If calling, please ask for Democratic Services

Te Awa Kairangi/Hutt River Valley Subcommittee

Tuesday 5 August 2025, 2.00pm

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

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

Members

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, 5 August 2025, 2.00pm

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

Public Business

Please note these minutes remain unconfirmed until the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 8 August 2025.

Report 25.208

Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on Tuesday 13 May 2025

Council Chamber, Upper Hutt City Council
838 Fergusson Driver, Upper Hutt, at 2.03pm.

Members Present

Councillor Connelly (Chair)	Greater Wellington Regional Council
Councillor Duthie (Deputy Chair)	Greater Wellington Regional Council
Councillor Edwards	Hutt City Council
Mayor Guppy (until 2.08pm, from 2.19pm)	Upper Hutt City Council
Councillor Lee (until 4.09pm)	Greater Wellington Regional Council
Caleb Ware (until 3.26pm)	Te Rūnanga o Toa Rangatira Inc

Caleb Ware participated at this meeting remotely via Microsoft Teams and counted for the purpose of quorum in accordance with clause 25A 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 Edwards / Cr Duthie

That the Subcommittee accepts the apologies for absence from Councillor Hammond and Councillor Laban.

The motion was **carried**.

2 Declarations of conflicts of interest

There were no declarations of conflicts of interest.

3 Public participation

Lindsay Forbes spoke to the accuracy of flood maps relating to his property and neighbouring properties.

Rachel Tallon, Friends of Waiwhetū Stream, spoke to a long-term vision for continuing the transformation of the Stream to health.

Mayor Guppy left the meeting at 2.08pm at the conclusion of Lindsay Forbes' presentation and returned at 2.19pm during Rachel Tallon's presentation. The meeting lost quorum during Mayor Guppy's absence and was suspended. With the agreement of members and Ms Tallon, her presentation commenced while the meeting was suspended.

Susan Pattinson spoke to the proposed continued hold on construction of stages 3-5 of the Pinehaven FMP structural works. A handout was tabled.

Stephen Pattinson spoke to the accuracy of the Pinehaven flood modelling, particularly the flood frequency curve. A presentation and handout were tabled.

4 Confirmation of the Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 22 October 2024 – Report 24.575

Moved: Cr Connelly / Cr Duthie

That the Subcommittee confirms the Public minutes of the Te Awa Kairangi / Hutt River Valley Subcommittee meeting on 22 October 2024 – Report 24.575.

The motion was **carried**.

5 Update on the Progress of Action Items from Previous Te Awa Kairangi / Hutt River Valley Subcommittee Meetings – Report 25.203 [For Information]

Jack Mace, Director Delivery, spoke to the report.

The Chairperson accorded precedence to agenda item 8 – Pinehaven Floodplain Management Plan Structural Works Implementation – Review – Report 25.186 in accordance with Standing Order 3.5.2.

6 Pinehaven Floodplain Management Plan Structural Works Implementation – Review – Report 25.186

Tim Harty, Group Manager Operations Upper Hutt City Council, and Jack Mace, Director Delivery, spoke to the report.

Moved: Cr Duthie / Mayor Guppy

That the Subcommittee:

1 Recommends to the Greater Wellington Regional Council Environment Committee and the Upper Hutt City Services Committee (the respective

council committees) that construction of Stages 3-5 of the Pinehaven FMP structural works remain on hold.

2 Recommends to the respective council committees that alternative options for Stages 3, 4 and 5 of the Pinehaven FMP structural works are developed over the next 12 months.

3 Notes the appointments to the Pinehaven Steering Group.

The motion was **carried**.

Noted: The Subcommittee requested an update to the next meeting on the Pinehaven Floodplain Management Plan.

7 Waiwhetū Integrated Catchment Project Overview – Report 25.143 [For Information]

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

8 Waiwhetū Stream Flood Hazard Maps – Report 25.183

Francie Morrow, Team Leader Knowledge – Water Resilience, spoke to the report.

Moved: Cr Lee / Cr Edwards

That the Subcommittee:

1 Notes that the flood hazard maps have been developed in accordance with Greater Wellington's Flood Hazard Modelling Standard.

2 Recommends that the Environment Committee endorse the Waiwhetū Stream Flood Hazard Maps.

The motion was **carried**.

Caleb Ware left the meeting at 3.26pm during questions on the above item and did not return.

9 Hutt Valley Flood Risk Management Update – Report 25.177 [For Information]

Hamish Fenwick, Team Leader Flood Operations Delivery, and Francie Morrow, Team Leader Knowledge – Water Resilience, spoke to the report.

10 Te Wai Takamori o Te Awa Kairangi (RiverLink) – Greater Wellington Programme [For Information]

Fiona Abbott, Programme Manager, Tracy Berghan, Manager Riverlink, and Jon Kingsbury, Director of Economy and Development Hutt City Council, spoke to the report.

Councillor Lee left the meeting at 4.09pm, during the above item, and did not return.

11 Belmont Wetland Maintenance Works – Report 25.195 [For Information]

Hamish Fenwick, Team Leader Flood Operations Delivery, spoke to the report.

Karakia whakamutunga

The Subcommittee Chair closed the meeting with a karakia whakamutunga.

The public meeting closed at 4.32pm.

Councillor R Connelly

Chair

Date:

Te Awa Kairangi / Hutt River Valley Subcommittee
5 August 2025
Report 25.333

For Information

UPDATE ON THE PROGRESS OF ACTION ITEMS FROM PREVIOUS TE AWA KAIRANGI / HUTT RIVER VALLEY SUBCOMMITTEE MEETINGS

Te take mō te pūrongo
Purpose

1. To update the Te Awa Kairangi/Hutt River Valley Subcommittee (the Subcommittee) on the progress of action items arising from previous Subcommittee meetings.

Te horopaki
Context

2. Items raised at Subcommittee meetings that require actions from staff are listed in the table of actions from previous Subcommittee meetings (**Attachment 1** – Action items from previous Te Awa Kairangi / Hutt River Valley Subcommittee meetings – August 2025). All action items include an outline of the current status and a brief comment.

Ngā hua ahumoni
Financial implications

3. There are no financial implications arising from this report, but any implications arising from specific action items will be discussed in the brief comment in **Attachment 1**.

Ngā āpitihanga
Attachments

Number	Title
1	Action items from previous Te Awa Kairangi / Hutt River Valley Subcommittee meetings – August 2025

Ngā kaiwaitohu
Signatories

Approvers	Jack Mace – Director Delivery Fathima Iftikar – Kaiwhakahaere Matua, Taiao – Acting Group Manager Environment

He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or with Committee's terms of reference The action items are of an administrative nature and support the functioning of the Subcommittee.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies Action items contribute to Council's or Greater Wellington's related strategies, policies and plans to the extent identified in **Attachment 1**.
Internal consultation There was no additional internal consultation in preparing this report and updating the action items.
Risks and impacts - legal / health and safety etc. There are no known risks or impacts.

Attachment 1 to Report 25.333

Action items from previous Te Awa Kairangi / Hutt River Valley Subcommittee meetings

Date	Action item	Status and comment
6 August 2024	**Pinehaven Flood Management Plan Implementation – Project Update Report – Report 24.365** **Noted:** The Subcommittee requested information on the removal and potential reinstatement of the water flow meter on the Pinehaven Stream.	**Status:** Ongoing **Comment:** A feasibility study has been completed to identify a suitable location for the re-establishment of a flow gauge on Pinehaven Stream, to support both flood hazard modelling and flood warning. The commissioning of this site is being progressed through the Knowledge & Insights function, with consideration being given to funding and resourcing in the context of the wider monitoring network. We are developing options to enable the delivery of this additional site. Given that current team resources are fully committed to maintaining the existing network, we are exploring two main approaches: • reallocating resources by removing or repurposing existing sites, or • engaging external consultants or contractors to deliver the new site. A preferred option will be identified and available for consideration by 30 September 2025.
22 October 2024	**Update on the Progress of Action Items from Previous Te Awa Kairangi/Hutt River Valley Subcommittee Meetings – October 2024 – Report 24.428** [For Information]	**Status:** Ongoing *We met onsite with HCC Roading's David Kennedy to discuss HCC's plans for improving active modes travel network pathway just before April at Fraser Park entry to the floodway as a road crossing point and shaped path down through the grass berm to the*

Action items from previous Te Awa Kairangi / Hutt River Valley Subcommittee meetings

	Noted: The Subcommittee requested that staff continue to collaborate with officers from Upper Hutt City Council and Hutt City Council on transport planning, including linkages from city streets to the River Trail.	*Hutt River Trail. An HCC project, we are supporting the endeavour and have been waiting on design plans and scope to assess and approve which has now been received although further, more detailed design information and detail is required before we can assess, and this has been asked for* *GW Flood Ops officers also met on-site May 12 at Belmont Domain with HCC's Project Coordinator Dion Scott. This meeting was to discuss plans and drainage for the new concrete linkage path from Norfolk St to Hutt River Trail gravel path (and new carpark toilet block). We are supporting this HCC proposal to progress.* *We're also supporting HCC's Hikoikoi Landing project as a proposal to improve trail welcome linkages near and around Te Awakairangi Hutt River mouth trail. This culminates in a shared pathway entry point designed and planted around the Te Mome Stream/Shandon Golf Course gateway. We are also in talks with HCC regards an access ramp into Halford Place HCC is not currently budgeting for that. We met on-site with HCC Urban Design mid-April to address vehicle clearances, signages, pathways and property agreements which are currently in place TBC Jigsaw Property as a peppercorn lease arrangement on GW land.* *Te Awa Kairangi Hutt River Trail Existing State Assessment October 2024 realised and has fed into Phase 2 Te Awa Kairangi Trail Priorities Report July 2025 Draft of which can be found below to establish project weighting & assessments.* BM250170_TeAwaKairangi_TrailPrioritiesReport_Draft.cleaned.pdf

Attachment 1 to Report 25.333

Action items from previous Te Awa Kairangi / Hutt River Valley Subcommittee meetings

		Whakawhirinaki Water Pipe Bridge Silverstream. This new infrastructure provides new East/West trail linkage to Manor Park and beyond. Flood Ops officers met on-site with site engineer's representatives and superintendent to discuss Hutt River Trail reinstatement, linkage pathways & GW branded signage and wayfinding in May.
22 October 2024	**Hutt Valley Flood Risk Management Update – October 2024 – Report 24.460** [For Information] **Noted:** The Subcommittee requested officers liaise with Wellington Water Limited to provide an update on the Taitā rock erosion site.	**Status:** Ongoing **Comment:** *Work is underway on the erosion investigation.* *A site visit by the Flood Operations Technical Officer with the Lead River Ranger agreed that river erosion is likely not the only erosive factor at play. Due to the clear stratification of bed rock and soft unconsolidated fill it is hypothesized different erosive factors will be impacting the two layers differently.* *Appropriate GIS layers are currently being collated to start the desktop assessments with work underway on the catchment assessment to understand flow paths and stormwater interactions in the wider catchment. The erosion investigation will look at all potential factors including fluvial geomorphology, stormwater, groundwater and presence of the active fault line and whether there is an interaction with multiple factors that accelerates erosion at the site.*
13 May 2025	**Pinehaven Floodplain Management Plan Structural Works Implementation – Review – Report 25.186**	**Status:** Completed. **Comment:** A report is being presented on the Pinehaven FMP at the Subcommittee meeting in August 2025.

Attachment 1 to Report 25.333

Action items from previous Te Awa Kairangi / Hutt River Valley Subcommittee meetings

	Noted: The Subcommittee requested an update to the next meeting on the Pinehaven Floodplain Management Plan.	

Te Awa Kairangi / Hutt River Valley Subcommittee
5 August 2025
Report 25.293

For Information

PINEHAVEN FLOODPLAIN MANAGEMENT PLAN – REVIEW PROCESS AND TIMEFRAMES

Te take mō te pūrongo
Purpose

1. To update the Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) on the timing of the Pinehaven Floodplain Management Plan (FMP) review.

Te horopaki
Context

2. Implementation of the Pinehaven FMP structural works commenced in September 2016 to address the risk of flooding and protect habitable homes. Work was to be carried out in five stages to provide capacity to accommodate a 1 in 25-year flood event. The first two stages are now complete.
3. In August 2024 the Subcommittee endorsed a review of the three remaining stages (3-5) of the structural works in response to increasing costs (Pinehaven Flood Management Plan Implementation – Project Update Report – Report 24.365). An update report was then provided in the May 2025 meeting (Pinehaven Floodplain Management Plan Structural Works Implementation – Review – Report 25.186).
4. The May 2025 report recommended that construction of stages 3-5 of the structural works remain on hold and alternative options for these works are developed over the next 12 months (herein referred to as the Structural Works project).
5. At its meeting on 26 June 2025, Council approved the construction of Stages 3 to 5 of the Pinehaven FMP structural works remaining on hold and for officers to develop alternative options for Stages 3, 4, and 5 of the Pinehaven FMP structural works.
6. During discussion of the Subcommittee report, it was noted that a review of the Pinehaven FMP is programmed for 2026. The Subcommittee asked if a review of the FMP should be completed in conjunction with, or instead of, the structural works project.

Summary of Pinehaven Floodplain Management Plan Structural Works Project

7. The purpose of the Structural Works project is to assess feasible alternative flood risk management options to the structural works currently proposed in stages 3-5 of the FMP.

8. The project will consider structural solutions such as the existing proposal of concrete lined channels and bridges, through to strategic property purchase with channel enlargement and naturalisation.

9. Current available information, including the existing flood hazard model (2010), will be used to determine whether the alternative options can meet the FMP objectives, including providing the desired level of service.

10. If an alternative option that achieves the FMP outcomes can be determined, then design, costs and benefits will be developed along with a recommendation of a preferred option.

11. This work will be completed over the next 12 months. The estimated completion date is mid-2026.

12. At the completion of the project, should a feasible preferred option be identified, a go/no-go decision for implementation will be made. It is anticipated that this decision will be made in mid-2026.

Summary of Pinehaven FMP Review

13. FMPs are typically reviewed when one of the following triggers occur: a major flood event, significant change to the catchment, or a programmed review. The Pinehaven FMP is currently scheduled for a programmed review in 2026. This is 10-years on following its approval in 2016.

14. The process of an FMP review is broadly summarised in the following points. Further detail specific to the Pinehaven FMP is provided below under Te tātaritanga/Analysis.

    - For an FMP review, it is necessary to first identify whether the catchment hydraulic modelling (which is used to define the flood hazard) needs to be updated. This includes assessing whether the catchment hydrology is still appropriate and whether there have been significant changes to the catchment (e.g., land use and river management works). Updated site-specific hydrological information and hydraulic modelling are required for the Pinehaven Stream catchment.

    - When the flood hazard has been defined, an assessment of the existing FMP documents is then undertaken. The purpose of the assessment is to determine whether the objectives of the FMP and the appropriate level of service for flood risk management are being or will be met. The results of this assessment determine what level of modification the FMP could require. This marks a decision point to confirm how to proceed with updating the FMP and whether any other work is required.

    - Minor modifications may include updating budgets and minor projects while considerably more work could be needed if the level of service for flood risk management is not being or will not be achieved.

    - Minor updates could be completed within months, while more significant modifications could require years of planning, investigations and engagement to complete.

15. Greater Wellington has previously committed to the Parliamentary Commissioner for the Environment (PCE) that the Pinehaven Stream flood hazard modelling will be updated. Flood hazard modelling is currently prioritised on risk, and while on a regional scale Pinehaven is not currently in the top assessed risk catchments, Greater Wellington recognises the important of up-to-date modelling.

Te tātaritanga
Analysis

Details of Pinehaven FMP Review

16. Hydraulic modelling was completed in 2010 to inform the development of the Pinehaven FMP in 2016. To support this modelling, a temporary flow monitoring site was installed at Chatsworth Road (2008–2014). However, it was later closed due to a lack of long-term funding.

17. To support updated modelling for the catchment, site specific data must be collected. Greater Wellington is therefore considering the installation of a permanent flow monitoring site and Space-Time Image Velocimetry (STIV) camera at Willow Park, as well as upgrading the Pinehaven Reservoir rainfall monitoring site.

18. Once installed, the two monitoring sites will need a minimum of two years to gather data. Note that the ability to gather a range of flow data is dependent on the climatic conditions that occur following the installation.

19. The hydrological data gathered is a key component of updating the flood hazard modelling for the Pinehaven Stream. The updated modelling will also incorporate the land use changes within the catchment (including the already completed stages of the FMP structural works and any further changes that occur prior to the model update).

20. The modelling process is comprehensive and is outlined in Greater Wellington's flood hazard modelling standard (FHMS) (https://www.gw.govt.nz/assets/GWRC-Flood-Hazard-Modelling-Standard-R1-May-2021.pdf)

21. The flood hazard modelling process generally takes a minimum of two years. Greater Wellington has programmed the updated flood hazard modelling for the Pinehaven Stream to begin in the 2027/2028 financial year.

22. Following the update of the flood hazard modelling, an assessment of the FMP will be undertaken. Based on the need for site-specific hydrological data and updated modelling, this review will be a minimum of four years away.

23. The outcomes of the FMP assessment, and the resultant modifications and updates required, will heavily depend on the results of the updated flood hazard modelling.

    - If the updated results are similar to the existing modelling, the revision to the FMP may be minor (up to one year). This is because the flood risk management works (those already implemented and assuming that a feasible alternative option is determined and is also implemented) will provide the required level of service.

- More extensive revisions could be required if the updated modelling indicates significantly worse flooding than the current modelling. In this situation, review and investigation of the flood risk management works may be required and could take many years.

24. Overall, review of the Pinehaven FMP (2016) is a considerable undertaking and is likely to take at least five years to complete.

Advice for the Pinehaven Floodplain Management Plan Structural Works Project and FMP Review

25. A high-level programme showing estimated timelines for the structural works project and the FMP review process is shown in Table 1 for comparative purposes.

26. The Structural Works project is due to be completed in mid-2026. A decision for implementation will then be made should a feasible preferred option be identified. Implementation (design, consenting and construction) is estimated to take three – four years and could therefore be completed in 2029/30 financial year.

27. It is anticipated that the FMP review process (collecting site-specific hydrological data, updating the modelling and then assessing and updating the FMP) will take a minimum of five years.

28. The Structural Works project (to determine a feasible option to replace stages 3-5 of the structural works) will need to be undertaken, whether as part of the current scope of work or at a later date. This is because the objectives and level of service set out by the FMP are still unlikely to be met by the status quo, though this is dependent on the outcomes of the updated hydraulic modelling and assumes a desire to continue to provide a similar level of service.

29. It is possible that the structural works project will not identify any feasible options. However, this would not affect the programme for the FMP review.

Table 1: Approximate programme for structural works project and FMP Review

Financial Year	Structural works project	FMP review
2025/26	Structural works project	Install hydrological monitoring sites
		Hydrological data capture
2026/27	Go/no-go decision	Hydrological data capture
	Implementation of alternative option	
2027/28	Implementation of alternative option	Update modelling [1]
2028/29	Implementation of alternative option	Update modelling
2029/30	Implementation of alternative option	FMP review – assessment [2]
		Go/no-go decision

Financial Year	Structural works project	FMP review
2030/31		FMP review – FMP modifications
2031/32		Implementation of alternative option
2032/33		Implementation of alternative option
2033/34		Implementation of alternative option
2034/35		Implementation of alternative option

Notes:

1. *Modelling committed to in agreement with the PCE.*
2. *It is likely at this point that without the structural works project, the objectives and level of service outlined in the FMP will not be met. This could trigger the need for a similar scope of work; to determine an alternative to the currently proposed stages 3-5 works.*

30. The question raised in the May 2025 meeting was whether a review of the FMP should be completed in conjunction with, or instead of, the structural works project. Officers have evaluated the risks and benefits of replacing the structural works project with the FMP review or progressing both, which are presented in Table 2.

Table 2: Summary of risks and benefits to options

Description	Benefits	Risks
Continue with structural works project and programmed FMP review	• The objectives and level of service outlined in the FMP can be realised in a shorter timeframe. • This will result in a shorter timeframe to reduce the flood risk to community. • Updated modelling and FMP review will still take place and will reflect implemented flood risk management works.	• The existing modelling (which the structural works project will utilise) is considered out of date and requires updating. • The updated modelling could identify that the implemented alternative option is not sufficient for the future impacts of climate change and further works may be required.
Replace structural works project with FMP review	• Reduces risk of implementing physical works which could be found to be inadequate after the updated modelling is available. • Any future design is based on updated modelling.	• As the FMP review process will take many years, the time to realise the FMP objectives and level of service is much longer. • During this time the community will be exposed to the existing flood risk.

Description	Benefits	Risks
		• While dependent on the outcomes of the updated flood hazard modelling, it is likely that the scope of work for the structural works project will be needed as part of the FMP review.

Ngā tūāoma e whai ake nei
Next steps

31. Based on our existing knowledge of the flood risk, the Structural Works project is required to meet the objectives and level of service outlined in the Pinehaven FMP. If not completed now, it will likely still be required as part of the FMP review but be delayed by a number of years.
32. A go/no-go decision is proposed at the completion of the Structural Works project to confirm whether a preferred option will be implemented and will meet the required level of service.
33. The risk of not investigating and implementing an alternative option now is that the community will remain exposed to the existing flood risk for many more years.
34. While it would be ideal to use updated modelling to inform the Structural Works project, the process to update the modelling and then complete the FMP cannot be expedited.
35. The risks of implementing an alternative option based on the existing (2010) modelling are largely financial, where updated modelling could indicate less or more flooding in the catchment. On balance, Greater Wellington advises that both the structural works project and the review of the Pinehaven FMP will proceed on current timelines.

Ngā kaiwaitohu
Signatories

Writers	Ella Boam – Senior Project Manager, Investigations Francie Morrow – Team Leader Knowledge Water Resilience
Approvers	Evan Harrison – Manager Knowledge Jack Mace – Director Delivery Fathima Iftikar – Kaiwhakahaere Matua Taiao | Group Manager Environment (acting)

He whakarāpopoto i ngā huritaonga Summary of considerations
Fit with Council's roles or with Committee's terms of reference The Subcommittee's specific responsibilities include to oversee development, implementation and review of floodplain management plans (FMPs) for the Te Awa Kairangi/Hutt River floodplain. This report relates to the development of flood hazard modelling in the Pinehaven Stream.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies The project described in the report support the delivery of Greater Wellington's Long Term Plan objectives. This project specifically supports the priority area of te tū pakari a te rohe/regional resilience and the understanding of climate change.
Internal consultation Internal consultation on the Pinehaven FMP has been undertaken with: • The Delivery Function regarding the existing structural works and implementation of the FMP.
Risks and impacts - legal / health and safety etc. There are no health and safety risks. The purpose of flood risk management planning is to reduce the risk to communities and improve the region's resilience.

Te Awa Kairangi / Hutt River Valley Subcommittee
05 August 2025
Report 25.375

For Information

PINEHAVEN FLOODPLAIN MANAGEMENT PLAN STRUCTURAL WORKS IMPLEMENTATION - REVIEW

Te take mō te pūrongo
Purpose

1. To update the Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) on the Pinehaven Floodplain Management Plan Structural Works Implementation Review.

Te tāhū kōrero/Te horopaki
Context

2. Structural works to achieve the Pinehaven Floodplain Management Plan (FMP) outcomes are currently on hold due to the significant cost escalation ($10.6 million to $58.6 million) from what was envisaged in the 2016 FMP to now.
3. Other options are currently being investigated. One alternative option, currently being developed and tested in a hydraulic model, involves a more natural channel form with fewer structures. Another option focuses on maintenance and emergency management considerations. Refer to the Analysis section for details on the alternative options.
4. If any of the alternative options under investigation can achieve the required FMP outcomes, then a design and cost estimate will be developed and presented alongside the currently proposed (on hold) option.
5. The project Steering Group has been meeting monthly to discuss progress.

Te tātaritanga
Analysis

6. Due to the significant cost escalations and general changes in stream channel design philosophy since the inception of this project, it is necessary to review the type of structural works currently proposed to meet the flood risk management outcomes agreed to in the Pinehaven FMP.
7. A more natural solution that has less bridges and culverts and doesn't require lengths of concrete lined channel could provide a more cost effective, resilient and ecologically sound solution.

8. Three options are being considered so that an informed decision can be made as to the nature of the remaining FMP structural works -
    - Option 1 – Proceed with works as currently proposed;
    - Option 2 – More naturalised channel enlargement with minimal structures;
    - Option 3 – Do no further structural works but enhance maintenance and emergency management provisions to manage flood risk.
9. Modelling work is underway using the existing hydraulic model (2010) to test the feasibility of Option 2 in terms of providing a 25-year return period flood capacity within the mainstream channel and reducing the flooding of habitable dwellings in the 100-year return period.
10. If Option 2 can be demonstrated as feasible in terms of meeting the agreed FMP outcomes, then a design and cost estimate will be developed.
11. If Options 2 or 3 cannot achieve the required FMP outcomes, then a review of the FMP would likely be required. Another paper (Pinehaven Floodplain Management Plan – Review process and Timelines – Report 25.293) is being presented to this Sub-committee regarding a review of the FMP.
12. One on one engagement has commenced with property owners directly affected by the proposed alternative option and will continue as the project develops and more information becomes available. Those directly affected are defined as properties where physical works are proposed on their property.
13. Wider engagement with the community indirectly affected is also planned. Those indirectly affected are defined as properties where the proposed works have the potential to change the flood risk to their property.

Ngā hua ahumoni
Financial implications

14. Cost estimates for the more naturalised options have not yet been developed so there is no update on the financial implications of the project.

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

15. The more naturalised option (Option 2) would generally be considered to be more aligned with the principles of Te Mana o Te Wai and it would also be positive for Māori that live in any of the houses that are to benefit in terms of reduced flood hazard.

Ngā tūāoma e whai ake nei
Next steps

16. Modelling of the more natural option (Option 2) is underway and the feasibility of this option in terms of meeting FMP outcomes will be reported on at the next Sub-Committee meeting.

17. Further details of Option 3 will also be developed and tested with the hydraulic model over the coming months.

Ngā kaiwaitohu
Signatories

Writers	Kyle Christensen – Project Manager
Approvers	Jack Mace – Director Operations Tim Harty – Group Manager Operations Upper Hutt City Council

He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or with Committee's terms of reference Management of flood risk and provision of flood risk infrastructure are fundamental responsibilities of both Greater Wellington and Upper Hutt City Council.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies The purpose is the cost-effective delivery of outcomes agreed in the Pinehaven FMP.
Internal consultation Steering Group membership provides internal representation.
Risks and impacts - legal / health and safety etc. The risk of investing too much in a structural works that benefit relatively few properties is considered greater than the risk of delaying structural flood risk improvements to Pinehaven Stream.

Te Awa Kairangi / Hutt River Valley Subcommittee
5 August 2025
Report 25.273

For Decision

ANNUAL TE AWA KAIRANGI I HUTT RIVER VALLEY SUBCOMMITTEE FLOOD ASSET ASSESSMENT 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) with the Te Awa Kairangi, Waiwhetū, and Wainuiomata schemes.

He tūtohu
Recommendations

That Subcommittee:

1 **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).

2 **Notes** that identified issues are being addressed through maintenance and improvement work programmes.

3 **Notes** that the 2024–34 Long Term Plan provides an increased level of funding for capital works and operational resources to support flood protection outcomes 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 across 15 river schemes throughout the Wellington Region. These assets have a combined replacement value of approximately $621 million[1] and provide essential flood and erosion protection to communities, businesses, and infrastructure on these floodplains.

3. The Environment Committee has overall responsibility to monitor the maintenance and improvement of these assets on behalf of Council. The Committee relies on feedback from various subcommittees, scheme advisory committees, and friends'

[1] Revaluation as of 30 June 2024

groups to confirm assets are being satisfactorily maintained to agreed service levels.

4. In 2025, the annual asset condition inspection programme trialled a new targeted inspection approach, prioritising inspections of critical assets as well as all channel assets.

5. Critical assets are identified as follows: Stopbank, Riprap, Groyne, Retaining wall, Floodwall, Floodgate, Culvert and Headwall/ Wingwall.

6. As a result, not all assets within the Te Awa Kairangi flood protection scheme were re-inspected this year.

7. This report presents the most up-to-date condition and performance data available across the scheme's 2,308 assets.

8. These inspections and the resulting data inform the ongoing evidence-based assessment of flood protection and erosion control assets, supporting targeted investment and maintenance planning.

Current Challenges

9. The operating environment for flood protection and erosion control operations and maintenance (O&M) continues to evolve. The catchment-based approach established through the Environment Group restructure is more embedded but requires continued resourcing and refinement to achieve intended outcomes, particularly with increasing integration of nature-based solutions.

10. The broader range of assets constructed over the past decade, including multi-use recreational assets such as the Hutt River Trail, signage, and amenity structures, continues to demand higher and more complex maintenance inputs.

11. Nature-based approaches, while valuable for enhancing ecological outcomes, often involve additional requirements such as pest plant and animal control and invasive species management. While these approaches may appear to require more intensive and potentially higher-cost interventions, further monitoring and data collection is needed to confirm and validate long-term maintenance cost assumptions.

12. National and regional reforms, including resource management system changes, as well as increasing compliance expectations in health, safety, and environmental performance, are placing additional pressure on operational resources. Similarly, growing expectations around engagement with mana whenua and communities to achieve broader social outcomes continue to add complexity to O&M planning and delivery.

13. The impacts of climate change remain a significant challenge. The increased frequency and severity of storms, floods, and high-flow events is testing asset resilience and putting additional strain on maintenance budgets. Reactive responses to climate-driven events increasingly disrupt planned works programmes and require flexible planning approaches.

14. Ongoing work to fully embed the Ngātahi asset management information system, implemented in 2022, remains a focus. Data quality, staff familiarity, and system

optimisation continue to improve, but further training, support, and data validation will be needed to ensure consistent application across all asset types.

15. Skill shortages persist across the public works sector, affecting the recruitment and retention of suitably qualified engineers, field staff, and asset management professionals. As Greater Wellington's strategic ambitions grow to address environmental, social, and climate challenges, broader and more specialist skillsets will be essential to meet community expectations.

16. Operational resourcing, while supported through the 2024–34 Long-term Plan, still faces pressures from inflation, construction cost escalation, and constrained contractor availability. Delivering the desired levels of service will require ongoing attention to workforce planning, procurement resilience, and long-term investment certainty.

17. The 2025 condition assessment programme trialled a new targeted inspection approach, where inspections focused on critical assets located within all reaches, as well as all channel assets. While this risk-based approach aimed to improve the efficiency of inspections, it presented some challenges. Not all assets were re-inspected, which limited the ability to fully compare condition trends across the entire asset base year-on-year. This has implications for understanding the overall performance of some lower-risk assets, which may not receive regular condition updates under this approach.

18. Officers are reviewing the outcomes of this trial to refine the methodology for future inspection programmes. A balanced approach will be required to maintain good visibility of the full asset portfolio while continuing to prioritise inspections that address the greatest flood and erosion risks.

Te tātaritanga

Analysis

19. The national risk-based framework (Figure 1) continued to underpin asset performance assessments in 2025, evaluating 100–200 metre segments along both riverbanks to develop a comprehensive risk profile for the Te Awa Kairangi, Waiwhetū, and Wainuiomata schemes.

20. Originally developed by the National River Managers Special Interest Group in 2015, this framework remains widely adopted by local authorities across Aotearoa to provide consistency and transparency in flood protection performance assessments.

21. The framework considers the likelihood and consequences of failure within discrete river sections, typically between 100–500 metres in length, to prioritise investment and maintenance.

22. Probability of failure is assessed through factors such as the intrinsic strength of stopbanks, the channel's flood-carrying capacity, and the condition of associated infrastructure.

23. Consequence of failure relates to potential impacts on people, property, and the environment in the event of a design flood, with risk levels assigned on a scale from 'Very Low' to 'Very High'.

24. Applying this methodology also highlights areas where technical confidence is lower, helping direct future investigations and information-gathering activities to reduce uncertainty.

25. It is important to note that flood protection and erosion control rely on systems of interdependent assets, rather than isolated structures. Accordingly, the framework recognises and assesses the performance of these systems, in addition to individual components.

26. The following diagram illustrates the relationship between asset condition, probability, and risk.

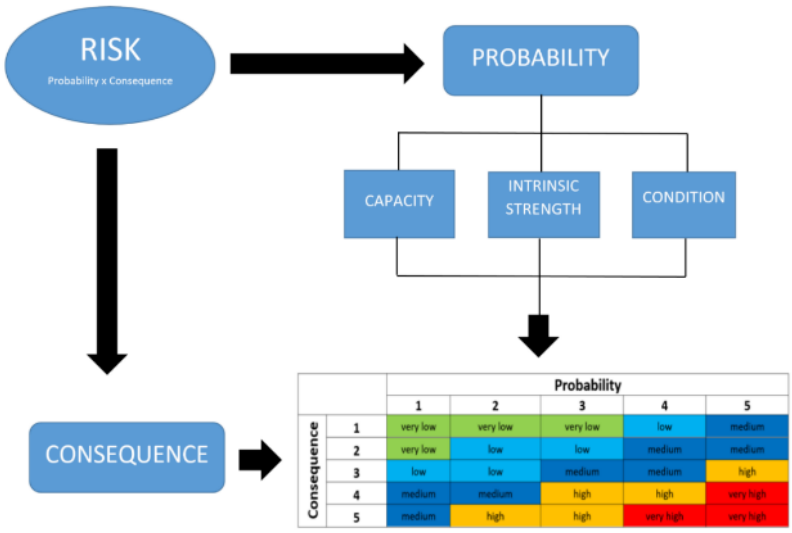


Figure 1: Risk-based framework used for assessing performance of flood protection assets

Asset Condition

27. Asset condition in 2025 was again assessed primarily through visual inspections, providing an indication of the current physical state of flood protection and erosion control assets. The condition assessment process uses standardised rating descriptions to ensure consistent evaluation across the network. These ratings are outlined in Table 1 below.

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

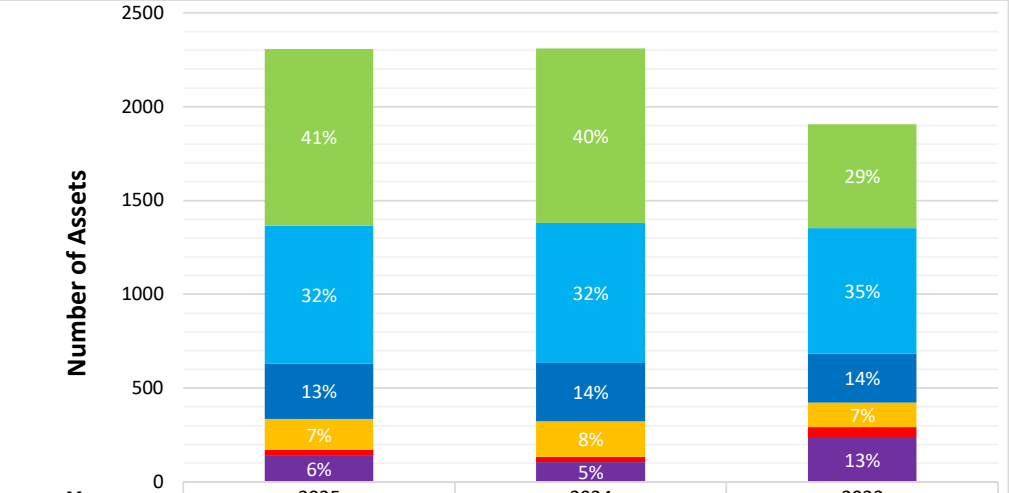
Score	Condition Rating	Definition
1	Very Good	Sound physical condition well maintained. No work required.

Score	Condition Rating	Definition
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.

28. Ongoing monitoring of asset condition supports informed planning and prioritisation of maintenance, helps forecast future renewals, and enables a proactive and targeted works programme. Understanding asset condition is vital for managing flood risk, as it directly influences the probability of an asset failing.

29. The condition grading does not, on its own, determine asset criticality or confirm whether the asset continues to meet service level expectations. These elements are assessed through complementary performance assessments described later in this report.

30. The following Figure 2 summarise the number of assets in each condition category. In total, 2,308 assets were assessed across the Te Awa Kairangi, Waiwhetū, and Wainuiomata schemes.



Year	2025	2024	2023
1 - Very Good	943	927	551
2 - Good	734	746	669
3 - Moderate	294	313	261
4 - Poor	167	190	132
5 - Very Poor	27	28	52
TBD	143	105	240
Totals	**2308**	**2309**	**1905**

Figure 2: Summary of asset condition by year – Te Awa Kairangi, Waiwhetū and Wainuiomata schemes.

31. The results show that 41% of assets (943 assets) were assessed as being in 'Very Good' condition, reflecting a slight improvement from 40% in 2024. A further 32% of assets (734 assets) were in 'Good' condition, unchanged from the previous year. Moderate condition assets accounted for 13% (294 assets), which is broadly consistent with prior years.

32. The proportion of assets in 'Poor' or 'Very Poor' condition in 2025 decreased slightly to a combined 8%, compared to 9% in 2024. There were 27 assets assessed as 'Very Poor' (1%), like last year, with most of these comprising vegetative defences or debris-related structures.

33. Approximately 6% of assets (143) were categorised as "To Be Determined" (TBD), which refers to assets for which condition information was incomplete or inspections could not be finalised. This is slightly higher than in 2024 (5%) but significantly reduced from 2023 (13%). Figure 3 represents the summary of the 2025 asset condition rating. A summary of condition by asset type is provided (**Attachment 1**).

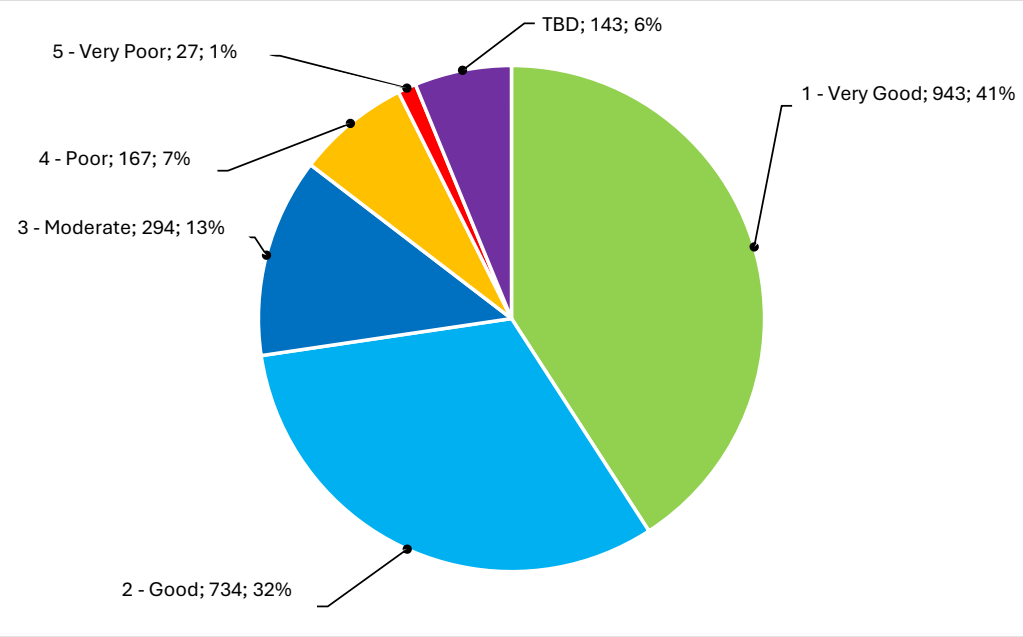


Figure 3: Summary of 2025 asset condition – Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes.

34. Several ripraps, groynes and some retaining walls[2] were classified as TBD this year due to inaccessibility during inspections. These structures were either submerged underwater or buried beneath vegetation, making it impractical to assess their condition using standard methods. The presence of vegetation does not necessarily indicate poor performance. Vegetation growth over such assets is often a natural and expected outcome, particularly in stable environments with minimal erosion. Vegetation can contribute positively to structural integrity by reducing surface erosion and binding surrounding soil, which may enhance the long-term stability of these assets.

35. Overall, the 2025 results demonstrate a stable condition profile, with 86% of the inspected assets assessed as being in Very Good, Good, or Moderate condition. This provides continued confidence in the ongoing performance of these assets, despite the targeted inspection focus this year.

36. Table 2 provides a summary of assets in Poor and Very Poor condition across critical asset types, together with commentary on the reported issues. In 2025, there are 30 stopbank assets recorded in Poor condition, consistent with previous assessments. The most common issues relate to trees, invasive vegetation, scouring, erosion, and slumping.

Table 2: Summary of Critical Asset Types in Poor Condition – Te Awa Kairangi, Waiwhetū, and Wainuiomata Schemes

Asset Type	Total Number	4 - Poor	5 - Very Poor	Issue(s) reported
Culvert	20	0	0	Blocked, moved, misaligned

[2] These retaining wall are classified as Fence Rail Iron Net (RIN)

Asset Type	Total Number	4 - Poor	5 - Very Poor	Issue(s) reported
Floodgate	23	0	0	Chipping on structure
Floodwall	28	0	0	Corroding, rust evident
Groyne	133	5	1	Loss off material, rocks missing
Headwall/ Wingwall	18	0	0	Graffiti, Cracked, Corroding
Retaining wall	27	2	1	Moved, Misaligned, Cracked
Riprap	180	3	4	Excessive grass or weed, Rocks missing, Loose
Stopbank	270	30	0	Invasive weeds, Trees, Scouring, Erosion, Slumping
Total	**699**	**40**	**6**	

37. Greater Wellington continues to apply a conservative approach for recording vegetative encroachment on stopbanks, maintaining a Poor score where trees or invasive species are present within 5 metres of the stopbank toe. This approach has been refined with updated guidance to support more consistent application by inspectors, particularly around tree age, height, and structure.

38. Across other asset types, a total of 42 assets is assessed in Poor condition and 6 in Very Poor condition. The most notable issues identified include loss of rock material from groynes, excessive weed growth around riprap structures, and movement or cracking in retaining walls. **Attachment 2,** which summarises these Poor condition assets in relation to the scheme's risk profile.

39. Most Poor and Very Poor condition assets remain located outside the highest risk areas. Where significant assets in Poor condition do coincide with high-risk reaches, they have been prioritised within the 2025/26 maintenance and improvement programme, as highlighted in **Attachment 3.**

40. Since 2025, eight additional stopbank assets have been constructed as part of the RiverLink Stage 1 project under the Te Wai Takamori o Te Awa Kairangi Programme. These new assets, located between the Transpower substation and Melling Link Bridge, are not yet fully captured in the asset information management system.

41. Table 3 provides a breakdown of new recorded assets added to the asset inventory this year, including stopbank, ripraps, willows, groyne, and weir. Several of these represent previously undocumented assets while the willow assets are newly constructed assets.

Table 3: Additional assets newly built or captured since 2024 - Te Awa Kairangi, Waiwhetū, and Wainuiomata Schemes

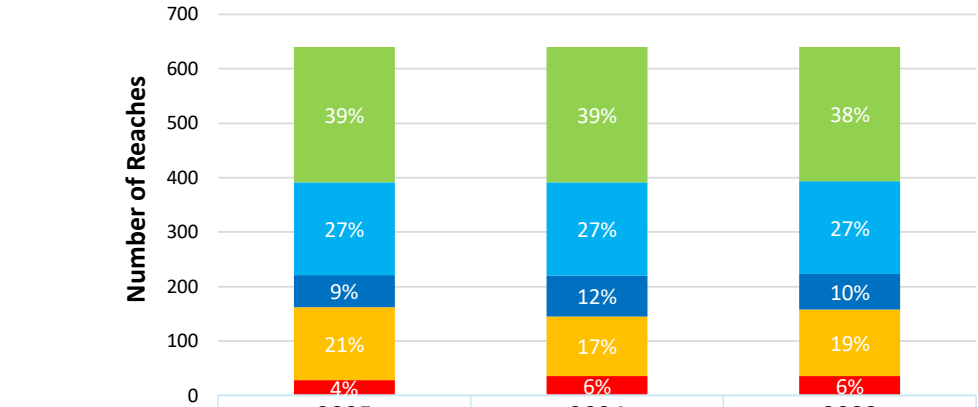
Asset Type	1 – Very Good	2 - Good	3 - Moderate	4 - Poor	Total
Groyne	0	0	1	0	1
Riprap	0	2	0	0	2
Stopbank	0	0	1	0	1
Weir	0	1	0	0	1
Willow	2	0	0	1	3
Total	**2**	**3**	**2**	**1**	**8**

42. The condition data continues to inform planning for future maintenance, renewals, and climate resilience programmes.

Asset performance and risk

43. The national risk-based framework continues to be applied to the Te Awa Kairangi/Hutt River and Wainuiomata River schemes, as it is best suited for assets such as stopbanks. The Waiwhetū and Pinehaven streams remain excluded from this framework due to their relatively limited asset base.

44. In 2025, a total of 640 segments, each approximately 100–200 metres in length, were assessed for performance risk across the Te Awa Kairangi and Wainuiomata schemes. Figure 4 summarises the risk profile for these segments, with a spatial overview provided in **Attachment 4.**



Year	2025	2024	2023
1 – Very Low	249	249	246
2 – Low	170	171	171
3 – Medium	59	75	65
4 – High	134	109	122
5 – Very High	28	36	36
Total	**640**	**640**	**640**

Figure 4: Summary of segments by risk scores across the Te Awa Kairangi and Wainuiomata Schemes

45. Analysis of the 2025 results indicates that 75% of segments (249) are assessed as 'Very Low' risk, consistent with 2024 results. A further 170 segments are classified as 'Low' risk, while 59 segments are rated as 'Medium' risk.

46. Notably, the proportion of segments classified as 'High' risk slight increased to 25% (134 segments) in 2025 compared to 23% (109 segments) in 2024. The number of segments with a 'Very High' risk rating has reduced to 28 segments, down from 36 in the previous year.

47. The increase in 'High' risk segments is attributed to a combination of factors, including updated information on asset condition, updated modelling outputs (Te Awa Kairangi scheme), climate-driven flow projections, and revised consequence-of-failure considerations. Management responses to all areas of 'High' risk are outlined in the Management response section below.

48. While the proportion of segments with 'Very Low' to 'Medium' risk remains high (approximately 75%), the results highlight areas that will require continued attention to maintain acceptable levels of service and flood risk reduction.

Management response

49. With the recent adoption of Greater Wellington's 2024–34 Long Term Plan, increased budgets and resourcing will be available over the next ten years to support the maintenance of agreed scheme service levels and to continue delivery of core operations and maintenance activities.

50. Some of this funding has already been realised in the current financial year. The Flood Operations team implemented a new team structure in December 2024, creating four new roles to strengthen planning, scheduling, and delivery of maintenance work. This restructure has enabled earlier identification of annual work programme items, improved internal processes, and more direct engagement with mana whenua and key stakeholders such as Fish & Game. Further field-based roles are planned for 2025–26 to continue lifting the condition of assets and respond to increasing maintenance demands.

51. In parallel, a new Consents Management team was established in early 2025 to lead the preparation of global river management consents and support delivery teams across the region. The team has played an important role in implementing the Code of Practice and ensuring regulatory processes are underpinned by genuine engagement with mana whenua and stakeholders. The upcoming introduction of a Consent Management System will further improve coordination and transparency across Greater Wellington's work programmes.

52. The highest risk areas within the Te Awa Kairangi/Hutt River corridor, as identified through the 2025 risk assessment process (**Attachment 4** and **Attachment 5**), are discussed below in geographic order from downstream to upstream, followed by the Wainuiomata River.

53. At the Te Awa Kairangi/Hutt River mouth, downstream of the Estuary Bridge, capacity remains a key issue. This reach is inundated during a 1,900 cumec (1% AEP) event and is currently rated as 'High' risk. No stopbanks are present in this area and none are currently proposed in the Hutt River Floodplain Management Plan (HRFMP). Initial investigation work has been undertaken as part of RiverLink and may be progressed further as part of the future HRFMP review.

54. The reaches from Moera to Strand Park and through Alicetown are rated as 'High' risk, primarily due to the consequences associated with potential stopbank failure. Operational works will continue to prioritise maintenance of assets in Poor condition in these areas.

55. In the city centre, including the Rutherford Street and Harcourt Werry Drive areas, the risk is also rated 'High'. A prioritisation review of structural works within the HRFMP is underway, informed by the recently completed Hutt River flood hazard modelling. This review will guide future investment and implementation sequencing.

56. Further upstream, areas along River Road near Heretaunga Park, Holdsworth Avenue, above Moonshine bridge/ Whakatiki Street, Ebdentown and Ngai-tama Park have also been assessed as 'High' risk. This is due to a combination of condition of assets and high potential consequences of failure. Assets with identified condition issues in these areas will be addressed through routine operational works.

57. At Gemstone Drive, the stopbank is predicted to overtop during a 2,800 cumec event. The area is rated as 'High' risk and will also be included in the ongoing HRFMP prioritisation review. Assets with Poor condition scores will be addressed through programmed maintenance.

58. The River Road stopbank above Moonshine Bridge is rated as 'Very High' risk due to limited capacity and average intrinsic strength. It is also predicted to overtop during a 2,800 cumec event. Targeted investigations have commenced to better understand the local conditions and develop options for treatment.

59. Stopbanks along Pharazyn Street and central Lower Hutt are also rated as 'Very High' risk. These defences are expected to overtop in a 2,800 cumec design event. The RiverLink project will mitigate this by retreating, raising, and strengthening stopbanks in this reach. Stage 1 of the Mills Street stopbank upgrade has achieved practical completion, and condition assessments of these works are scheduled for the current year.

60. The latest assessment for the Wainuiomata River has identified two segments as being at 'High' risk, due to the potential for overtopping during a 1% AEP (Annual Exceedance Probability) event. In response, an update to the flood hazard model is programmed to commence in the 2025/26 financial year. Following completion of the updated model, investigations will be undertaken to better understand the extent of the risk and identify suitable solutions. These investigations will inform the development of options to manage or mitigate the overtopping risk.

61. Two additional Wainuiomata River segments have been assessed as 'High' risk due to Poor condition. Maintenance of these critical assets will be prioritised in the operational works programme.

62. All high-risk areas outlined above are known to officers and, unless otherwise stated, are already scheduled for treatment under existing Floodplain Management Plans (FMPs), planned technical investigations, or operational maintenance programmes. These considerations have been incorporated into the latest Activity Management Planning and Long-Term Plan processes.

Ngā hua ahumoni
Financial implications

63. The proposed recommendation has no financial implications.

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

64. Greater Wellington is required to manage land and water in accordance with a range of statutory obligations, including giving effect to Te Mana o Te Wai and upholding the principles of Te Tiriti o Waitangi when developing and implementing the Council's strategies, plans, programmes and initiatives.

65. Under the Long-term Plan 2024–34, Greater Wellington continues to strengthen its partnership with mana whenua as kaitiaki (guardians) of their ancestral lands, freshwater, and coastal environments. This includes deepening collaboration across governance, management, and operational levels, ensuring that mana whenua perspectives are reflected in flood risk management priorities and practices.

66. A significant number of Māori, including both mana whenua and mātāwaka, live and work in flood-prone areas within Te Awa Kairangi. There are also many culturally and spiritually significant sites that are potentially at risk from flooding. Ongoing delivery of an effective flood risk management programme is essential to protect Māori communities and their cultural values, supporting all four wellbeing; social, economic, environmental, and cultural.

67. In 2025, Greater Wellington will continue working alongside mana whenua partners to embed mātauranga Māori in flood resilience initiatives and to explore opportunities for more nature-based and culturally informed flood management solutions.

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

68. Matters outlined in this report have been assessed by officers in accordance with Greater Wellington's Climate Change Consideration Guide.

69. The assets covered in this report were developed over a long period, during which climate change projections have continued to evolve in line with the scientific community's improved understanding of risks to the Wellington Region. Climate change considerations, including projected changes in rainfall intensity and sea level rise, were integrated into the development of relevant management plans and asset designs at the time they were prepared.

70. Previous climate projections applied to Te Awa Kairangi/Hutt modelling included a 20% increase in rainfall intensity and 0.8 m of sea level rise. Current projections estimate a 25 – 30% increase in rainfall intensity and a sea level rise of 1.35 m, and these have been adopted for recent modelling projects. Greater Wellington's policy remains to use the latest national guidance for incorporating climate change impacts into flood risk assessments, asset design, and operational responses.

71. The RiverLink river works design uses a risk-based approach and delivers a complete river channel, berm, and stopbank system designed to:

- Convey a design flood event of 2,800 m^3/s without breach or overtopping of the stopbanks;
- Withstand a 2,300 m^3/s flood event without requiring structural repairs to edge protection such as rock revetments, platforms, groynes, or bioengineered structures (though planting and berm surfaces may require maintenance);
- Maintain non-structural elements such as gravel beaches, meander patterns, and vegetation for flows up to 1,900 m^3/s without requiring repair.

72. RiverLink considers an EV1 (Extreme Value 1) probability distribution, the 2,800 m^3/s design flow equates to a 1-in-3,100 AEP event in current climate conditions and a 1-in-260 AEP under forecast climate conditions to the year 2130. This projection is based on the RCP 6.0 scenario, representing a "worst case" climate pathway with an estimated 2.6°C increase in average temperature for the Wellington region.

73. Climate Resilience projects delivered since 2023 have continued to incorporate significant planting and river corridor greening measures, supporting carbon reduction and enhancing ecosystem resilience. These programmes complement hard infrastructure improvements to build long-term adaptive capacity against climate-driven flood events.

Ngā tikanga whakatau
Decision-making process

74. 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

75. Officers have considered the significance of this matter, as defined by Part 6 of the Local Government Act 2002, with reference to Councils's *Significance and Engagement Policy* and Greater Wellington's *Decision-making Guidelines*. Officers recommend that this matter is of low significance, given its administrative and reporting nature.

Te whakatūtakitaki
Engagement

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

Ngā tūāoma e whai ake nei
Next steps

77. Officers will present Attachment 6 at the Subcommittee meeting on 5 August 2025.

Ngā āpitihanga
Attachments

Number	Title
1	Te Awa Kairangi, Waiwhetū & Wainuiomata - Summary of Condition by Asset Type
2	Te Awa Kairangi & Wainuiomata - Risk Vs Poor Condition
3	Te Awa Kairangi & Wainuiomata Flood Asset Proposed Work Programme 2025
4	Te Awa Kairangi & Wainuiomata - Risk Assessment Maps 2025
5	Te Awa Kairangi & Wainuiomata High and Very High Risks and Their Remediation High and Very High Risks and Their Remediation
6	Annual Te Awa Kairangi, Hutt River Valley Subcommittee Flood Asset Assessment Report Presentation 2025

Ngā kaiwaitohu
Signatories

Writers	Rolayo Olukunle - Project Engineer, Assets and Performance
Approvers	Lucy Ashford - Team Leader, Assets and Performance Jacky Cox - Manager, Infrastructure - Assets and Support Jack Mace - Director- Delivery Lian Butcher - Kaiwhakahaere Matua Taiao - Group Manager Environment

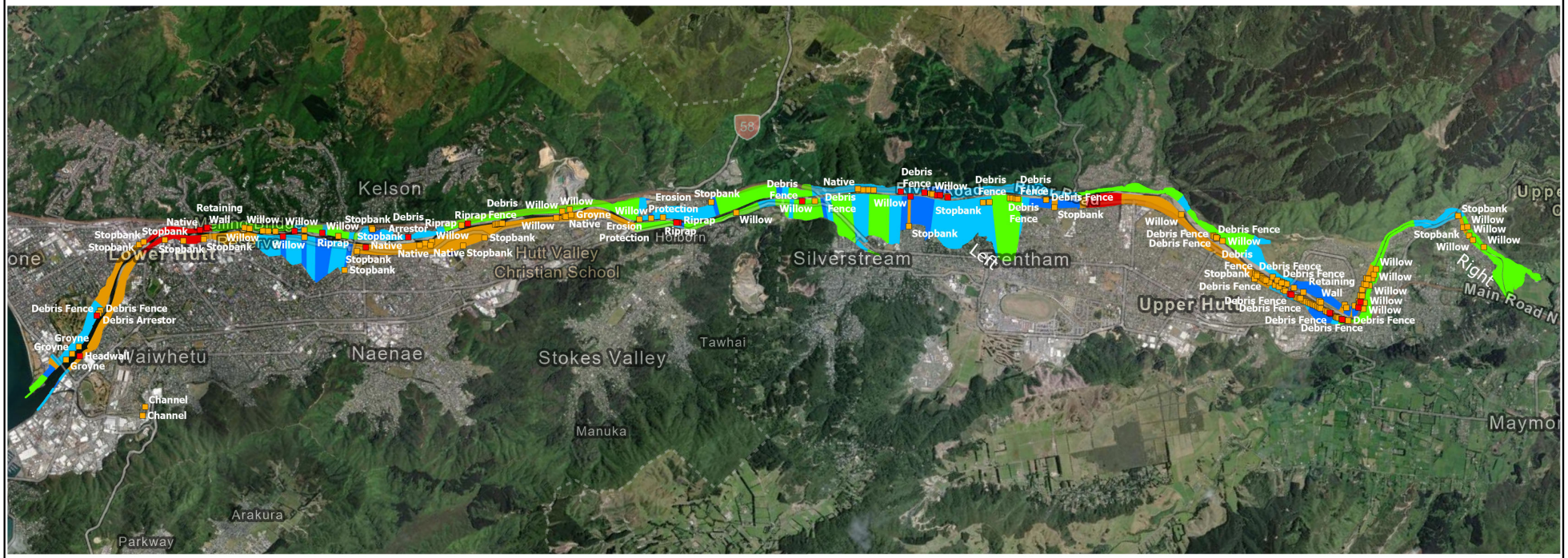
He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or with Committee's terms of reference The Subcommittee provides oversight of the development, implementation, and review of the Floodplain Management Plan for the Te Awa Kairangi and the Greater Wellington managed watercourses of Hutt Valley floodplain; the infrastructure assets that form the flood protection and erosion control scheme are a critical element of this.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies The confirmation from the Subcommittee that the infrastructure assets in the Te Awa Kairangi/Hutt Valley 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.
Internal consultation There was no internal consultation.
Risks and impacts - legal / health and safety etc. The reports note that there are a small number of sections of Te Awa Kairangi/Hutt Valley 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.

Attachment 1 to Report 25.273

Te Awa Kairangi, Waiwhetū & Wainuiomata - Summary of Condition by Asset Type

Asset Type	1 - Very Good	2 - Good	3 - Moderate	4 - Poor	5 - Very Poor	TBD	Total
Blockline	0	7	3	2	0	2	14
Bridge	1	1	0	0	0	0	2
Carpark	7	2	0	0	0	0	9
Channel	271	116	22	3	0	2	414
Constructed wetland	0	2	0	0	0	0	2
Culvert	1	15	4	0	0	0	20
Cycle path/access track	209	113	19	0	0	0	341
Debris arrestor	1	0	0	1	1	0	3
Debris fence	3	22	24	68	8	67	192
Demolition line	0	6	0	0	0	0	6
Drain/modified channel	28	24	20	1	0	0	73
Fence	13	4	0	0	0	0	17
Floodgate	4	15	4	0	0	0	23
Floodwall	5	22	1	0	0	0	28
Gate	45	16	1	1	2	3	68
Groyne	30	51	35	5	1	11	133
Headwall/Wingwall	0	16	2	0	0	0	18
Native planting	39	54	20	1	2	0	116
Retaining wall	0	2	4	2	1	18	27
Riprap	50	57	30	3	4	36	180
Rock Mattress	2	2	1	0	0	2	7
Seat	10	1	0	0	0	1	12
Sign	15	5	0	0	0	0	20
Stopbank	138	89	13	30	0	0	270
Three Water Asset	1	0	0	0	0	1	2
Weir	1	3	0	0	0	0	4
Willow	69	89	91	50	8	0	307
Grand Total	**943**	**734**	**294**	**167**	**27**	**143**	**2308**

Attachment 2 to Report 25.273



Greater Wellington
Te Pane Matua Taiao

Hutt River Overview APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Poor Asset (154)	
Very Poor Asset (26)	

Risk Classification

Very High (28)
High (130)
Medium (53)
Low (146)
Very Low (183)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:89,000

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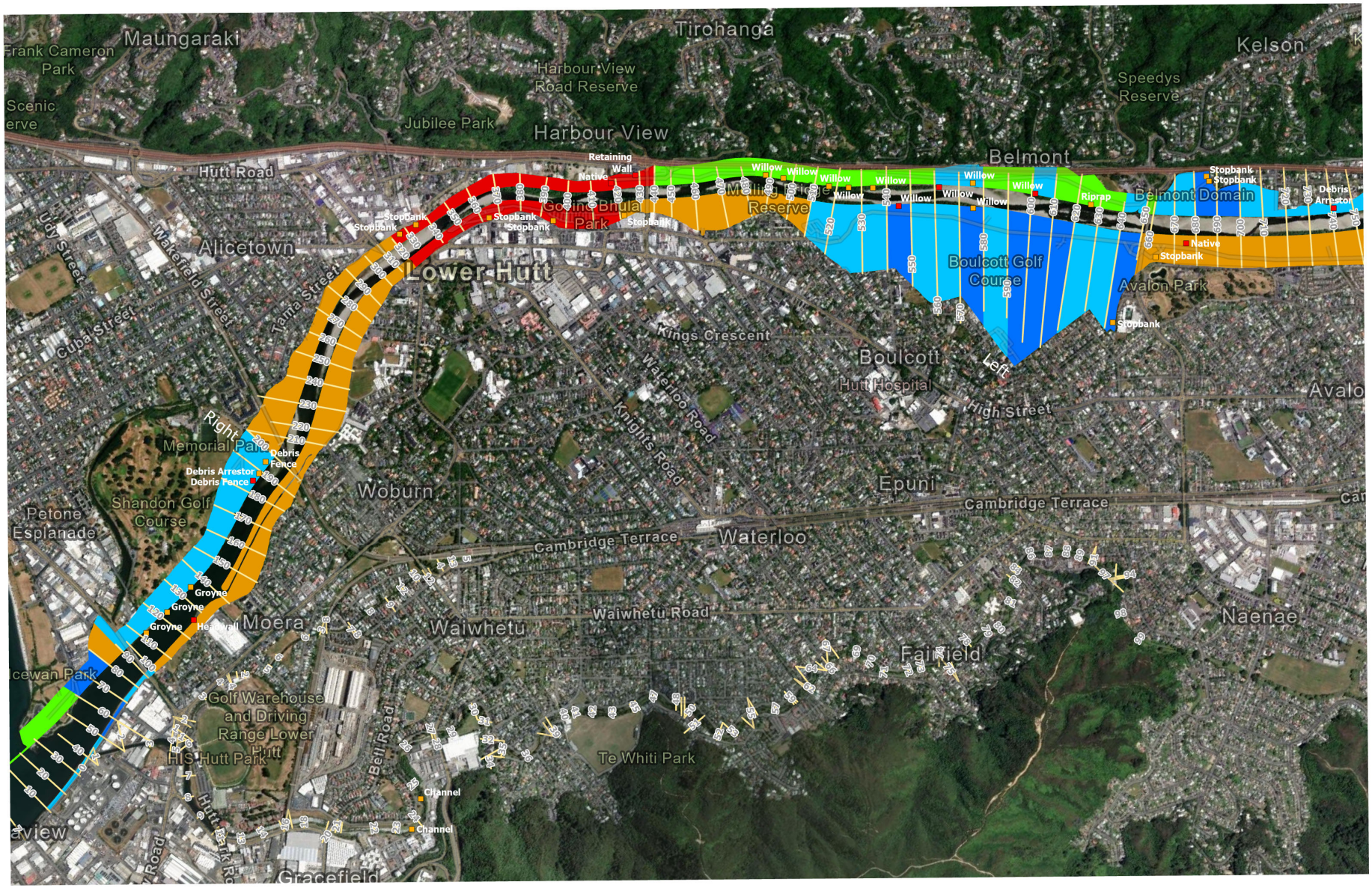

Greater Wellington
Te Pane Matua Taiao

Hutt 1 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

- Cross Sections
- Poor Asset (24)
- Very Poor Asset (9)

Risk Classification

- Very High (22)
- High (55)
- Medium (12)
- Low (38)
- Very Low (23)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:24,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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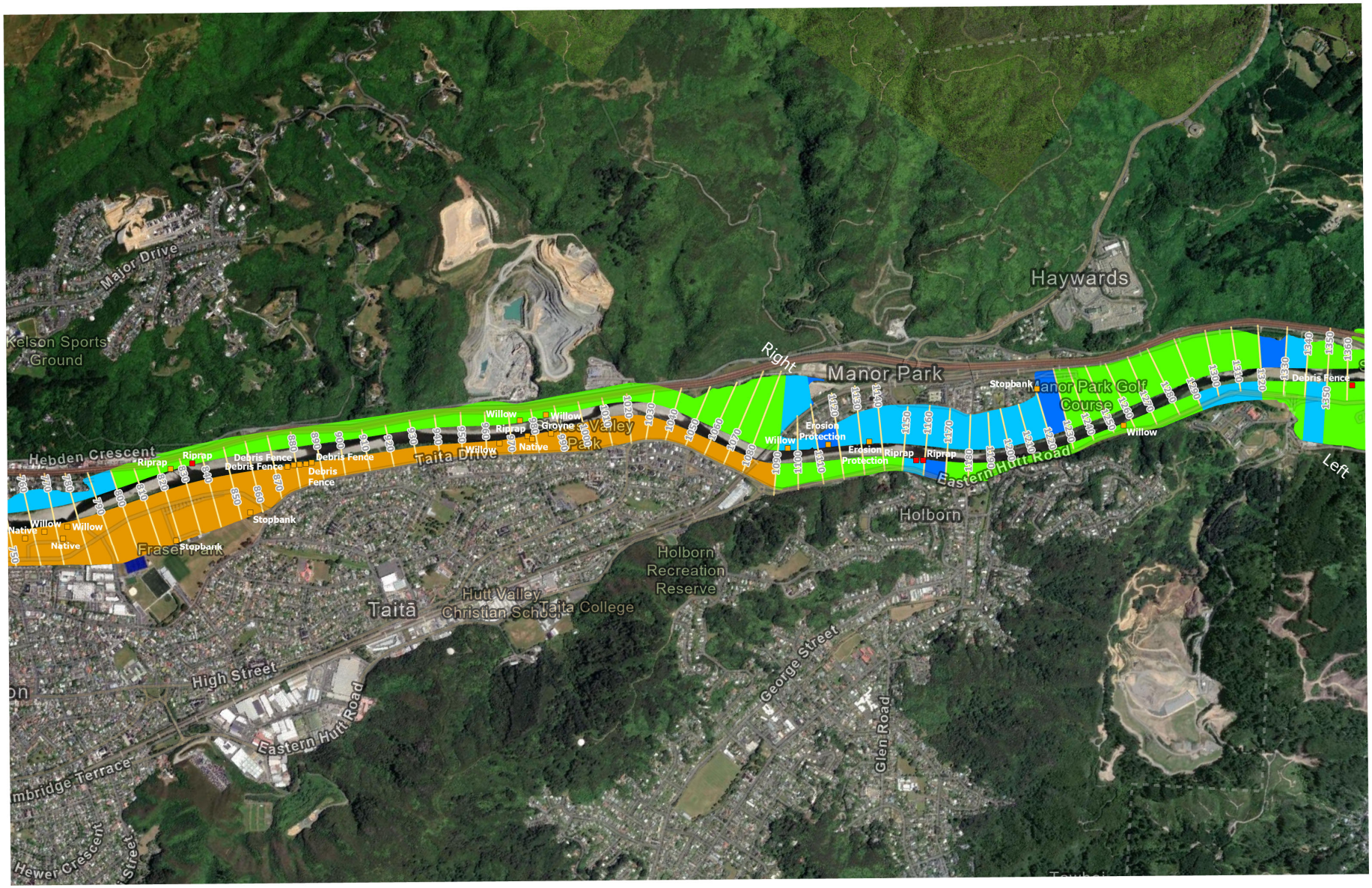

Hutt 2 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

- Cross Sections
- Poor Asset (23)
- Very Poor Asset (4)

Risk Classification

- Very High (0)
- High (35)
- Medium (4)
- Low (23)
- Very Low (63)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:24,000

Porirua District Council, Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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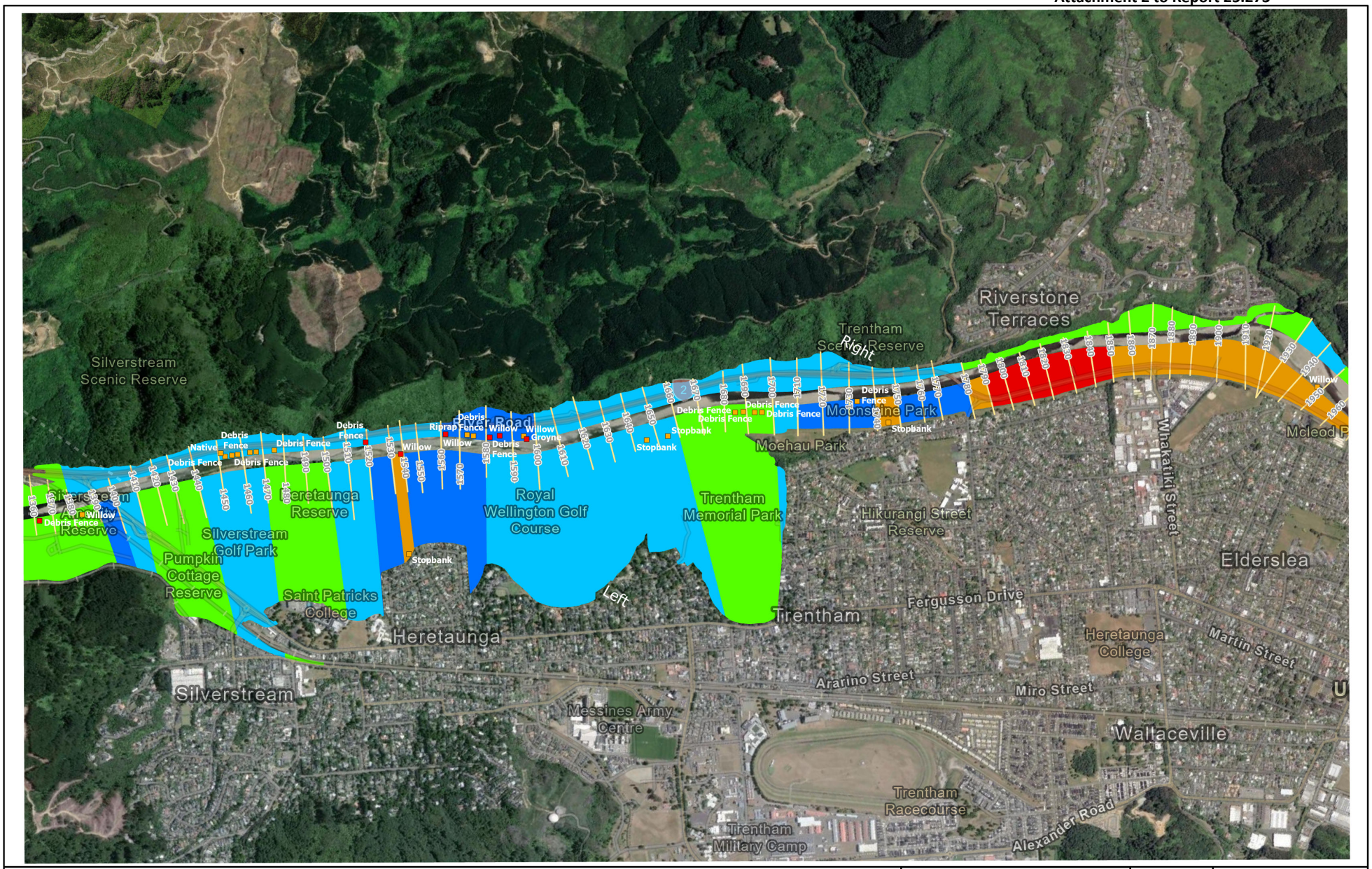

Hutt 3 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

- Cross Sections
- Poor Asset (21)
- Very Poor Asset (7)

Risk Classification

- Very High (6)
- High (15)
- Medium (16)
- Low (53)
- Very Low (33)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:23,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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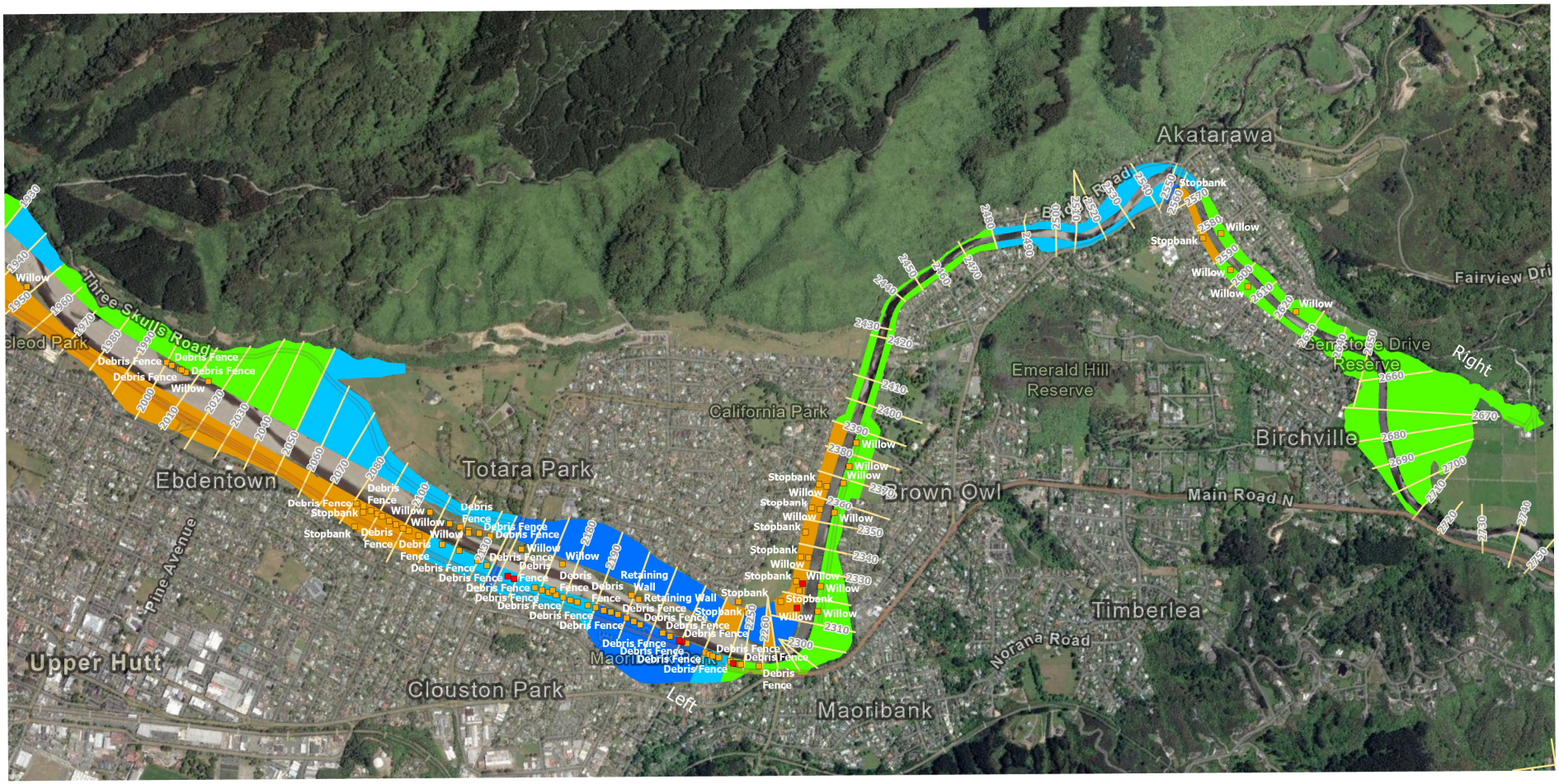

Greater Wellington
Te Pane Matua Taiao

Hutt 4 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

- Cross Sections
- Poor Asset (87)
- Very Poor Asset (7)

Risk Classification

- Very High (0)
- High (31)
- Medium (21)
- Low (35)
- Very Low (70)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:22,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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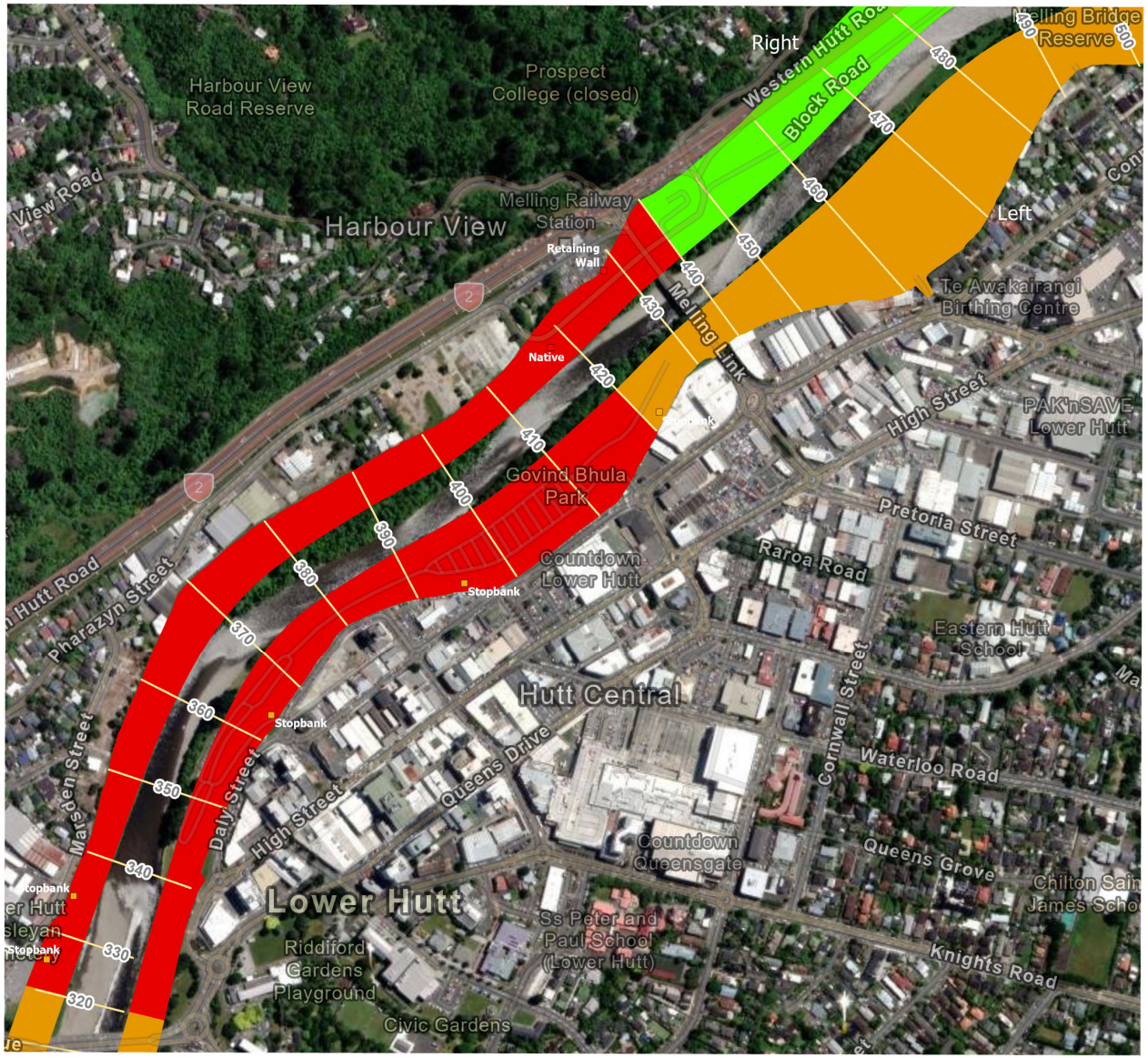

Greater Wellington
Te Pane Matua Taiao

Hutt City Centre APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Cross Sections
Poor Asset (5)
Very Poor Asset (2)

Risk Classification
Very High (22)
High (12)
Medium (0)
Low (0)
Very Low (5)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:8,000

Esri Community Maps Contributors, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS, Maxar

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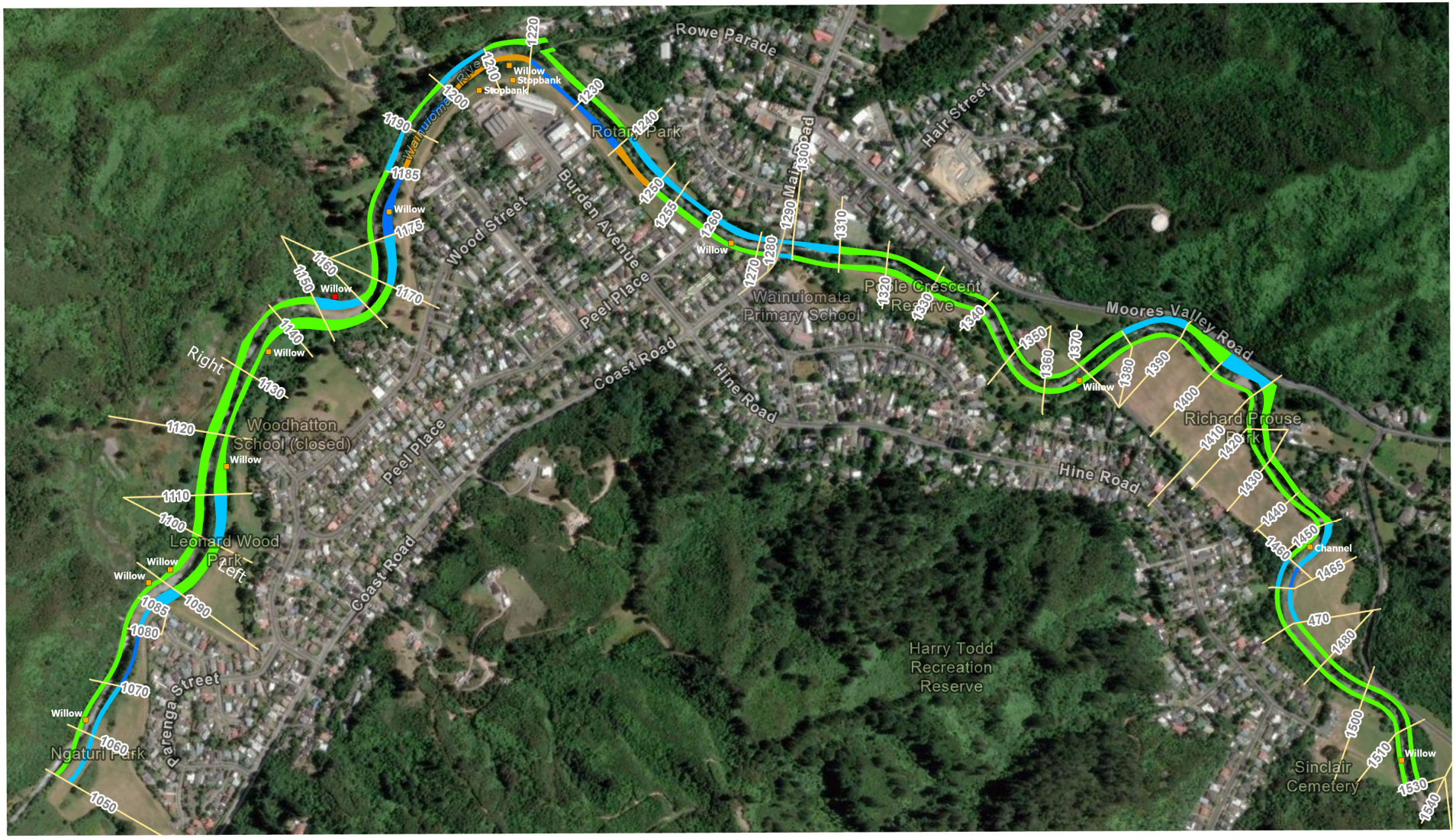

Greater Wellington
Te Pane Matua Taiao

Wainuiomata APT Map

2025 Asset Performance Tool Risk Assessment

Legend

- Cross Sections
- Poor Asset (13)
- Very Poor Asset (1)

Risk Classification

- Very High (0)
- High (4)
- Medium (6)
- Low (24)
- Very Low (66)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:9,000

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Attachment 2 to Report 25.273

Greater Wellington
Te Pane Matua Taiao

Wainuiomata - Rotary Park APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Cross Sections
Poor Asset (5)
Very Poor Asset (0)

Risk Classification
Very High (0)
High (4)
Medium (4)
Low (11)
Very Low (13)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
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Esri Community Maps Contributors, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS, Maxar

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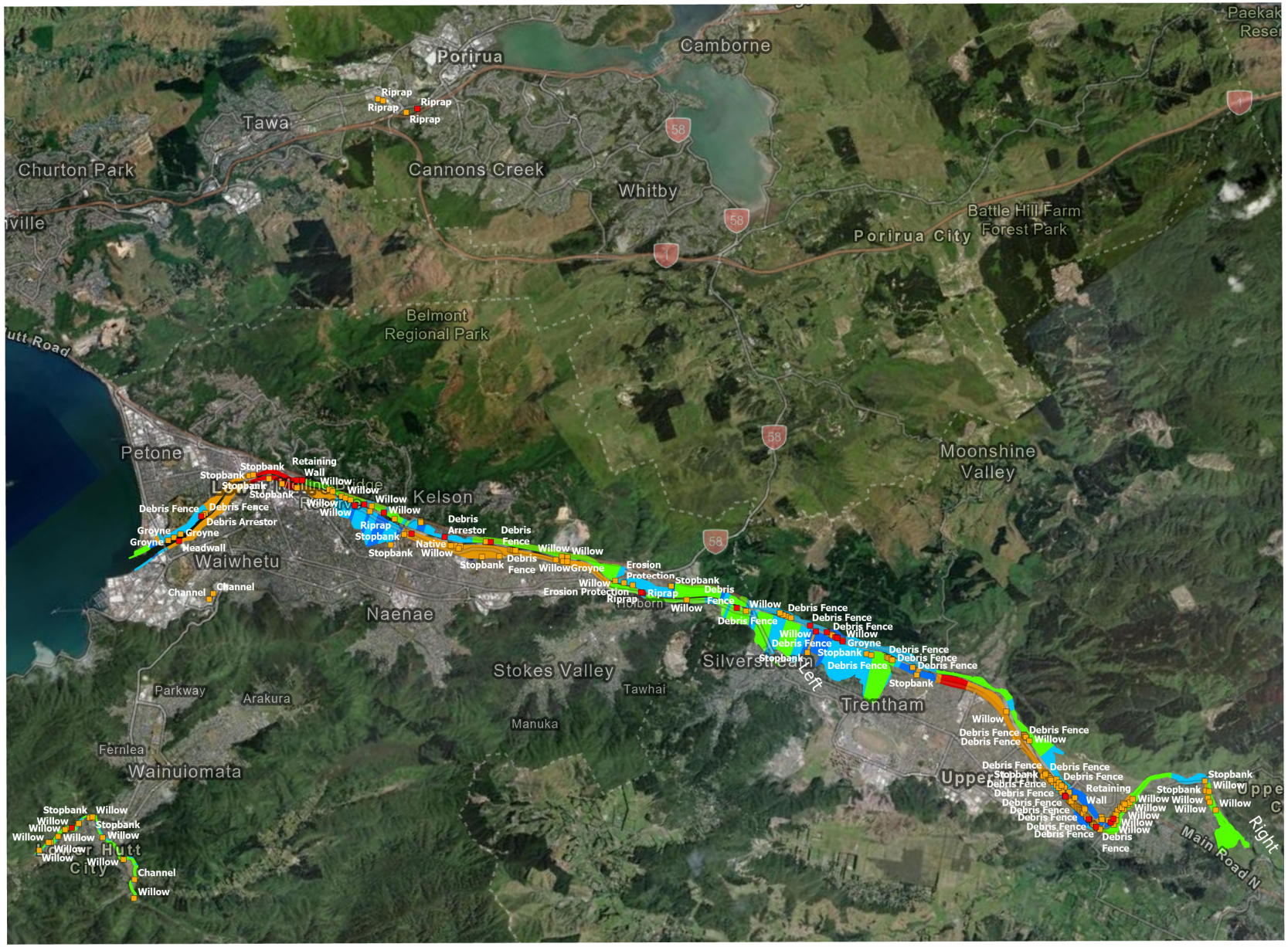

Hutt, Wainuiomata & Porirua APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Poor Asset (170)	
Very Poor Asset (28)	

Risk Classification

Very High (28)
High (134)
Medium (59)
Low (170)
Very Low (249)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	4/07/2025 10:28 am
Scale at A4:	1:113,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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Attachment 3 to Report 25.273

Te Awa Kairangi (Lower) Flood Asset Proposed Work Programme (as of 9th July 2025)

Te Awa Kairangi Lower				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
Shandon Floodgate	SR130+67	Repair floodgate seal and headwall	Low	3
Ava Floodwall	SR0200	Repair to gaps in joints, may have to remove vegetation	High	2
Market Grove Floodwall	SL0300	Repair to floodwall and fencing in wall	High	2
Melling to KGB	SR0570-SR0590	Debris Fence repairs, repair/replace rope to posts	Very Low - Low	3-4
Melling - Silverstream	SR0570-SR1350	Vegetation clearing	Very Low - Medium	Various
KGB location	SL0640-SL0650	Remove trees from stopbank	Medium - High	3
GNS by gate	SL0660-SL0670	Remove trees from stopbank	High	3
KGB to Owen Street beach	SL/R0660-SL/R0780	Rip dry beaches to move gravel or Gravel Extraction (dry only)	Various	2-3
Upstream KGB L/B	SL0680-SL0690	Willow edge bioengineering protection works and pole planting	High	2
Fraser Park area	SL0850-SL0860	Willow Planting & mulch	High	2-3
Taita Rock Entrance	SL0860-SL0870	Repair/replace asphalt access road over stopbank	High	2-3
Manor Park R/B lower golf course	SR1100-SR1150	Willow planting grid pattern spot planting	Low - Medium	2-3
Stokes Valley Stream mouth outlet	SL1150-SL1160	Repair rock structure	Low - Medium	3-4
Various	Various	Remove Debris/obstructions from channel	Low - Medium	Various
Various	Various	Remove vegetation from rock structures	Various	Various

Attachment 3 to Report 25.273

Te Awa Kairangi (Lower) Flood Asset Proposed Work Programme (as of 9th July 2025)

Te Awa Kairangi Lower				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
Various	Various	Repairs to berm drainage issues	Various	Various
Various	Various	Willow maintenance & Willow layering	Various	Various
Various	Various	Berm pest control	Various	Various

Attachment 3 to Report 25.273

Te Awa Kairangi (Upper) Flood Asset Proposed Work Programme (as of 9th July 2025)

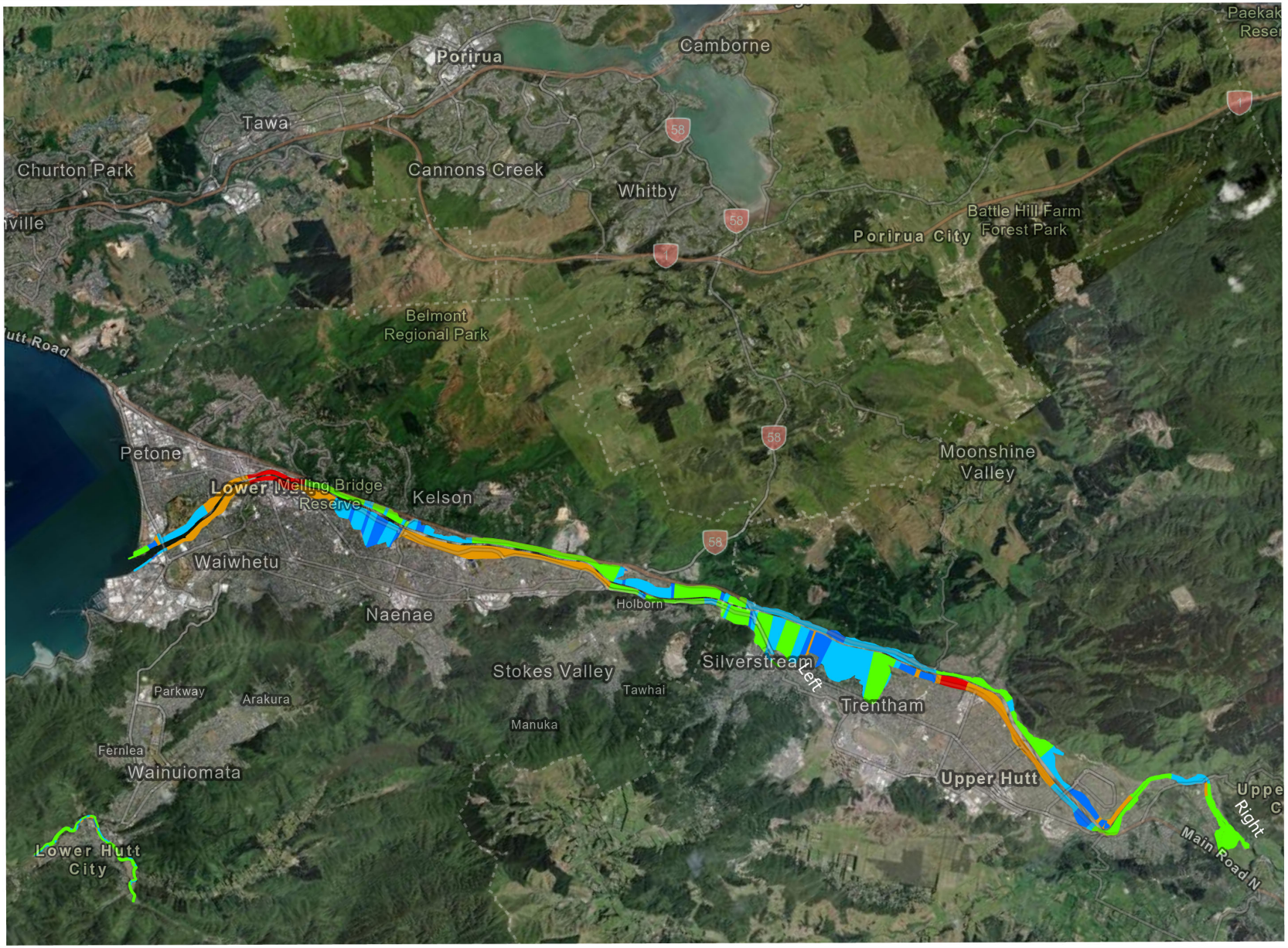
Te Awa Kairangi Upper				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
River Road	SR150-SR1560	Erosion above Bluff rockline, hole and patching	Various	Various
Poets Park	SL820 - SL 1790	Remove rotten trees, lift lower branches stump removal, bamboo	Various	Various
River Road section	SR1570-SR1600	Realign access track to allow willow planting in 25/26	Low - Medium	1, 3 - 4
River Road opp RWGC		Willow planting opposite RWGC, batter bank edge to allow planting		
Poets - Whakatiki	SR1820 - SR1900	Design pads around 3 block/rock displays	Various	Various
Totara Park South	SL2110-SL2140	Realign access track to allow willow planting in 25/26	Low - Medium	2 - 3
Ebdentown to Totara Park		Willow planting, mulch area		
Totara Park to Ebdentown	SL2140 - SL2190	Remove old debris fences while planting willows, no longer required	Low - Medium	2 - 3
Totara Park to Maoribank	SL2150-SL2170	Remove old debris fences north of bridge where rockline is situated only	Low	3
Totara Park to Elbow Bend	SR2180-SR2240	Remove trees from stopbank as per defects	Medium – High	1 - 3
Elbow Bend to Norbert Bridge	SR2240-SR2390	Remove trees from stopbank, trim back trees, ruts in toe	Various	Various
Norbert Street	SL/SR2310-2390	Inspect gabion basket work along river edge	Very Low High	2-3
Gemstone Drive	SL2580	Remove trees from stopbank	Low	2
Gemstone Drive	SL2570-SL2580	Replace crib wall blocks	High	2-3
Various	Various	Repairs to berm drainage issues	Various	Various
Various	Various	Berm Pest Control - rabbit control with biosecurity	Various	Various

Attachment 3 to Report 25.273

Wainuiomata Flood Asset Proposed Work Programme (as of 9th July 2025)

Wainuiomata				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
Leonard Wood Park	SL1085	Remove tree inside stopbank toe	Low	2
LWP and Parenga Street	SL1085 - SL1160	Repair rutting on top of stopbank -further onsite inspection on options	Very Low - Low	2-3
Wood Street	SL1160-L1170	Remove 4 trees in stopbank profile	Very Low - Low	2
	SL1160-SL1185	Outlet Structure maintenance	Various	2 - 3
Burden Ave by funeral home	SL1200-SL1220	Remove 2 trees in stopbank	Medium – High	2 - 3
Poole Cres rockline	SL1360	Rock structure top up 10-20 tonne	Very Low	3

Attachment 4 to Report 25.273



Greater Wellington
Te Pane Matua Taiao

Hutt, Wainuiomata & Porirua APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (28)
- High (134)
- Medium (59)
- Low (170)
- Very Low (249)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:09 am
Scale at A4:	1:113,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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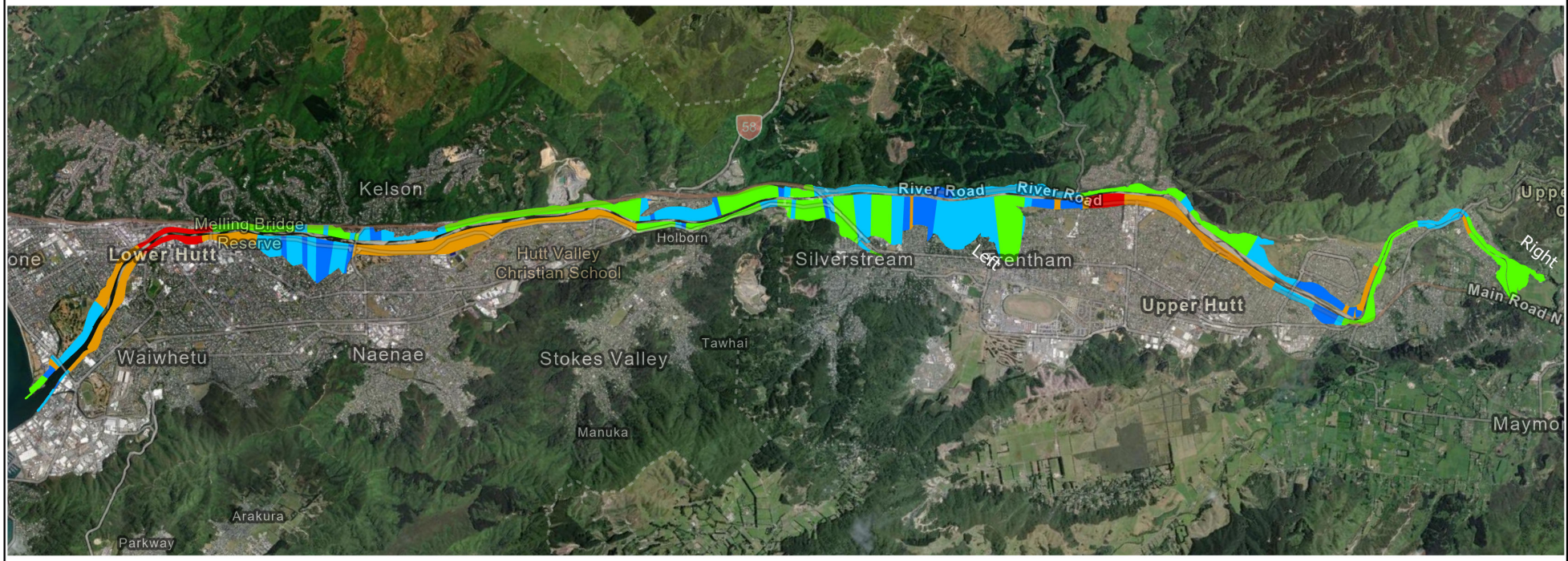

Greater Wellington
Te Pane Matua Taiao

Hutt River Overview APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (28)
- High (130)
- Medium (53)
- Low (146)
- Very Low (183)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:89,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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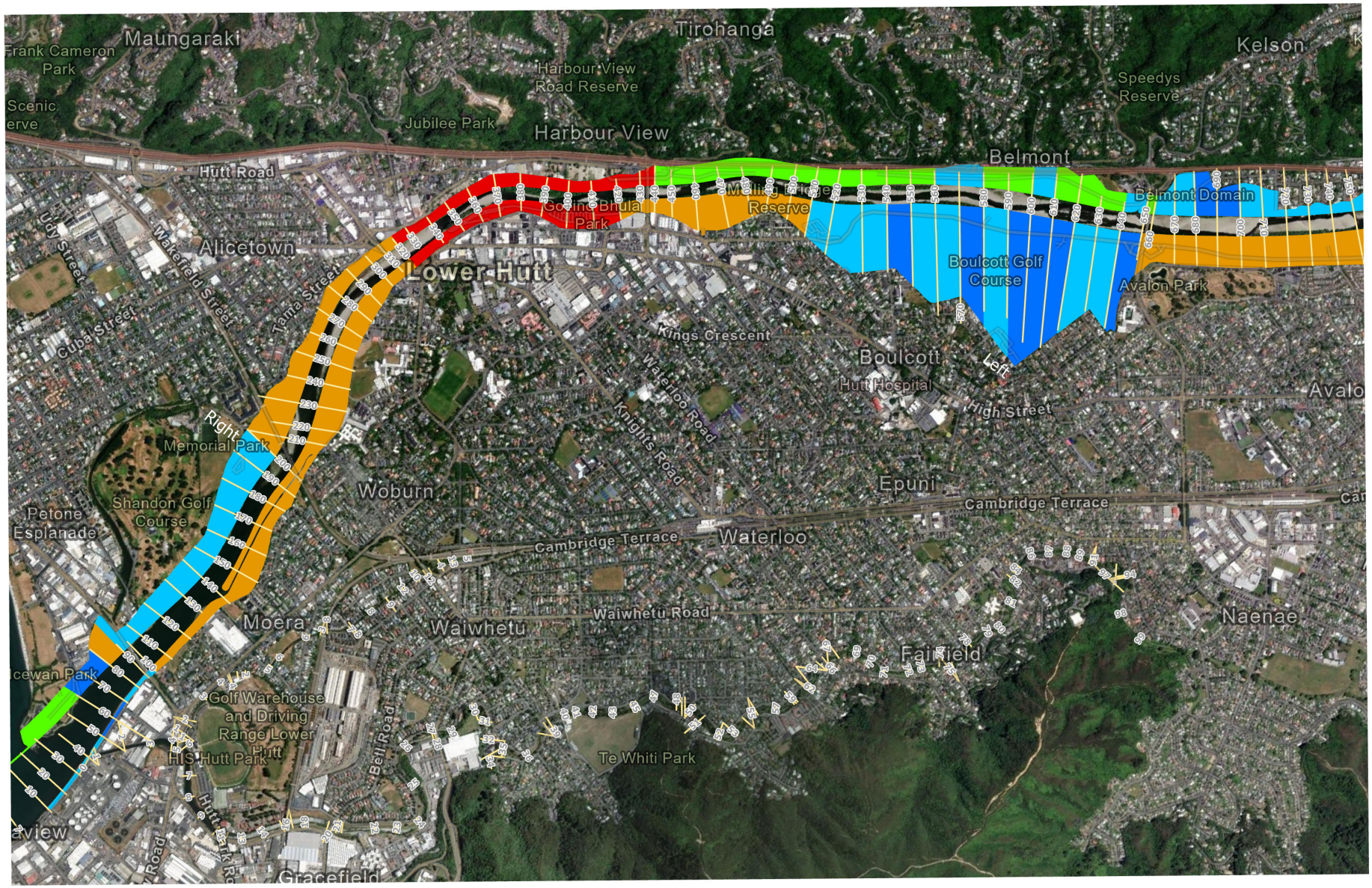

Greater Wellington
Te Pane Matua Taiao

Hutt 1 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (22)
- High (55)
- Medium (12)
- Low (38)
- Very Low (23)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:24,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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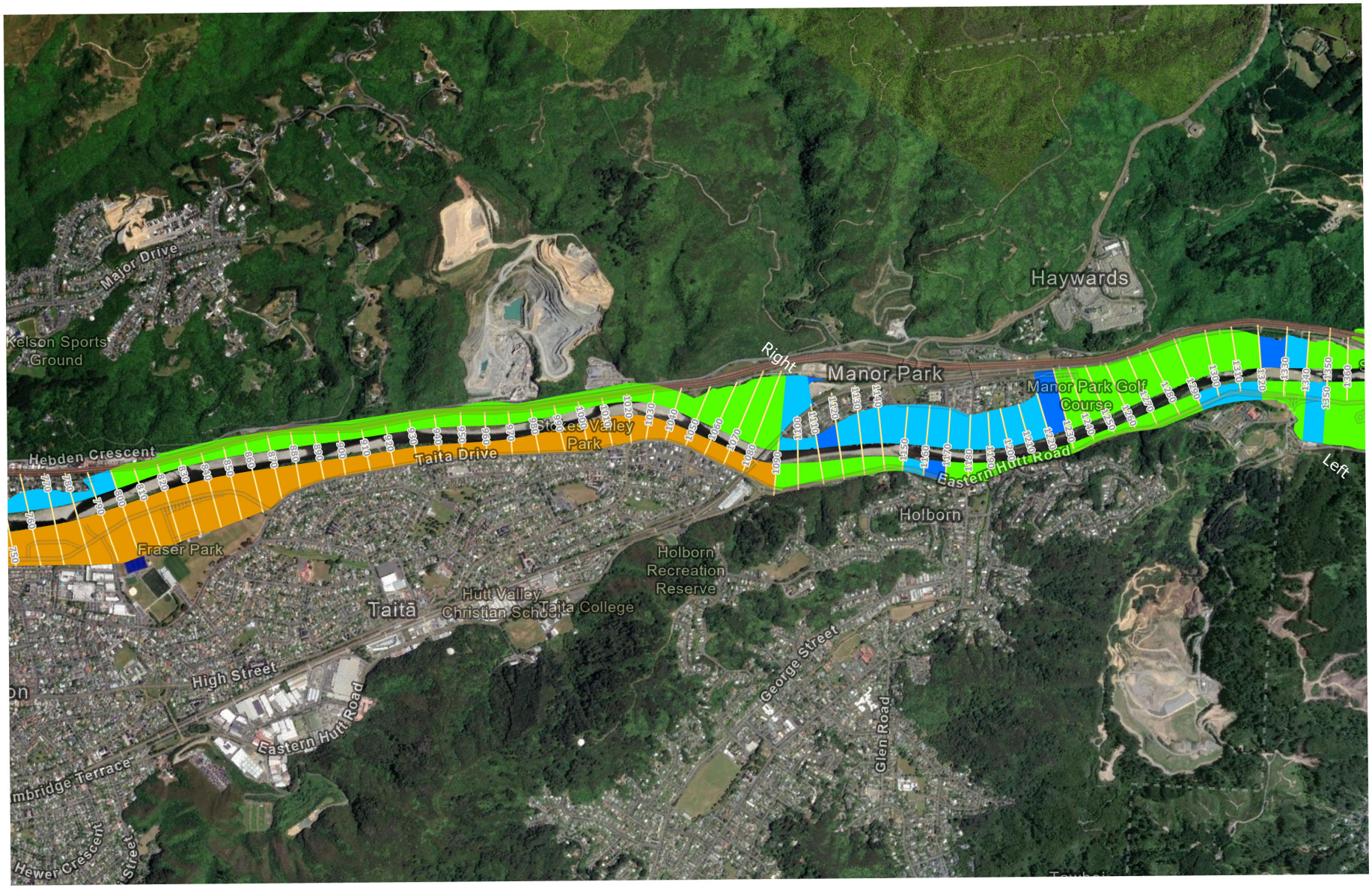

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Te Pane Matua Taiao

Hutt 2 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (0)
- High (35)
- Medium (4)
- Low (23)
- Very Low (63)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:24,000

Porirua District Council, Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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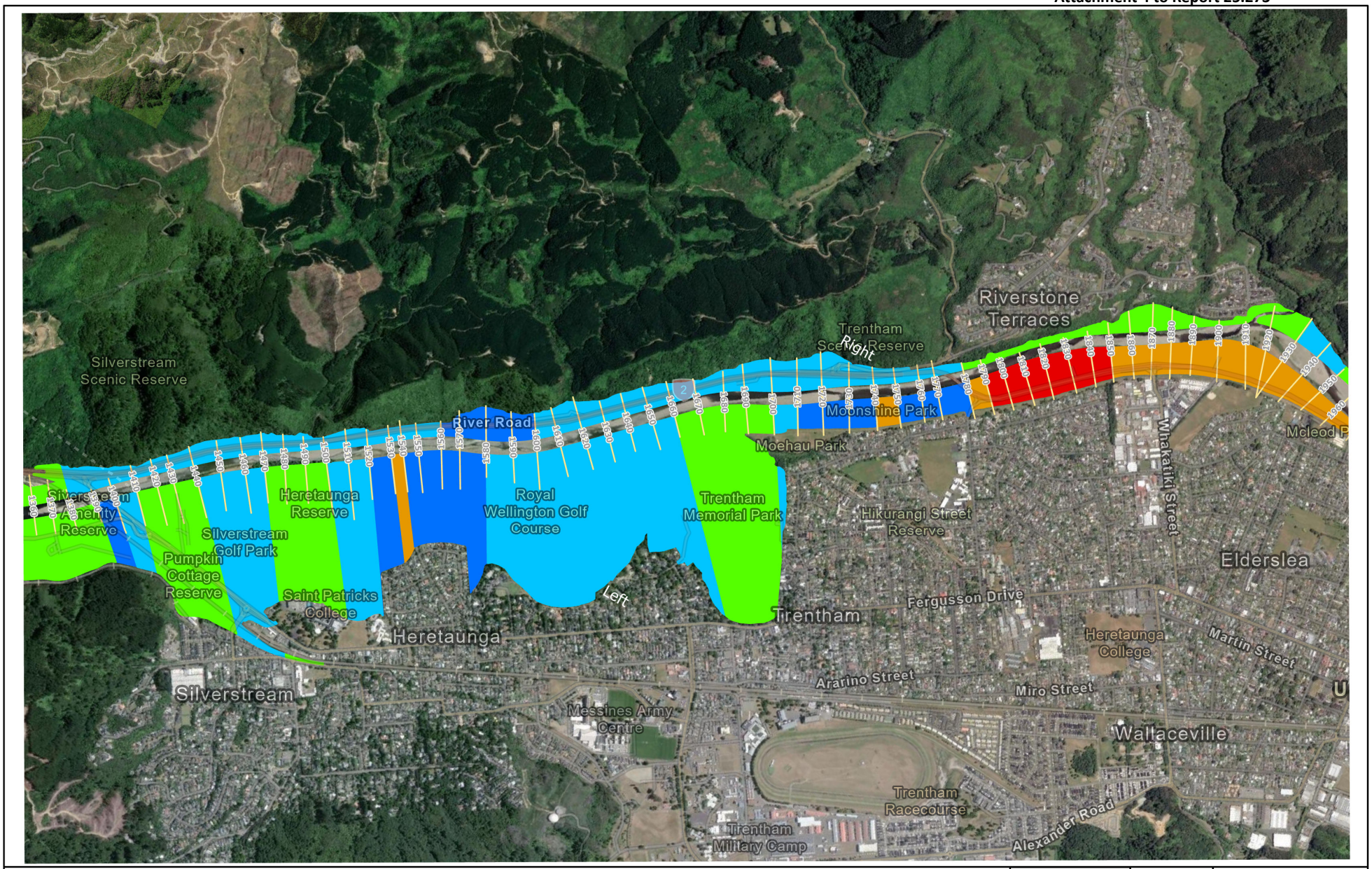

Greater Wellington
Te Pane Matua Taiao

Hutt 3 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (6)
- High (15)
- Medium (16)
- Low (53)
- Very Low (33)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:23,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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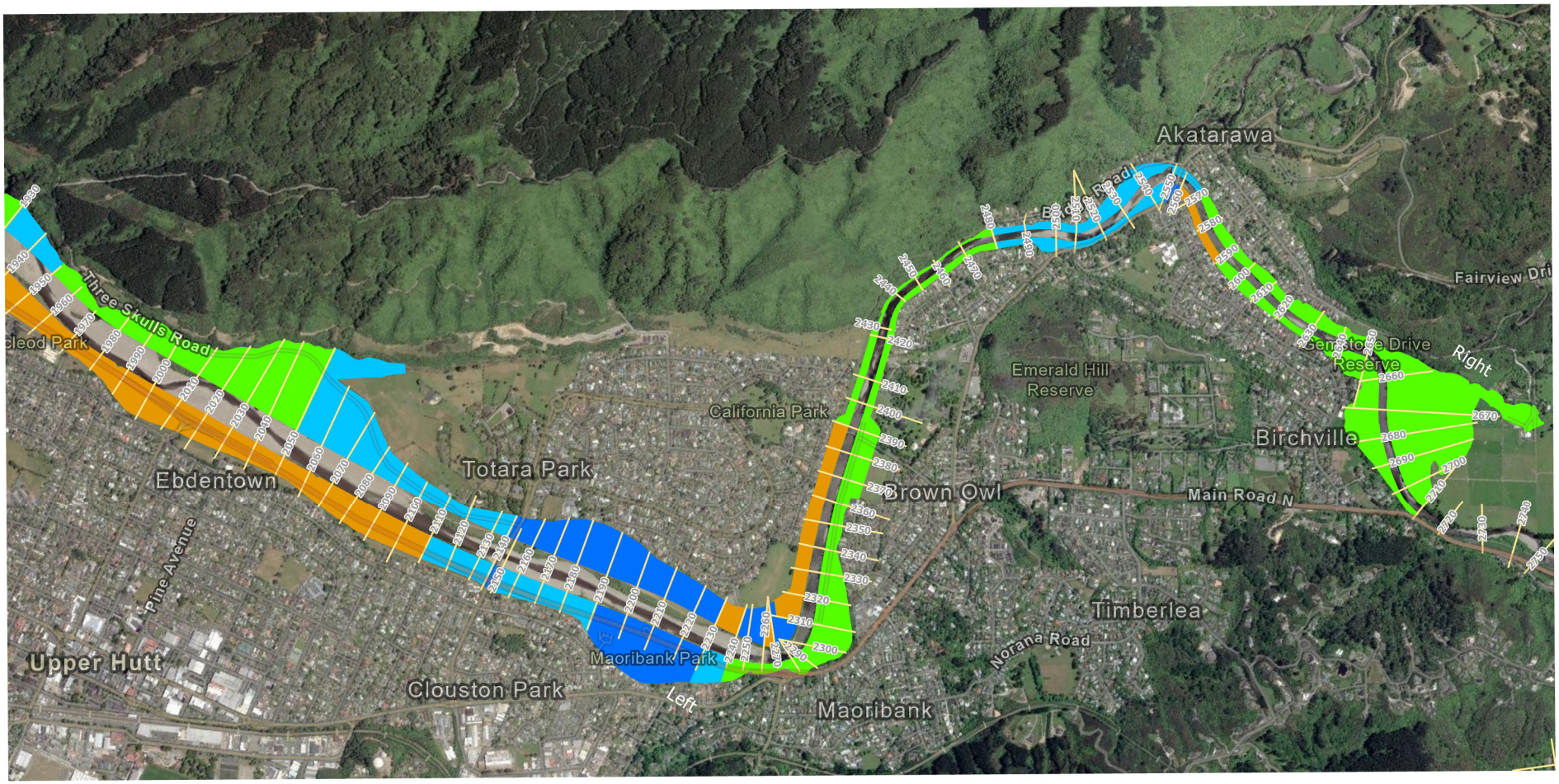

Greater Wellington
Te Pane Matua Taiao

Hutt 4 APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (0)
- High (31)
- Medium (21)
- Low (35)
- Very Low (70)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:22,000

Earthstar Geographics, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS

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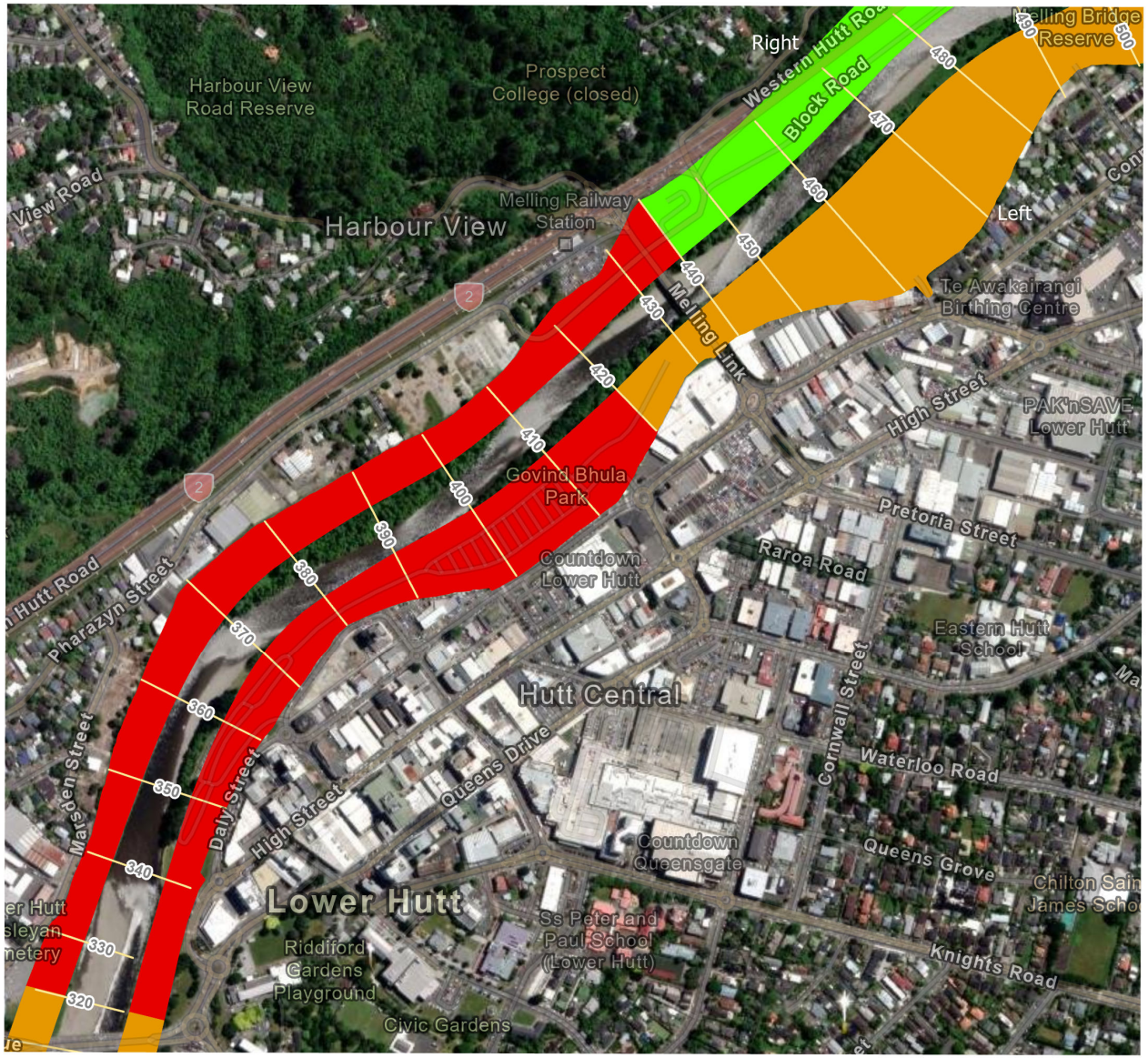

Greater Wellington
Te Pane Matua Taiao

Hutt City Centre APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (22)
- High (12)
- Medium (0)
- Low (0)
- Very Low (5)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:8,000

Esri Community Maps Contributors, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS, Maxar

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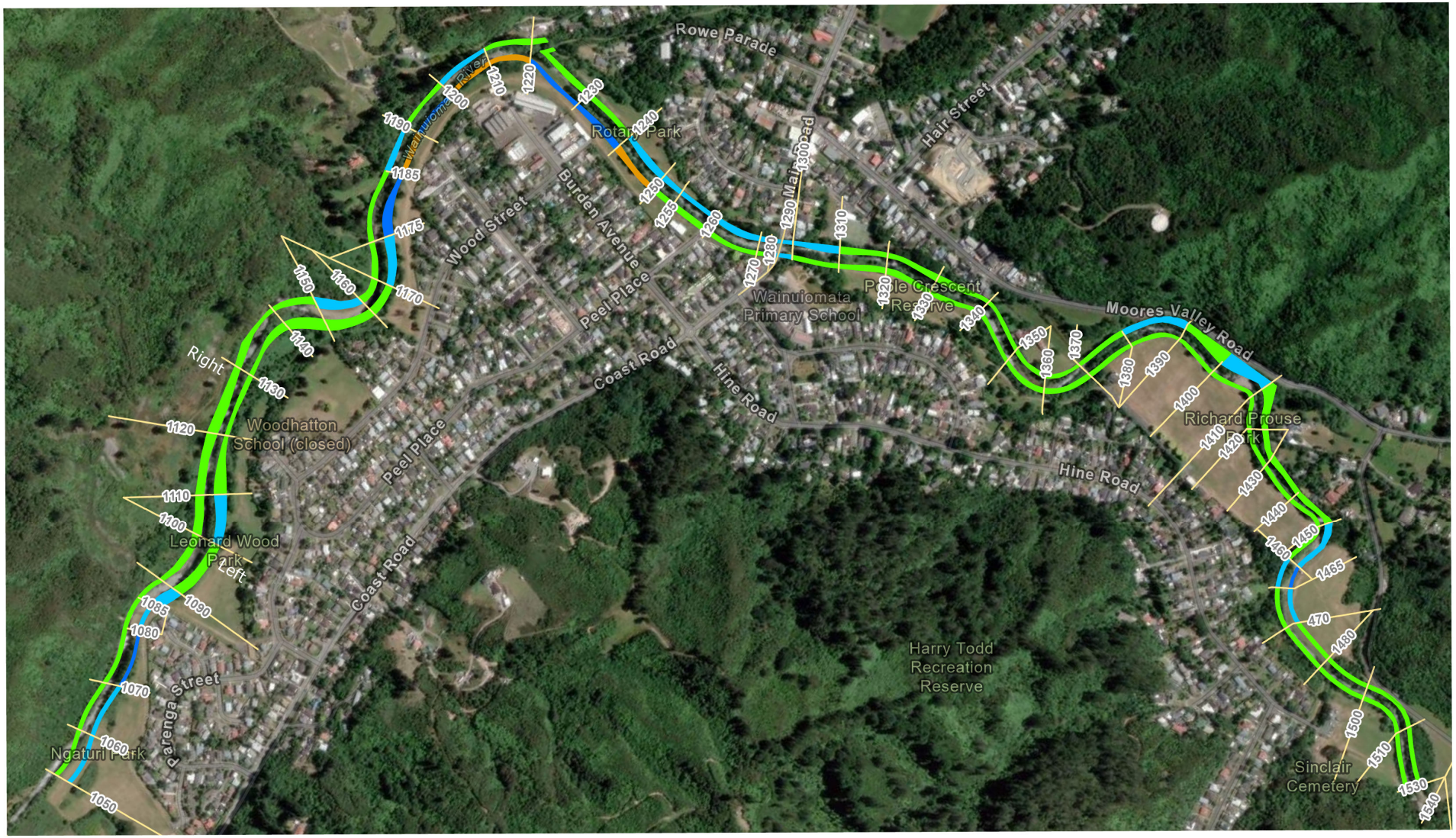

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Te Pane Matua Taiao

Wainuiomata APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (0)
- High (4)
- Medium (6)
- Low (24)
- Very Low (66)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:08 am
Scale at A4:	1:9,000

Esri Community Maps Contributors, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS, Maxar

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Attachment 4 to Report 25.273

Greater Wellington
Te Pane Matua Taiao

Wainuiomata - Rotary Park APT Map

2025 Asset Performance Tool Risk Assessment

Legend

Risk Classification
- Very High (0)
- High (4)
- Medium (4)
- Low (11)
- Very Low (13)

Project Name:	APT_2025_Master
Author:	TurnerL
Date of Issue:	18/06/2025 9:09 am
Scale at A4:	1:3,000

Esri Community Maps Contributors, LINZ, Stats NZ, Esri, TomTom, Garmin, METI/NASA, USGS, Maxar

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Attachment 5 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Pharazyn 320 – 440 Right Bank	Capacity Intrinsic Strength	Stopbank will overtop from 2800 cumec event. Stopbank intrinsic strength is 'average'	5	5	Very High	RiverLink project will retreat, raise and improve stopbank structures by 2027.
City Centre, 320 - 420, Left Bank	Capacity Intrinsic Strength	Stopbank will overtop from 2800 cumec event. Stopbank intrinsic strength is 'average'	5	5		RiverLink project will retreat, raise and improve stopbank structure. Practical completion of Mills Street stopbank stage 1 has been completed. Assets assessments will be undertaken this year, including the Mills Street Stopbank stage 1, this is expected to address the very high risk.
River Road above Moonshine Bridge 1790 - 1840, Left Bank	Capacity Intrinsic Strength	Stopbank will overtop from 2800 cumec event.	5	5		Modelling for Te Awa Kairangi/Hutt River has been completed. A targeted detailed investigation on this stopbank is being undertaken and will consider options for managing the risk.
Hutt River mouth / Estuary, 80 – 90 Right bank	Capacity	No Stopbank in area, Rock revetment will overtop from 1900 cumec event.	5	3	High	Initial investigations have been completed through the RiverLink project and these will be progressed further when the HRFMP is reviewed.
Moera to Strand Park 100 - 300, Left bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues	2-3	5	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Attachment 5 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Alicetown, 200 - 320, Right bank Alicetown/ Pharazyn, 310 -320 Left & Right bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues	2-3	5	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches. Works have been completed through work programming - Trees on stopbanks have been removed
City Centre, 420 - 430 Left bank	Capacity Intrinsic Strength	Stopbank possible overtop from 2800 cumec event. Stopbank intrinsic strength is 'average'	3	5	High	Following the finalisation of the Hutt River flood hazard modelling, a prioritisation review of the structural measures within the Hutt Floodplain Management Plan is being undertaken. The outcomes of this will determine which projects should be prioritised moving forward.
Rutherford / Harcourt Werry Drive 440 - 510, 650 – 660 Left bank	Consequence Intrinsic Strength	Inherent high consequence will result in high risk.	2-3			
Harcourt Werry/ Taita Drive, 660 - 1090 Left bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues.	2-3	5	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Attachment 5 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
River Road above Heretaunga Park / Moonshine Bridge 1530 - 1540	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues.	3	4	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.
River Road above Holdsworth Ave / Moonshine 1740 - 1750 Left bank			3	4		
River Road above Moonshine Bridge/ Whakatiki Street 1780 - 1790, 1850 – 1920 Left bank			2-3	5		
Ebdentown/ River Road 1920- 2110 Left bank			2-3	5		

Attachment 5 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Ngai-tama Park 2230 - 2240, 2260 - 2270, 2310 - 2390 Right Bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues.	3	4	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.
Gemstone Drive 2560 - 2590 Left bank	Capacity Condition	Stopbank will overtop from 2800 cumec event. Some XS have condition issues.	5	3	High	Following the finalisation of the Hutt River flood hazard modelling, a prioritisation review of the structural measures within the Hutt Floodplain Management Plan is being undertaken. The outcomes of this will determine which projects should be prioritised moving forward. Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Attachment 5 to Report 25.273

Wainuiomata Flood Asset High & Very High Risks and Their Remediation 2025

WAINUIOMATA						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Rotary Park, 1185 - 1190, 1200 - 1220, 1240 - 1250 Left Bank	Capacity	Possible overtopping at x2 locations in 1% AEP event.	3	4	High	An update to the flood hazard model is programmed to commence in the 2025/26 financial year. Following completion of the updated model, investigations will be undertaken to better understand the extent of the risk and identify suitable solutions. These investigations will inform the development of options to manage or mitigate the overtopping risk.
Rotary Park, 1210 -1220, 1240 – 1250 Left Bank	Condition	Some XS have condition issues.				Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Attachment 6 to Report 25.273

Te Awa Kairangi / Hutt Valley Subcommittee Annual Asset Management Condition Report

5th August 2025

Greater Wellington
Te Pane Matua Taiao

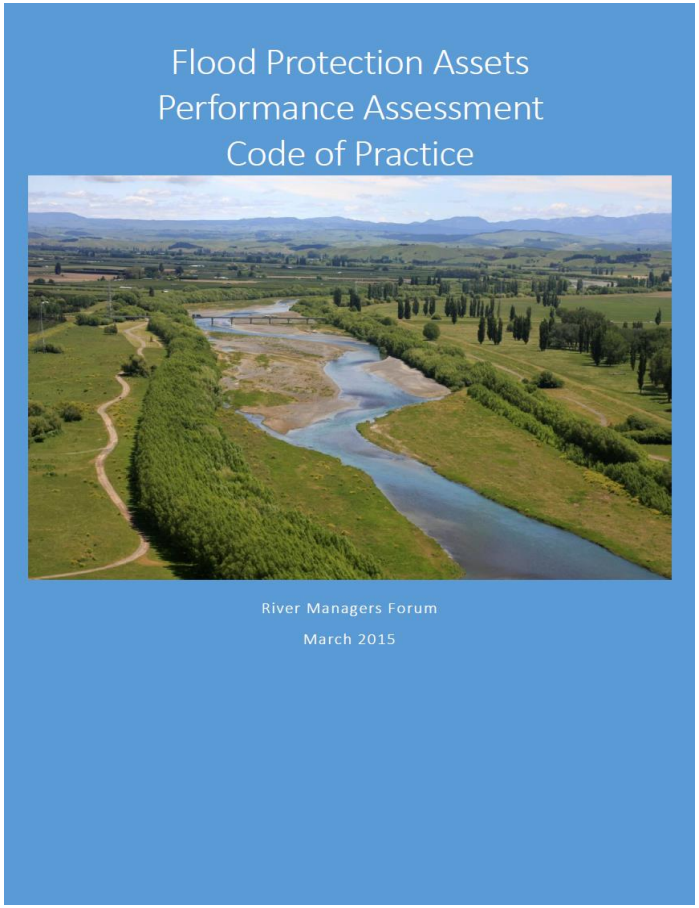
Attachment 6 to Report 25.273

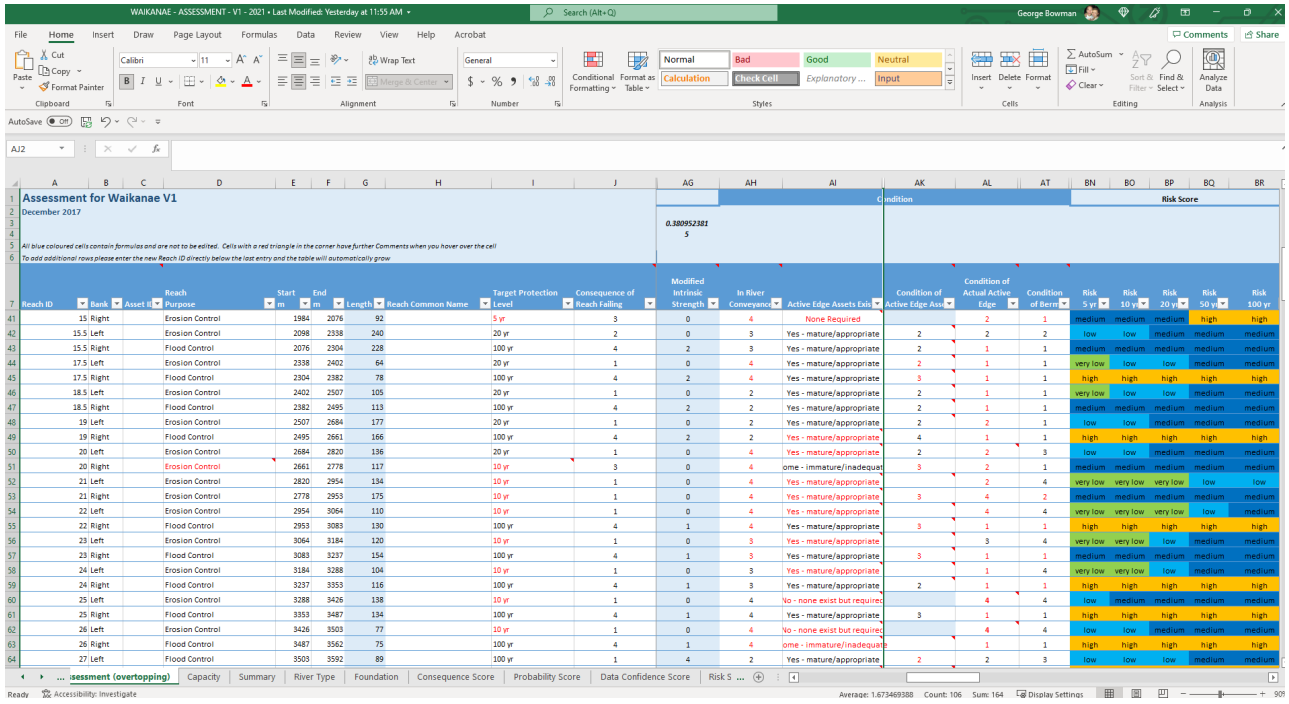
Part 1: How do we assess asset condition and river system risk?

Greater Wellington
Te Pane Matua Taiao

Attachment 6 to Report 25.273

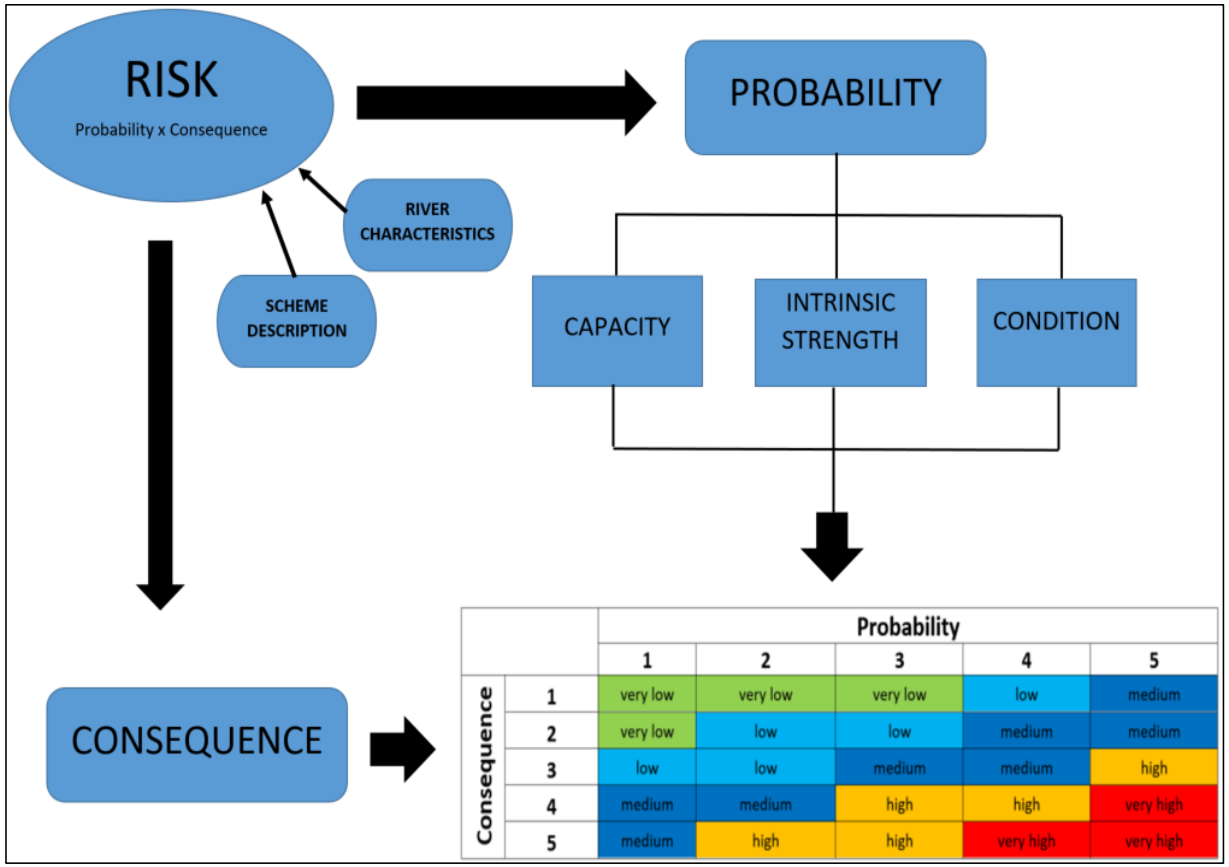
What is the Asset Performance Framework?





Attachment 6 to Report 25.273

How do we assess the risk?



Consequence	Probability 1	2	3	4	5
1	very low	very low	very low	low	medium
2	very low	low	low	medium	medium
3	low	low	medium	medium	high
4	medium	medium	high	high	very high
5	medium	high	high	very high	very high

Example: Hutt River Scheme Risk Assessment

CONSEQUENCE

Modelling
Flood Hazard Maps

Consequence	1	2	3	4	5
1	very low	very low	low	medium	medium
2	very low	low	low	medium	medium
3	very low	low	medium	high	high
4	low	medium	medium	high	very high
5	medium	high	high	very high	very high

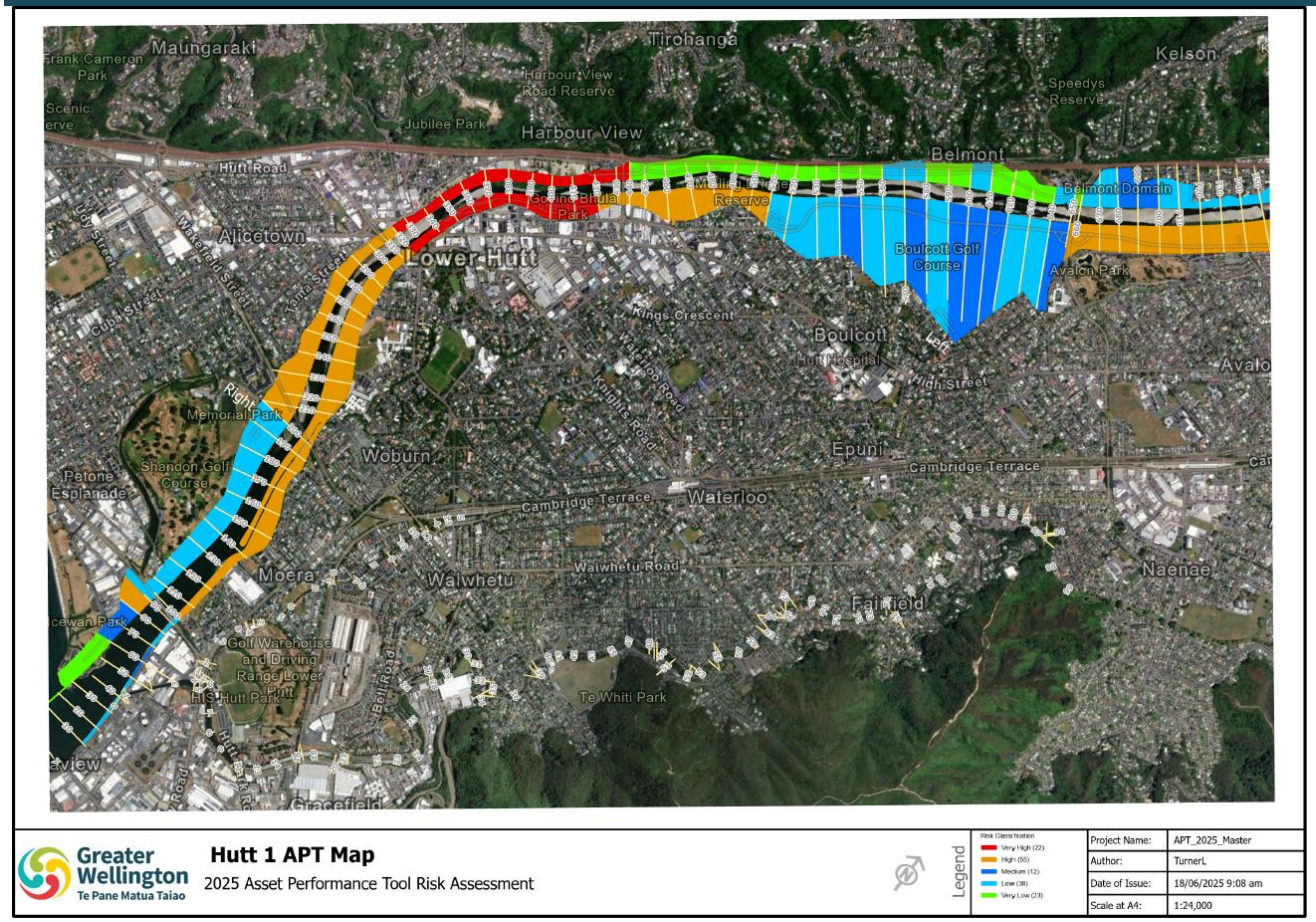
Modelling
Surveying

Geotech
As-builts

Inspections

Performance
Information

Risk Assessment: Why do we do it?



BENEFITS

- Risk communication
- Work program prioritisation
- Identifies potential failure modes
- Identifies critical assets
- Identifies missing information

Attachment 6 to Report 25.273

Part 2: 2025 Annual Asset Management Conditio Report

Greater Wellington
Te Pane Matua Taiao

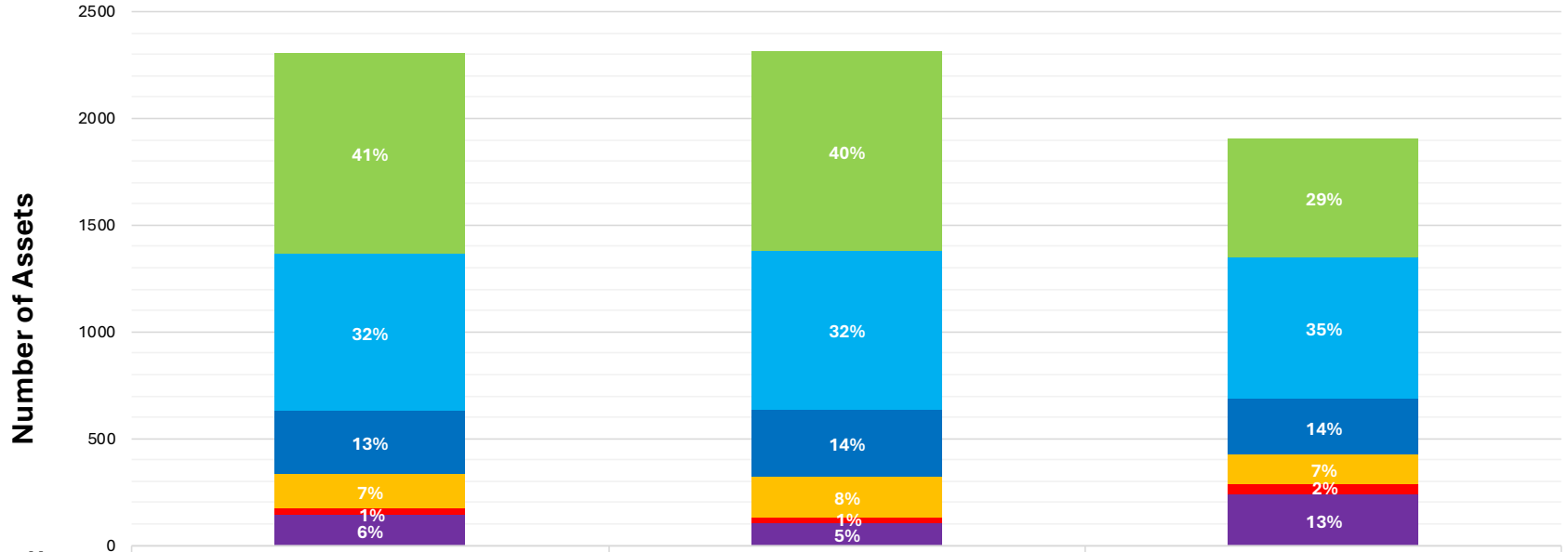
Attachment 6 to Report 25.273

Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes Condition Trend

Year	2025		2024		2023	
Condition Scores	Ratio	Count	Ratio	Count	Ratio	Count
1 - Very Good	85%	943	86%	927	78%	551
2 - Good		734		746		669
3 - Moderate		294		313		261
4 – Poor	8%	167	9%	190	10%	132
5 - Very Poor		27		28		52
TBD	6%	143	5%	105	13%	240
Totals	100%	2308	100%	2309	100%	1905

Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes
Summary of Condition by year

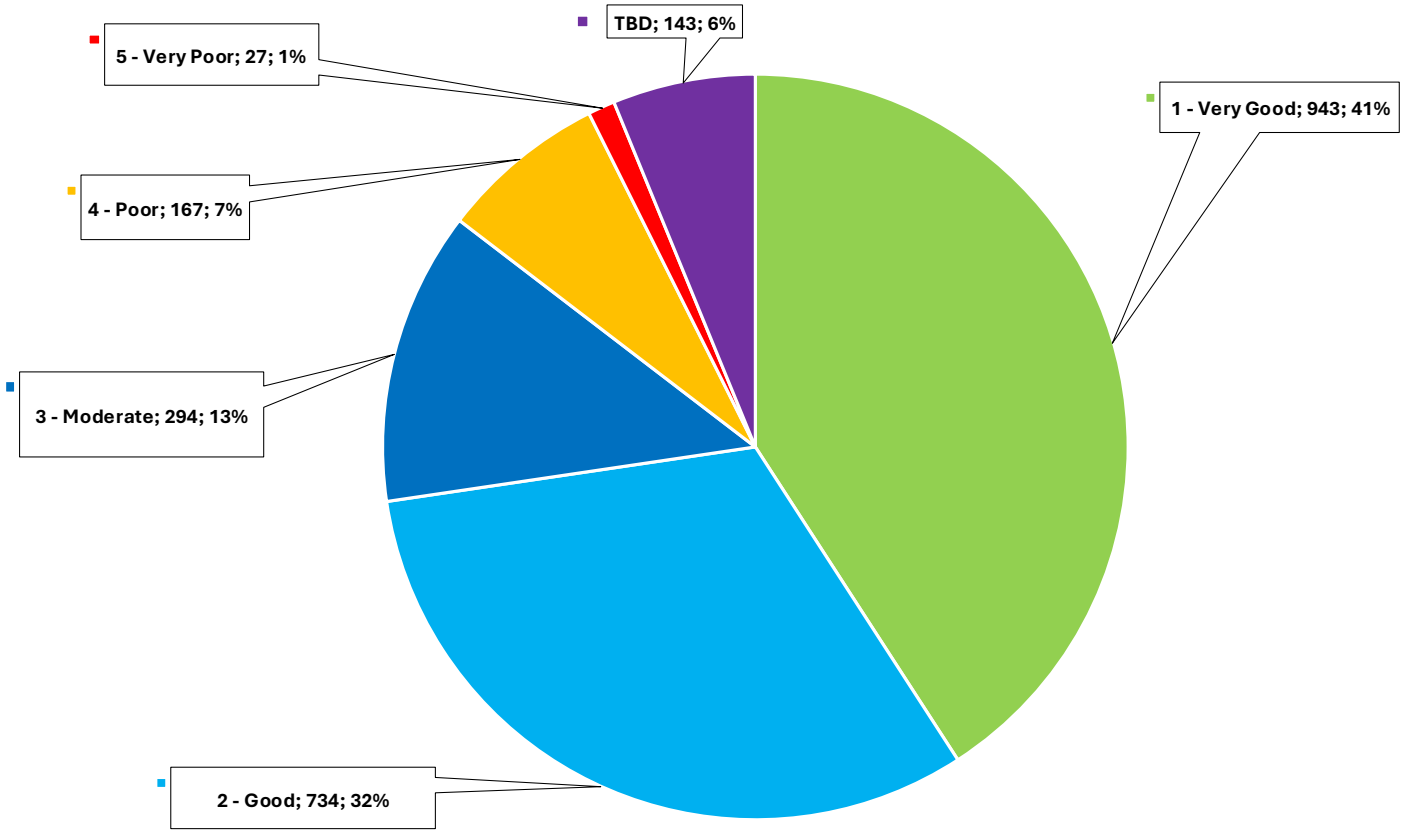
Attachment 6 to Report 25.273



Year	2025	2024	2023
1 - Very Good	943	927	551
2 - Good	734	746	669
3 - Moderate	294	313	261
4 - Poor	167	190	132
5 - Very Poor	27	28	52
TBD	143	105	240
Totals	**2308**	**2309**	**1905**

Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes 2025 Condition Summary

Attachment 6 to Report 25.273



Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes
2025 Condition by Asset Type

Attachment 6 to Report 25.273

Asset Type	1 - Very Good	2 - Good	3 - Moderate	4 - Poor	5 - Very Poor	TBD	Total
Blockline	0	7	3	2	0	2	14
Bridge	1	1	0	0	0	0	2
Carpark	7	2	0	0	0	0	9
Channel	271	116	22	3	0	2	414
Constructed wetland	0	2	0	0	0	0	2
Culvert	1	15	4	0	0	0	20
Cycle path/access track	209	113	19	0	0	0	341
Debris arrestor	1	0	0	1	1	0	3
Debris fence	3	22	24	68	8	67	192
Demolition line	0	6	0	0	0	0	6
Drain/modified channel	28	24	20	1	0	0	73
Fence	13	4	0	0	0	0	17
Floodgate	4	15	4	0	0	0	23
Floodwall	5	22	1	0	0	0	28
Gate	45	16	1	1	2	3	68
Groyne	30	51	35	5	1	11	133
Headwall/Wingwall	0	16	2	0	0	0	18
Native planting	39	54	20	1	2	0	116
Retaining wall	0	2	4	2	1	18	27
Riprap	50	57	30	3	4	36	180
Rock Mattress	2	2	1	0	0	2	7
Seat	10	1	0	0	0	1	12
Sign	15	5	0	0	0	0	20
Stopbank	138	89	13	30	0	0	270
Three Water Asset	1	0	0	0	0	1	2
Weir	1	3	0	0	0	0	4
Willow	69	89	91	50	8	0	307
Grand Total	943	734	294	167	27	143	2308

Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes
Poor Condition by Asset Type

Attachment 6 to Report 25.273

Asset Type	4 - Poor	5 - Very Poor	Total
Blockline	2	0	2
Channel	3	0	3
Debris arrestor	1	1	2
Debris fence	68	8	76
Drain/modified channel	1	0	1
Floodwall	0	0	0
Gate	1	2	3
Groyne	5	1	6
Native planting	1	2	3
Retaining wall	2	1	3
Riprap	3	4	7
Stopbank	30	0	30
Willow	50	8	58
Grand Total	**167**	**27**	**194**

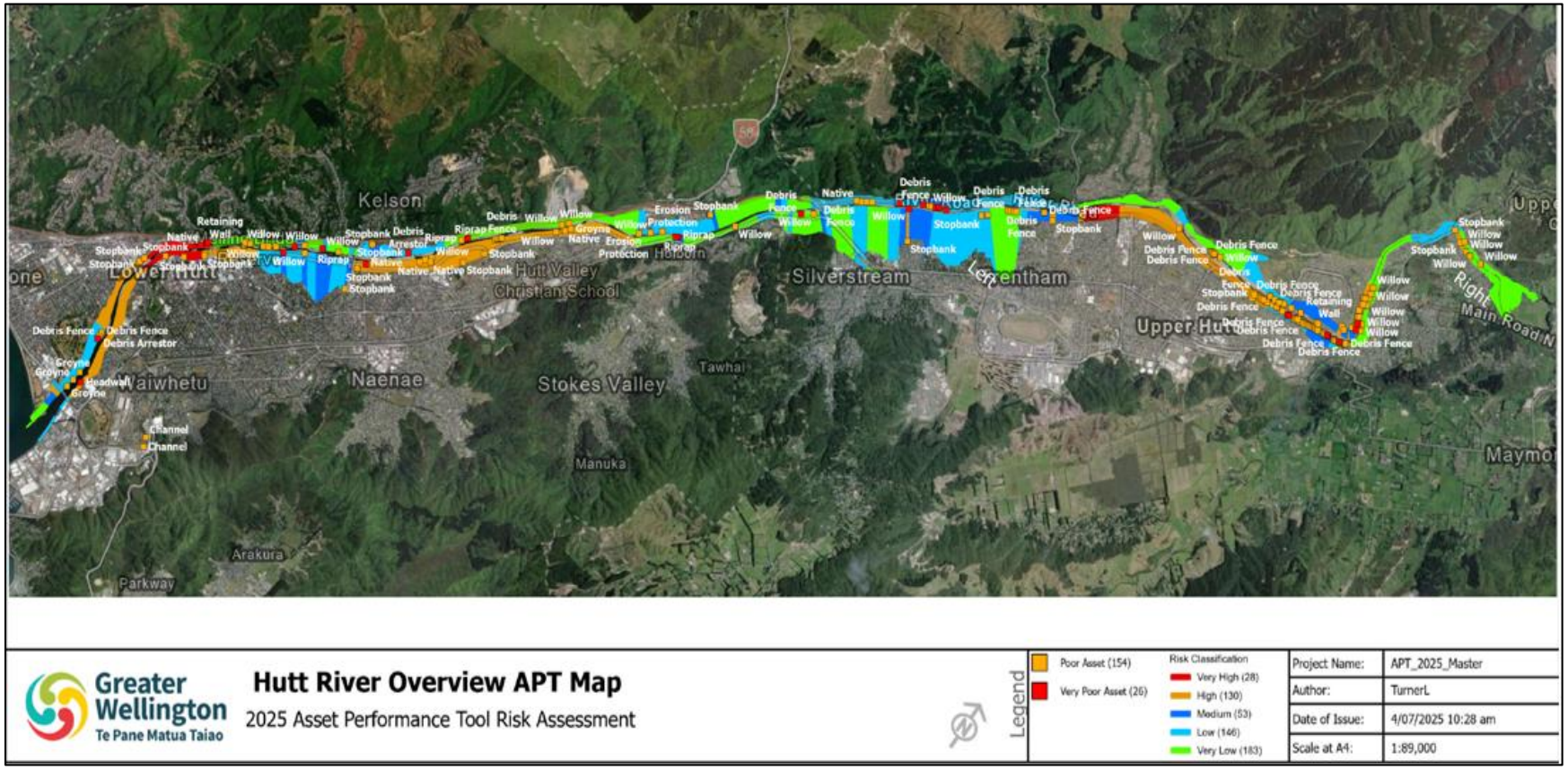
Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes Condition by Critical Asset Type

Attachment 6 to Report 25.273

Asset Type	Total Number	4 - Poor	5 - Very Poor	Issue(s) reported
Culvert	20	0	0	Blocked, moved, misaligned
Floodgate	23	0	0	Chipping on structure
Floodwall	28	0	0	Corroding, rust evident
Groyne	133	5	1	Loss off material, rocks missing
Headwall/ Wingwall	18	0	0	Graffiti, Cracked, Corroding
Retaining wall	27	2	1	Moved, Misaligned, Cracked
Riprap	180	3	4	Excessive grass or weed, Rocks missing, Loose
Stopbank	270	30	0	Invasive weeds, Trees, Scouring, Erosion, Slumping
Total	**699**	**40**	**6**	

Te Awa Kairangi
Poor condition Asset Vs Risk

Attachment 6 to Report 25.273



Te Awa Kairangi Operational Works Plan 2025/26

Attachment 6 to Report 25.273

Te Awa Kairangi (Lower) Flood Asset Proposed Work Programme (as of 9th July 2025)

Te Awa Kairangi Lower				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
Shandon Floodgate	SR130+67	Repair floodgate seal and headwall	Low	3
Ava Floodwall	SR0200	Repair to gaps in joints, may have to remove vegetation	High	2
Market Grove Floodwall	SL0300	Repair to floodwall and fencing in wall	High	2
Melling to KGB	SR0570-SR0590	Debris Fence repairs, repair/replace rope to posts	Very Low - Low	3-4
Melling - Silverstream	SR0570-SR1350	Vegetation clearing	Very Low - Medium	Various
KGB location	SL0640-SL0650	Remove trees from stopbank	Medium - High	3
GNS by gate	SL0660-SL0670	Remove trees from stopbank	High	3
KGB to Owen Street beach	SL/R0660-SL/R0780	Rip dry beaches to move gravel or Gravel Extraction (dry only)	Various	2-3
Upstream KGB L/B	SL0680-SL0690	Willow edge bioengineering protection works and pole planting	High	2
Fraser Park area	SL0850-SL0860	Willow Planting & mulch	High	2-3
Taita Rock Entrance	SL0860-SL0870	Repair/replace asphalt access road over stopbank	High	2-3
Manor Park R/B lower golf course	SR1100-SR1150	Willow planting grid pattern spot planting	Low - Medium	2-3
Stokes Valley Stream mouth outlet	SL1150-SL1160	Repair rock structure	Low - Medium	3-4
Various	Various	Remove Debris/obstructions from channel	Low - Medium	Various
Various Various	Various Various	Remove vegetation from rock structures Repairs to berm drainage issues	Various Various	Various Various
Various	Various	Willow maintenance & Willow layering	Various	Various
Various	Various	Berm pest control	Various	Various

Te Awa Kairangi Operational Works Plan 2025/26

Attachment 6 to Report 25.273

Te Awa Kairangi (Upper) Flood Asset Proposed Work Programme (as of 9th July 2025)

Te Awa Kairangi Upper				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
River Road	SR150-SR1560	Erosion above Bluff rockline, hole and patching	Various	Various
Poets Park	SL820 - SL 1790	Remove rotten trees, lift lower branches stump removal, bamboo	Various	Various
River Road section	SR1570-SR1600	Realign access track to allow willow planting in 25/26	Low - Medium	1, 3 - 4
River Road opp RWGC		Willow planting opposite RWGC, batter bank edge to allow planting		
Poets - Whakatiki	SR1820 - SR1900	Design pads around 3 block/rock displays	Various	Various
Totara Park South	SL2110-SL2140	Realign access track to allow willow planting in 25/26	Low - Medium	2 - 3
Ebdentown to Totara Park		Willow planting, mulch area		
Totara Park to Ebdentown	SL2140 - SL2190	Remove old debris fences while planting willows, no longer required	Low - Medium	2 - 3
Totara Park to Maoribank	SL2150-SL2170	Remove old debris fences north of bridge where rockline is situated only	Low	3
Totara Park to Elbow Bend	SR2180-SR2240	Remove trees from stopbank as per defects	Medium – High	1 - 3
Elbow Bend to Norbert Bridge	SR2240-SR2390	Remove trees from stopbank, trim back trees, ruts in toe	Various	Various
Norbert Street	SL/SR2310-2390	Inspect gabion basket work along river edge	Very Low High	2-3
Gemstone Drive	SL2580	Remove trees from stopbank	Low	2
Gemstone Drive	SL2570-SL2580	Replace crib wall blocks	High	2-3
Various	Various	Repairs to berm drainage issues	Various	Various
Various	Various	Berm Pest Control - rabbit control with biosecurity	Various	Various

Te Awa Kairangi Risk Mitigation

Attachment 6 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Pharazyn 320 – 440 Right Bank	Capacity Intrinsic Strength	Stopbank will overtop from 2800 cumec event. Stopbank intrinsic strength is 'average'	5	5	Very High	RiverLink project will retreat, raise and improve stopbank structures by 2027.
City Centre, 320 - 420, Left Bank	Capacity Intrinsic Strength	Stopbank will overtop from 2800 cumec event. Stopbank intrinsic strength is 'average'	5	5		RiverLink project will retreat, raise and improve stopbank structure. Practical completion of Mills Street stopbank stage 1 has been completed. Assets assessments will be undertaken this year, including the Mills Street Stopbank stage 1, this is expected to address the very high risk.
River Road above Moonshine Bridge 1790 - 1840, Left Bank	Capacity Intrinsic Strength	Stopbank will overtop from 2800 cumec event.	5	5		Modelling for Te Awa Kairangi/Hutt River has been completed. A targeted detailed investigation on this stopbank is being undertaken and will consider options for managing the risk.
Hutt River mouth / Estuary, 80 – 90 Right bank	Capacity	No Stopbank in area, Rock revetment will overtop from 1900 cumec event.	5	3	High	Initial investigations have been completed through the RiverLink project and these will be progressed further when the HRFMP is reviewed.
Moera to Strand Park 100 - 300, Left bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues	2-3	5	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Te Awa Kairangi Risk Mitigation

Attachment 6 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Alicetown, 200 - 320, Right bank Alicetown/ Pharazyn, 310 -320 Left & Right bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues	2-3	5	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches. Works have been completed through work programming - Trees on stopbanks have been removed
City Centre, 420 - 430 Left bank	Capacity Intrinsic Strength	Stopbank possible overtop from 2800 cumec event. Stopbank intrinsic strength is 'average'	3	5	High	Following the finalisation of the Hutt River flood hazard modelling, a prioritisation review of the structural measures within the Hutt Floodplain Management Plan is being undertaken. The outcomes of this will determine which projects should be prioritised moving forward.
Rutherford / Harcourt Werry Drive 440 - 510, 650 – 660 Left bank	Consequence Intrinsic Strength	Inherent high consequence will result in high risk.	2-3			
Harcourt Werry/ Taita Drive, 660 - 1090 Left bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues.	2-3	5	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Te Awa Kairangi Risk Mitigation

Attachment 6 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
River Road above Heretaunga Park / Moonshine Bridge 1530 - 1540	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues.	3	4	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.
River Road above Holdsworth Ave / Moonshine 1740 - 1750 Left bank			3	4		
River Road above Moonshine Bridge/ Whakatiki Street 1780 - 1790, 1850 – 1920 Left bank			2-3	5		
Ebdentown/ River Road 1920- 2110 Left bank			2-3	5		

Te Awa Kairangi Risk Mitigation

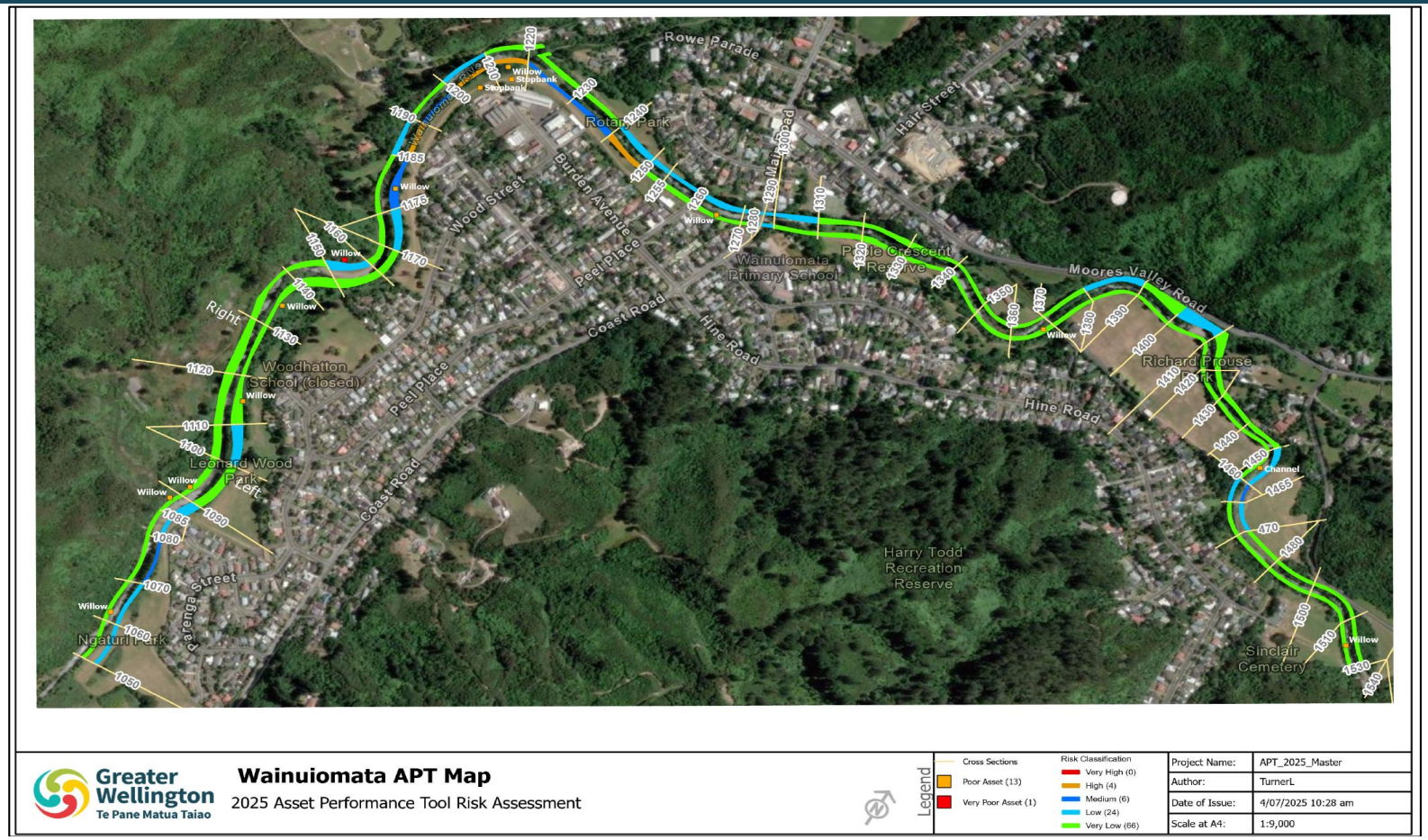
Attachment 6 to Report 25.273

Te Awa Kairangi Flood Asset High & Very High Risks and Their Remediation 2025

TE AWA KAIRANGI						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Ngai-tama Park 2230 - 2240, 2260 - 2270, 2310 - 2390 Right Bank	Consequence Condition	Inherent high consequence will result in high risk. Some XS have condition issues.	3	4	High	Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.
Gemstone Drive 2560 - 2590 Left bank	Capacity Condition	Stopbank will overtop from 2800 cumec event. Some XS have condition issues.	5	3	High	Following the finalisation of the Hutt River flood hazard modelling, a prioritisation review of the structural measures within the Hutt Floodplain Management Plan is being undertaken. The outcomes of this will determine which projects should be prioritised moving forward. Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Wainuiomata
Poor condition Asset Vs Risk

Attachment 6 to Report 25.273



Wainuiomata
Operational Works Plan 2025/26

Attachment 6 to Report 25.273

Wainuiomata Flood Asset Proposed Work Programme (as of 9th July 2025)

Wainuiomata				
Location	**Cross Section**	**Work Planned**	**Segment Risk**	**Condition of Asset**
Leonard Wood Park	SL1085	Remove tree inside stopbank toe	Low	2
LWP and Parenga Street	SL1085 - SL1160	Repair rutting on top of stopbank -further onsite inspection on options	Very Low - Low	2-3
Wood Street	SL1160-L1170	Remove 4 trees in stopbank profile	Very Low - Low	2
	SL1160-SL1185	Outlet Structure maintenance	Various	2 - 3
Burden Ave by funeral home	SL1200-SL1220	Remove 2 trees in stopbank	Medium – High	2 - 3
Poole Cres rockline	SL1360	Rock structure top up 10-20 tonne	Very Low	3

Wainuiomata Risk Mitigation

Attachment 6 to Report 25.273

Wainuiomata Flood Asset High & Very High Risks and Their Remediation 2025

WAINUIOMATA						
Location, XS, Bank	**Failure Mode(s)**	**Description**	**Probability of Failure**	**Consequence of Failure**	**Risk**	**Remediation 2025**
Rotary Park, 1185 - 1190, 1200 - 1220, 1240 - 1250 Left Bank	Capacity	Possible overtopping at x2 locations in 1% AEP event.	3	4	High	An update to the flood hazard model is programmed to commence in the 2025/26 financial year. Following completion of the updated model, investigations will be undertaken to better understand the extent of the risk and identify suitable solutions. These investigations will inform the development of options to manage or mitigate the overtopping risk.
Rotary Park, 1210 -1220, 1240 – 1250 Left Bank	Condition	Some XS have condition issues.				Operational work programs will prioritise the maintenance of critical assets in poor condition located within high-risk reaches.

Attachment 6 to Report 25.273

Te Awa Kairangi, Waiwhetū and Wainuiomata Schemes
New assets built/captured Since 2024

Asset Type	1 – Very Good	2 – Good	3 – Moderate	4 – Poor	Total
Groyne	0	0	1	0	1
Riprap	0	2	0	0	2
Stopbank	0	0	1	0	1
Weir	0	1	0	0	1
Willow	2	0	0	1	3
Total	**2**	**3**	**1**	1	**8**

Recommendation

- That Subcommittee:

1. 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).

2. Notes that identified issues are being addressed through maintenance and improvement work programmes.

3. Notes that the 2024–34 Long Term Plan provides an increased level of funding for capital works and operational resources to support flood protection outcomes over the next 10 years.

Thank you.

Greater Wellington
Te Pane Matua Taiao

Te Awa Kairangi / Hutt River Valley Subcommittee
5 August 2025
Report 25.371

For Information

MOONSHINE STOPBANK OPTIONS ASSESSMENT – PROGRESS UPDATE

Te take mō te pūrongo
Purpose

1. To provide an update on the progress of the Moonshine Stopbank Options Assessment project to the Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee).

Te horopaki
Context

2. The Hutt River Floodplain Management Plan (FMP) sets the level of service required for different reaches of the Hutt River. For major urban reaches, the level of service is to protect from flooding in a 2800 m^3/s flood event.
3. The Greater Wellington design standard for stopbanks in the Hutt River flood protection scheme requires a freeboard of 0.9m from the design flood level to the crest of the stopbank. The freeboard is to account for uncertainties, such as wave action.
4. As part of regular programmed works, Greater Wellington reviews and updates flood hazard modelling for major rivers throughout the region. Hydraulic modelling is a key aspect of floodplain management planning and is used to understand flood hazard. An update to the Hutt River hydraulic model was recently completed by Tonkin and Taylor.
5. Annual Asset Performance Assessments identified that an existing section of stopbank upstream of the State Highway 2 bridge at Moonshine Road (the Moonshine stopbank) was a High Risk reach, as it is expected to overtop.
6. As part of the update to the Hutt River hydraulic model, Tonkin and Taylor confirmed the Moonshine stopbank is expected to overtop during the 2800m^3/s flood event and therefore does not meet the required level of service defined in the Hutt River FMP. The stopbank is expected to contain the 2300m^3/s flood event, however with a freeboard of only 0.2m.
7. To address how this reach can achieve the desired level of service as set out in the FMP, an options assessment is now underway. This is being undertaken by Pattle Delamore Partners.

8. This investigation will define the preferred option in terms of a high-level concept design, feasibility study, and cost estimate. The preferred option will then be taken forward to the detailed design phase for implementation.

Te tātaritanga
Analysis

9. The purpose of this project is to identify and assess potential options to increase the protection provided by the Moonshine stopbank. It was requested by Greater Wellington that key stakeholders were involved where necessary. The scopes stages of the project are:
    - Data collection and review
    - Long list optioneering
    - Short list of up to three options in addition to options of 'do nothing' and 'do minimum'
    - Multi criteria analysis on short list
    - Feasibility assessment on preferred option
    - High-level design.
10. The project has progressed to the feasibility assessment on preferred option stage. A summary of the progress to date is provided in the following paragraphs.
11. Key stakeholders have been engaged to ensure consideration of infrastructure interacting with the stopbank, and an understanding of physical constraints, operational requirements and potential future projects. External stakeholders engaged with were:
    - Upper Hutt City Council (UHCC);
    - PowerCo;
    - NZTA Waka Kotahi; and
    - Wellington Water (WWL).
12. A long list of potential options was developed looking at a range of engineering and nature-based options to improve the level of service. A total of eleven options were identified at this stage.
13. Several workshops were held with internal staff and involved Flood Operations, Infrastructure Projects, Consents Management and Knowledge Water Resilience. The short list of options was developed following workshops and discussion with Greater Wellington staff.
14. A Multi Criteria Analysis (MCA) matrix was used to assess the relative benefits and detriments of each option. The options considered in this analysis were:
    - Option A: Do nothing
    - Option B: Do minimum

- Option C: Raise stopbank crest level
- Option D: Engineered bridge approach
- Option E: Combined stopbank/bridge approach

15. The outcome of the MCA resulted in the preferred option being Option C: Raise stopbank crest level.

Ngā tūāoma e whai ake nei
Next steps

16. The next steps of the options assessment will include:
    - Illustrate alignment, configurations and footprint of the reshaped stopbank
    - Consider options for the requirements on Moonshine Road which intersects the stopbank
    - Estimate construction costs
17. This project is expected to be completed by the end of 2025.

Ngā kaiwaitohu
Signatories

Writer	Alexander Brotherston – Engineer Investigations Francie Morrow – Team Leader, Knowledge Water Resilience
Approvers	Evan Harrison – Manager Knowledge Jack Mace – Director Delivery

He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or with Committee's terms of reference The Subcommittee's specific responsibilities include to oversee development, implementation and review of floodplain management plans (FMPs) for the Te Awa Kairangi/Hutt River floodplain. This report relates to meeting the agreed Level of Service of the Moonshine Stopbank.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies The project described in the report support the delivery of Greater Wellington's Long Term Plan objectives. This project specifically supports the priority area of te tū pakari a te rohe/regional resilience.
Internal consultation Internal consultation on Moonshine Stopbank Options Assessment has been undertaken with: • Flood Operations Delivery • Infrastructure Projects • Consents Management
Risks and impacts - legal / health and safety etc. There are no health and safety risks. The purpose of flood risk management planning is to reduce the risk to communities and improve the region's resilience.

Te Awa Kairangi / Hutt River Valley Subcommittee
5 August 2025
Report 25.328

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 horopaki
Context

2. Greater Wellington Regional Council (Greater Wellington) has an ongoing programme of projects and operational work within the catchments of Te Awa Kairangi/Hutt River and the Pinehaven Stream. These activities 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

Flood Knowledge Investigations

3. A review of the structural measures proposed in the Hutt River Floodplain Management Plan will be undertaken by Jacobs. This is due to be completed this year.

4. The investigation into Moonshine Stop bank has produced an interim report and is progressing to the next stage. The final report will include details of the preferred option, a high-level concept design, and cost estimates for implementation.

Flood Mapping

Upper Hutt Flood Mapping Consultation

5. Greater Wellington officers, in conjunction with Wellington Water Limited (WWL) and Upper Hutt City Council (UHCC), are arranging public consultation on updated flood hazard mapping in the Upper Hutt area. This is the final consultation on Greater Wellington's updated Hutt River mapping before the Independent Audit is undertaken, and the maps are finalised.

6. Greater Wellington staff briefed UHCC councillors on the process of produced the flood hazard mapping at a workshop on 22 July 2025. The public engagement with

the maps is intended to occur between August and September 2025, depending on UHCC timelines.

River Ranger Activities

7. Hutt City Council (HCC) Taita Shared Path (Harcourt Werry Link) - Design Options and Next Steps have been discussed with Transport Project Manager HCC, Greater Wellington Area Wellington Engineer and Greater Wellington Lead River Ranger. HCC's consultant Spencer Holmes has developed two design options for the main piece of earthworks based on feedback from our previous site visit and the reference material Greater Wellington provided from the Taita Drive and High Street shared path works. HCC's preference would be option 2, with an adaptation that would align better with a proposed dual crossing at Harcourt Werry Drive. Greater Wellington has asked for further actual design drawings, overall plan, and a formal request for the work so it can be cleared by the appropriate people in Greater Wellington to assess the stop bank risk. Greater Wellington would also like to encourage an overall HCC/Greater Wellington property agreement instead of the transport team within HCC only and we are hopeful we can collectively progress this.
8. Community work partnership with Pareraho Forest Trust is in motion for weed control works around Speedy's Culvert mouth and Belmont Wetland in the river space.
9. Heretaunga's Community Church and Forest & Bird Upper Hutt Branch have applied for streamside restoration support near Totara Park entering Te Awa Kairangi. These works are being partly funded by the Greater Wellington Community Environment Fund (CEF), which will include the removal of fences, willows, weeds and native tree plantings. Mawaihakona stream Silverstream and Manor Park Forest & Bird Lower Branch are also project areas we are supporting in conjunction with the CEF around the river.
10. Whakawhirinaki Bridge work is close to completion. New signs and directional signs have been ordered and are ready to be installed once site fences are down and contractors have cleared out. Native planting has occurred on river right to rehabilitate the area.
11. The Taita Rock slip is currently under investigation regarding erosion assessment, with interim remedial works involving retreating and reinforcing the fence and realignment of the track for further safety. New warning signs have been installed. The bigger issues regarding utilities protection with WWL/HCC and New Zealand Transport Agency (NZTA) needs a joined-up approach which is currently being established.
12. Approximately 400 plants have been planted at Craigs Crossing, Memorial Park and Taita Park to boost natives along the river's edge, with plans to further populate the riverbanks with native gardens.
13. Camping bylaw compliance Upper Hutt River, Poets Park and Whakatikei: we have been working with Upper Hutt Police and the community constable to enforce trespass notices. Ongoing works are occurring to combat long term campers within the area including mental health assessments and welfare checks via NZ Police.

14. Replacement overhaul of signs for the Hutt River Trail is beginning, with the removal of old white trail markers, to help streamline and improve aesthetics of the trail.

15. Installation of kilometre markers along the Hutt River Trail has been completed, allowing more streamlined wayfinding across the trail.

Flood Operations Delivery – Maintenance

16. Annual works programmes for Hutt and Wainuiomata have been drafted with input from stakeholders and mana whenua. They are being currently worked through before being submitted to Environmental Regulation.

17. Following gravel removal, vegetation replanting of the upper Belmont Wetlands has been completed. The whole piece of work has gone well involving various teams to get this over the line.

18. Stopbank and berm mowing has been completed for the year; mowing will commence after winter around late August to gear up for the upcoming spring growth.

19. All planned rock structure repair work has been completed throughout the awa. This has involved a lot of coordination to meet the consent and environmental aspects of the code of practice and contractor availability.

20. The ongoing noxious plant removal programme along the awa is progressing well with a collaborative approach between our Flood Operations and Pest Plant teams. Work will continue over the next 1-2 years to get on top the infected areas.

21. The native planting and maintenance season has commenced. Infilling existing areas is priority with ongoing maintenance on other existing plantings taking place through the season. The existing plantings between Poets Park and Whakatikei is scheduled to have 2,180 planted for July-August to fill the gaps from dead plants. Ongoing planting work is still required.

22. There has been a lot of work to reinstate access tracks and remove debris from grass berms in the lower area below Kennedy Good Bridge following a small flood event in May 2025.

23. Site preparation and planting of willows has started along the awa with some areas requiring access roads to be retreated to allow better buffer zone planting. The first site is north of Fraser Park (replacing dead willows), then Manor Park and then two further sites in Upper Hutt.

24. While undertaking road improvement work on State Highway Two, NZTA caused unauthorised damage to a section of stopbank between Maoribank and Totara Park. The degree of risk presented by this damage is currently being assessed. NZTA has agreed to remediate the damage and some work has taken place but further work will need to wait for more suitable weather.

Waiwhetū Integrated Catchment Project

25. Taranaki Whānui have confirmed their involvement in this project will be led out of Te Rūnanganui o Te Āti Awa ki te Upoko o Te Ika a Māui (Te Rūnanga) based in Waiwhetū.

26. Greater Wellington officers met with members of Te Rūnanga to discuss the purpose and scope of the project. Issues raised include a long history of frustration, flooding, coastal pressures, stormwater (quantity and quality), wastewater, and impacts on existing housing and development potential. It is recognised that the Seaview Rōpū is addressing wastewater issues.

27. Options for a wānanga are being considered alongside timing of local government elections.

28. Greater Wellington officers continue to meet with HCC and WWL officers, including HCC's Te Tira Māori and Greater Wellington's Te Hunga Whiriwhiri, to share information and to align work programmes. Options for making best use of HCC's masterplan budget are being discussed. Fish passage remediation options for this summer are being investigated.

Ngā hua ahumoni
Financial implications

29. For this reporting period, projects are within the current budgets, noting that there is some risk to achieving the forecast financial year end expenditure relating to changes in the way that flood operations deliver its work.

30. The new Code of Practice introduced on 1 July 2025 introduces additional liaison, reporting, and monitoring requirements which create additional resource demands and extend lead-in times for some types of work. The practical implications of these changes will not be fully understood until the end of the financial year when we have had an opportunity to see their impacts.

31. The impact on delivery of flood operations works following the establishment of the new "Earthworks, Civils and Heavy Machinery Supplier Panel" is also yet to be felt and understood. In practical terms it is likely to provide benefits in reducing time spent procuring some works, the flip side being that there has been a reduction to the pool of available experienced Contractors that we can draw from.

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

32. 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 Greater Wellington's strategies, plans programmes and initiatives.

33. Implementation with mana whenua partners is guided by Te Whāriki – the Māori Outcomes Framework as part of Greater Wellington's Long-Term Plan 2024–34.

34. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the RiverLink Board.

35. A significant number of Māori, both mana whenua and mātāwaka, live and work in flood prone areas along 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

36. 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.

37. This programme aligns with Greater Wellington's Climate Change strategy (2015), 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.

38. 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.

39. 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.

Te whakatūtakitaki
Engagement

40. The 2025 Te Awa Kairangi Community Environment Fund is supporting 13 environmental restoration projects being undertaken by community volunteers and/or schools in the catchment. All 14 applicants who qualified for funding will be supported although one school will only access the Student Action Project Fund which is why it doesn't appear in the table below.

Applicant	Project Description	Funding recommendations		
		2024-25	2025-26	2026-27
Wainuiomata Forest and Bird Nursery	Potting mix for native plant nursery supplying a range of different restoration projects.	$ 2,000.00	$ 2,000.00	$ 2,000.00
Korokoro Enviornmental Group	Riparian restoration of the Korokoro stream and Belmont Regional Park through planting and pest plant and animal control	$ 4,180.00	$ 2,850.00	$ 2,850.00
Friends of Baring Head	Restoring threatened plant communities and native invertebrate habitat, riparian restoration and pest plant and animal control	$10,000.00		
Tupoki Takarangi Trust	Wetland and riparian restoration through native planting and pest plant and animal control on mana whenua land	$ 9,100.00	$ 9,100.00	$ 9,100.00
Forest and Bird Lower Hutt	Controlling weeds and pest animals around a wetland area managed for lizard habitat at Maro Park	$10,000.00		
Pareraho Forest Trust	Riparian restoration of Speedys Stream through weed control and native revegetation	$ 8,000.00	$ 5,500.00	
Wainuiomata Marae Trust	Deer fencing a remnant ngāhere on Marae land as part of a larger restoration initiative.	$ 6,000.00		
Korau Reserve Pest Free	Pest animal control and native planting to stabilise eroding banks	$ 5,000.00	$ 6,000.00	$ 3,500.00
Growing Places Trust	Supporting small local community groups with various restoration projects	$ 1,000.00		
Friends of Mawai Hakona Stream	Finishing off a riparian restoration project around the Mawai Hakona Stream	$ 4,294.00		
Heretaunga Community Church	Riparian restoration of Te Awakairangi at Totara Park	$ 8,620.00	$10,000.00	$10,000.00
Arakura School	Controlling blackberry in, removing rubbish from and improving access to ngāhere boardering the school	$ 3,000.00		
AsureQuality Waiwhetu	Riparian planting along the Waiwhetu Stream	$ 1,000.00	$ 1,000.00	
TOTALS		**$72,194.00**	**$36,450.00**	**$27,450.00**

Ngā kaiwaitohu
Signatories

Writers	Tina Love – Team Leader Infrastructure Projects Hamish Fenwick – Team Leader Flood Operations Delivery Andy Brown – Knowledge Risk Management & Resilience Lead Francie Morrow – Team Leader Knowledge Water Resilience Tim Sharp – Catchment Manager Te Whanganui-a-Tara
Approvers	Jack Mace – Hautū Whakatutuki | Director Delivery David Hipkins – Hautū Whai Māramatanga | Director Knowledge and Insights Fathima Iftikar – Kaiwhakahaere Matua Taiao | Group Manager Environment (acting)

He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or with Committee's terms of reference The Subcommittee's specific responsibilities include "reviewing periodically the effectiveness of implementation and delivery of Floodplain Management Plans for the Te Awa Kairangi/Hutt River Floodplain".
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies 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.
Internal consultation Specific projects consult with groups and teams across Greater Wellington, where relevant to a project.
Risks and impacts - legal / health and safety etc. The purpose of implementing floodplain management plans is to reduce the risk to communities and improve the region's resilience.

Te Awa Kairangi / Hutt River Valley Subcommittee
8 August 2025
Report 25.379

For Information

TE WAI TAKAMORI O TE AWA KAIRANGI (RIVERLINK) – GREATER WELLINGTON PROGRAMME

Te take mō te pūrongo
Purpose

1. To update Te Awa Kairangi / Hutt River Valley Subcommittee (the Subcommittee) on the Greater Wellington Programme since the last report in May 2025.

Te tāhū kōrero
Background

2. Commenced in 2012, the Te Wai Takamori o Te Awa Kairangi (RiverLink) programme of work is a partnership project 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 (collectively the Programme Partners).
3. Delivery of RiverLink relates to Greater Wellington's strategic priorities for regional resilience and public transport. Strategic priorities for freshwater quality, biodiversity, and multi-modal transport options are also supported by the successful completion of Riverlink.
4. Greater Wellington withdrew from the Alliance Delivery of its programme in March 2024 and entered into a Relationship Agreement and Commercial Development Agreement for Te Awa Kairangi with HCC and NZTA in April 2025.

Te tātaritanga
Analysis

Progress of note

5. The Wellington Electricity Limited (WELL) Board has approved the 33kV cable relocation for Greater Wellington to enable completion of stage 2 of the Mills Street stopbank. Partners have agreed the cost splits for the relocation under the Electricity Act. The contract with WELL, held by Greater Wellington, is due to be signed in late July and an updated programme will be provided by WELL once the contract is signed. This work is on a critical path for achieving the milestones in the Coordinated Delivery Plan.
6. HCC, Greater Wellington and NZTA have agreed to move the Western Hills Sewer Main (WHSM) from the river corridor as far as the new City Link Bridge. This

relocation will be done by the Alliance through a commercial agreement with Hutt City. Hutt City and Greater Wellington will be sharing the costs to undertake the relocation via a bilateral agreement.

7. A significant additional benefit of moving the WHSM from the river corridor is to enable us to move the river towards the True Right Bank (TRB), provide more room for the river, and have better stopbank alignment at the City Link Bridge. This also helps with access and egress over the stopbank for the new city link bridge as the current space on the True Left Bank (TLB) is constrained.

8. Greater Wellington has commissioned Lincoln Agritech to develop a targeted monitoring regime for the aquifer, particularly during gravel extraction. Lincoln Agritech have proposed a monitoring regime which Greater Wellington have shared with Wellington Water (WWL). Work is underway to implement the monitoring regime. A Greater Wellington / WWL management forum has been established to ensure alignment between WWL and Greater Wellington.

9. Willow removal north and south of Melling Bridge will be starting in August to enable NZTA works and will take place at night due to traffic management issues. A communication and engagement plan has been developed to support this work, which will involve closure of the Melling Bridge to all traffic between 9pm and 5am over five consecutive nights from 12th to 18th August (weather permitting), and closure of Block Road in both directions from 12th to 21st August. Pedestrian and cyclist movements across the bridge and along the trail adjacent to Block Road will be catered for by providing intermittent escorted access.

10. Greater Wellington communications in July will focus on the Belmont riverbank and bioengineering work, earthworks by Belmont school and transplanting willows removed from Melling bridge area, as well as road closures for Melling Bridge and Block Road to accommodate willow removal work starting 14th August.

11. We are working with KiwiRail on a programme of work to accelerate and prioritise network renewals on the Hutt Valley Line to improve reliability for the train service during construction to assist with congestion and provide non-road transport alternatives.

12. Concept design has been completed for the realignment of Marsden Street to accommodate the stopbank. Further works will be undertaken to make best use of the available space for the stopbank and road alignment, while aiming to avoid installing traffic signals on the junction of Bridge Street and Marsden Street.

Property

13. A total of 145 properties are being acquired for the Project.

14. All properties have now been acquired and settled.

15. 64 commercial rights (lessee interests, easement interests, business closures and business relocations) have been acquired with six lease acquisitions remaining (six retailers at 69-95 High Street).

16. The targeted vacant possession date for the remaining tenancies in lower Daly Street/High Street has moved slightly to December 2025 and March 2026 to accommodate two separate tenant requests.

Consents and Designations

17. Temporary Active modes diversions and Active Modes Outline Plan of Works (OPW) and condition changes to recognise the proposed changes to active modes are currently being worked through with partners.
18. Two further Project Design Liaison Group (PDLG) meetings have been held since May.
19. Responses to regulators completed, for two non-compliances, one for release of sediment and the other for not promptly notifying the regulator about finding low levels of containments when excavating for rocklines.
20. The annual report for Greater Wellington works is in preparation.

Demolition

21. Pharazyn Street and upper Marsden Street demolition (above and below ground) fully signed off by Greater Wellington in March 2025. Below ground demolition has now commenced in lower Marsden Street.
22. Due to the proximity of below ground demolition works to the Bridge Street cemetery, archaeological surveys have been taking place. Two Māori artefacts were recently found (a hook and a peg) and discussions are underway with mana whenua on next steps and how to appropriately deal with the archaeological finds.
23. Site investigations are underway for properties in Daly Street, with demolition planned to commence in January 2026.

Mills Street Stopbank Construction

24. Practical completion reached for stage 1 in October 2024. The site has not been opened up for public access due to the significant amount of work required, cost, and health and safety considerations. Traffic management and fencing are being maintained around the site until a contractor is mobilised for stage 2.
25. Partners have collectively been discussing temporary active modes to meet the consent condition for access along one side of the river. Access at Mills Street is the best option but this may affect construction sequencing for Stages 2 and 3.
26. Redesign process underway for Stage 2 to utilise some of the property purchased at 39A Mills Street.

River works, rocklines, and bioengineering

27. Taylors were engaged in February 2025 to complete rocklines construction, and work is underway on R3 and L3 rocklines upstream of Melling Bridge.
28. Testing revealed a significant amount of contaminated material at the R3 rockline site. Landfill disposal would incur significant cost, so on-site burial of the contaminated material is being progressed as a cost-effective alternative. An ongoing monitoring plan will be put in place for the contaminated land permanent storage site.
29. Taylors to complete earthworks by Belmont school in August in preparation for transplantation of the willows removed from Melling Bridge area.

Utilities

30. 33kV and 11KV cable construction agreement being concluded with WELL. Greater Wellington will hold the contract with financial contribution from partners. Greater Wellington, HCC and NZTA have agreed percentage cost splits for cable construction.

31. Greater Wellington and HCC have been working together with WELL on options for substation relocation. Agreement reached on Andrews Avenue substation, which will be moved to the roundabout at the top of Andrews Avenue, subject to HCC further approval. Temporary traffic management will be required.

32. The Marsden Street substation will be relocated to 59 Marsden Street.

Ngā hua ahumoni
Financial implications

33. Greater Wellington has, through its 2024-34 Long Term Plan and subsequent annual planning processes, committed funding of $295 million to delivery of the flood protection benefits of the Programme.

34. This budget does not include allowances for improvements to facilities related to public transport associated with the relocation of Melling Train Station, as NZTA is responsible for its relocation.

35. In addition, inflation and escalation will need to be adjusted during the Programme. The next formal opportunity to adjust the current budget will be through the 2027-37 Long Term Plan.

36. The CAPEX spend to date has been $177.7 million since 2016. Of this $111 million has been spent on property purchase (excluding demolition).

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

37. Ngāti Toa Rangitira and Taranaki Whānui ki Te Upoko o Te Ika are members of the Project Governance Group and will remain so under the Relationship Agreement. Mana whenua and Greater Wellington will continue to engage at the Project Governance level and through the overall Programme delivery.

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

38. The Greater Wellington components of the Programme are subject to Greater Wellington's initiatives designed to minimise greenhouse gas emissions and enhance sequestration capacity. We will work with the Partners to develop an approach that supports Greater Wellington's mitigation objectives. The current basis of reference for this includes the RiverLink consent conditions and the Code of Practice for River Management (Te Awa Kairangi 2020). The Greater Wellington corporate sustainability programme and Greater Wellington's procurement process will encourage suppliers and contractors to minimise emissions.

39. The design development for the Project acknowledges the need to adapt to a changing climate and aims to address these predicted impacts. Greater Wellington has included allowances for climate change impacts within its Preliminary Design.

40. Greater Wellington's flood risk mitigation scope provides for flood protection upgrades to safely convey the Design Flood Event past the Hutt City Centre. The levels of service may, however, be at risk through the design mitigation process if the other Partners in this Programme do not agree to fairly balance cost and delivery risk associated with any mitigations required to deliver a flood protection system that can safely convey the Design Flood Event in terms of both capacity and security.

Te whakatūtakitaki
Engagement

41. The Programme has been extensively promoted in the Hutt community through workshops, open days and targeted communications and engagement. The last major announcements were made at the end of April with the confirmation of the Melling Transport aspects of the wider programme. The next significant announcements are likely to be in September 2025.

Ngā kaiwaitohu
Signatories

Writers	Tracy Berghan – Manager RiverLink, Partner Lead, Te Wai Takamori o Te Awa Kairangi
Approvers	Fiona Abbott – Programme Director, Greater Wellington Sponsor, Te Wai Takamori o Te Awa Kairangi Lian Butcher – Group Manager, Environment Group

He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or with Committee's terms of reference Te Awa Kairangi / Hutt River Valley 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.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies RiverLink contributes to the delivery of Greater Wellington's strategic priorities of Regional Resilience, Freshwater Quality and Biodiversity, and Public Transport.
Internal consultation Internal consultation was undertaken as appropriate to the impact of the proposed delivery changes affecting regional resilience.
Risks and impacts - legal / health and safety etc. Escalation and general uncertainties in the construction market will continue for some time and cost pressure on construction will remain. A Risk Register for the programme is available.

Te Awa Kairangi / Hutt River Valley Subcommittee
5 August 2025
Report 25.276

For Information

ANNUAL FLOODPLAIN MANAGEMENT PLAN 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 2025 in implementing the Hutt River and Pinehaven Stream Floodplain Management Plans.

Te tāhū kōrero
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 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)

3. A major project delivery focus remains Te Wai Takamori o Te Awa Kairangi (formerly RiverLink). Te Wai Takamori o Te Awa Kairangi 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. Te Wai Takamori o Te Awa Kairangi is reported to this Subcommittee separately, however, there have been significant milestones for the project delivery:

4. A standalone Te Wai Takamori o Te Awa Kairangi team supporting the programme across Greater Wellington was established in May 2023.

5. Above ground demolition works commenced in July 2023 and below ground demolition works commenced in September 2024. Pharazyn Street and upper Marsden Street demolition (above and below ground) completed in March 2025. Below ground demolition continues in lower Marsden Street, and site investigations have commenced ahead of demolition for properties in Daly Street.

6. Gravel extraction and Mills Street Stopbank 'pre-loading' was undertaken between October and December 2023.
7. 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 completed on time in October 2024. Design work is currently underway for MSSB stage 2.
8. 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.
9. Permission to proceed with commercial and contractual arrangements with NZTA and HCC was granted by Council on 20 March 2025, and agreements were subsequently signed by all parties.
10. Procurement activity for rocklines construction commenced in August 2024 and Taylors Contracting Co. Ltd. were chosen as the contractor in January 2025. Mobilisation of site and R3 rockline construction commenced in March 2025.
11. Wellington Electricity Lines Ltd (WELL) conducted a feasibility assessment for relocation of the 33kV and 11kV high voltage cables in August 2024 and commenced design in October 2024. Commercial negotiations with partners have taken place and cost splits were agreed in June 2025. The commercial agreement with partners and the construction contract with WELL are due to be signed in July, with construction due to commence in September 2025.
12. The property acquisition programme is nearing completion. Notably, two additional properties were added in 2022 and 2024—located on Pharazyn Street and Mills Street, respectively. The Pharazyn Street acquisition was finalized in October 2023, followed by the Mills Street purchase in June 2025. Additionally, freehold ownership of 69–95 High Street was secured in April 2025, and the business acquisition process for this site is currently underway.

Flood Operations Delivery - Te Awa Kairangi/Hutt River

13. All planned minor water course blockage and vegetation maintenance has been completed. Additional follow up work was undertaken from various weather events.
14. Routine mowing on the river berm and stopbanks has continued throughout the year. The ongoing BAU work continues with tree removal from stopbanks, floodgate repairs, rubbish removal, track maintenance, and pest plant control which are all critical to the everyday floodplain management.
15. Bed recontouring was undertaken at Pomare to correct a river alignment issue causing the river to erode a new vegetation buffer. This involved 120 metres of wetted channel work.
16. Willow and native planting have been completed at various sites with 941 and 1175 respectively planted. New sites have been identified, and preparation is underway for the planting session between July and September 2025.

17. The rock asset maintenance programme is complete. This work involved repairing existing assets from Ava to Totara Park using 510 tonnes which is on the light side compared to the major repair work completed the previous year.

Pinehaven Stream Floodplain Management Plan (2016)

18. In 2017, 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. Wellington Water Limited (WWL) were appointed by UHCC to act as the agency to manage delivery of the physical work.

19. 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.

20. The objective of the planned Pinehaven Stream 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.

21. As delivery of the works evolved from the concept design conceived in the FMP, significant cost escalations have occurred. This is due to increasing scope and complexity as detailed design was completed and the full scale of the works became apparent, as well as construction costs generally increasing over this period.

22. Notwithstanding the above, Stages 1 and 2 of the project have been completed for a cost of $22.5m. These stages included the works on the main public infrastructure including the Sunbrae and Pinehaven Road culvert crossings as well as a channel upgrade through Willow Park.

23. In August 2024, WWL were instructed to pause any further construction work on Stages 3, 4 and 5 in light of the significant cost increases and the Subcommittee requested a review of the project.

24. A workshop was held with the Subcommittee on 11 February 2025 for the purpose of explaining why the construction of the structural works for the Pinehaven FMP were currently on hold and to propose an alternative way of achieving the FMP outcomes.

25. The following were identified in the review report from 26 March 2025, and presented at the 13 May 2025 Te Awa Kairangi / Hutt River Valley Subcommittee:

    a Costs have increased from $10.9m when the Pinehaven FMP was developed to $58.6m.

    b Remaining work for Stages 3 to 5 of the project are estimated to cost $36.1m.

    c Benefits after completion of Stage 2 are that 13 habitable floors are relieved from flooding from a modelled 1% AEP plus climate change flood event.

d It is an opportune time to take stock of the benefits achieved from the first two stages, document the learnings from the work to date, and consider more cost-effective delivery options for Stages 3 to 5 that still meet the objectives of the FMP.

e Consideration is needed of options for future stages and how they will be funded including longer term maintenance.

f A review of governance and project management arrangements is required.

g Consideration should be given to asset ownership and maintenance, including responsibilities for river management.

h Project timescales need to be revised.

26. Following on from this review, the Pinehaven Steering Group now consider that the structural works proposed in the FMP should be re-evaluated and alternative, more cost-effective options be developed.

27. On 13 May 2025, the Subcommittee endorsed the recommendation to keep the construction of Stages 3–5 of the Pinehaven Flood Management Plan (FMP) structural works on hold, and to develop alternative options for these stages over the next 12 months. This was also endorsed by Environment Committee on 19 June 2025 and approved by Council on 26 June 2025.

28. Three options are to be analysed so that an informed decision can be made as to the scope of the remaining FMP structural works:

a Option 1 – Proceed with works as currently proposed

b Option 2 – More naturalised channel enlargement with minimal structures

c Option 3 – Do no further structural works but enhance maintenance and emergency management provisions to manage flood risk

29. To enable these options to be evaluated, modelling and design work is required to develop realistic cost estimates. This would then be used as the basis for a cost benefit analysis to help inform which option provides the best overall outcome.

30. The Pinehaven Steering Group was re-established and resumed monthly meetings in May 2024 and will provide updates at scheduled meetings of this Subcommittee.

31. The Terms of Reference for the Steering Group were established in August 2024 and formally endorsed by the group in May 2024.

32. Progress on the key deliverables for the Pinehaven Stream Floodplain Management Plan is listed in **Error! Reference source not found.**.

Table 1: Pinehaven Stream FMP key deliverables

Stage	**Status**
Phase 1: Culverts and enabling works **Phase 2: Downstream and Willow Park** • Stage 1 and 2 works have reduced the flood risk for 13 buildings with 57 remaining at risk.	Complete 2024

Phase 3: Upstream of Sunbrae Culvert to 28 Blue Mountains Road **Phases 4– 5: Upstream of 28 Blue Mountains Road** • Partially funded. • The current phase of work aims to reduce flood risk for an additional 28 buildings, bringing the total to 41 buildings protected under the 1% Annual Exceedance Probability (AEP) flood event model, inclusive of climate change projections	Pending Review On hold

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

33. The Waiwhetū modelling is complete. The independent audit report was finalised which is the final step in our flood hazard modelling process. The flood hazard maps have been provided to HCC for inclusion in their District Plan.

34. 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 one of this new financial year. The flood hazard maps for the Hutt River were also provided to HCC for inclusion in their District Plan.

Flood Risk Management Planning

35. 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. A consultant to undertake this project is currently being procured.

36. For the Waiwhetū an approach is being developed in conjunction with HCC and will be aligned with wider coastal adaption planning processes where appropriate.

Asset and River Management Investigations

37. The Moonshine stopbank options assessment investigation is underway and a recommendation of a preferred option has been provided. This investigation has evaluated options systematically using a multi-criteria analysis to ensure the best option is taken forward to the feasibility and concept design. Internal stakeholders have been consulted and engagement with NZTA, UHCC, and WWL has been arranged.

Regional Initiatives

Flood Incident Management

38. The Flood Warning & Response Improvements programme was initiated in 2019 to address three key challenges:

    - Limited alignment in response procedures across Greater Wellington and Wellington Region Emergency Management Office (WREMO); Current procedures are not aligned and do not support and effective, regionally consistent emergency response.

- Limited forecasting capability currently; Greater Wellington has limited capability to provide flood warning across the region which will enable proactive emergency management.
- Low level of risk awareness within communities; Limited awareness within communities that have been identified as being at risk of flooding on what the risk is and how to respond.

39. The Programme consist of four workstreams;
    - **Flood Awareness** – Raise community awareness of the risk posed by flooding.
    - **Flood Warning** – Improve Greater Wellington's flood warning capability
    - **Flood Response** – Review, update and alignment flood response procedures across key agencies.
    - **Flood Recovery** – Improve Greater Wellington's recovery processes and capability.

Flood Response

40. The Flood Incident Management Team (FIMT) has completed this year's training programme including core duty officer training, training for support officers and a full FIMT training day focusing on response planning. Preparations are now underway for the annual flood incident exercise which will test the systems, our capability and procedures on a regional scale flood event.

41. This quarter we have also issued the updated flood response procedures which has brought our systems into line with the new structures of the Environment Group as well as lessons learnt from the North Island Severe Weather Events. This has included modelling extreme flood events (those larger than our schemes are designed to protect against) and working with Civil Defence to review trigger levels and communication protocols.

Flood Warning

42. Greater Wellington is now in the deployment phase of our new suite of flood forecasting models. These floods forecast models will be able to provide early warning of floods up to 3.5 days in advance of alarm thresholds being exceeded.

43. As the flood forecast modelling is based on forecast rainfall and assumptions on catchment characteristics communicating uncertainty and confidence is critical particularly if they are being sued to trigger mass evacuation. We are working with WREMO to agree common operating procedures and terminology to ensure that our system is efficiently and effectively utilised in flood incidents.

Flood Recovery

44. Recovering from significant flood events in a major undertaking. We are currently developing a project to learn lessons from Hawkes Bay and other flood impacted areas to develop a toolkit for use by Environment Group staff in recovering from significant flood events. This project is due to run this financial year.

Summary of progress

Implementation progress

45. 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.

46. Te Wai Takamori o Te Awa Kairangi 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 was achieved, albeit slightly delayed - above ground demolition works commenced in July 2023, gravel extraction and pre-load works for Mills Street Stopbank (MSSB) were undertaken between October and December 2023, construction work began on MSSB stage 1 in February 2024 and completed in October 2024, and rocklines construction began in March 2025.

47. 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.

Table 2 Implementation Progress (structural measures)

FMP or Scheme	Actual % Complete to June 2024	Actual % Complete to June 2025
Hutt	45%	51%
Pinehaven	38%	38%

48. 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 $11 million). The figures in Table *1* below have been indexed to 2025-dollar values using reserve bank CPI calculator.

Table 1: FMP Implementation Financial Summary

River	Original FMP Total 40-year estimate ($Millions) Inflation Adjusted	Expenditure to June 2025 ($Millions)	Total Budgeted Forecast to 2034 ($Millions)	Total Expenditure Forecast to 2034 ($Millions)
Hutt	150.1	249.9	177.0	426.9
Pinehaven	6.7	22.5	43.7	58.6

Ngā hua ahumoni
Financial implications

49. The 2024-34 Long Term Plan[1] increased budgets and resources to ensure we can maintain agreed scheme service levels and continue to undertake routine operational and maintenance activities.

Pinehaven Floodplain Management Plan (2016)

50. The original forecast for the FMP was $10.9 million. In 2017, this estimate was revised to $18.2 million, and Stage 1 commenced. By 2020, projected costs had increased significantly, ranging between $37 million and $45 million. The current total estimated cost to complete the project stands at $58.6 million. To date, $22.5 million has been spent, leaving an estimated $36.1 million required to complete the remaining work.

    Greater Wellington have allocated approximately $18m in their 2024-2027 Long Term Plan.

51. UHCC have a total capital budget of $6.53m in their 2024-2027 Long Term Plan. This amount represents the total cost, with 50% of the revenue budget expected to come from Greater Wellington. Consequently, the net budget amounts to $3.27m. Assuming a 50:50 cost share, this leaves a shortfall of $14.83m.

52. The recommended option will require some expenditure to undertake redesign work but is expected to reduce overall project costs, realising savings back to both councils.

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

53. 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.

54. 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.

55. 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.

[1] https://www.gw.govt.nz/your-region/plans-policies-and-bylaws/plans-and-reports/long-term-plan/

56. 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

57. 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.

58. 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.

59. 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.

60. Heavy machinery emissions from river construction projects have not been estimated. However, in the 2023-24 year, use diesel in heavy machinery mainly for flood protection operational work at Greater Wellington represented 4.0% (1,228 tCO2e) of the total organisational carbon footprint.

61. 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.

62. 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.

63. Climate Resilience projects delivered since 2023 have continued to incorporate significant planting and river corridor greening measures, supporting carbon reduction and enhancing ecosystem resilience. These programmes complement hard infrastructure improvements to build long-term adaptive capacity against climate-driven flood events.

Ngā tūāoma e whai ake nei
Next steps

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

64. Project partners Greater Wellington, HCC and NZTA to progress Te Wai Takamori o Te Awa Kairangi project: commence/continue construction; continue community connection and project awareness.

65. Flood operations will continue to deliver the 2025-26 annual work plan that identifies and priorities asset defects requiring maintenance. This will start with replacing willow and native plantings between July and September.

66. We will continue the operational maintenance and consent monitoring of the Belmont wetland.

67. Community infrastructure and amenities will continue to be maintained to an acceptable level of service and our river ranger service will be ensuring the river corridor remains a safe and tidy environment.

68. We will establish flood monitoring network resilience standards.

69. We will continue improvements of gauging and monitoring of river (level and flow).

70. We will continue reviewing and updating the regional Flood Hazard Modelling Standard and updating the Flood Risk Management Planning Guidelines and Flood Emergency Planning and Projects.

71. The next steps in the Moonshine stopbank options assessment are to investigate the feasibility of the preferred option and develop a concept design.

72. Major capital works projects will be reprioritised after a review of the Hutt FMP and options assessment investigations have been completed as mentioned in paragraphs 35 and 37.

Pinehaven Floodplain Management Plan (2016)

73. Modelling and design of alternative options will be undertaken over the next six months followed by cost benefit analysis and reporting to present a business case for the preferred option.

74. Greater Wellington is preparing a report on the review process and timelines of the Pinehaven Floodplain Management Plan, completed for presentation at the Te Awa Kairangi / Hutt River Valley Subcommittee meeting.

Ngā āpitihanga
Attachments

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

Ngā kaiwaitohu
Signatories

Writers	Tina Love – Team Leader, Infrastructure Projects Lucy Ashford – Team Leader, Assets and Performance, Delivery Hamish Fenwick – Team Leader, Flood Operations, Delivery Francie Morrow – Team Leader, Knowledge Water Resilience, Knowledge and Insights

	Andy Brown – Knowledge Risk Management and Resilience Lead, Knowledge and Insights
Approvers	Jacky Cox – Manager, Infrastructure, Assets and Support Jack Mace – Hautū Whakatutuki | Director Delivery Lian Butcher – Kaiwhakahaere Matua Taiao | Group Manager Environment

He whakarāpopoto i ngā huritaonga **Summary of considerations**
Fit with Council's roles or Committee's terms of reference The Subcommittee has delegated authority to review and monitor periodically the effectiveness and delivery of FMPs for Te Awa Kairangi/Hutt River Floodplain
Contribution to Annual Plan / Long term Plan / Other key strategies and policies 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.
Internal consultation Specific projects consult with groups and departments across Greater Wellington where relevant to that project.
Risks and impacts: legal / health and safety etc. The purpose of implementation floodplain management plans is to reduce the risk to communities and improve the region's resilience.

Attachment 1 to Report 25.276

Te Awa Kairangi FMP Summary Progress Table

Updated 19/7/24

TOTALS IMPLEMENTATION HUTT FMP				Date AMP	COST $M 2001 FMP	Target % at completion			Percent Complete to date	
				2000-2051	$77.76	100.00%			50.69%	

REACH 1 : River Mouth to Estuary Bridge

WORK REQUIREMENT	REACH	PRIORITY	DATE 2001 FMP	DATE AMP	COST $M 2001 FMP	4.69%	STAGE	% Complete	3.10%	HRFMP (Page #)
River Mouth Channel Works	1	6	after 2010	2032-2035	$3.65	4.69%	Complete	0.66	3.10%	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		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
Woollen 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		25.68%	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	Te Wai Takamori o Te Awa Kairangi	$0.06	0.08%	Complete	1	0.08%	56
Daly Street (Ewen to Melling RB) stopbank upgrade and land purchase	3	1	2008+	Te Wai Takamori o Te Awa Kairangi	$4.61	5.93%	In Design + land	0.5	2.96%	56
Marsden Bend (RB) channel works	3	3	after 2010	Te Wai Takamori o Te Awa Kairangi	$1.91	2.46%	In Design		0.00%	56
Pharazyn St (Ewen to Melling RB) stopbank	3	3	after 2010	Te Wai Takamori o Te Awa Kairangi	$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	Te Wai Takamori o Te Awa Kairangi	$1.78	2.29%	In Design		0.00%	56
Land for Melling Bridge Upgrade	3	14	after 2010	Te Wai Takamori o Te Awa Kairangi	$8.00	10.29%	In Design + land	1	10.29%	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		11.16%	HRFMP (Page #)
Melling to Kennedy Good Bridge channel works	4	1	after 2010	Te Wai Takamori o Te Awa Kairangi	$1.11	1.43%	In Design + land	0.66	0.94%	58
Melling Bridge (LB) stopbank upgrade	4	3	after 2010	Te Wai Takamori o Te Awa Kairangi	$0.26	0.33%	In Construction	0.66	0.22%	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		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		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		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	4.26%			0.00%	64
Whirinaki 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		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		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		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

Attachment 2 to Report 25.276

Pinehaven Stream Floodplain Management Plan: Summary Financial Progress Table

Stage	Budget ($ Millions)	Actuals	Remaining Budget	% Complete	2018 - 2023/24	2024/25	2025/26 to 2026/27	Totals ($ Millions)
Phase 1		$ 15,267,454	$0	100%	$ 15,267,454			**$ 15.3**
(Chargeable Works to UHCC)								
Property Purchase		*$ 2,182,956*	*$0*	*100%*				
Culvert Purchase		*$ 484,000*	*$0*	*100%*				
Pinehaven Road Roundabout Construction		*$ 230,541*	*$0*	*100%*				
Phase 2 (Willow Park)		$ 6,795,231	$0	100%	$ 5,849,263	$ 945,968		**$ 7.2**
Phase 3 & 4 (Blue Mountains Road to Sunbrae Drive)	*GW $18.00*	$ 435,324	*Under review*		$ 435,324	*Estimates prior to Review*		*$ 17.1*
Phase 5 (Blue Mountains Road to Pinehaven Reserve)	*UHCC $6.53 Under funded contribution*	$0			$0			*$ 19.0*
Totals		**$ 22,498,009**			**$ 21,552,041**	**$ 945,968**		***$ 58.6***

Table prepared 21 July 2025