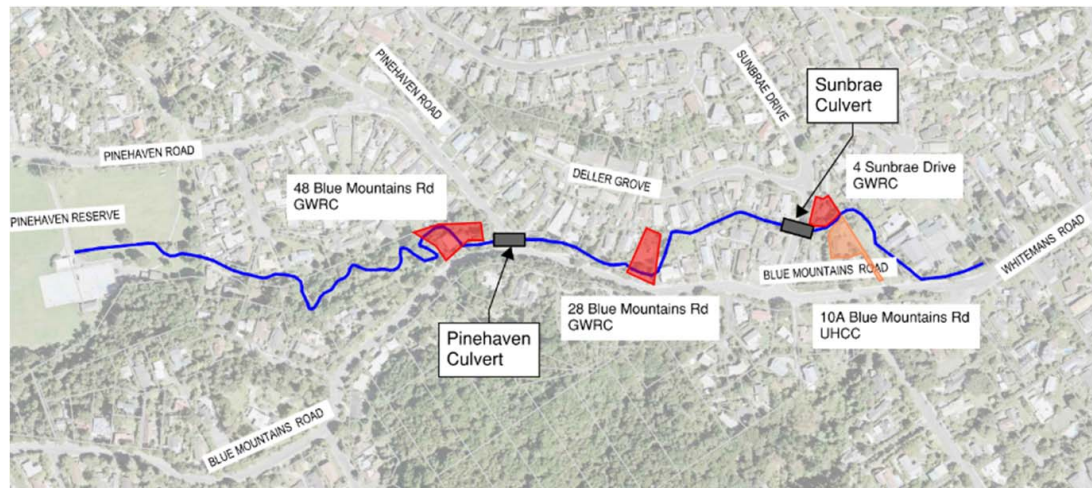


Pinehaven Project Scope

As per the FMP, the project includes three parts:

- Culverts works - upgrading culverts at Sunbrae Drive and Pinehaven Road
- Enabling works – includes house removal and service relocation upgrades. Residential houses at 4 Sunbrae Drive, 28 Blue Mountains Road, and 48 Blue Mountains Road were purchased by GWRC to be removed for streamworks
- Stream capacity and environmental improvement works – widening the stream, planting, bank stabilisation, retaining walls and earthworks

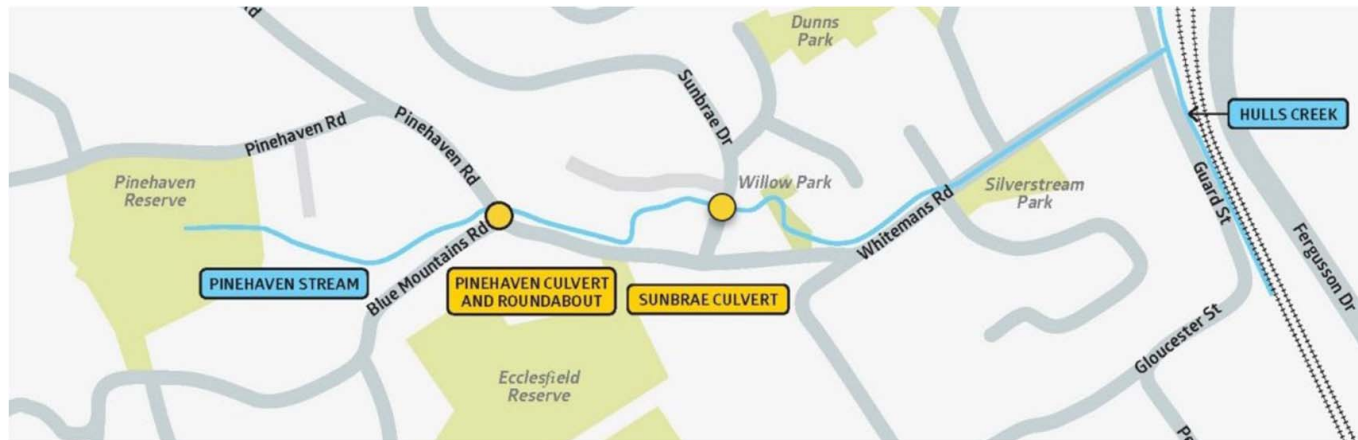
This scope is now being delivered in a Phased Approach.





Project Scope and Delivery Phases

Phase	Stages	Description
Phase 1		Pinehaven and Sunbrae culvert construction, removal of 48 Blue Mountains Rd and 4 Sunbrae Drive (including design and consenting for the full project)
Phase 2	9 – 10	Willow Park vertical wall stream channel and stream stabilisation, bridge, earthworks and landscaping
Phase 3	7 – 8	Removal of 28 Blue Mountains Rd, stream re-alignment, new driveway to 30 and 32 Blue Mountains Rd, vertical wall stream channel, earthworks and landscaping
Phase 4	5 – 6	Vertical wall stream channel and driveways to 30 – 40 Blue Mountains Rd
Phase 5	1 – 4	Vertical wall stream channel and driveways behind 8 – 11 Birch Grove



Phase 1 - Complete



Our water, our future.

Phase 2 - In Construction



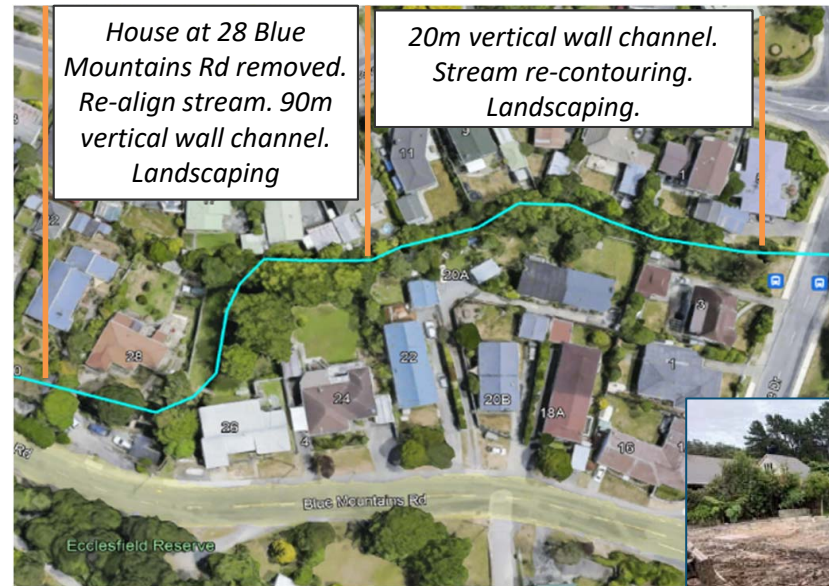
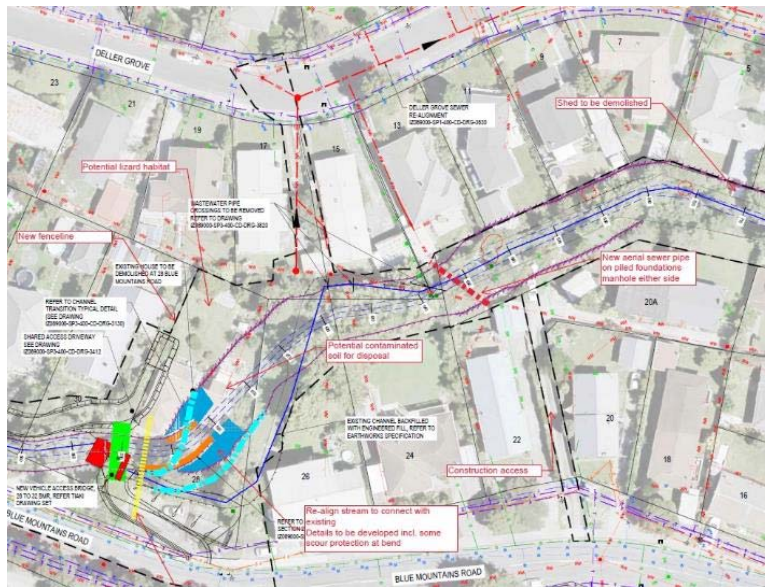
- Construction started September 2023 and is expected complete October 2024. We are currently within budget and schedule.



Phase 3 – Construction Planning and Procurement



- Hold point for Award - September 24
- 28 Blue Mountains Road has been removed in advance due to fire damage



Phase 4 to 5 - Pending



- Designed and consented

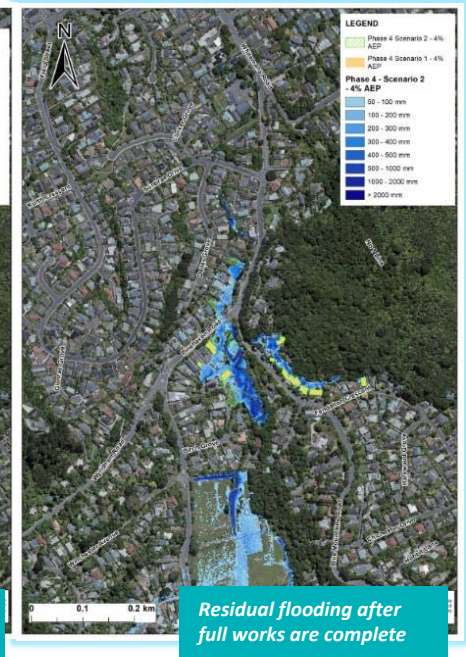
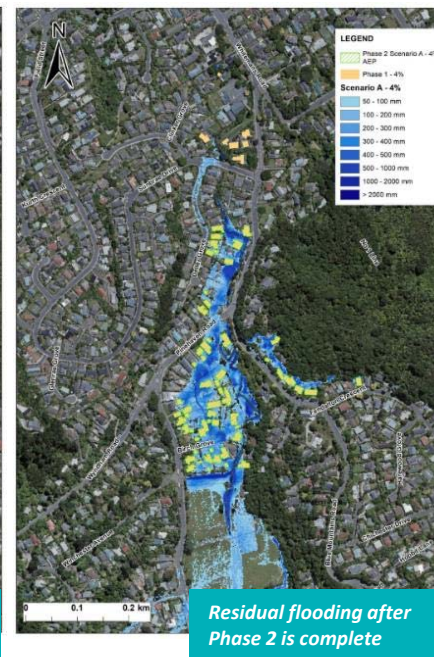
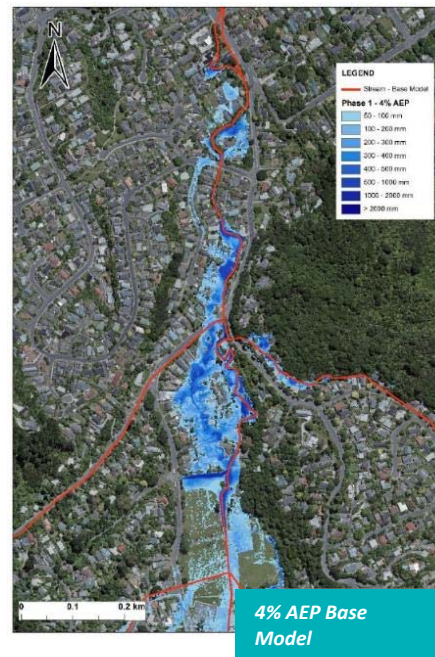


Our water, our future.



Benefits

- Approximately 60 habitable floors are expected to be affected by a 4% AEP (Annual Exceedance Probability) event, with approximately 55 expected to benefit from the full complete scope.
- Approximately 70 affected in a 1% AEP event, with approximately 51 expected to benefit from the full complete scope.
- The full scope of works is required to achieve the expected benefits, with majority of the benefits only being realized on the completion of Phase 5.
- Approximately 9 habitable floors are expected to be protected in a 4% AEP event and approximately 13 in a 1% AEP event with works complete to date (end of Phase 2).



Project Challenges and Risks



To date the project progress has been slow to progress due to annual planning budgets and uncertainty in funding.

This has resulted in increased project risks that must be addressed to ensure project continuity:

- Resource consent expiry
- Private property agreements expiry
- Winter works permitting



Next Steps



Together with UHCC and GWRC we intend to:

- Review of the benefits of the works and estimate to complete works
- Explore alternative options to mitigate flood risk and achieve the objectives of the FMP
- Reset the project plan, and
- Update the Hutt River Valley Subcommittee in October 2024



Questions?



Our water, our future.

Te Awa Kairangi / Hutt River Valley Subcommittee
6 August 2024
Report 24.360



For Decision

TE AWA KAIRANGI / HUTT RIVER VALLEY ANNUAL ASSET MANAGEMENT CONDITION REPORT

Te take mō te pūrongo

Purpose

1. To advise the Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) of the overall performance and physical condition of flood protection and erosion control infrastructure assets (assets).

He tūtohu

Recommendations

That the Subcommittee:

- 1 **Notes** that identified issues are being addressed through maintenance and improvement work programmes.
- 2 **Recommends** to the Environment Committee that it is satisfied that Flood protection and erosion control infrastructure assets have been managed satisfactorily to the agreed Level of Service (LoS).
- 3 **Notes** that the 2024-34 Long Term Plan provides an increased level of funding for capital works and operational resources over the next 10 years.

Te tāhū kōrero

Background

2. Greater Wellington Regional Council (Greater Wellington) is responsible for flood protection and erosion control infrastructure assets, including land and property, located on 15 river schemes across the Wellington Region. These assets have a total combined value of \$621 million¹ and provide flood and erosion protection to the communities, businesses and infrastructure located on these floodplains.
3. The Environment Committee has overall responsibility to monitor the maintenance and improvement of these assets on behalf of Council. The Environment Committee relies on feedback from the various subcommittees, scheme advisory committees and friends' groups to confirm infrastructure assets are being satisfactorily maintained to the agreed service level.

¹ Revaluation as at 30 June 2024

Current Challenges

4. The context and overall environment in which Operations and Maintenance (O&M) is undertaken is evolving, with the introduction of a catchment-based approach better enabled through the restructure of the Environment Group last year, and with more focus on nature-based solutions.
5. Over the past decade we have constructed a broader range of assets, aside from those that provide flood protection and erosion control, and these assets have different uses and more intensive maintenance requirements. For example, the Hutt River Trail which includes tracks, gates, signs and benches. The introduction of more nature-based solutions will have an impact on maintenance, in terms of cost and time, such as increased maintenance requirements around pest plants and animals.
6. Central and local government reforms coupled with increasing compliance costs (health, safety and wellbeing, environmental), increasing expectations on how we should work to improve environmental outcomes, partnering with mana whenua and the increasing community desire for consultation and engagement to achieve broader social objectives continue to increase operational resource requirements.
7. Climate change is also requiring more complex planning. More frequent and extreme weather events may result in reactive maintenance taking precedence over the annual works programme. These events have proven to be significantly disruptive in other parts of Aotearoa.
8. Greater Wellington transitioned to a new asset management information system (AMIS), called Ngātahi, in February 2022. Migrating to, and rolling out, a new AMIS comes with its challenges, such as change management, new technology to learn, additional training requirements, and data migration and validation. While we have made significant progress with the new systems and tools, it remains a process that will take time to embed.
9. We require broader skillsets within our teams than we have had in the past if we are to achieve Greater Wellington's strategic outcomes in light of the above considerations. Disciplines across the public works sector such as engineering, operations, and asset management are known skill shortage areas.
10. Across the board, resourcing for operational maintenance and asset planning has fallen short of what is required. This has been addressed through the 2024-34 Long-term Plan with a significant package of additional funding.

Te tātaritanga Analysis

Asset condition

11. Asset condition is a measure of the physical state of the asset and is assessed through a visual inspection. [Table 1](#) below outlines condition rating descriptions used during visual inspections.

12. Monitoring asset condition enables us to identify, plan and prioritise maintenance, forecast replacement requirements, and develop effective and proactive work programmes. Asset condition information is essential to managing flood risk because it influences the likelihood of asset failure.

Table 1: Condition rating descriptions taken from the Greater Wellington Condition Rating Guide.

Score	Condition Rating	Definition
1	Very Good	Sound physical condition, well maintained. No work required.
2	Good	Generally sound physical condition, showing minor wear or deterioration, well maintained. Minor work may be required.
3	Moderate	Acceptable physical condition, but showing some wear or deterioration. Generally maintained well but some work is required to improve the asset condition or make sure it is working well.
4	Poor	Poor physical condition, significant wear or deterioration impacting much of the asset. May not meet level of service.
5	Very Poor	Failed/failure imminent. Major work or replacement required.

13. Asset condition alone does not identify the criticality of the asset, or whether the asset meets the required service level. This is addressed through asset performance assessments, covered further below.
14. The following table and graph show the volume of assets in each condition grading. [Table 2](#) shows that there has been a significant increase in the number of assets in Very Good to Moderate condition. Note the total number of assets inspected has increased significantly (441) which is why the ratio has not changed significantly.

Table 2. Summary of asset condition – Te Awa Kairangi, Waiwhetu and Wainuiomata.

Year	2024		2023		2022	
Condition Scores	Ratio	Count	Ratio	Count	Ratio	Count
1 - Very Good	90%	861	89%	551	92%	392
2 - Good		716		669		944
3 - Moderate		311		261		377
4 – Poor	10%	190	11%	135	8%	137
5 - Very Poor		28		52		22
Totals	100%	2106	100%	1665	100%	1872

15. The total number of assets inspected in 2023 was notably lower due to technical issues experienced whilst implementing our new asset information management

system, which meant we could not map the asset locations in time for the inspections and therefore were unable to inspect all assets. This was rectified in time for the 2023/24 condition rating programme.

16. Additional assets were also added as part of the Climate Resilience and rock work programmes completed in the last 12 months. The rock work programme completed in April 2024 has improved the condition of assets on Te Awa Kairangi/Hutt River. Compared to last year where a slight decline was emerging, a substantial increase in the number of assets in 'Very Good' and 'Good' condition has been observed.
17. During the 2024 condition assessment programme, 90% of assets were assessed as Very Good to Moderate condition, with only 1% of assets in Very Poor condition.

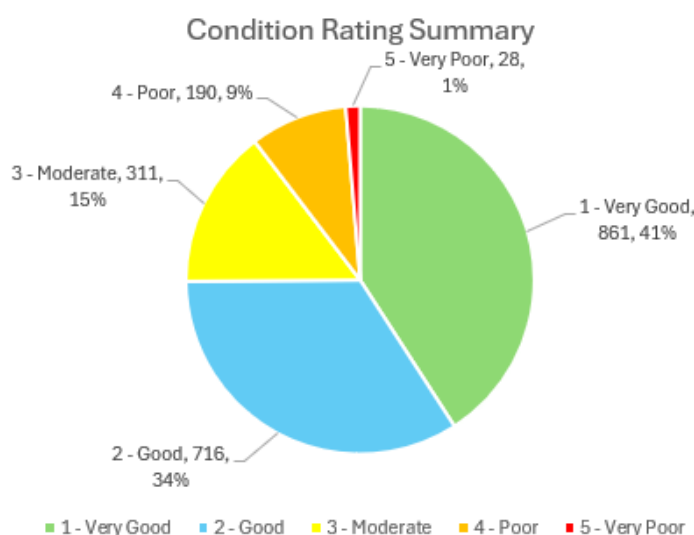


Figure 1: Condition rating summary 2024

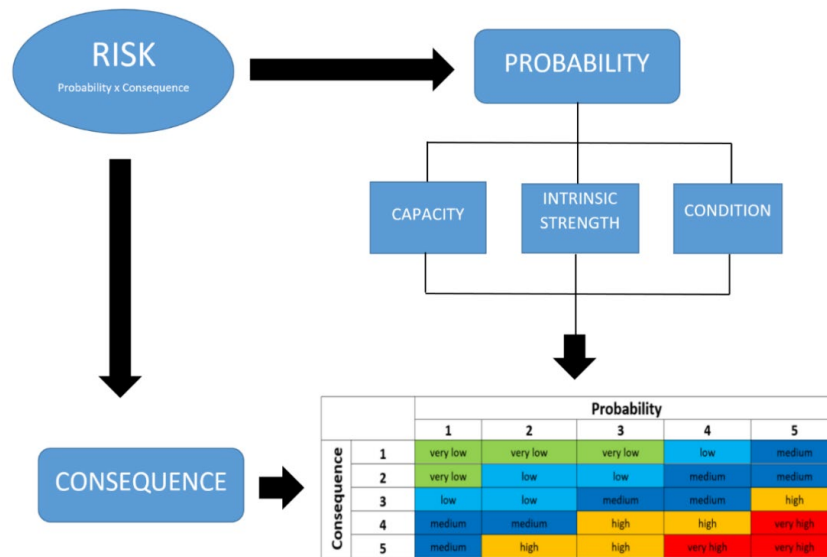
Asset performance and risk

18. A comprehensive, national risk-based framework is used to assess asset performance at 100-200m segments along both banks of the river. The output of the assessment produces a risk profile for each major flood protection scheme.
19. The national risk-based framework for assessing the performance of flood protection schemes was originally developed by the National River Managers Special Interest Group in 2015. The framework is used by Regional Authorities across the motu.
20. The risk assessment framework assesses both the probability and consequence of failure of a group of assets within a discrete section of the river (e.g. 100-500m).
21. Assessing the probability of failure includes analysing the structural strength of stopbanks (intrinsic strength), the capacity of the channel to attenuate flood flows, and the physical condition of infrastructure assets.
22. The consequence of failure relates to the risks posed to both the community and environment from asset failure from a design flood event. Once a probability and

consequence score have been determined for each reach, a risk level is assigned from ‘Very Low’ to ‘Very High’.

23. Application of the framework also highlights where the confidence in the underlying technical information is low and informs the investigative work programme to gather new or additional information to improve this confidence.
24. Assets do not work in isolation; they typically belong to a system of assets that are interconnected. Flood protection and erosion control assets are no different. A system of assets can be identified as critical in the same way individual assets can.
25. The following diagram illustrates the relationship between asset condition, probability, and risk.

Figure 2: Risk-based framework used for assessing performance of flood protection assets.



26. Currently, this risk-based framework is applied to the Te Awa Kairangi/Hutt River and the Wainuiomata River schemes. This is because this framework is applicable to flood protection infrastructure (e.g. stopbanks). This risk-based framework is not applied to the Waiwhetū or Pinehaven streams due to the limited amount of flood protection infrastructure in these waterways.
27. Due to the inherent consequences should parts of the Te Awa Kairangi/Hutt river scheme fail, the proportion of segments in ‘High’ or ‘Very High’ risk is elevated compared to more rural areas, such as in the Wairarapa. Still, the majority of segments within the Hutt Valley schemes are attributed as ‘Very Low’ to ‘Medium’ risk (77%), which is a slight improvement since 2023.
28. Since 2023, the risk across thirteen ‘High’ risk segments has reduced. This is largely attributed to the Climate Resilience programme completed in the last 12 months, as well as operational work to remove invasive roots/trees away from stopbanks.
29. There are a number of segments that have been assessed as ‘High’ or ‘Very High’ risk. This can be attributed to one or more of the following failure modes: capacity, intrinsic strength, condition, or consequence of failure.

Table 3. Summary of asset performance by risk scores across the Hutt and Wainuiomata river schemes.

Year	2024		2023		2022	
Risk Scores	Ratio	Count	Ratio	Count	Ratio	Count
1 – Very Low	77%	249	75%	246	76%	245
2 – Low		171		171		146
3 – Medium		75		65		94
4 – High	23%	109	25%	122	24%	119
5 – Very High		36		36		36
Totals	100%	640	100%	640	100%	651

Management response

30. With the recent approval of the 2024-34 Long Term Plan², increased budgets and resources will be available to ensure we can maintain agreed scheme service levels and continue to undertake routine O&M activities.
31. All ‘Very High’ or ‘High’ risks, shown in [Attachment 1](#), are known to officers and have been identified for treatment either through an existing Floodplain Management Plan (FMP), a technical investigation, or operational work programme. Existing and proposed FMP improvement works have been considered as part of the recent Activity Management Planning and Long Term Planning process.
32. The highest risk areas are discussed below, from downstream to upstream of Te Awa Kairangi/Hutt River, followed by the Wainuiomata River.
33. At the Te Awa Kairangi / Hutt River mouth, downstream of the Estuary Bridge, capacity is an issue as the area is inundated during a 1,900 cumec event (1% Annual Exceedance Probability – AEP) and is shown as ‘High’ risk. There are no stopbanks in this reach and no new stopbanks are currently signalled in the Hutt River Floodplain Management Plan (HRFMP). Initial investigations have been completed through the RiverLink project and these will be progressed further when the HRFMP is reviewed. Riverlink is due for completion by 2027.
34. Sections of Te Awa Kairangi/Hutt River from Moera to Strand Park, and adjacent to Alicetown are ‘High’ risk. This is an inherent risk as the consequences of any stopbank failure is significant.
35. Pharazyn Street and Lower Hutt city stopbanks have capacity and intrinsic strength issues; they are predicted to overtop in the 2,800 cumec design event and are shown as ‘Very High’ risk. As both the probability and consequence of failure are very high, the risk rating reflects this. RiverLink will retreat, raise, and improve the stopbanks and enhance channel capacity through this section of the Te Awa Kairangi/Hutt River. Advance works are in progress for the Mills Street stopbank.

² <https://www.gw.govt.nz/your-region/plans-policies-and-bylaws/plans-and-reports/long-term-plan/>

Updates on RiverLink Project are provided in a separate report at this meeting (refer report 24.352).

36. The River Road stopbank above Moonshine Bridge has a capacity issue and average intrinsic strength; it is predicted to overtop in the 2,800 cumec event and is shown as 'Very High' risk. Modelling for Te Awa Kairangi/Hutt River is mostly complete. A targeted detailed investigation on this stopbank is planned this financial year and will consider options for managing this risk.
37. The latest assessment for the Wainuiomata River has identified two 'high risk' segments attributed to potential overtopping in the 1% Annual Exceedance Probability (AEP) event. An investigation is planned into these areas to determine whether local raising of defences is required. An update to the flood hazard model is programmed to commence this financial year once the flood hazard modelling for the Te Awa Kairangi/Hutt river has been completed.

Ngā hua ahumoni Financial implications

38. The proposed recommendation has no immediate financial implications.

Ngā Take e hāngai ana te iwi Māori Implications for Māori

39. 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.
40. Our partnership with mana whenua partners within Council's Long-term Plan 2024-34 recognises and supports mana whenua as kaitiaki (guardians) of their broad whenua, freshwater and moana interests in their ancestral lands. We continue to work with our mana whenua partners in new ways at all levels of our organisation including governance, management and operations.
41. A significant number of Māori, both mana whenua and mātāwaka, live and work in flood prone areas within Te Awa Kairangi. There are also numerous sites of cultural and spiritual significance potentially at risk from flooding. Effective delivery of our flood risk management programme helps to protect Māori communities and their values across the four wellbeings (social, economic, environment and cultural).

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

42. Matters discussed in this report have been considered by staff in accordance with the process set out in Greater Wellington Climate Change Consideration Guide.
43. The assets discussed in this report were developed over an extensive period of time, during which climate change projections (e.g. rainfall intensity, sea level rise) have evolved with the scientific community's understanding of how climate change will affect the Wellington Region. Climate change projections were incorporated

into the modelling that underpins relevant management plans and asset designs at the time they were developed. Previous climate change projections of 20% increase in rainfall intensity and 0.8m sea level rise were used for modelling in Te Awa Kairangi/Hutt. Current climate projections estimate a 25-30% increase in rainfall intensity and a sea level rise of 1.35m and are used for recent modelling projects. The policy for modelling projects is to use latest national guidance for incorporating climate change into flood risk assessments and responses.

44. The Climate Resilience projects completed in 2023 incorporated significant planting areas to offset carbon footprint.

**Ngā tikanga whakatau
Decision-making process**

45. The matters requiring decision in this report have been considered by officers against the requirements of Part 6 of the Local Government Act 2002.

**Te hiranga
Significance**

46. Officers considered the significance (as defined by Part 6 of the Local Government Act 2002) of this matter, taking into account Council's *Significance and Engagement Policy* and Greater Wellington's *Decision-making Guidelines*. Officers recommend that this matter is of low significance due to the administrative nature of the decision.

**Te whakatūtakitaki
Engagement**

47. Due to the low significance of this matter, no engagement was considered necessary.

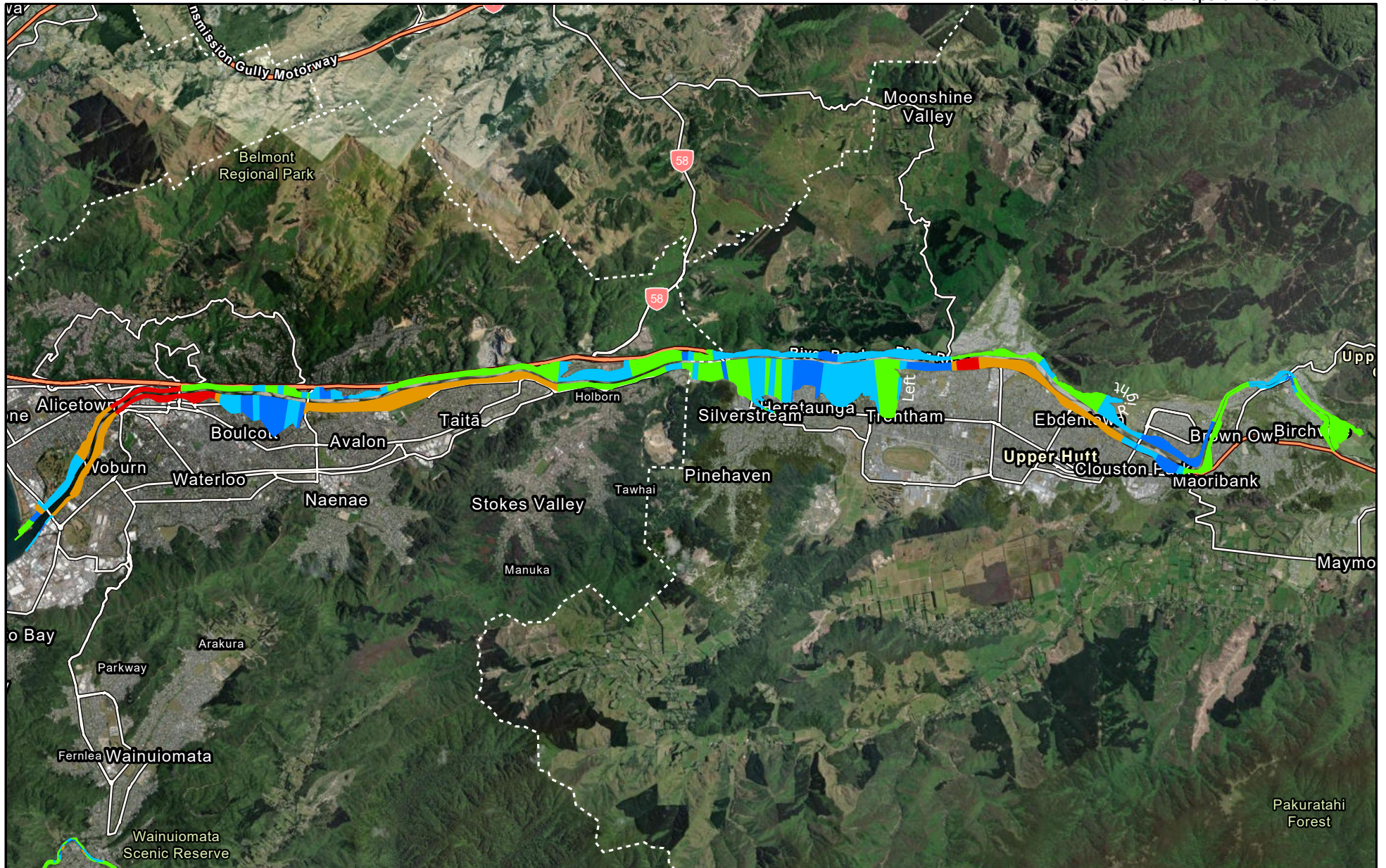
**Ngā āpitihanga
Attachment**

Number	Title
1	Te Awa Kairangi/Hutt River risk assessment maps 2024

**Ngā kaiwaitohu
Signatories**

Writer	George Bowman – Team Leader, Assets and Performance
Approvers	Jacky Cox – Manager, Infrastructure, Assets and Support Jack Mace – Director, Delivery Lian Butcher – Kaiwhakahaere Matua Taiao Group Manager Environment

He whakarāpopoto i ngā huritaonga Summary of considerations
<p><i>Fit with Council’s roles or with Committee’s terms of reference</i></p> <p>The Subcommittee provides oversight of the development, implementation, and review of the Floodplain Management Plan for the Te Awa Kairangi/Hutt River floodplain; the infrastructure assets that form the flood protection and erosion control scheme are a critical element of this.</p>
<p><i>Contribution to Annual Plan / Long Term Plan / Other key strategies and policies</i></p> <p>The confirmation from the Subcommittee that the infrastructure assets in the Te Awa Kairangi/Hutt River have been satisfactorily maintained fulfils one of the Department’s non-financial performance measures in the Long Term Plan. This report and confirmed minutes are supplied as evidence to Audit NZ that the Department has achieved this.</p>
<p><i>Internal consultation</i></p> <p>There was no internal consultation.</p>
<p><i>Risks and impacts - legal / health and safety etc.</i></p> <p>The reports note that there are a small number of sections of Te Awa Kairangi/Hutt River that pose either a ‘Very High’ or ‘High’ risk to the communities and businesses on the River’s floodplain but that the infrastructure assets providing protection are in very good to moderate condition. These areas are also identified in for either a technical investigation or in an operational or improvement programme.</p>

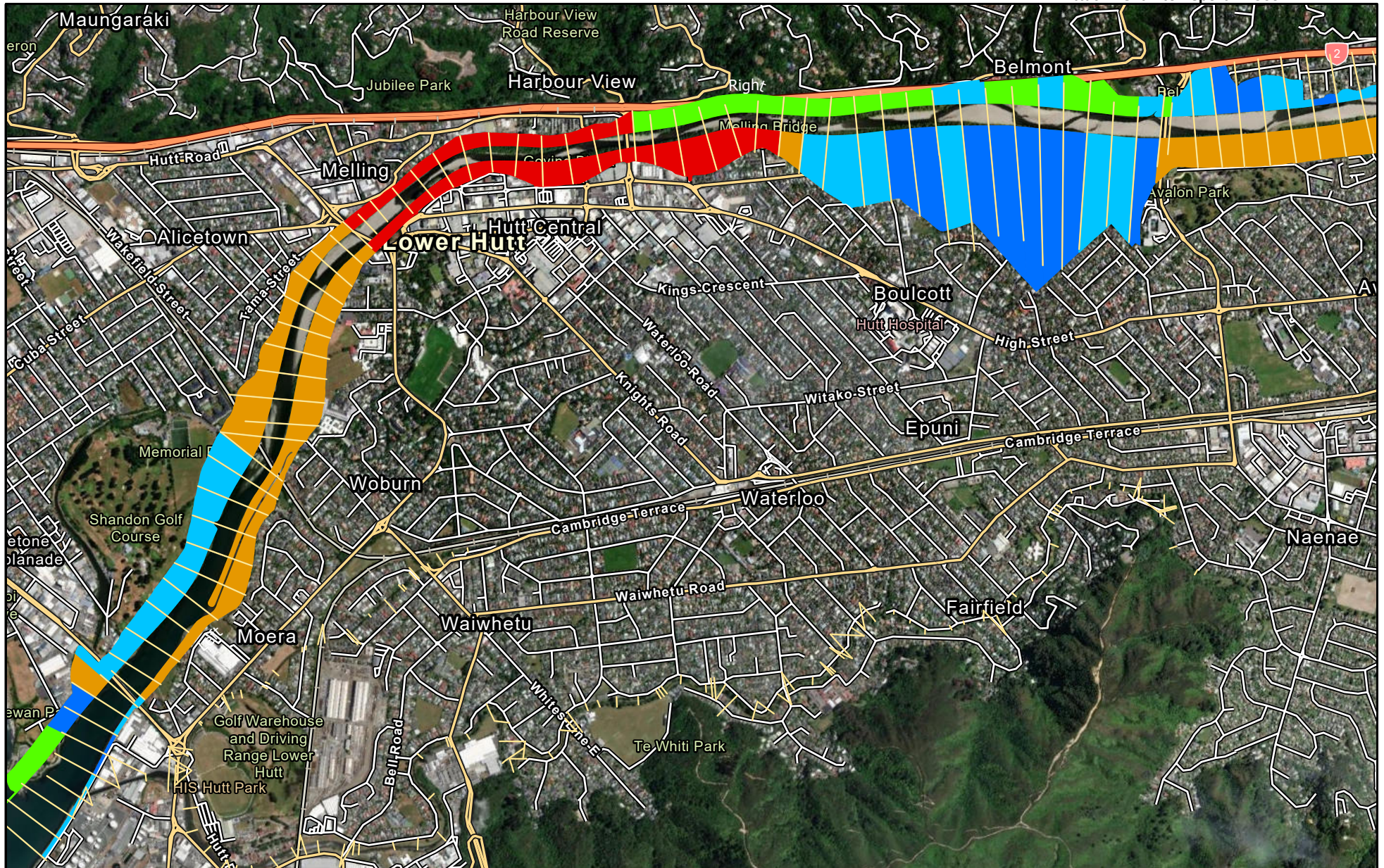


Hutt Overview APT Map
2024 Asset Performance Tool Risk Assessment



Risk Classification	
Very High (36)	High (109)
Medium (72)	Low (161)
Very Low (212)	

Project Name:	APT
Author:	TurnerL
Date of Issue:	8/07/2024 8:25 am
Scale at A4:	1:88,000



Hutt 1 APT Map
2024 Asset Performance Tool Risk Assessment

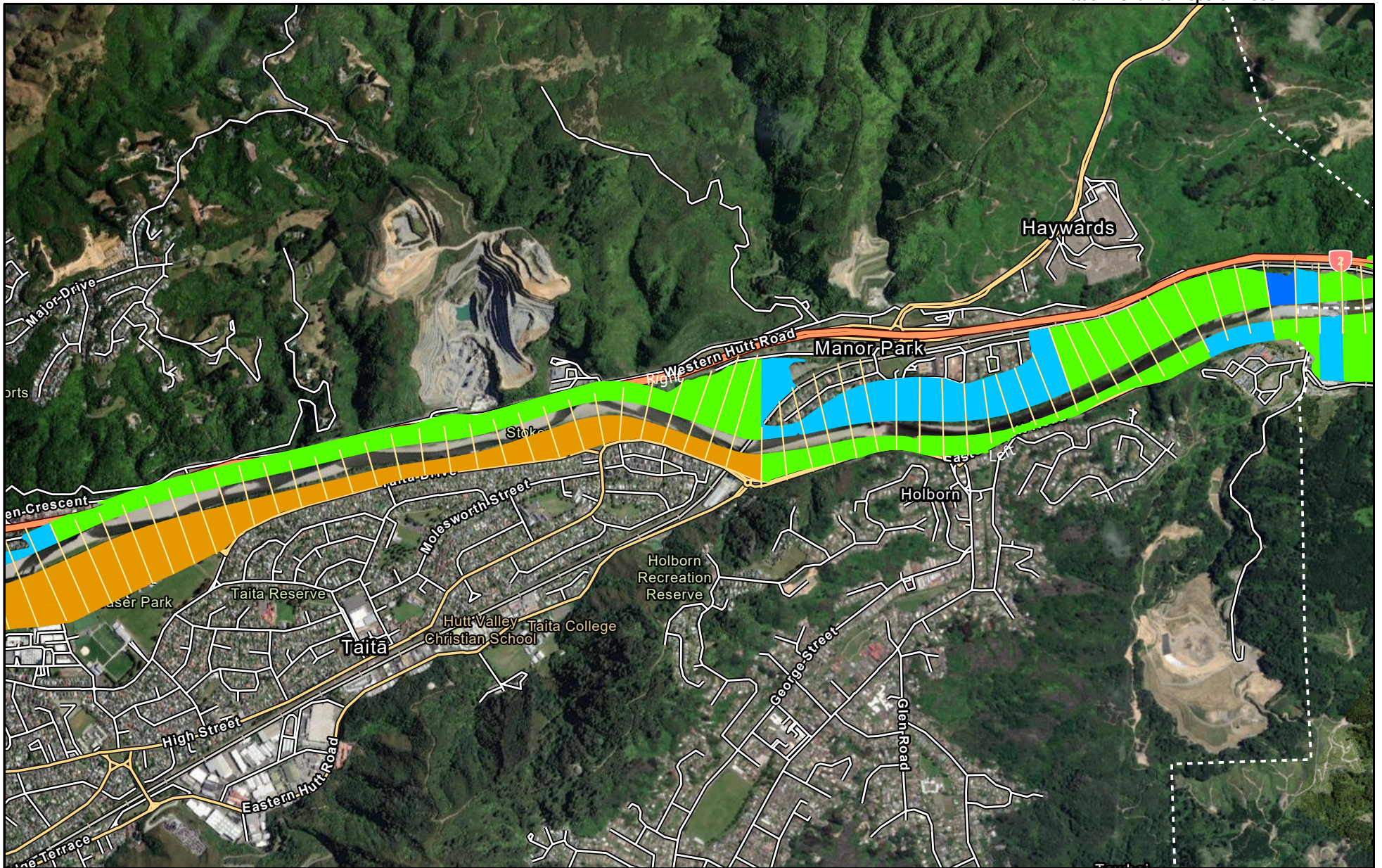


Cross Sections (210)

Risk Classification

- Very High (32)
- High (44)
- Medium (15)
- Low (34)
- Very Low (23)

Project Name:	APT
Author:	TurnerL
Date of Issue:	8/07/2024 8:26 am
Scale at A4:	1:21,000

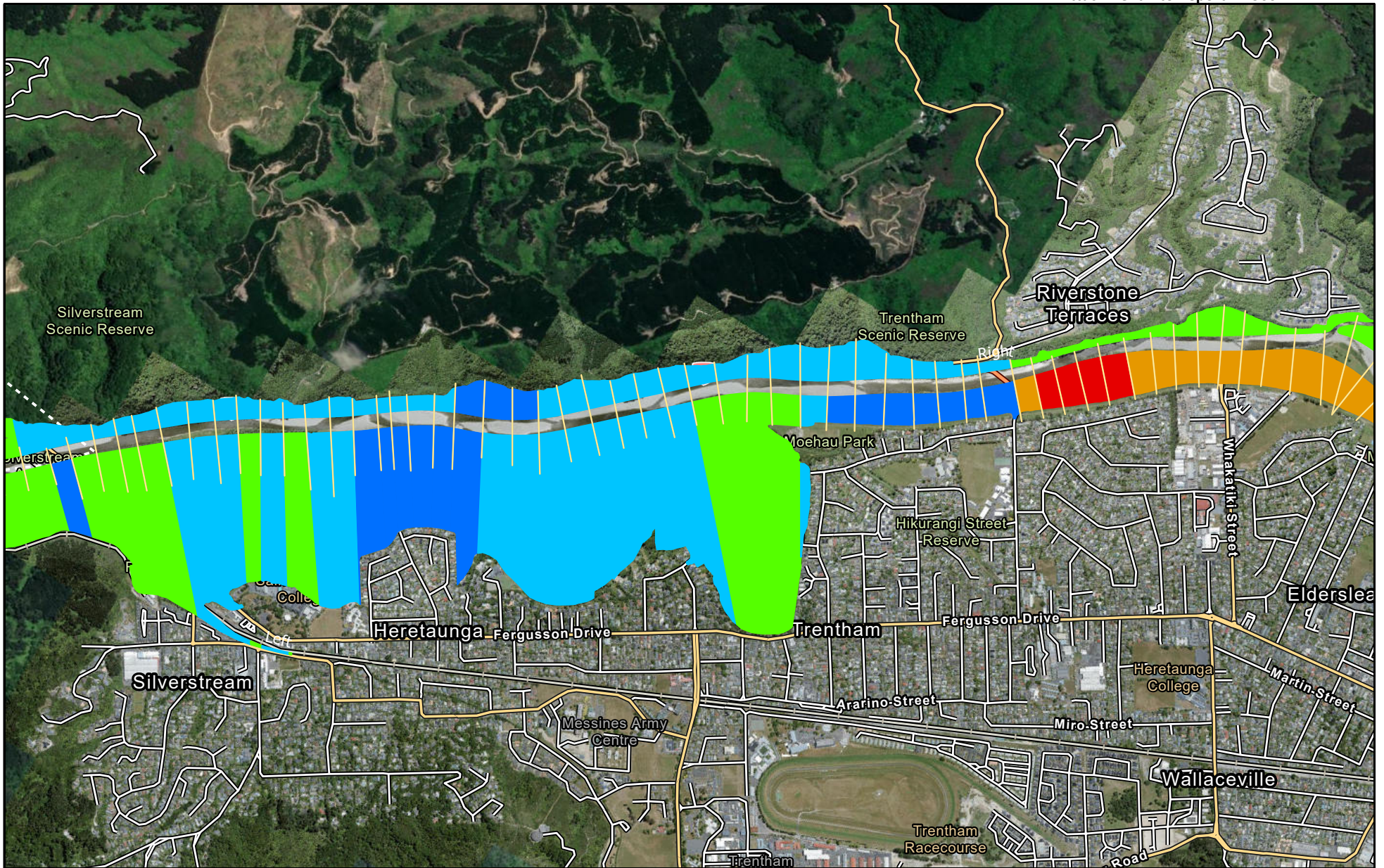


Hutt 2 APT Map
2024 Asset Performance Tool Risk Assessment

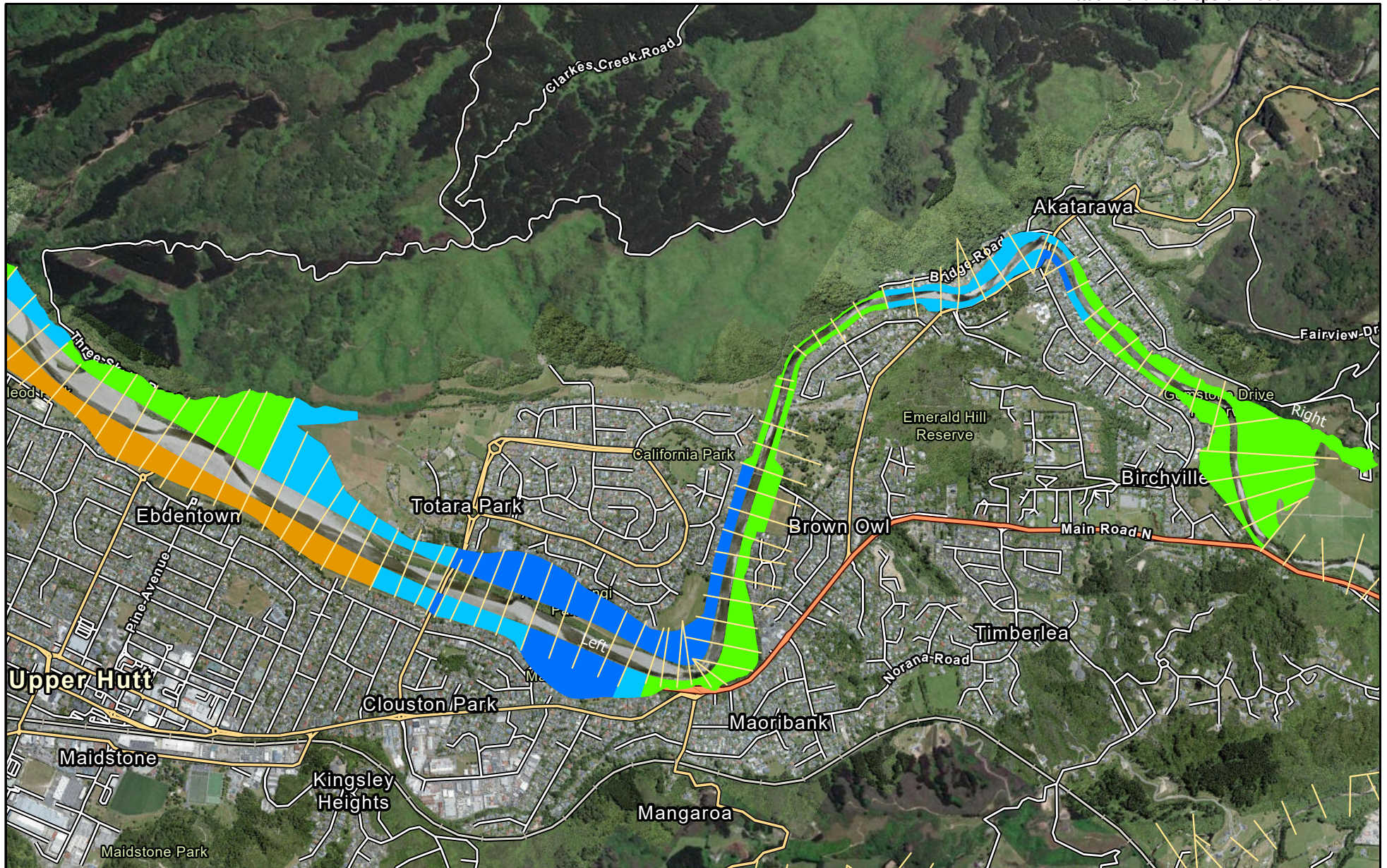


Cross Sections (60)	
Very High (0)	High (33)
Medium (1)	Low (22)
Very Low (65)	

Project Name:	APT
Author:	TurnerL
Date of Issue:	8/07/2024 8:26 am
Scale at A4:	1:21,000



 <p>Greater Wellington Te Pane Matua Taiao</p>	<p>Hutt 3 APT Map 2024 Asset Performance Tool Risk Assessment</p>	 <p>Legend</p>	<p>Cross Sections (58)</p>	<p>Risk Classification</p> <ul style="list-style-type: none"> ■ Very High (4) ■ High (13) ■ Medium (17) ■ Low (52) ■ Very Low (29) 	<p>Project Name: APT</p>
			<p>Author: TurnerL</p>	<p>Date of Issue: 8/07/2024 8:26 am</p>	<p>Scale at A4: 1:21,000</p>



Hutt 4 APT Map
2024 Asset Performance Tool Risk Assessment

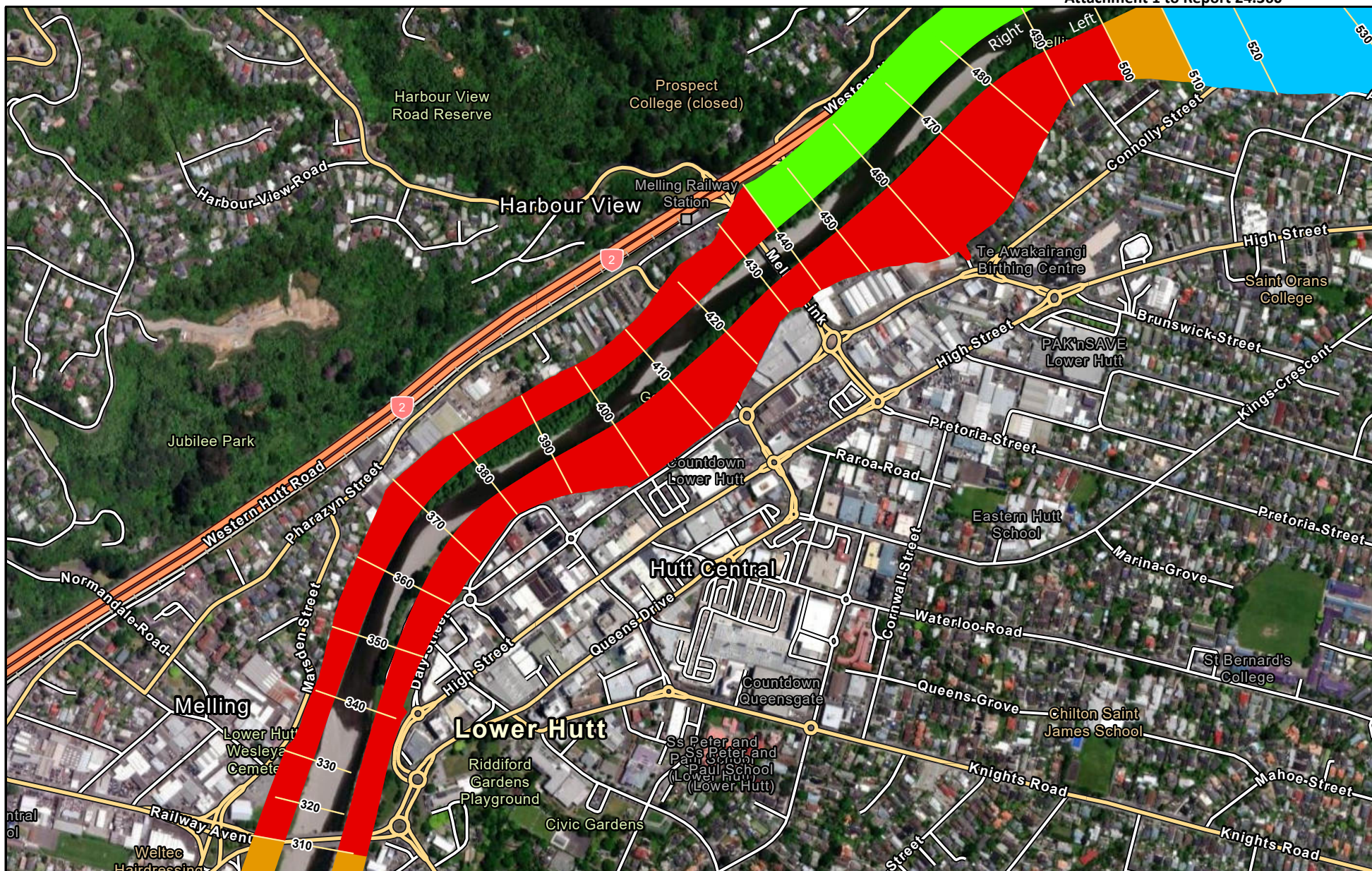


Cross Sections (102)

Risk Classification

- Very High (0)
- High (17)
- Medium (33)
- Low (37)
- Very Low (69)

Project Name:	APT
Author:	TurnerL
Date of Issue:	8/07/2024 8:27 am
Scale at A4:	1:21,000

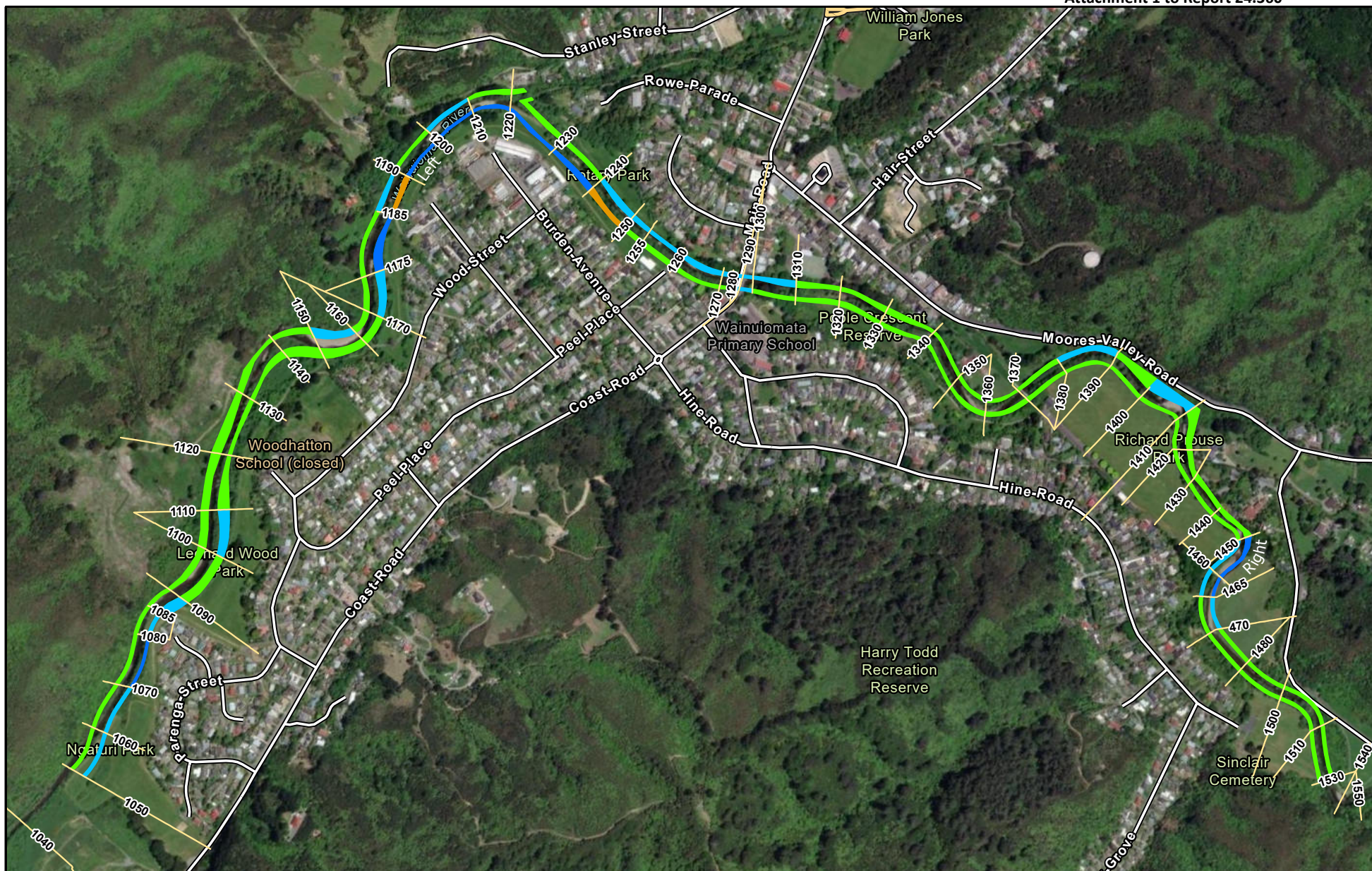


Hutt City Centre APT Map
2024 Asset Performance Tool Risk Assessment



Cross Sections (23)	Risk Classification
	Very High (32)
	High (3)
	Medium (0)
	Low (3)
	Very Low (6)

Project Name:	APT
Author:	TurnerL
Date of Issue:	8/07/2024 8:27 am
Scale at A4:	1:8,000



Wainuiomata APT Map
2024 Asset Performance Tool Risk Assessment



Legend	Cross Sections (54)	Project Name:	APT
	Risk Classification	Author:	TurnerL
	Very High (0)	Date of Issue:	8/07/2024 8:27 am
	High (2)	Scale at A4:	1:9,000



Wainuiomata - Rotary Park APT Map
2024 Asset Performance Tool Risk Assessment



Cross Sections (18)

Risk Classification

- Very High (0)
- High (2)
- Medium (6)
- Low (14)
- Very Low (16)

Project Name:	APT
Author:	TurnerL
Date of Issue:	8/07/2024 8:27 am
Scale at A4:	1:3,000

Te Awa Kairangi / Hutt River Valley Subcommittee
6 August 2024
Report 24.354



For Information

TE AWA KAIRANGI / HUTT RIVER AND PINEHAVEN STREAM ANNUAL FLOODPLAIN MANAGEMENT IMPLEMENTATION REPORT

Te take mō te pūrongo

Purpose

1. To update Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) of progress made to June 2024 in implementing the Hutt River and Pinehaven Stream Floodplain Management Plans.

Te tāhū kōrero/Te horopaki

Background

2. The scoping and planning of the Hutt River and Pinehaven Stream Floodplain Management Plans (FMPs) were completed in 2001 and 2016 respectively. The Plans recommend both structural, non-structural and environmental measures to reduce the flood risk to the respective floodplains with improvement to the environment. Greater Wellington Regional Council (Greater Wellington) has adopted a 40-year time frame to fully implement the Flood Management Plans (FMPs). Implementation of the FMPs commenced in 2001. This report updates the committee on the progress for implementing these plans.

Te tātaritanga

Analysis

Te Awa Kairangi/Hutt River Floodplain Management Plan (2001)

4. A major project delivery focus remains RiverLink. RiverLink is a partnership programme of work between Greater Wellington, Hutt City Council (HCC), the New Zealand Transport Agency - Waka Kotahi (NZTA), Ngāti Toa Rangatira and Taranaki Whānui. RiverLink is reported to this Subcommittee separately, however, there have been significant milestones for the project delivery:
5. A standalone RiverLink team supporting the programme across Greater Wellington was established in May 2023.
6. Above ground demolition works commenced in July 2023 and continue on-track for completion in September 2024.
7. Gravel extraction and Mills Street Stopbank 'pre-loading' was undertaken between October and December 2023.

8. A decision was made in late 2023 for Greater Wellington to enter into a direct contract with Fletchers for construction of Mills Street Stopbank (MSSB). Construction work began on MSSB stage 1 in February 2024 and is on-track for completion in November 2024
9. Council agreed on 28 March 2024 for the flood mitigation components of the programme to be removed from the Alliance and managed directly by Greater Wellington
10. The property acquisition programme is almost complete, noting that two additional properties have been added in 2022 and 2024 in Pharazyn and Mills Street, respectively with the Pharazyn St property purchase completed in October 2023, and the Mills Street purchase proposed to be completed in early 2025. The main outstanding properties and tenancies are in High Street.

Flood Operations Delivery - Te Awa Kairangi/Hutt River

11. All planned minor water course blockage and vegetation maintenance has been completed ahead of seasonal rain fall increasing over the autumn and winter months.
12. Routine mowing on the river berm and stopbanks has continued through the autumn months.
13. A specific work programme for river berm tree pruning and removal for the entire length of the Hutt River corridor has been completed.
14. Planting sites have been identified and planning and preparation is underway for the coming planting session between June and August 2024.
15. The rock asset maintenance programme is complete. This work involved re-stacking and placing new rock to 32 rock assets in both the dry and wet channel.

Pinehaven Stream Floodplain Management Plan (2016)

19. The Pinehaven Stream Floodplain Management Plan (PSFMP) was completed in 2016 with a range of structural and non-structural flood risk management measures proposed. These measures will guide the long-term management of the catchment. The implementation of the plan is being led by Upper Hutt City Council (UHCC). Wellington Water Limited (WWL) were appointed by UHCC to act as the agency to manage delivery of the physical work.
20. Funding for the PSFMP has been established through a Memorandum of Understanding with a 50/50 allocation between Greater Wellington and UHCC. Reporting on this project is provided by Wellington Water.
21. The objective of the planned Pinehaven Stormwater Improvements project is to provide improved capacity and an effective and efficiently functioning stormwater infrastructure in the stream and its tributaries to a 4% Annual Exceedance Probability (AEP) flood event level, which will also contribute to the management of flood risk to habitable floor levels up to the predicted peak 1% AEP flood level.
22. Hydraulic modelling has been undertaken to develop the phasing of works and prioritise work on stream capacity upgrades. This work will be primarily

construction of new rock walls, widening of the stream bed and replacement of a pedestrian bridge within Willow Park. The works will be delivered in Phases:

Phase 1 – Culvert upgrades and enabling works (*Complete*)

Phase 2 – Willow Park (Construction completion forecast September 2024)

Phase 3 – 28 Blue Mountains Road to Sunbrae Drive (Planning has begun with

Phase 4 – Pinehaven roundabout to 28 Blue Mountains Road

Phase 5 – Pinehaven reserve to Pinehaven Road

23. Project delivery is being done over five phases in accordance with Annual Plan budgets and approvals. Phase 1 is completed; Phase 2 in Willow Park is under contract with construction forecast for completion in 2024. Funding uncertainty has delayed the start of Phase 3 and Phases 4-5 are unfunded.
24. The benefits of the project are only realised once the full scope of works is complete (Phase 5). The affected properties will remain at risk until the full works are complete.
25. Progress on the key deliverables for the Pinehaven Stream Floodplain Management Plan is listed in Table 1.

Table 1: Pinehaven Stream FMP key deliverables

Stage	Status
Phase 1: Culverts and enabling works	
<ul style="list-style-type: none"> Final Completion Certificate to be issued end of July 2024. 	Complete
Phase 2: Downstream and Willow Park	
<ul style="list-style-type: none"> Winter works permits approved by Greater Wellington Consents Team on a monthly approval basis. Installation of replacement pedestrian bridge complete. Construction of 109 metres of vertical channel redi-rock walls in the stream complete. Flood barrier for dewatering the stream removed. Earthworks in Willow Park are well underway. Refer Figure 1 & 3 Property agreement for 1 Tapestry required (outstanding). 	Practical Completion 2024
Phases 3: Upstream of Sunbrae Culvert to 28 Blue Mountains Road	
<ul style="list-style-type: none"> Funding confirmed May Demolition and asbestos clearing 28 BMR complete Planning for Phase 3 has commenced. 	Planning in progress
Phases 4– 5: Upstream of 28 Blue Mountains Road	
<ul style="list-style-type: none"> Currently unfunded. 	On hold



Figure 1 Looking downstream from Sunbrae Dr. towards pedestrian bridge (photo credit: GHD)

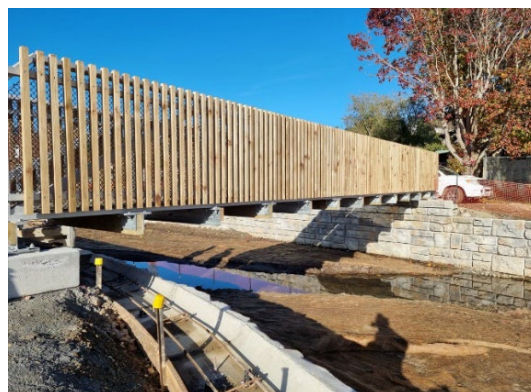


Figure 2 Pedestrian bridge installed on concrete foundations (photo credit: GHD)



Figure 3 Pinehaven Stream siteworks looking downstream from pedestrian bridge (photo credit: GHD)

26. The Resource Consent; soil disturbance, temporary damming and sediment discharge consents expire on 10 July 2028. This may have programme and funding impacts. WWL recommended that this application is submitted six- months before this expiry ahead of an anticipated non-notified process.

Regional Initiatives

Flood Hazard Modelling – Te Awa Kairangi/Hutt River and Waiwhetu Stream

27. The Waiwhetu modelling is virtually complete with the independent audit report being finalised. This independent audit is the final step in our flood hazard modelling process. We have been working closely with WWL to complete this modelling and are working with HCC to ensure it is pulled through into the District Plan.
28. The Hutt flood model is also nearing completion with a final stage of community engagement being planned in Upper Hutt to release the mapping. This is currently planned for quarter two of this financial year.

Flood Risk Management Planning

29. Following the completion of the flood hazard modelling for the Hutt and Waiwhetū flood risk management plans are proposed. For the Hutt this will be a review and reprioritisation of the major projects identified in the Hutt FMP. This project is currently being planned.
30. For the Waiwhetū an approach will be developed in conjunction with HCC and will be aligned with wider coastal adaption planning processes where appropriate.

Asset and River Management

31. The Moonshine stopbank investigation will be progressed once the flood hazard modelling for the Hutt River has been completed. This study is currently being planned.

Flood Incident Management

32. Flood Warning & Response – Greater Wellington is currently progressing through the latest iteration of the annual flood response training programme and has been working across the Environment Group and Regional Emergency Management to adapt flood incident management to our new structure. As part of this process, we are working with Regional Emergency Management to support evacuation planning exercises in the Hutt Valley.
33. Flood Forecasting – Greater Wellington continues to work with Deltares to develop the DELFT FEWS flood forecasting platform. We have developed a pilot platform and an uncalibrated flood forecast model for the Hutt River. Over the next six months we will be calibrating the Hutt flood forecast model and developing uncalibrated models for the wider region. In quarters 3 and 4 of the 2024/25 financial year we will be working to operationalise the system and embed it into our flood response procedures.
34. Flood monitoring network improvements programme – Following Cyclone Gabrielle we have been reassessing the flood monitoring network improvements programme. We have been working to establish a set of resilience standards for the flood monitoring network set levels of service across a number of key domains such as infrastructure, data, comms, and instrumentation.
35. Automated Warning Systems – Greater Wellington has been operating a pilot automated warning system in the Lower Wairarapa for the past four months. This trial has shown good results although we have not seen multiple alarms triggered due to the relatively dry weather so far this winter. We are currently developing a plan for the full roll-out of the system over the coming months.

Summary of progress

Implementation progress

36. In the 2024-34 Long Term Plan, the resilient future community outcome for flood protection has the strategic priority of ‘communities safeguarded from major flooding’. The level of service is to ‘provide the standard of flood protection agreed with communities’, with the performance measure ‘major flood protection and control works are maintained, repaired and renewed to the key standards defined

in the relevant documents'. Implementing the FMPs helps achieve this strategic priority.

37. RiverLink also has a performance measure of 'Implement RiverLink in accordance with the approved preliminary design', with a target for 2022/23 of 'Construction started'. This target has been achieved, albeit slightly delayed - above ground demolition works commenced in July 2023, gravel extraction and pre-load works for Mills Street Stopbank (MSSB) commenced in October 2023, and construction work began on MSSB stage 1 in February 2024.
38. Table 2 shows the FMP structural measures implemented as a percentage of progress of the recommendations within the respective FMPs. Please also refer [Attachment 1](#) and [Attachment 2](#) for further detail. Please note change in the way that Pinehaven Stream FMP project progress is reported, as referred to in the footnote.

Table 2 Implementation Progress (structural measures)

FMP or Scheme	Actual % Complete to June 2023	Actual % Complete to June 2024
Hutt	44%	45%
Pinehaven	Now 52% (was 29% ¹)	69% ¹

39. Table 3 outlines the financial summary of the implementation of the FMPs. These figures are based on the original FMP costs Hutt 1999 (estimate \$78 million) and Pinehaven 2014 (estimate \$5 million). The figures in [Table 3](#) below have been indexed to 2024 dollar values using reserve bank CPI calculator.

Table 1: FMP Implementation Financial Summary

River	Original FMP Total 40-year estimate (\$Millions) Inflation Adjusted	Expenditure to June 2024 (\$Millions)	Total Budgeted Forecast to 2034 (\$Millions)	Total Expenditure forecast to 2034 (\$Millions)
Hutt	146.2	220.1	191.3	411.4
Pinehaven	6.5	9.7	17.9	28.6

Ngā hua ahumoni Financial implications

40. For this reporting period, projects are within the current flood protection budgets.

¹ Pinehaven Stream FMP; UHCC approved 2024 – 2034 LTP funding provides commitment to complete Phase 2 and Phase 3 physical work only. Phase 4 & 5 % complete progress by financial has been excluded.

41. With the recent approval of the 2024-24 Long Term Plan² increased budgets and resources will be available to ensure we can maintain agreed scheme service levels and continue to undertake routine operational and maintenance activities.

Ngā Take e hāngai ana te iwi Māori

Implications for Māori

42. 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.
43. Our partnership with mana whenua partners within Council's Long-term Plan 2024-34 recognises and supports mana whenua as kaitiaki (guardians) of their broad whenua, freshwater and moana interests in their ancestral lands. We continue to work with our mana whenua partners in new ways at all levels of our organisation including governance, management and operations.
44. A significant number of Māori, both mana whenua and mātāwaka, live and work in flood prone areas within Te Awa Kairangi. There are also numerous sites of cultural and spiritual significance potentially at risk from flooding. Effective delivery of our flood risk management programme helps to protect Māori communities and their values across the four wellbeings.
45. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the RiverLink Board.

Te huritao ki te huringa o te āhuarangi

Consideration of climate change

46. 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.
47. 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.
48. 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.
49. Heavy machinery emissions from river construction projects have not been estimated. However, in the 2022-23 year use of heavy machinery mainly for flood protection operational work at Greater Wellington represents 1.8% (623 tCO₂e) of the total organisational carbon footprint.

² <https://www.gw.govt.nz/your-region/plans-policies-and-bylaws/plans-and-reports/long-term-plan/>

50. Quarry selection will be the single largest determinant of project emissions. While it seems likely that quarry operations could be improved to reduce emissions to some extent, the avoidance of long-distance transport of the rock is the most obvious means to minimise emissions. This was looked into as part of procurement for projects, however scarcity of rock supply and lack of suitable material made any emissions avoidance extremely difficult.
51. 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 1 metre for District Planning and 1.3 metres for infrastructure planning.

Ngā tūāoma e whai ake nei

Next steps

Te Awa Kairangi/Hutt River Floodplain Management Plan (2001)

54. Project partners Greater Wellington, HCC & NZTA to progress RiverLink project: commence construction; continue community connection and project awareness.
55. Continue operational maintenance and monitoring of the Belmont wetland.
56. Establish resilience standards for the flood monitoring network.
57. Continue improvements of river (level & flow) gauging and monitoring
58. Continue reviewing and updating the regional flood hazard modelling standard, updating the flood risk management planning guidelines and flood emergency planning and projects
59. Continue FMP and Environmental Strategy Projects as budgets allow.

Pinehaven Floodplain Management Plan (2016)

59. Greater Wellington and UHCC will work together to review the composition of the new cost estimate and whether there are alternative solutions to achieve the outcomes within the FMP and mitigate risk.
60. The joint review will be completed for presentation at the 22 October 2024 Te Awa Kairangi / Hutt River Valley Subcommittee.

Ngā āpitihanga
Attachments

Number	Title
1	Hutt Floodplain Management Plan Summary Progress Table
2	Pinehaven Floodplain Management Plan Summary Progress Table

Ngā kaiwaitohu
Signatories

Writers	Steve Kamo – Project Engineer, Infrastructure Assets & Support
Approvers	Tina Love – Team Leader, Infrastructure Projects Jack Mace – Hautū Whakatutuki Director Delivery Lian Butcher – Kaiwhakahaere Matua Taiao Group Manager Environment

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 has delegated authority to review and monitor periodically the effectiveness and delivery of FMPs for Te Awa Kairangi/Hutt River Floodplain</p>
<p><i>Contribution to Annual Plan / Long term Plan / Other key strategies and policies</i></p> <p>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.</p>
<p><i>Internal consultation</i></p> <p>Specific projects consult with groups and departments across Greater Wellington where relevant to that project.</p>
<p><i>Risks and impacts: legal / health and safety etc.</i></p> <p>The purpose of implementation floodplain management plans is to reduce the risk to communities and improve the region’s resilience.</p>

Te Awa Kairangi FMP Summary Progress Table

Attachment 1 to Report 24.354

Updated 19/7/24

TOTALS IMPLEMENTATION HUTT FMP											
											Date AMP
											2000-2051
											COST \$M 2001 FMP
											\$77.76
											Target % at completion
											100.00%
											Percent Complete to date
											44.51%

REACH 1 : River Mouth to Estuary Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	4.69%	STAGE	% Complete	2.35%	HRFMP (Page #)
River Mouth Channel Works	1	6	after 2010	2032-2035	\$3.65	4.69%	Partially complete	0.5	2.35%	52

REACH 2 : Estuary Bridge to Ava Rail Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	17.16%	STAGE	% Complete	6.71%	HRFMP (Page #)
Shandon golf course (RB) stopbank	2	2	after 2010	Ava Woolen Mills [2028-2034]	\$1.72	2.21%			0.00%	54
Light rock protection works (Estuary to Ava rail bridge)	2	2	after 2010	Ava Woolen Mills [2028-2034]	\$0.43	0.55%	Partially Work	0.5	0.28%	54
Woolen mills (Estuary to Ava LB) stopbank	2	6	after 2010	Ava Woolen Mills [2028-2034]	\$3.99	5.13%			0.00%	54
Relocation and rock lining (Estuary to Ava LB)	2	6	after 2010	Ava Woolen Mills [2028-2034]	\$2.20	2.83%			0.00%	54
Ava rail bridge investigations	2	1	2000-2002	Alicetown Strand Project [2000-2010]	\$0.23	0.30%	Complete	1	0.30%	54
Ava rail bridge waterway improvements	2	1	2003-2008	Alicetown Strand Project [2000-2010]	\$4.77	6.13%	Complete	1	6.13%	54

REACH 3 : Ava Rail Bridge to Ewen Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	38.14%	STAGE	% Complete	20.53%	HRFMP (Page #)
Strand park (Ava to Ewen RB) river realignment and land purchase	3	3	2000-2005	Alicetown Strand Project [2000-2010]	\$4.48	5.76%	Complete	1	5.76%	56
Strand park stopbank upgrade (Ava to Ewen LB)	3	1	2000-2010	Alicetown Strand Project [2000-2010]	\$2.64	3.40%	Complete	1	3.40%	56
Tama Street stopbank upgrade (Ava to Ewen RB)	3	3	2000-2010	Alicetown Strand Project [2000-2010]	\$2.48	3.19%	Complete	1	3.19%	56
Melling Bridge investigations	3	3	2001-2002	RiverLink	\$0.06	0.08%	Complete	1	0.08%	56
Daly Street (Ewen to Melling RB) stopbank upgrade and land purchase	3	1	2009-	RiverLink	\$4.61	5.93%	In Design + land	0.5	2.96%	56
Marsden Bend (RB) channel works	3	3	after 2010	RiverLink	\$1.91	2.46%	In Design		0.00%	56
Pharazyn St. (Ewen to Melling RB) stopbank	3	3	after 2010	RiverLink	\$3.70	4.76%	In Design		0.00%	56
Riverside car park channel works (LB) and light protection works (Ewen to Melling LB)	3	1	after 2010	RiverLink	\$1.78	2.29%	In Design		0.00%	56
Land for Melling Bridge Upgrade	3	14	after 2010	RiverLink	\$8.00	10.29%	In Design + land	0.5	5.14%	56

REACH 4 : Melling Bridge to Kennedy Good Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	11.75%	STAGE	% Complete	10.87%	HRFMP (Page #)
Melling to Kennedy Good Bridge channel works	4	1	after 2010	RiverLink	\$1.11	1.43%	In Design + land	0.5	0.71%	58
Melling Bridge (RB) stopbank upgrade	4	3	after 2010	RiverLink	\$0.26	0.33%	In Construction	0.5	0.17%	58
Boulcott Golf Course (LB) stopbank upgrade and land compensation	4	1	after 2005	Boulcott [2010-2013]	\$5.44	7.00%	Complete	1	7.00%	58
Connolly Street (LB) stopbank and land purchase	4	1	after 2010	Boulcott [2010-2013]	\$2.33	3.00%	Complete	1	3.00%	58

REACH 5 : Kennedy Good Bridge to Pomare Rail Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	5.61%	STAGE	% Complete	0.91%	HRFMP (Page #)
Kennedy Good Bridge to Pomare (LB) stopbank upgrade	5	4	after 2010	KGB Pomare [2037-2042]	\$0.86	1.11%			0.00%	60
Vegetation at Kennedy Good Bridge to Pomare rail bridge (LB/RB)	5	14	after 2010	KGB Pomare [2037-2042]	\$1.63	2.10%			0.00%	60
House Raising at Belmont to 1900	5	8	after 2010	KGB Pomare [2037-2042]	\$0.45	0.58%			0.00%	60
Rock protection at Belmont, Nash St. and Pomare Rail Bridge (LB/RB)	5	4	after 2010	KGB Pomare [2037-2042]	\$1.42	1.83%	Partial Work	0.5	0.91%	60

REACH 6 : Pomare Rail Bridge to Silverstream Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	2.98%	STAGE	% Complete	0.00%	HRFMP (Page #)
Pomare rail bridge to Silverstream Bridge channel works (LB/RB)	6	13	after 2010	Manor Park Pomare [2041-2051]	\$1.34	1.72%			0.00%	62
Manor Park stopbanks to 2300	6	13	after 2010	Manor Park Pomare [2041-2051]	\$0.98	1.26%			0.00%	62

REACH 7 : Silverstream Bridges to Moonshine Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	5.85%	STAGE	% Complete	0.64%	HRFMP (Page #)
Moonshine Bridge investigations	7	10	2001-2002	Trentham to Whakatikei [2032-2036]	\$0.06	0.08%	Investigation begun	0.5	0.04%	64
Moonshine bridge waterway upgrade	7	10	after 2010	Trentham to Whakatikei [2032-2036]	\$3.31	4.25%			0.00%	64
Whimaki Crescent stopbank to 2300	7	5	2004-2006	Trentham to Whakatikei [2032-2036]	\$0.47	0.60%	Complete	1	0.60%	64
Trentham to Whakatikei stopbank (part)	7	8	after 2010	Trentham to Whakatikei [2032-2036]	\$0.71	0.91%			0.00%	64

REACH 8 : Moonshine Bridge to Whakatikei River

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	2.89%	STAGE	% Complete	0.00%	HRFMP (Page #)
Trentham to Whakatikei (LB) stopbank (part)	8	8	after 2010	Trentham to Whakatikei [2032-2036]	\$2.00	2.57%			0.00%	66
Moonshine to Maoribank (LB) channel works (part)	8	10	after 2010	Trentham to Whakatikei [2032-2036]	\$0.25	0.32%			0.00%	66

REACH 9 : Whakatikei River to Norbert St. Footbridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	8.31%	STAGE	% Complete	0.00%	HRFMP (Page #)
Totara park stopbanks to 2300	9	10	after 2010	NOT IN AMP	\$1.42	1.83%			0.00%	68
Elbow park channel upgrade	9	10	after 2010	NOT IN AMP	\$1.41	1.81%			0.00%	68
Whakatikei to Maoribank (LB) stopbank	9	10	after 2010	NOT IN AMP	\$0.28	0.36%			0.00%	68
Moonshine to Maoribank channel works (part)	9	10	after 2010	NOT IN AMP	\$3.35	4.31%			0.00%	68

REACH 10 : Norbert St. Footbridge to Gemstone Drive

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST \$M 2001 FMP	2.61%	STAGE	% Complete	2.49%	HRFMP (Page #)
Norbert Street footbridge to Akatarawa Channel works	10	14	2004-2005	2037-2042	\$0.34	0.44%	Complete	1	0.44%	70
Akatarawa Road (LB) floodwall at 1900	10	12	2004-2005	2037-2042	\$0.72	0.93%	Complete	1	0.93%	70
Gemstone Drive channel works to 1900	10	12	2005-2006	2037-2042	\$0.64	0.82%	Complete	1	0.82%	70
Gemstone Drive (LB) stopbank to 1900	10	12	2005-2006	2037-2042	\$0.15	0.19%	Complete	1	0.19%	70
Bridge Road House Raising to 1900	10	7	2003-2007	NOT IN AMP	\$0.18	0.23%	Partial Work	0.5	0.12%	70

Pinehaven Stream Floodplain Management Plan: Summary Financial Progress Table

		2018 - 2022/23	2023/24	2024/25	2025/26	Totals
Phase 1	Complete	\$ 15,267,454				\$ 15,267,454
Phase 2	Funding	\$ 784,252	\$ 5,900,000	\$1,197,350		\$ 7,881,602
	Forecast	\$ 784,252	\$ 4,815,011	\$ 995,700		\$ 6,594,963
	<i>Spent to date</i>	\$ 784,252	\$ 4,815,011			\$ 5,599,263
Phase 3	Funding		\$ 2,817,000	\$4,940,000	(carry-over)	\$ 7,757,000
	Forecast		\$ 435,324	\$4,056,029	\$ 2,429,500	\$ 6,920,853
	<i>Spent to date</i>		\$ 435,324			\$ 435,324

Totals	Funding	\$ 16,051,706	\$ 8,717,000	\$6,137,350		\$ 30,906,056
	Forecast Phase 1 - 3	\$ 16,051,706	\$ 5,250,336	\$5,051,729	\$ 2,429,500	\$ 28,783,271
	<i>Spent to date</i>	\$16,051,706	\$ 5,250,336			\$ 21,302,042

% Complete (Phases 1, 2 & 3) 52% 69%

Phase 4		Estimate	\$ 10,760,000
Phase 5		Estimate	\$ 18,960,000
Programme Risk		Estimate	\$ 2,496,729

Revised Estimate (Full Scope) i.e Phase 1- 5 \$ 61,000,000

	Approved 2023/24 Annual Plan Budget
	Funded LTP Budget (UHCC & GWRC)
	Currently Not Funded

Table prepared 194 July 2024