



WORKSHOP AGENDA

Date: Wednesday, 22 April 2026

Time: 1.00pm

Location: Council Chambers
Waikato Regional Council
Level 1, 160 Ward Street, Hamilton

Workshop Details:

- Strategic Risk
- Flood Management
- Whangamarino Action Plan
- WRC Framework and Plan for Resilience to Natural Hazard Risk

Order Of Business

1	Karakia Timatanga	3
2	Workshop Paper(s)	4
2.1	Strategic Risk Refresh 2026	4
2.2	Review of Funding for Flood Management and Drainage Services	65
2.3	Draft Whangamarino Action Plan	68
2.4	Waikato Regional Council Framework and Plan for Resilience to Natural Hazard Risk	97
3	Karakia Whakamutunga	121

1 KARAKIA TIMATANGA

Whakataka te hau ki te uru

Cease o winds from the west

Whakataka te hau ki te tonga

Cease o winds from the south

Kia mākinakina ki uta

Bring calm breezes over the land

Kia mātaratara ki tai

Bring calm breezes over the sea

E hī ake ana te atakura

And let the red-tipped dawn come

He tio

With a touch of frost

He Huka

A sharpened air

He hau hū

And promise of a glorious day

Tīhei mauri ora!

Behold we live

2 WORKSHOP PAPER(S)

2.1 STRATEGIC RISK REFRESH 2026

Rā | Date: 9 April 2026

Kaituhi | Author: James Brennan, Strategic Risk Advisor

Kaituku | Authoriser: Janine Becker, Director, Customer and Corporate Services

TE ARONGA | PURPOSE

1. The purpose of this paper is to brief Councillors on the refresh of Waikato Regional Council's (WRC's) Strategic Risks and associated risk appetite. It outlines the objectives, context, and expected outcomes of the workshop, as set out in the accompanying Councillor Briefing Pack prepared by PwC. PwC has also provided a small number of optional additional readings, attached, and clearly labelled as optional.
2. The workshop is a key step in refreshing Waikato Regional Council's Strategic Risk profile and risk appetite statements to ensure they are aligned with the Council's new strategic direction 2026 – 2036 and the current operating environment. The attached material has been prepared by PwC and reflects:
 - (a) relevant global, national, and local government risk trends.
 - (b) WRC's strategic direction and priorities; and
 - (c) refinements made to WRC's existing strategic risks, following an Executive Leadership Team workshop.

Objectives of the Workshop

3. The objectives of the workshop are to:
 - (a) Seek input on whether the revised risk descriptions clearly articulate the key drivers or cause of each risk and reflect the external and internal challenges facing Council and the ability to deliver its long-term goals, and that nothing important is missing or no longer relevant.
 - (b) Talk through the risks from a governance perspective, sharing views on what matters most and why.
 - (c) Confirm how much risk Council is willing to take, including whether the risk descriptions and appetite statements are clear and make sense.
 - (d) Understand how risks connect to each other and where combined risks could have bigger impacts.
 - (e) Provide clear direction to help finalise the strategic risk profile and guide future reporting to Council and its Committees – in particular, the Risk and Assurance Committee.

KŌRERO WHAKATAKI | EXECUTIVE SUMMARY

4. WRC operates in a complex and rapidly changing environment, shaped by climate and natural hazard events, legislative reform, funding constraints, technological change, and evolving expectations from communities, iwi, stakeholders, and partners.
5. As part of good governance, the Council periodically reviews its strategic risks and associated risk appetite to ensure these remain aligned with the Council's strategic direction, priorities, and external environment.
6. A review of the strategic risk profile has recently been undertaken with the Executive Leadership Team, and this workshop provides an opportunity for Councillors to test, challenge, and provide input into that work before the finalisation of the strategic risks and risk appetite settings.
7. Councillor perspectives are critical to ensuring that the strategic risks reflect what matters most at the governance level, that risk appetite settings are appropriate, and that there is shared understanding of where the Council will and will not accept risk.

Background and Strategic Context

8. Strategic risks arise both from the choices Council makes in pursuing its priorities, and from external and internal factors that could prevent Waikato Regional Council from achieving its strategic direction and objectives. These risks exist within a complex and rapidly changing environment shaped by climate and natural hazard events, legislative reform, funding pressures, technological change, and evolving expectations from communities, iwi, stakeholders, and partners.
9. Council has adopted [Te Pae Tawhiti – Strategic Direction 2026–2036](#), which sets clear long-term priorities for the Waikato region, including:
 - (a) Future-fit organisation
 - (b) Productivity and prosperity
 - (c) Building regional resilience
 - (d) Sustaining natural resources
 - (e) Optimised transport system
10. These priorities are being pursued in an environment characterised by increasing uncertainty and interconnected risks. Detailed background on the strategic context, global and sector-wide risk trends, and Council's strategic priorities is provided in the attached PwC workshop pack.
11. As part of good governance practice, Council periodically reviews its strategic risks and associated risk appetite to ensure they remain aligned with its strategic direction, priorities, and operating environment.
12. A review of the strategic risk profile has recently been undertaken with the Executive Leadership Team, and this workshop provides an opportunity for Councillors to test, challenge and shape that work from a governance perspective.
13. Councillor input is critical to ensuring that the strategic risks reflect the issues that matter most at the governance level, that risk appetite settings are appropriate, and that there is a shared understanding of where Council will, and will not, accept risk in pursuit of its long-term outcomes.

14. Refreshing the strategic risk profile helps ensure that:
 - (a) Governance and decision-making are informed by a clear view of the most material risks.
 - (b) Risk appetite is explicit, understood, and consistently applied.
 - (c) Management effort and assurance activities are focused on what matters most.

Current State

15. Following an Executive Leadership Team workshop, the Council's draft strategic risks include the following risks:
 - (a) Emergency response
 - (b) Governance and reform transition
 - (c) Relationships
 - (d) People, capability, capacity, and culture
 - (e) Information, data, and technology
 - (f) Financial sustainability
 - (g) Climate change
 - (h) Giving effect to Te Tiriti o Waitangi
 - (i) Strategic prioritisation and decision-making
16. ELT also discussed that WRC also has three top organisational risks:
 - (a) Health and Safety
 - (b) Legislative Compliance
 - (c) Fraud
17. These risks, and the associated draft risk appetite statements, are provided in the accompanying workshop materials and will form the starting point for discussion.

What Councillors Are Being Asked to Do

18. Ahead of the workshop, Councillors are asked to:
 - (a) Review the workshop materials, including the draft strategic risks and risk appetite statements.
 - (b) Consider the following questions:
 - (i) What are the key risks Council faces in delivering the strategic priorities and outcomes?
 - (ii) Do the existing strategic risks describe the heart of our concerns? Would these have a material impact on Council achieving the strategic priorities – and how?
 - (iii) How much risk is Council willing to take?
19. During the workshop, Councillors will be asked to actively participate, share perspectives, and provide direction that will inform the finalisation of the WRC's strategic risks.

Next Steps

20. Following the workshop:
 - (a) Feedback and insights from Councillors will be incorporated into the refreshed strategic risk profile and risk appetite statements.
 - (b) The updated strategic risks will be presented to the Risk and Assurance Committee for endorsement on 2 June 2026.

ĀPITIHANGA | ATTACHMENTS

1. **WRC Strategic Risk Workshop - Councillor Briefing pack** [↓](#)
2. **Optional Reading - Risk Management Activity update report – Risk and Assurance Committee open agenda 16 March 2026 – item 6.2** [↓](#)
3. **Optional Reading - Waikato Regional Council Strategic Direction 2026 - 2036** [↓](#)
4. **Optional Reading - WRC Risk Management Framework (3375577)** [↓](#)



Waikato Regional Council

**Payroll system implementation internal audit
Final Report**

March 2026





Janine Becker
Director of Finance and Business Services
Waikato Regional Council
Private Bag 3038
Hamilton 3240

2 March 2026

Payroll system implementation internal audit

Dear Janine

In accordance with our Letter of Engagement dated 27 June 2025, we are providing this report on the implementation of a new payroll system for Waikato Regional Council (WRC).

Our assessment was performed per our scope and agreed approach described in the Letter of Engagement (extract included in the Appendix).

I would like to take this opportunity to acknowledge and thank the Waikato Regional Council personnel for the time and contributions they have made to enable us to perform this engagement.

Please feel free to contact me on 021 044 3320 if you have any questions or require any further information.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jade Collins', written in a cursive style.

Jade Collins
Partner
jade.m.collins@pwc.co.nz

PwC Waikato Regional Council | Payroll system implementation internal audit

Limitations

We have performed our engagement in accordance with relevant ethical requirements of the Code of Ethics issued by the Chartered Accountants of Australia and New Zealand, and appropriate quality control standards. Our engagement does not constitute a review or audit in terms of standards issued by the Chartered Accountants of Australia and New Zealand.

Accordingly, this engagement is not intended to result in either the expression of an audit opinion nor the fulfilling of any statutory audit or other requirements.

Private and confidential

This report is provided solely for Waikato Regional Council for the purpose for which the services are provided. Unless required by law you shall not provide this report to any third party, publish it on a website or refer to us or the services without our prior written consent.

In no event, regardless of whether consent has been provided, shall we assume any responsibility to any third party to whom our report is disclosed or otherwise made available. No copy, extract or quote from our report may be made available to any other person without our prior written consent to the form and content of the disclosure.

Users of the report

This report is intended solely for the use of Waikato Regional Council. This report contains confidential personal information. Please treat the report with confidentiality in every respect.

1

Executive summary

Background and objective

WRC are implementing the Datapay payroll system as their previous payroll system will be no longer supported. WRC ran a selection process and then started the implementation in June 2025, with a go-live date in February 2026. WRC staff have been supporting the Datacom implementation team to configure the system, migrate data, develop interfaces and perform testing.

The objective of our engagement was to perform an ongoing real-time assessment of the WRC payroll system implementation. This assessment supported WRC to identify and manage risks proactively and effectively. The scope was to assess the design and adequacy of WRC's key payroll controls within the new system, covering both control configuration and overall payroll process integrity based on the following areas:

- pay run processing
- bank account master data
- leave management processes
- user system access levels
- audit trail logging
- data interfacing with the Infor CloudSuite Public Sector HR module (which provides employee master data and timesheet data)
- data migration
- holiday pay risk assessment.

Payroll Scope Area	Assessment Result
Payrun processing	Areas for improvement
Masterdata (including bank accounts)	No recommendations
Leave management	No recommendations
User Access levels	No recommendations
Audit Trails	No recommendations
Infor Interface	Minor recommendations
Data migration	No recommendations
Holiday Pay risk assessment	Areas for improvement

Executive summary

WRC's Payroll Implementation - key observations

We have compared and considered the key payroll controls, that WRC plan to implement in Datapay, against our payroll risk and control matrix (which identifies the key risks in relation to payroll processing and expected good practice controls to mitigate risks).

All of the expected key controls are in place within the design of the payroll system and related processes, with some identified areas for improvement. There is a need to ensure that the process design (based upon decisions made) is detailed into a business process document, so that payroll processes and the controls are clearly documented for everyone's understanding and knowledge. **(Recommendation 1)**.

WRC have mostly opted to retain existing manual processes, rather than automation (i.e. self-filing to IRD rather than automatic filing, manual banking process rather than sending payrun directly to the bank). This is prudent at this stage and automation can be further considered in the future.

Our observations are grouped in accordance with the payroll process scope areas:

Payrun Processing

The segregation of duties challenges of having only one payroll staff member are mitigated by using finance staff to perform verification, review and authorisation of the pay runs.

Masterdata is automatically interfaced. Timesheets are manually imported in bulk (with error checking) and will have an internal manual approval process as this is not being automated.

The payrun has various stages and includes a stage where the payrun can be checked independently via the payrun reports (these cover expected key reviews - i.e. masterdata changes, pay comparison of this pay against last pay for each employee). The payrun is then independently authorised.

The payroll banking file will be extracted and manually uploaded by the finance team into the banking portal and approved by the banking authorisers. There is an independent validation process that the payment file matches the approved payrun.

Masterdata (including bank accounts)

Masterdata (except bank accounts) is maintained within the Human Resources system (Infor) and we have been informed that any changes to this data will be performed in Infor (as the system of record), and updates made into the payroll system via the interface. An assessment of the controls over updating the masterdata in Infor were out of scope of this engagement.

Payroll staff do have the ability to update masterdata directly in Datapay if required. This will be checked by an independent person reviewing the changes ("Updating") report.

Changes to bank accounts will be made by payroll staff and then checked by an independent person reviewing changes made (all masterdata fields) including verifying the bank account change to supporting documentation.

Leave Management Processes

Leave types and rules have been configured into Datapay. Management of Purchase Leave is still to be confirmed.

Leave management will be performed using Datacom's Direct Access (employee self-service portal). Managers approve leave via the Direct Access portal. Leave details are automatically interfaced with Infor.

User Access

User access is role-based and requires unique ID's and passwords, plus Multi-factor authentication. Segregation of duties is in place. User security is managed by Datacom, with WRC responsible for ensuring their user details are kept up-to-date.

Access rights will be reviewed at least quarterly. This review will include verification of active users, access levels, and recent changes to permissions.

Audit Trails

Datapay has audit trails for all fields. Standard reports provide comprehensive ability to review changes. WRC can also create custom reports as needed.

Executive summary

Key observations - continued

Infor interface

Masterdata (except bank accounts) is maintained within the Human Resources (HR) system (Infor) and Datapay will update Infor for employee leave transactions. There is a change “freeze” period during the creation of the payrun.

Interface testing was being undertaken, which has resulted in discussions with HR to update some business processes.

Any exceptions from the interface are automatically emailed to the payroll manager. WRC need to monitor to ensure that the systems are in sync – as the interface was still being worked on at the time of this report, we have not confirmed the extent of the error checking. **(Recommendation 2)**.

Data Migration

Data migration processes were successfully completed with only minimal errors being identified during parallel test one.

Holiday Pay calculation risk assessment

WRC only have a few employees that have variable pay, so this reduces the risk.

Annual leave

From our assessment of the solution design document provided, the planned method for the calculation for annual leave payments is aligned with the relevant calculation process requirements in the Holidays Act 2003 (“the Act”).

Termination calculations for holiday pay where employees have no work pattern will be manual.

We note that Datapay’s default annual leave formula for annual leave paid after parental leave utilises the Act’s 52 week average rate. Most organisations choose to pay the higher of ordinary weekly earnings or the 52 week average rate, so that employees are not disadvantaged. **(Recommendation 3)**.

Holiday Pay risk assessment (continued)

Other leave

This is paid at either the Relevant Daily Pay (RDP) or Average Daily Pay (ADP). The planned method within the solution design document formulas align with the relevant calculation process requirements in the Act. We note that the solution document states that WRC would like to continue to pay ADP based upon the basic hourly rate. ADP has to be calculated in accordance with the Act (Clause 9A (2)), which is gross earnings for the last 52 weeks / number of whole or part days worked in last 52 weeks. **(Recommendation 4)**.

Gross Earnings

We have reviewed the Company Components Attribute Report that outlines what pay components are included in Holiday Earnings. We identified 8 out of 264 components for further clarification. Three of these items have been subsequently updated to be included as part of Holiday Earnings.

Holiday Act reform

We note that the Holidays Act is currently being revised with the bill due to go to select committee stage shortly. There will be a two year implementation period to allow for changes to payroll systems and processes.

Limitations

We have not undertaken any testing to confirm if the system is calculating Holiday pay correctly.

Executive summary

The most significant opportunities for improvement are to:

	Key recommendations	Management Comments (from the Financial Controller on 23 February 2026)
1	Document the payroll processes so that there is a clear understanding of the entire payroll process, including those processes outside of the system itself, and based upon the decisions made during the implementation.	A first draft of the end-to-end payroll process documentation (including processes outside the payroll system and reflecting implementation decisions) will be completed by 7 March 2026, with the final version issued by 31 March 2026.
2	Ensure that the Infor interface error checking is documented as part of the payroll processes and is sufficient to identify any differences between Infor and Datapay.	Daily checks of payroll-related information captured in the Updating Report are performed by the Payroll Manager. Any discrepancies identified between Infor and Datapay are investigated and referred to the Human Resources team as required. This control will be formally documented within the payroll process documentation, including reconciliation steps and escalation procedures.
3	Confirm that WRC want to use the average weekly earnings formula for the payment of annual leave following a period of parental leave .	Datapay has been configured to apply the appropriate calculation methodology in accordance with the Holidays Act 2003, including the use of average weekly earnings where required following a period of parental leave.
4	Update the ADP calculation methodology to align with the requirements of the Holidays Act 2003.	This will be confirmed with the Payroll manager and DataPay.

Appendix

PwC | Waikato Regional Council | Payroll system implementation internal audit

Appendix: Objective and scope (extract from LoE)

The objective of this engagement is to undertake an internal audit of the data migration plan and design effectiveness of key payroll controls during the new payroll system implementation ("project").

The data migration scope includes:

- Evaluating project documentation relating to the data migration strategy, and results of data migration trial runs
- Assessing how the data migration is being validated by the system implementation team (completeness and accuracy)
- Identifying any gaps in the data migration approach, and discussing these with the system implementation team.

The key payroll controls design effectiveness scope covers up to 9 controls (excluding data interfacing controls) and includes:

- Evaluating project documentation relating to the design of key controls
- Obtain an understanding of the key controls with the project team
- Assess the design of the key controls both from an overall process view (are the right controls in place to provide an effective overall control environment) and individual control view (configuration) including an assessment of segregation of duties.
- Payroll process areas in scope:
 - pay run processing
 - bank account master data
 - leave management processes
 - user system access levels
 - audit trail logging
 - data interfacing with the Infor CloudSuite Public Sector HR module (which provides employee master data and timesheet data)
- Holiday Pay calculation risk assessment.

WRC have indicated that they would want us to undertake operational effectiveness procedures over the payroll controls once the system has been implemented. We will discuss the scope of this work and issue a separate letter of engagement to cover this work.

This work will be undertaken during the implementation phase of the new payroll system (before it goes live in production). We will provide observations and recommendations where areas of improvement are identified.

We will perform our engagement in accordance with relevant ethical requirements of the Code of Ethics issued by the New Zealand Institute of Chartered Accountants, and appropriate quality control standards. All services will be rendered in good faith, by and under the supervision of qualified staff in accordance with the terms and conditions set forth in this letter, the Terms of Business. We will use reasonable skill and care in the provision of the services set out in this letter.

Limitations

We are not covering:

- Any controls that relate to the below areas with the exception of data interfacing controls directly related to the interfacing of the below data from Infor EPM to the new system:
 - timesheets being entered and/or approved in Infor EPM
 - employee master data changes in Infor EPM (outside of bank account changes)
 - incentive/bonus payment calculations.
- Compliance with New Zealand payroll legislation (our holiday pay assessment will check if the system is utilising the calculation processes specified in the Holidays Act 2003).

Our holiday pay calculation checks may not cover every calculation possible (considering all employment agreements, entitlements and work patterns) within an organisation.

Ngā mihi

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6.2 RISK MANAGEMENT ACTIVITY UPDATE

Rā Date:	17 February 2026
Kaituhi Author:	James Brennan, Strategic Risk Advisor
Kaituku Authoriser:	Janine Becker, Director, Customer and Corporate Services
Mana whakatau Delegation Status:	Committee has delegated authority to make the recommended decision

TE ARONGA | PURPOSE

1. To update the Risk and Assurance Committee on current and emerging risks and Waikato Regional Council's (WRC) risk management activities.

KŌRERO WHAKATAKI | EXECUTIVE SUMMARY

2. The Risk Management Activity report updates the Committee on the ongoing management of key risks which includes a summary of the deep dives undertaken this quarter as well as current and emerging risks.
3. Since the last Risk and Assurance Committee meeting, staff completed deep dives into four of the ten strategic risks:
 - (i) STRAT RISK 04 – People, Capacity, Capability and Culture
 - (ii) STRAT RISK 05 – Health and Safety
 - (iii) STRAT RISK 06 – Information Technology
 - (iv) STRAT RISK 09 – Climate Change
4. The report includes findings from these deep dives.
5. The efficacy of the controls for the four strategic risks was explored as part of the deep dives and have been assessed, with changes made where necessary

TAUNAKITANGA KAIMAHI | STAFF RECOMMENDATION:

That the report *Risk Management Activity Update* (Risk and Assurance Committee, 16 March 2026) be received.

HOROPAKI | BACKGROUND

6. An update on current and emerging risks facing the organisation is provided to set the scene for this report – reflecting feedback from the Executive Leadership Team.
7. Informing the identification of these risks are the discussions held through the Risk Forum – a group of senior staff from across the organisation who meet monthly to discuss emerging risks, as well as to participate in the risk deep dives that inform the risk ratings associated with Council's strategic risks.
8. Feedback from the Risk Forum is provided to the Executive Leadership Team (ELT) to ensure insights and feedback on the key areas of concern being voiced by the organisation are visible.

9. Since the last Committee meeting deep dives were conducted on four of Waikato Regional Council's (WRC) ten strategic risks. This report provides further details from these reviews, as well as a summary of the efficacy of the controls and mitigations.
10. Strategic risks and mitigation actions are monitored by staff and reported quarterly to the Risk and Assurance Committee.

CURRENT AND EMERGING RISKS

11. WRC's changing operating environment continues to generate volatility, uncertainty, complexity, and ambiguity. This shifting operating environment remains a significant driver of risk, requiring ongoing strategic monitoring and targeted communication.

Geopolitical and geoeconomic uncertainty

12. In January the World Economic Forum released its [Global Risk Report 2026](#). The report analyses global risks to support decision-makers in balancing current crises and longer-term priorities. The key findings from this report are: That multilateralism is in retreat; Economic Risks are intensifying; Technological risks are growing largely unchecked; Societal and political polarisation is intensifying pressures on democratic systems; Environmental concerns are being deprioritised; and Geoeconomic transformation is reshaping alliances and institutions impacting the resilience of markets.
13. The trends identified in the WEF Global Risk Report signal a more volatile external environment that will place increasing pressure on WRC's ability to plan, prioritise, and deliver over the coming years. Rising geopolitical and economic instability is likely to drive higher supply-chain and operating costs, intensifying inflationary pressures and challenging WRC's long term financial sustainability. Growing technological risk require accelerated investment in staff capability, systems assurance, and compliant technology use particularly in relation to the rapid expansion of AI, cyber threats, and data governance obligations. Increasing societal and political polarisation raises the risk of community resistance and reduced trust in public institutions, which could complicate engagement on sensitive issues such as climate, land use, or environmental issues. At the same time, the deprioritisation of environmental action heightens the strategic importance of WRC's role in regional resilience, emergency management, and long-term asset viability, particularly as climate impacts intensify.
14. Compounding these global trends is the recent escalation of conflict in the Middle East involving the United States and Israel against Iran, which has created additional external risks relevant to WRC. Disruption to shipping routes, particularly through the Strait of Hormuz, and the renewed instability affecting Red Sea shipping that had only recently begun recovering following the Gaza conflict. This has increased global uncertainty driving up fuel prices supply and shipping costs. As shipping companies choose to route around the Horn of Africa to avoid conflict zones, supply chain transit times are expected to lengthen and transport costs rise.
15. These pressures have immediate implications for WRC, particularly in relation to fuel requirements for flood pumps and field operations, and the transportation or procurement of specialist equipment from overseas. Over the longer term, these disruptions create broader inflationary pressure, including potential asset inflation and increased financial strain on ratepayers already managing cost of living challenges.
16. The geopolitical tensions also elevate the potential for increased technological and cyber risks, particularly if global cyber activity escalates in response to the conflict. Public

organisations may face increased exposure to cyber-attacks or malicious activity affecting data, systems, and service continuity.

17. Taken together, these emerging and interconnected global risks reinforce the need for disciplined prioritisation, robust business continuity arrangements, and ongoing enhancement of WRC's cyber, supply chain, and resilience planning.

New Zealand's economic outlook: Cautious optimism

18. Economists are expecting that the New Zealand economy should pick up in 2026, following a flat 2025. This is supported by renewed investment confidence, rising consumer confidence, stabilising inflation, and falling mortgage pressures while government infrastructure projects and resilient primary sector performance provide additional momentum. However, this cautious optimism could be derailed due to global uncertainty (as mentioned above), as well as domestic uncertainties such as the impending national election.

Ministry of Cities, Environment, Regions, and Transport

19. In December 2025, the government established a new Ministry of Cities, Environment, Regions, and Transport (MCERT). MCERT will bring together the Ministry for the Environment, the Ministry of Housing and Urban Development, the Ministry of Transport, and local government functions from the Department of Internal Affairs into one new agency.
20. For council and the local government sector, this shift signals both opportunity and disruption: councils can expect more integrated and coordinated policy direction, clearer accountability channels, and potentially simplified engagement on complex cross-cutting issues such as infrastructure funding, environmental planning, and transport integration. However, the transition to a consolidated ministry (scheduled to be fully operational by mid-2026) also brings uncertainty as roles, processes, and regulatory responsibilities are reshaped, with implications for long-term planning, compliance obligations, and how regional councils navigate central government reforms.

Legislative reform and uncertainty surrounding the future of regional councils

21. Legislative and regulatory compliance risks continue to escalate as the Government progresses the most significant local government reform programme in decades, creating substantial uncertainty about the future role, services, structure, and governance of regional councils. This reform environment heightens uncertainty for Council, particularly regarding implementation timeframes, cost implications, and associated legal, operational, and reputational risks. It should be noted that it is not only the outcomes of the reform, which will generate risk and uncertainty, but also the transitional period prior to reform packages being enacted.
22. The Government's Simplifying Local Government proposals—including the potential replacement of elected regional councillors with Combined Territories Boards and the introduction of a national rates cap—represent a fundamental restructuring of the sector and are currently under consultation. In parallel, resource management reform through the Natural Environment Bill and Planning Bill will reshape land use, environmental, and spatial planning functions, requiring Council to transition to new regulatory and operational frameworks while maintaining continuity of service delivery.

23. Council supports the intention to simplify and modernise the resource management system but has emphasised in its submission the need for a practical, workable transition that preserves investment to date and delivers enduring benefits for communities. Similarly, in responding to the Simplifying Local Government proposals, Council has highlighted the critical considerations that must guide reform: maintaining levels of service, ensuring coherence across concurrent reforms, securing sufficient central government resourcing, upholding Treaty settlement obligations and iwi/Māori participation, respecting catchment-based governance arrangements, protecting the integrity of regional transport planning, providing sufficient time resource and support from central government through the transition period, and clarifying the role and mandate of any Combined Territories Board.
24. WRC's submission on the proposed Rates Target Model recognises the need for reform but raises significant concerns about the feasibility of rates capping unless key design and implementation issues are addressed. A key issue raised is the continued ability to meet community-agreed levels of service provision (those agreed via a statutory process) within the parameters defined in the proposal. In addition, the proposed new Emergency Management Bill—while aimed at strengthening national resilience—introduces further compliance and operational demands at a time when system-wide staffing and capacity constraints are already evident.
25. Collectively, these overlapping reforms substantially elevate Council's legislative compliance burden and contribute to a heightened level of strategic uncertainty for the organisation.

General Election 2027

26. The upcoming New Zealand general election, to be held on 7 November 2026, introduces an additional layer of uncertainty for Council, as potential shifts in government priorities, regulatory settings, and sector reforms may significantly influence the Council's operating environment. The House will rise on 24 September 2026, providing a constrained window of less than 8 months for the government to achieve all it has signalled. Changes in policy direction particularly relating to local government reform, environmental regulation, emergency management, and funding frameworks could alter strategic expectations, resource requirements, and long-term planning assumptions.

Technology and Artificial Intelligence risks

27. Information and technology-related risks are evolving rapidly as Council manages increasing data volumes, inconsistent information practices, and the accelerated adoption of AI across the organisation. These factors are amplifying privacy, compliance, and cyber security exposures, particularly where low process maturity and variable data quality create vulnerabilities in how information is collected, stored, and used.
28. AI adoption introduces a further set of emerging risks. While organisational appetite for AI is high, inconsistent, or unsafe use creates significant risk of privacy breaches, misuse of personal information, and weak compliance with public record obligations. More broadly, AI presents environmental risks associated with increased energy and water demand from data centres, governance, and ethical risks such as bias, copyright issues, and "AI hallucinations".
29. The recent deep dive into STRAT RISK 06 - Information Technology confirms that while council's existing controls remain generally effective, a significant uplift is required in data governance, safe AI frameworks, cyber security resilience, and organisation-wide capability. Strengthening governance over data ownership, storage, lifecycle management, and the development of clear policies and training for AI use will be essential to safely harness

emerging technologies and reduce associated exposures. Further detail on these mitigations is provided in the Deep Dive section.

Climate-related risk – escalating weather events and response capacity

30. The January 2026 rain event underscored the growing severity and frequency of climate-driven hazards, with record single-day totals and widespread flooding and landslides across the upper North Island. For councils, this reinforces the urgent need to plan for more frequent high-impact rain events, growing exposure to landslides and flooding, and compounding recovery demands as climate-driven hazards become more severe and less predictable.
31. This intensifies Strategic Risk 01 - Emergency Management exposure as capacity to address both response as well as service continuity becomes stretched over prolonged periods.

Organisational change

32. Waikato Regional Council continues to operate within a period of significant uncertainty, driven by economic pressures, ongoing central government reforms, and rapid legislative change. At the same time, internal reviews and restructuring are impacting short-term capacity and influencing workload distribution across directorates.
33. The organisation is still embedding several structural changes arising from reviews completed last year, including within Integrated Catchment Management and Regional Transport Connections. Staff sentiment through the most recent PULSE survey (November 2025) illustrates the impact that these changes have had on engagement, confidence, and overall organisational sentiment. If not closely monitored, this may elevate people-related, cultural, and performance risks.
34. These risks, and their broader implications for strategic workforce planning and organisational capability, are further explored in the Deep Dive into STRAT RISK 04 – People, Capability, Capacity and Culture.

Deep dives into strategic risks

35. Deep dives were conducted on four of the ten strategic risks since the last RAC meeting:
 - (a) STRAT RISK 04 – People, Capacity, Capability and Culture.
 - (b) STRAT RISK 05 – Health and Safety.
 - (c) STRAT RISK 06 – Information Technology; and
 - (d) STRAT RISK 09 – Climate Change.
36. Details from the deep dives conducted can be found in the report below.
37. *STRAT RISK 04 – People, Capacity, Capability and Culture*
 - (a) The risk description is:

There is a risk that Waikato Regional Council does not enable a constructive organisational culture that may result in poor staff attraction, retention, engagement, and performance. This will in turn mean that we are not able to deliver on our strategic priorities and goals as we will not have the capacity, skillset, or relationships to effectively engage with communities, iwi partners and our key stakeholders.

- (b) No change in risk rating is proposed since the last report.
- (c) *Waikato Regional Council's People Strategy 2025–2029* sets an ambitious, future-focused direction for managing people, capability, and culture risks. The increasing complexity and breadth of the work envisaged through the People Strategy needs to be balanced with ongoing business-as-usual demands to ensure that efforts are carefully prioritised.
- (d) Key Changes and Messages for Risk and Assurance Committee Reporting:
 - (i) People Strategy finalised: He Manawa Tangata | The People Strategy 2025–2029 is now guiding all risk treatment and operational planning for people, capability, and culture.
 - (ii) Strategic Alignment: The People and Capability Operational Plan for 2025/26 sets out ambitious actions aligned to the People Strategy's five strategic focus areas:
 - (1) Being an employer of choice
 - (2) Setting people up for success
 - (3) Investing in a culture of performance
 - (4) Prioritising health, safety, and wellbeing
 - (5) Being future ready.
 - (iii) New and enhanced initiatives: Major initiatives underway include a comprehensive recruitment review, onboarding review, and ongoing development of KPIs and benchmarks to monitor progress and effectiveness across the employee lifecycle.
 - (iv) Programme reviews: The Leadership Development Programme and employee engagement measures are under review, with potential for a refreshed approach to defining and measuring organisational culture (key-stone elements of our culture programme).
 - (v) Change capability: The Navigating Change programme has been rolled out for people leaders (over 80 per cent attendance), with individual contributor training piloting and full rollout planned for early 2026.
 - (vi) Performance Management: The P&C team has prioritised addressing legacy performance management gaps through direct support to managers. A 2026 initiative will strengthen managers' capability in core performance and employment relations practices.
 - (vii) Employee experience measures: The Pulse Survey and broader employee experience measures are under review, with a focus on improving visibility and follow-through on committed actions.
 - (viii) Health, Safety and Wellbeing: Integration of the Health and Safety Strategy and development of a psychosocial risk management standard are underway, supporting a healthy and effective workforce. Initiatives include upskilling programmes, enhanced reporting systems, and recognition of health and safety excellence. Collaborative partnerships and policy updates are being pursued to reflect the changing nature of work and improve workplace culture. Technology-enabled solutions and targeted communications are being leveraged to inspire and engage staff in achieving better health, safety, and wellbeing outcomes.

- (ix) Continuous improvement: Ongoing BAU initiatives include reviewing and optimising People and Capability systems, reporting improvements, remuneration policy review, summer intern programme expansion, and implementation of He Whare Taumatua actions.
 - (x) Risk effectiveness: Existing controls remain generally effective, with turnover rates below benchmark. Niche recruitment and onboarding for new recruits requires further attention (hence reviews underway).
 - (xi) Strategic advantage: The People Strategy and operational plan provide a robust framework for proactively managing emerging risks and turning them into strategic advantage, particularly through workforce capability, cultural responsiveness, and strengthened partnerships with iwi and communities.
 - (xii) Resource challenges: A key challenge is balancing strategic improvement initiatives with ongoing BAU demands. Prioritisation and resource planning are ongoing.
 - (xiii) Monitoring and reporting: Risk is monitored and reported through regular metrics, surveys, and feedback mechanisms, with a commitment to continuous improvement and alignment with organisational goals.
 - (e) The existing controls have been updated within the Risk Register (see Attachment 4) to reflect the above changes.
38. *STRAT RISK 05 – Health and Safety*
- (a) The risk description is:

‘There is a risk that Waikato Regional Council does not provide a safe and healthy work environment for workers, visitors and people affected by our work with the results that workers may be harmed.’
 - (b) No change in risk rating is proposed since the last report.
 - (c) Ongoing organisational improvements to critical and common risk management, and increased focus on management of psychosocial safety, has strengthened our health and safety performance. With the ISO 45001 aligned Health and Safety Management System (HSMS) now in place for one year, we have a stronger structure and clearer processes to support these improvements. As a result, and in line with increasing administrative, assurance, and legislative requirements, there is a greater expectation on managers and their teams to actively participate in continuous improvement activities. Their engagement is essential to achieving our strategic health and safety goals within the People and Capability ‘People Strategy’ 2025-2029, and in sustaining a proactive, high-performing safety culture.
 - (d) To ensure Waikato Regional Council meets its Health and Safety obligations, the organisation continues to ensure it has access to appropriate Health and Safety expertise, including specialist support when required. Since the last Deep Dive into STRAT RISK 05 – Health and Safety, WRC has completed a SafePlus Assessment. SafePlus is a government-endorsed framework that defines what ‘good’ health and safety looks like. It supports organisations to understand their current practices, drive continuous improvement, and strengthen a culture of shared responsibility and proactive engagement in health and safety.

- (e) By identifying areas of strong performance and opportunities for improvement, SafePlus delivers evidence-based recommendations that align with HSMS elements such as risk management, worker engagement, leadership, assurance, and continuous improvement. This enables council to prioritise actions, embed consistent practices across the organisation, and enhance overall system maturity. The assessment also reinforces a culture of shared responsibility and proactive engagement, supporting the HSMS objective of integrating health and safety into day-to-day operations and decision-making.
- (f) The assessment was conducted in June 2025, with insights gathered through site visits to 160 Ward Street, Hamilton and the Northgate Depot, and engagement with a broad cross-section of staff. This included the Chief Executive, Executive Leadership Team members from multiple directorates, the Executive Manager People and Capability, Health and Safety Manager, business partners, and employee focus groups.
- (g) The organisation achieved a 'developing' rating in the SafePlus Assessment, reflecting growing maturity in health and safety practices. Strengths include strong worker engagement, transparent communication, and a culture of trust and fairness. Senior leaders effectively communicate strategic direction, respond to incidents constructively, and foster a just culture. Key improvement areas include strengthening risk management, clarifying roles and responsibilities, and enhancing the assurance programme and reporting of outcomes.
- (h) Council's progress on implementing the recommendations can be found in the Internal Audit Activity Update.

Controls Effectiveness

- (i) Council continues to effectively mitigate the risk of not providing a safe and healthy work environment by maintaining a strong focus on managing, reviewing, and improving its health and safety risks, systems, frameworks, policies, education, and governance and assurance activities. This ongoing commitment supports the wellbeing of workers, visitors and others affected by our work, and helps ensure that harm is minimised.
- (j) Staff regularly complete reviews into the critical health and safety risks. The Health and Safety team ensure that directorates identify, monitor and review their health and safety risks through directorate risk registers.
- (k) In November 2025, WRC reviewed its Health, Safety and Wellbeing Policy to ensure alignment with the organisation's strategic direction. The revised policy adopts a broader scope by integrating wellbeing, sustainability, and psychosocial risk management, and reflects a strengthened to continuous improvement. The final Health, Safety and Wellbeing Policy was signed by the Chief Executive and Council Chair, and is now displayed at the Ward Street office, regional offices, and on the WRC website.

39. STRAT RISK 06 – Information Technology

- (a) The risk description is:

There is a risk that Waikato Regional Council does not innovate and invest enough in information and technology capabilities and solutions. This may compromise our ability to deliver our services, conduct our business activities, and lead to further impacts to our ability to support our communities in times of crises.

- (b) No change in risk rating is proposed since the last report.
- (c) The deep dive for this risk has been completed and found that:
 - (i) WRC is facing increasing expectations around the use and adoption of AI, and without the necessary guidelines and policies the risks increase. The new AI policy is the key mitigation to this alongside ensuring the user's technological skills are supported through adequate education.
 - (ii) AI is also increasing the risk related to cyber-attacks as these technology advances support cyber-attack capabilities. AI risks will evolve as the technology behind it increases.
 - (iii) Poor data quality and low process management maturity will also increase the risks associated with artificial intelligence.
 - (iv) Council is continuing to consolidate its IT capabilities around a core set of enterprise class set of technologies.
 - (v) WRC is seeing increasing risks relating to and stemming from data ownership and storage especially as the volume of the data and information council holds, grows.
- (d) The IS Strategic Direction and Guiding Principles provide the mitigation for the information and technology strategic risk. The existing controls have been updated within the Risk Register (see Attachment 6) to reflect this. The Deep Dive also raised questions about the naming of this risk. Given the breadth and volume of information held by WRC, and its separation from traditional IT systems, it may be more appropriate to refer to this risk as 'Information and Technology'. This nuance should be considered as Council progresses its strategic risk refresh.

40. STRAT RISK 09 – Climate Change

- (a) The risk description is

There is a risk that Waikato Regional Council does not appropriately consider the impact of climate change in its planning and decision-making processes for infrastructure, organisational business, policies and service delivery, that may result in long term financial and social costs for communities, iwi partners and stakeholders. This can lead to legislative impacts as well as reputational impacts which can impact our social license to operate.
- (b) No change in risk rating is proposed since the last report.
- (c) There is ongoing concern that constant legislative change creates significant difficulty in implementing effective climate change responses. Climate mitigation requires consistent policy over decades to drive systemic changes in energy, industry, transport, and infrastructure.
- (d) There is ongoing concern that misinformation and disinformation around climate change could create a divide between WRC and some of its communities. Staff work with the Communications and Marketing team to ensure messaging is accurate and consistent across collateral developed to support adaptation and resilience planning engagement activities as well as on council's website and social media channels.
- (e) The new Regional Growth and Resilience Committee has a particular focus on adaptation planning which will support the development of the resilience strategy

incorporating the recently released national adaptation guidelines to enable consideration of impacts of natural hazards in WRC's future planning and decision-making.

Controls Effectiveness

- (f) Council is effective in its ability to mitigate its risk of not appropriately considering the impact of climate change in its planning and decision-making processes for infrastructure, organisational business, policies, and service delivery.
- (g) Climate considerations are integrated and inform cross-council actions. This work is supported by the following standing committees of Council:
 - (i) Regional Growth and Resilience Committee – oversees regional economic development and resilience issues including community adaptation planning, water and energy security.
 - (ii) Transport committees are responsible for decarbonising transport systems.
 - (iii) Risk and Assurance Committee – oversees the governance of WRC's strategic risks (including climate change).
 - (iv) Strategy and Policy Committee - oversees resource management policies and plan (including water allocation).
 - (v) Integrated Catchment Management Committee - oversees regional resilience, biodiversity/biosecurity, and drainage.
 - (vi) Joint Management Committees - established as part of Joint Management Agreements (JMAs) between the Waikato Regional Council and community partners and iwi.
- (h) There are a number of strategic initiatives and collaborations such as:
 - (i) Continued internal and external collaborations (e.g., Upper North Island Strategic Alliance (UNISA), Aotearoa Council Climate Change network, Aotearoa Climate Adaptation network (ACAN) and Taituara).
 - (ii) Other strategy controls consist of; Climate Action Roadmap Advisory Group (CARAG), continued use of the Waikato Regional Climate Action Roadmap, the release of Regional Climate Change Adaptation Guidelines, Integrated Catchment Management (ICM) Regional Resilience and Asset Management initiatives, (e.g., Infrastructure Strategy, Regional Hazards Forums).
- (i) The existing controls have been updated within the Risk Register (see Attachment 9) to reflect the change in Committee structures and responsibilities.

Strategic risk summary

Risk ID / Title	Risk Description	Risk Appetite	Risk Owner	Residual Risk Ranking
STRAT 01 Emergency Response	There is a risk that Waikato Regional Council is unable to effectively respond to a critical event or situation due to staff not being adequately trained, operational systems not being fit for	Low	Greg Ryan	High (12)

	purpose or decision making not being as informed by the most recent and relevant data. Ultimately this could lead to a range of consequences including loss of life, damage to property and critical infrastructure.			
STRAT 02 Legislative Compliance	There is a risk that Waikato Regional Council does not remain compliant with local, regional and national law and regulation, that may result in a breach, damage to reputation and potential financial penalties and/or civil and criminal liability. Legislative compliance is not a static area, and therefore the council must keep pace with the changing regulatory environment to ensure that the organisation is positioned to adapt to new and emerging changes in regulation.	Low	Janine Becker	Medium (6)
STRAT 03 Relationships	There is a risk that Waikato Regional Council does not effectively manage relationships with its communities and key stakeholders that may affect their trust and confidence in our ability to deliver on our services and commitments.	Medium	Mali Ahipene (iwi) Karen Bennett (Strategic)	High (12)
STRAT 04 People, Capacity, Capability and Culture	There is a risk that Waikato Regional Council does not enable a constructive organisational culture that may result in poor staff attraction, retention, engagement, and performance. This will in turn mean that we are not able to deliver on our strategic priorities and goals as we will not have the capacity, skillset, or relationships to effectively engage with communities, iwi partners and our key stakeholders.	Low	Stuart Brown	Medium (9)
STRAT 05 Health and Safety	There is a risk that Waikato Regional Council does not provide a safe and healthy work environment for workers, visitors and people affected by our work with the results that workers may be harmed.	Low	Stuart Brown	Medium (9)

<p>STRAT 06 Information Technology</p>	<p>There is a risk that Waikato Regional Council does not innovate and invest enough in information and technology capabilities and solutions. This may compromise our ability to deliver our services, conduct our business activities, and lead to further impacts to our ability to support our communities in times of crises.</p>	<p>Medium</p>	<p>John Crane</p>	<p>High (12) →</p>
<p>STRAT 07 Financial Sustainability</p>	<p>There is a risk that WRC is unable to plan, attract and effectively allocate sufficient funding to deliver on its strategic objectives. This can then lead to failing to achieve social outcomes for our communities, effectively forecast for organisational growth as well as maintain and build new infrastructure that will support the longevity of the council through times of economic and environmental change.</p>	<p>Medium</p>	<p>Janine Becker</p>	<p>Medium (9) →</p>
<p>STRAT 08 Fraud</p>	<p>There is a risk that Waikato Regional Council does not mitigate exposure to fraudulent activity that may result in financial loss or national negative multi-media coverage requiring significant additional work to repair stakeholder confidence.</p>	<p>Low</p>	<p>Janine Becker</p>	<p>Medium (6) →</p>
<p>STRAT 09 Climate Change</p>	<p>There is a risk that Waikato Regional Council does not appropriately consider the impact of climate change in its planning and decision making processes for infrastructure, organisational business, policies and service delivery, that may result in long term financial and social costs for communities, iwi partners and stakeholders. This can lead to legislative impacts as well as reputational impacts which can impact our social license to operate.</p>	<p>Medium</p>	<p>Karen Bennett</p>	<p>High (12) →</p>

<p>STRAT 10</p> <p>Giving Effect to Te Tiriti o Waitangi</p>	<p>There is a risk that the Council does not give effect to Te Tiriti o Waitangi, its principles (partnership, participation, and protection), and associated legislative obligations, which therefore fails to build and sustain partnerships with Iwi/Mana Whenua. This includes the risk that WRC does not adequately develop its capability and capacity to collaborate with Mana Whenua and Iwi. With The failure to do so means meaning that Council will not meet its legislative and statutory obligations, or develop the ability to operate and deliver key projects with Iwi and Mana Whenua organisations.</p>	<p>Medium</p>	<p>Mali Ahipene</p>	<p>Medium (8)</p> <p>➔</p>
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Table 1: Risk ranking evaluation matrix

Consequence →	Immaterial (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Likelihood ↓					
Rare (1)	1 Low	2 Low	3 Low	4 Medium	5 Medium
Unlikely (2)	2 Low	4 Medium	6 Medium	8 Medium	10 High
Possible (3)	3 Low	6 Medium	9 Medium	12 High	15 High
Likely (4)	4 Medium	8 Medium	12 High	16 High	20 Critical
Almost Certain (5)	5 Medium	10 High	15 High	20 Critical	25 Critical

Indicator	Description
➔	No change to residual risk ranking.
⬆	Residual risk ranking has increased.
⬇	Residual risk ranking has decreased.

WHAKAKAPINGA | CONCLUSION

41. This report updates the Risk and Assurance Committee on council’s risk management activities.

ĀPITIHANGA | ATTACHMENTS

1. **Strategic Risk 01 - Emergency Response - Risk Register (#32875320)**
2. **Strategic Risk 02 - Legal Compliance - Risk Register (#32876512)**
3. **Strategic Risk 03 - Relationships - Risk Register (#328706096)**
4. **Strategic Risk 04 - People, Capacity, Capability, and Culture - Risk Register (#32877115)**
5. **Strategic Risk 05 - Health and Safety - Risk Register (#32876229)**
6. **Strategic Risk 06 - Information Technology - Risk Register (#32878401)**
7. **Strategic Risk 07 - Financial Sustainability - Risk Register (#32876233)**
8. **Strategic Risk 08 - Fraud - Risk Register (#32877701)**
9. **Strategic Risk 09 - Climate Change - Risk Register (#32878109)**
10. **Strategic Risk 10 - Giving Effect to Te Tiriti o Waitangi - Risk Register (#32922956)**



Te Pae Tawhiti Strategic Direction

2026-2036



Tuia te rangi e tū nei, tuia te papa e takoto nei, tuia ki te pou herenga tangata, te pou herenga waka.

E tangi ana te ngākau i te hunga kua rere ki te kōpunitanga o te wāhi ngaro i ngā tau kua taha, tae ake ki ngā raukura kōtuku whai mana o te rohe.

I te tau 2022, koia ko te Tumuaki, a Anaru Tāmihana i tangihia nuitia e tōna iwi. I te tau 2024, ka waipuketia te marae o Tūrangawaewae e ngā roimata o te motu mō Kiingi Tuheitia Pootatau Te Wherowhero VII. I tērā tau, ka tanuku te tihi o Tongariro i te rironga o Tā Tumu Te Heuheu Tūkino VIII. Nō reira, haere koutou. Haere ki te pūtahi nui o Rehua, ki te huihuinga o te kahurangi, ki te iwi kua whetūrangitia, okioki atu ai. Na, e kī ana te kōrero - mate atu he tētēkura, ara mai rā he tētēkura. Nō reira, kei te Tumuaki hōu, kei te poutokomanawa hōu o te Whare o Te Heuheu, tatū ki te Arikiniui Kuini Nga wai hono i te po, koutou kua eke ki ngā tūranga i mahue mai i ō koutou mātua, i ō koutou tūpuna, tēnei ka mihi atu, tēnei ka mihi atu.

E ngā maunga whakahī, e ngā awa tuku kiri, e ngā hapori, puta noa i te rohe o Waikato, tēnā koutou katoa.

Kei te whakatakotoria i tēnei ahunga pae tawhiti ngā aronga mō te huarahi te haere mai nei — hei whakakotahi i a tātou:

- kia hikina te whai hua me te whai rawa
- kia tiakina ngā rawa taiao
- kia takatū tātou ki ngā huringa o te wā.

Nō reira, e te rohe, tēnā koutou, tēnā koutou, tēnā tātou katoa.

Let us come together.

We mourn those who have passed away in recent years, including respected leaders who held significant roles in this region.

In 2022, we mourned the passing of the Arikiniui o Ngāti Hauā, Te Tumuaki, Anaru Tāmihana. In 2024, the nation grieved the death of King Tuheitia Pootatau Te Wherowhero VII. In 2025, Tā Tumu Te Heuheu Tūkino VIII, a highly respected leader and guardian of Tongariro and its people, passed. We acknowledge their service and contribution, and we recognise those who have stepped into leadership roles following them, including the Queen, Nga wai hono i te po, and others who now carry these responsibilities.

We also acknowledge all who are indivisible from the Waikato region itself — its mountains, rivers and communities.

This 10-year direction sets a clear course for the future. It is intended to bring us together around shared priorities, so that by working in a coordinated way we can:

- lift productivity and prosperity
- safeguard natural resources
- adapt to economic and legislative changes.

We acknowledge all who make this region what it is.



Rārangi kaupapa

Contents

E takatū ai te kaunihera, te rohe Shaping our council, our region	4
Matawhānui Vision	5
Aronga Purpose	5
Ngā uara Values	5
Waikato trends and opportunities	6
Ngā aronga nui Our priorities	8
Tracking our progress	8
Te whakarite mō āpōpō Future-fit organisation	9
Ka tōnui, ka taurikura te rohe Productivity and prosperity	10
Kia manawaroa ake te rohe Building regional resilience	11
E toitū ai ngā rawa taiao Sustaining natural resources	12
Pūnaha waka tītike Optimised transport system	14

E takatū ai te kaunihera, te rohe **Shaping our council, our region**

The decade ahead will be one of profound transformation. Geopolitical uncertainty, shifts in global systems, new technologies, climate impacts, resource pressures, the cost of living burden and social fragmentation are creating a complex set of challenges. To respond, we need to address today's economic pressures while also planning for a more resilient, prosperous and equitable future for the Waikato region.

We need a strong economy underpinned by a healthy environment.

This strategy sets a clear direction for the next decade with a focus on delivery for the period 2026-2029.

As regional council governance enters a period of major reform, our role is twofold: provide stability and continuity for our people and communities today and prepare our organisation to successfully transition – essentially 'lift and shift' – into whatever future emerges. This requires a commitment to being a future-fit and high-performing organisation – one that makes evidence-based, technology-enabled decisions that are informed by the experiences, aspirations and preferences of the people and communities we serve.

Our overarching ambition is to help lift the region's productivity and prosperity by managing our natural resources sustainably. Achieving this requires us to be clear about the council's role in shaping the conditions for long term, sustainable regional growth. Decisions must be based on strong evidence and insights that enable leaders – across the sector, our communities, iwi partners and central government – to transparently balance environmental, social and economic considerations.



This matters because the Waikato region plays a pivotal role in New Zealand’s economy and resilience. Yet the pressures on the region are intensifying. Extreme weather events increasingly threaten communities, critical infrastructure and primary production. Most productive land is already in use, and pressures on streams, rivers, lakes and wetlands continue to grow. Invasive species further threaten environmental and human health.

These challenges are interconnected, complex and transcend local boundaries, requiring coordinated, practical and affordable catchment-scale solutions. This is where we hold deep and distinctive expertise. Over 36 years, we have operated at scale, carrying out environmental regulation, natural hazard identification, flood management, biosecurity management, transport planning, navigation safety and emergency management, as well as gathering, analysing and interpreting the data and science that underpin all these activities. Alongside this mahi, we have developed long-standing partnerships with iwi.

These capabilities are at the heart of what makes the Waikato region productive, resilient and prosperous, and will continue to be essential regardless of future governance arrangements.

Government reforms will reshape how regions deliver services and how they are governed. Being part of the conversation is critical. With our experience delivering services at scale, we are well positioned to help get the future model right for Waikato communities.



Matawhānui **Vision**

Waikato: Empowered people shaping a healthy, prosperous place for generations to come.

Aronga **Purpose**

Working together for a Waikato region that has a healthy environment, vibrant communities and strong economy.

Ngā uara **Values**

Kia tika ▲ **Responsible**


Our people model the highest standards of personal and professional behaviour in all job-related activities.

Kia tau ▲ **Respectful**

Showing others respect is the basis of all our behaviour.

Kia toa ▲ **Effective**

We always aim to give the best we can.

 [Read more about our values on our website](#)

A diverse economy spanning agriculture, advanced manufacturing, technology, renewable energy, aquaculture, tourism, healthcare and forestry.

The region's strengths are further supported by a growing Māori economy and the longstanding cultural regional leadership of the Kīngitanga.

Māori asset base
\$21.51b
 in the Waikato
↑ 88%
 from 2018
 to 2023

Waikato's contribution to farming, food and forestry GDP



Waikato trends and opportunities

To inform the development of this strategic direction, the council commissioned an analysis of political, economic, social, technological, legal and environmental trends and their implications for the governance of the Waikato region. Drawing on feedback from community leaders and subject matter experts, we identified the following key opportunities for this strategic direction:

- Accelerate environmental sustainability and energy resilience through optimising land use, restoring natural systems, partnering with iwi, incentivising environmental improvements, and scaling catchment initiatives.
- Build a resilient Waikato community and economy able to adapt to global shocks, climate change and technological disruption, transition to a low-emissions circular economy, and foster innovation and entrepreneurship.
- Strengthen community engagement by listening to local aspirations, building civic trust, countering misinformation, clarifying decision-making roles, and promoting the Waikato identity internationally.
- Support a technology-enabled region by leveraging primary industry strengths, advancing bioeconomy, agritech and applied technology, improving data use, strengthening sector collaboration, showcasing technology exemplars and promoting digital inclusion.

[View the full Waikato Region Trends and Opportunities report on our website](#)

Leader in electricity production

Thermal
1,379MW

Geothermal
1,074MW

Wind
64MW

Hydro
1,531.5MW

37%
of NZ's
electricity
capacity

More than any other single region

Flood infrastructure

Valued at
\$1.1 billion

Protecting land that contributes
\$2.5 billion to regional GDP

Critical national transport, freight and logistics corridor

40% of NZ's freight movements



Critical producer of aggregates

Supplying a large proportion of material that supports economic growth in both the Waikato and Auckland regions

Waikato
15.2 tonnes
per person



NZ wide
7.1 tonnes
per person

Significant mineral producing area

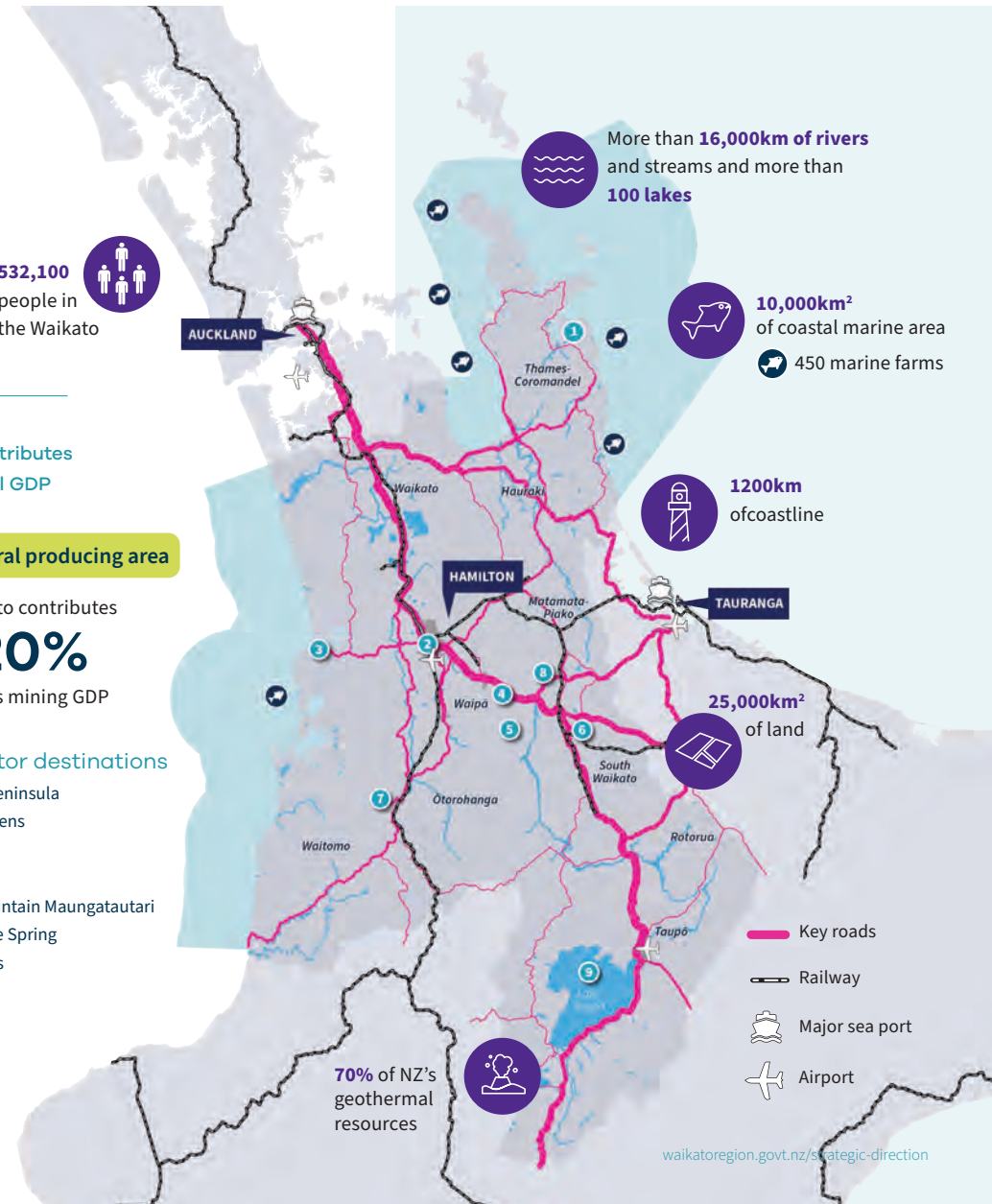
Waikato contributes
~20%
of NZ's mining GDP

Popular visitor destinations

1. Coromandel Peninsula
2. Hamilton Gardens
3. Raglan
4. Karāpiro
5. Sanctuary Mountain Maungatautari
6. Te Waihou Blue Spring
7. Waitomo Caves
8. Hobbiton
9. Lake Taupō

Note

- Gross domestic product (GDP) and population data are for 2025, sourced from Infometrics and Stats NZ.
- Aggregate production is for 2023, sourced from the Aggregate & Quarry Association Fact Files.
- Māori asset base insights sourced from Business and Economic Research Limited (BERL).



Ngā aronga nui

Our priorities

At the core of this strategy is a commitment to being a future-fit and high-performing organisation – one that makes evidence-based, technology-enabled decisions that are informed by the experiences, aspirations and preferences of the people and communities we serve.

Te whakarite mō āpōpō

Future-fit organisation

Building value and thriving through uncertainty to successfully transition into any future state.

Ka tōnui, ka taurikura te rohe

Productivity and prosperity

Enable and promote a productive region that delivers shared prosperity, profitability and security.

Kia manawaroa ake te rohe

Building regional resilience

Support communities to understand natural hazard risks, take action to reduce them, and respond to and recover from disasters and change.

E toitū ai ngā rawa taiao

Sustaining natural resources

Accelerate action to protect and restore the natural resources that make the Waikato nationally significant – our soils, water bodies, native plants and animals, geothermal areas, forests and coastal habitats.

Pūnaha waka tītike

Optimised transport system

Maintain an integrated, safe and efficient transport system to improve mobility and equity, reduce emissions and support regional productivity.

Tracking our progress

Each priority has progress measures for the 2026-2029 period, which are assigned to one of seven groups of activities. You can [track the detailed plans and actions](#) on our website and in our annual reports.



Customer, community and services



Flood protection and control works



Integrated catchment management



Regional hazards and emergency response



Regional transport connections



Resource use



Science, policy and information

Te whakarite mō āpōpō Future-fit organisation






Building value and thriving through uncertainty to successfully transition into any future state.

To be future fit, we need to be in the best shape possible to 'lift and shift' essential regional services into whatever future local governance structures best serve the needs of the Waikato's diverse communities. We also need to ensure we are active participants in designing the future of local government.



Outcome

Our organisation, and the region, is change ready.

Our approach	Progress measures	Groups of activities
Actively share our expertise in coordinating and delivering regional and catchment-scale solutions and services to help work up options for reform, including alternative structures and governance mechanisms.	Regional councillors participate in forums and discussions, helping shape future legislative and governance frameworks.	
	Options for catchment-scale governance are developed and consulted on.	 
Continue to increase operational efficiency by championing opportunities for shared services, alternative revenue streams and digital services.	Benefits of the organisational performance strategy and measurement framework are realised as set out in the benefits realisation plan.	
Equip our people to build community trust, foster engagement, and embrace technology for greater productivity and innovation.	Achieve the actions set out in <i>He Manawa Tangata Our People Strategy 2025-2029</i> .	

Ka tōnui, ka taurikura te rohe

Productivity and prosperity


Enable and promote a productive region that delivers shared prosperity, profitability and security.

With its strong foundation of export-focused primary industries, strategic position connecting Auckland, Hamilton and Tauranga, a growing Māori economy and strengths in education, technology and high-value manufacturing, this region is well-positioned for long-term success. A regional spatial plan and economic development strategy will be key to coordinating different policies and activities, helping spread economic growth more evenly and supporting the region's productivity and overall prosperity.



Outcome

The Waikato is recognised as a leading region for integrated spatial planning where well-coordinated decisions ensure the responsible use, development and protection of our natural and built resources.

Our approach	Progress measures	Groups of activities
Participate in the development of a spatial plan that aligns land use, infrastructure, environmental and cultural aspirations, and more.	Data and information shared with the Joint Regional Spatial Planning Committee.	

Outcome

An agreed direction for the regional economy to enable better decision making and efficient allocation of resources.

Our approach	Progress measures	Groups of activities
Adopt and promote a regional economic development strategy.	The economic development strategy, accord and initiatives are agreed and implemented by the end of June 2026. Level of adoption of the economic development strategy by key stakeholders and sectors. Information and insights on the regional economy are provided regularly.	 
Adopt and promote an energy strategy in collaboration with industry that champions a resilient, affordable and sustainable energy system for the Waikato.	A region-wide energy forum is established and functioning by the end of December 2026 with active participation from iwi, councils, industry and energy stakeholders. Level of adoption of the energy strategy by key sectors and communities. Energy objectives, land use considerations and infrastructure pathways identified in the energy strategy are integrated into the region's developing spatial plan.	

Kia manawaroa ake te rohe Building regional resilience


Support communities to understand natural hazard risks, take action to reduce them, and respond to and recover from disasters and change.

Extreme weather and natural hazards such as floods pose growing risks to lives, livelihoods and critical infrastructure. Strengthening resilience is essential to reduce vulnerability and protect our communities and economy. While our flood infrastructure plays a critical role in protecting communities from risks, it must be accompanied by efforts to accommodate, avoid or minimise vulnerabilities.






Outcome

Communities are less vulnerable and exposed to natural hazards.

Our approach	Progress measures	Groups of activities
Ongoing engagement with iwi, communities, central government and territorial authorities to understand natural hazard risks, including how these are increasing with climate change, and to identify priority areas for adaptation planning and risk reduction.	The framework and plan for resilience to natural hazard risk meets adaptation legislation and helps inform the region's developing spatial plan. The impact of future climate risk is consistently incorporated into natural hazard risk management plans and decisions.	

Outcome

Flood impacts are reduced within agreed service levels for communities, and our flood infrastructure and drainage network is enduring and affordable for ratepayers.

Our approach	Progress measures	Groups of activities
Invest in, plan for and maintain a flood infrastructure and drainage network that is future proofed and financially sustainable throughout its lifecycle.	Implement recommendations relating to the Office of the Auditor-General's mitigating flood risk report, specifically: <ul style="list-style-type: none"> Understand the current and future flood risk for a range of different flooding scenarios, including the projected impact of climate change. Understand and maintain the current performance of flood protection infrastructure, including to understand the costs involved in achieving different options for intended levels of service. Improve engagement with the public to ensure communities understand both flood risk and the extent of flood protection. 	
Develop a transparent, equitable and sustainable funding policy for flood management and drainage services.	By the end of June 2029, the review of funding for flood protection services will have been completed, consulted on and findings implemented.	
Ensure we are always response-ready and capable.	Waikato Regional Council has built and maintained an organisation-wide state of response readiness, with all staff trained, equipped and confident to activate and support emergency management functions for any event.	

E toitū ai ngā rawa taiao

Sustaining natural resources


Accelerate action to protect and restore the natural resources that make the Waikato nationally significant – our soils, water bodies, native plants and animals, geothermal areas, forests and coastal habitats.

The Waikato’s natural resources underpin the health, identity and prosperity of our region, yet our native plants and animals and the ecosystems they live in are threatened. Protecting and restoring these natural assets is not only essential for a healthy environment; it’s an investment in the Waikato’s future.






Outcome

The Waikato’s environment, economy and communities are protected from the impacts of pests, weeds and diseases.

Our approach	Progress measures	Groups of activities
Operate and maintain a collaborative, cohesive and comprehensive biosecurity system, leveraging risk assessment and technology for cost-effective delivery.	Achieve the measures as set out in the <i>Waikato Biosecurity Operational Plan 2022-2032: Implementing the Waikato Regional Pest Management Plan 2022-2032</i> .	






Outcome

Native plants and animals and the ecosystems they live in are thriving.

Our approach	Progress measures	Groups of activities
Gather necessary data to inform greater understanding of ecosystems from the mountains to the sea.	State of the environment reporting delivers accurate, compliant environmental information that supports evidence-based decision making and is accessible to partners and communities.	
Identify the highest priority biodiversity sites and support landowners to protect and restore them.	Implement the priority biodiversity sites programmes.	
Empower communities, iwi and partner agencies to actively participate in biodiversity protection and restoration.	Number of community groups and individuals funded through the Natural Heritage Partnership Programme that undertake restoration activities as per their funding agreement.	


Outcome

Water quality is maintained and improved, riverbanks are stable and flood risks reduced.

Our approach	Progress measures	Groups of activities
Deliver targeted, collaborative and innovative catchment and river management programmes.	Continue to deliver multi-partner river and catchment management programmes, meeting agreed outputs.	
Address the Environment Court's decision on Plan Change 1.	Timeframes set by the court are met.	  
Engage with local landowners, iwi, community groups and other agencies to achieve the Whangamarino Action Plan once it is approved.	Successful implementation of the Whangamarino Action Plan.	

Outcome

Sustainable and reliable access to quality fresh water.

Our approach	Progress measures	Groups of activities
Finalise and implement a water security plan.	Deliver the preferred water security plan actions once they are adopted in June 2026.	



Pūnaha waka tītike Optimised transport system




Maintain an integrated, safe and efficient transport system to improve mobility and equity, reduce emissions and support regional productivity.

Transport is the backbone of regional connectivity and economic growth. A reliable and efficient transport system is essential to connect people to jobs, education, people and services, move goods reliably and reduce emissions. By shaping a future-focused network, we can improve accessibility, enhance safety and support a thriving regional economy while protecting the environment.




Outcome

A transport network that supports economic development by efficiently moving freight and people, enhances social wellbeing and ensures equitable access to essential services.

Our approach	Progress measures	Groups of activities
With our stakeholders, develop the next iteration of <i>Mahere Waka ā-Rohe o Waikato Waikato Regional Land Transport Plan</i> for the period 2027-2057.	Deliver actions and measures identified in the current regional land transport (2024-2054) and public transport (2022-2032) plans. Adopt <i>Mahere Waka ā-Rohe o Waikato Waikato Regional Land Transport Plan 2027-2057</i> . Recognition and funding for Waikato’s needs is included in the 2027 <i>Government Policy Statement on land transport</i> . The <i>Rail Network Investment Programme</i> for 2027 includes actions and funding to resolve Waikato rail constraints and build rail capacity.	
Integrate land use and transport, providing support for housing growth. Collaborate with Future Proof partners.	Priority strategic corridors (road and rail) are optimised. Deliver transport-related projects identified in the Hamilton-Waikato Metropolitan Spatial Plan.	
With our stakeholders, advocate for improved route resilience on key strategic corridors.	As set out in the regional land transport plan, the number of unplanned state highway closures is reduced by 10 per cent.	


Outcome

An environmentally sustainable, energy efficient and increasingly low carbon transport system that reduces overall environmental impacts.

Our approach	Progress measures	Groups of activities
Deliver low emission regional public transport and initiate public transport networks that enable people to move from private car trips. Reduce emissions from freight.	Enable, support and, where appropriate, deliver the transport requirements set out in the Government’s <i>Emissions Reduction Plan</i> .	


Outcome

A range of public and community transport options available that meet diverse access and mobility needs, reducing transport inequities and enabling transport-disadvantaged people and communities to travel safely, independently and reliably.

Our approach	Progress measures	Groups of activities
<p>Improve transport accessibility and travel options to meet the mobility needs of transport-disadvantaged people and communities.</p> <p>Support community transport initiatives.</p>	<p>Waikato Regional Council increases public transport and active mode share by 2035 (from 2018 levels).</p> <p>By mid-2027, review and update the current strategy for community transport initiatives.</p>	

Outcome

Recognising progress made over previous decades, advocate for and deliver a safe, accessible transport system where no-one is killed or seriously injured.

Our approach	Progress measures	Groups of activities
<p>Work with regional and national partners to advocate for investment in safety.</p>	<p>Update the <i>Waikato Regional Road Safety Strategy</i>, including identifying the target to reduce deaths and serious injury.</p>	





He taiao mauriora ▲ **Healthy environment**

He hapori hihiri ▲ **Vibrant communities**

He ōhanga pakari ▲ **Strong economy**

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Waikato Regional Council

Risk Management Framework

Version #	Date	Revision By	Description of Change
1.0	09/2014	WRC	Inaugural risk management framework
2.0	05/2016	WRC	Review and update
3.0	03/2017	WRC	Review and update
4.0	09/2018	Office of the CEO	Risk consequence matrix update
5.0	08/2019	Office of the CEO	ISO31000:2018 alignment Approved by the Risk and Assurance Committee
6.0	11/2021	Office of the CEO	Review and updated, approved by the Risk and Assurance Committee
7.0	06/2023	Strategic Risk Advisor / Business Advisory Services	Updated program/project definitions and added issues and constraints definitions. Minor updates to wording.
8.0	10/23	Strategic Risk Advisor	Updated programme risks as per feedback. Add Interconnectedness description.
8.1	03/2024	Strategic Risk Advisor	Updated All staff responsibilities to include "Follow WRC risk management processes to mitigate risks", as per suggestion from Risk and Assurance Committee meeting on 13 March 2024 as part of their endorsement of the changes to this framework.
9.0	12/2025	Strategic Risk Advisor	Review and update:

Doc # 3375577



Risk Management Framework

Contents

1. The Purpose of a Risk Management Framework	3
2. Risk Management Commitment	3
3. WRC's Risk Appetite	3
4. Risk Management Principles:	3
5. Risk Management System	4
6. WRC's Strategic Risks	5
7. Directorates	5
8. Health and Safety	5
9. Project and Programme Risks, Issues, and Constraints	6
10. Risk Types	6
11. Risk Responsibilities	7
12. Risk Management Process	8
12.1 Identify	9
12.2 Analyse	9
12.2.1 Likelihood	9
12.2.2 Consequence	10
12.3 Evaluate	12
12.4 Treat	12
12.5 Record and Report	13
12.6 Monitor and Review	13
12.7 Communicate and Consult	13
13. Interconnectedness of WRC Strategic Risks	14
13.1 Emitters, Receivers, and Clusters	14
Appendix 1	15
Annex 2: Terms and Definitions	17
Appendix 3: WRC's interconnected risks	18



Risk Management Framework

1. The Purpose of a Risk Management Framework

This risk management framework outlines the responsibilities and the process for risk management to support Waikato Regional Council (WRC) to achieve its mission: *Working together to build a Waikato region that has a healthy environment, a strong economy, and vibrant communities* and its strategic priorities: *Water, Biodiversity and biosecurity, Coastal and marine, Sustainable development and infrastructure, Community connections, and Transition to a low emissions economy.*

2. Risk Management Commitment

Embedding a culture of proactive risk management requires sustained focus across the organisation, and not just after an issue has occurred. WRC commits to proactively involving its stakeholders in its decision-making processes to manage its risks, seeking opportunities within the activities it undertakes, and to sustainably manage the Waikato's resources now and into the future.

3. WRC's Risk Appetite

To deliver on its strategic priorities, WRC acknowledges that it must embrace risk in some areas. WRC's risk appetite represents a conscious, explicit decision about which risks - and how much risk - the council is willing to take. This level of risk is influenced by a range of factors that influence WRC's operating environment such as ongoing legislative changes, geopolitical uncertainties, community needs and wants, and organisational culture, systems and policies.

WRC aims to implement controls to mitigate its identified risks to a low or medium post-control level, but as a publicly funded organisation understands that some controls may be cost-prohibitive or impractical to implement and an increased appetite of post-control risk may need to be tolerated. WRC will be transparent with its stakeholders about its risk profiles.

The Council's general statement of risk appetite is attached (Appendix 1).

4. Risk Management Principles:

The main principles of risk management at WRC are influenced by the *ISO 31000: Risk management — Guidelines - 2018*:

Principle	How WRC applies this principle:
Integration – Risk management should be embedded into all organisational processes.	Align risk considerations with strategic planning, operations, and daily decision-making rather than treating it as a separate function.
Structured and Comprehensive – A systematic, structured, and comprehensive approach ensures reliable results.	Use standardised frameworks, documented processes, and consistent methodologies to assess and manage risks.
Customised – Tailor risk management to the organisation's external and internal context.	Adapt risk strategies based on industry, organisation size, regulatory environment, and specific business objectives.
Inclusive – Involve stakeholders in risk management processes.	Engage employees, management, councillors, and external stakeholders to identify risks, assess impacts, and develop appropriate mitigation strategies.

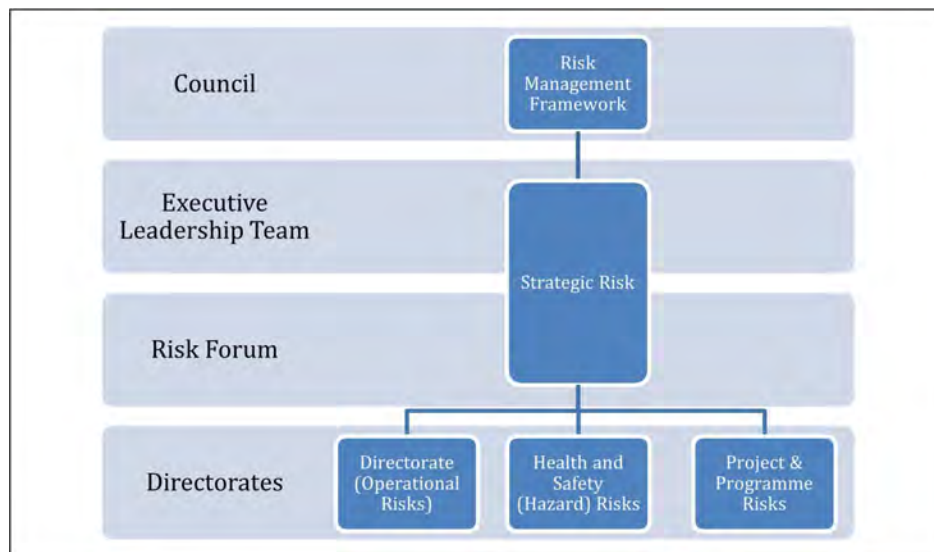


Risk Management Framework

Dynamic – Risk management should be responsive to change.	Continuously monitor risks and update risk strategies to address evolving threats, emerging trends, and organisational changes.
Best Available Information – Use the best available information to make informed decisions.	Gather data from credible sources, including market trends, historical incidents, and expert analysis, to improve risk-based decision-making.
Human and Cultural Factors – Consider human and cultural factors in risk management.	Recognise biases, organisational behaviours, and cultural attitudes toward risk, ensuring that risk practices align with company values and employee engagement.
Continual Improvement – Continuously improve risk management practices.	Regularly review and refine risk processes, conduct lessons learned exercises, and implement new tools and methodologies to enhance risk maturity.

5. Risk Management System

The following diagram outlines the key pillars and levels that are engaged to maintain WRC’s Risk Management Framework, e.g., the primary areas that may be impacted by risks and/or are responsible for monitoring the mitigations and controls:



To ensure an integrated and inclusive approach to risk management WRC operates the three lines of defence model. This strengthens risk culture, improves governance and transparency, while enabling people to make better decision that are within the delegation. The three lines of defence are:

Lines of Defence		
1 st	Everyone	Everyone acts as a risk champion, owning and managing their operational risks as part of their day-to-day activities.
2 nd	Management and governance	Provides oversight, guidance, and challenge (including setting of policies and expectations).



Risk Management Framework

3 rd	External and internal audits or reviews	Provides independent assurance.
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6. WRC’s Strategic Risks

WRC has identified the ten key risks that may have an impact on WRC achieving its vision, mission, and strategic objectives. These risks are:

- STRAT RISK 01 - Emergency response
- STRAT RISK 02 - Legal compliance
- STRAT RISK 03 - Relationships
- STRAT RISK 04 - People, Capacity, Capability and Culture
- STRAT RISK 05 - Health and Safety
- STRAT RISK 06 - Information Technology
- STRAT RISK 07 - Financial Sustainability
- STRAT RISK 08 - Fraud
- STRAT RISK 09 - Climate Change
- STRAT RISK 10 - Giving Effect to Te Tiriti O Waitangi

These risks were identified by WRC Councillors and Risk and Assurance Committee Members (agreed by Council at the [31 August 2023 Council Meeting](#)) and are managed by the Executive Leadership Team (ELT).

These risks are regularly reported to the Risk Forum, ELT and the Risk and Assurance Committee to ensure they are being appropriately managed. The focus of strategic risks are more likely, but not exclusively, to be on:

- External influences affecting WRC’s effective operations.
- WRC’s most critical and essential assets, activities and associated risks.
- Risks that are common to more than one WRC directorate or activity.
- Risks to WRC meeting expected stakeholder service levels and relationships.

7. Directorates

These risks may have an impact on WRC’s individual directorates achieving their directorate’s objectives. Directorate risks are identified and managed by directors and their teams and regularly reported at the Directorate’s Senior Leadership Team meetings and Risk Forum to ensure risks are being appropriately managed.

The focus of directorate risks is more likely, but not exclusively, to be on:

- External influences impacting directorate’s effective operations.
- Directorate’s most critical and essential assets, activities and associated risks.
- Risks to WRC meeting expected stakeholder service levels.

8. Health and Safety

These risks may have an impact on the health and safety of any WRC worker¹, visitor or the public at large. All WRC staff members are responsible for identifying and reporting risks that may impact their own work areas, multiple directorates, or wider organisational activities. Identified risks are regularly reported to the Executive Leadership Team to ensure risks are being appropriately managed. WRC’s Health and Safety Policy, states that the organisation is responsible for ensuring existing and emerging risks to health and safety are systematically identified, assessed, and controlled. WRC will take all reasonably practicable steps to eliminate risks, or where

¹ Worker is defined as an employee, contractor/subcontractor, volunteer, apprentice/trainee, person gaining work experience or an outworker (homeworker).



Risk Management Framework

elimination is not reasonably practicable, will minimise exposure through effective controls, ongoing monitoring, and continuous improvement.

9. Project and Programme Risks, Issues, and Constraints

These risks may have an impact on WRC's individual projects and programmes achieving their objectives. Project and programme risks are identified and managed by project and programme managers respectively, and their teams. Project and programme risks are identified initially as part of the initiation and planning process and throughout the lifecycle of the project or programme. Risks are regularly reported to the appropriate Project Sponsor/Programme Owner to ensure risks are being appropriately managed. Key projects - projects that are identified as having higher potential risks associated with them that could significantly impact the strategic deliverables of WRC - require additional governance oversight have their risks reported quarterly to the Risk and Assurance Committee.

There are clear differences between risks, issues and constraints. All should be identified and managed as part of a project and/or programme to ensure a greater chance of achieving the objective. The following outlines the differences and how they should be managed:

- Project risks and issues - risks might happen, issues are happening ([KB0011444](#)). Risks and issues identified at the project/programme level must be directly attributable to the project/programme. Those that are not directly attributable are BAU/organisational risks and/or issues that would place a constraint on the project/programme. An example might be where WRC have a number of operational/BAU vacancies which is putting strain on project team delivery. This is because project resources (people) are being pulled back into their BAU work and are therefore unable to undertake the project work they were scheduled to do. This is therefore a constraint on the project/programme as the issue is the BAU vacancies which the project has no control over.
 - Risks and issues not directly attributable to the project/programme should be escalated to the appropriate Team Leader, Section Manager or Director i.e. to the appropriate person in a business operational role who is best able to manage the risk / issue. The risk and/or issue can then be closed in the project/programme register and managed appropriately within the team/section/directorate. The project/programme should be replanned to account for the constraint.
- Project/programme issues – issues that are directly attributable to the project/programme should be identified, recorded, assessed, actions put in place, treated and monitored, then resolved and closed as quickly as possible ([KB0011449](#)).
- Project/programme constraints – identified constraints on the project/programme should be recorded in the relevant project/programme management plan and managed through appropriate replanning (e.g. timelines adjusted to account for the constraint on resource availability; [KB0011516](#)).

10. Risk Types

The following table outlines the eight risk types at WRC that may impact operations and activities:

Risk Type	Impact
Environmental	Potential or actual negative environmental or ecological impacts.
Financial	The ability to fund WRC activities and operations now and into the future and financial management of WRC.
Health and Safety	Potential event that adversely impacts on the health and safety of staff, contractors, visitors, or the community.
Infrastructure	Potential event that adversely impacts WRC infrastructure.
Legislative	Potential event that breaches legislation.
Reputation	Potential impact to the way WRC and staff are perceived by stakeholders.



Risk Management Framework

Service Delivery	Potential event that impacts WRC's ability to function and deliver services as expected.
Cultural	Potential offence caused to a group of people resulting in irreparable damage to relationships.

Project/programme risks have additional 'risk type' options due to the temporary and changing nature of the activity. These can be viewed in knowledge article [KB0011488](#).

11. Risk Responsibilities

The following table outlines the risk management responsibilities *by position* at WRC.

Position	Roles and Responsibilities
Council	<ul style="list-style-type: none"> Ensure that risks are adequately considered when setting WRC's objectives. Understand the risks facing the organisation in pursuit of its objectives. Ensure that systems to manage such risks are implemented and operating effectively. Ensure that such risks are appropriate in the context of WRC's objectives. Ensure that information about such risks and their management is properly communicated.
Risk and Assurance Committee	<ul style="list-style-type: none"> Understand the risks facing WRC in pursuit of its objectives. Assure Council that such risks are appropriate in the context of WRC's objectives. Assure Council that systems to manage such risks are implemented and operating effectively including insurance arrangements.
Chief Executive Officer	<ul style="list-style-type: none"> Advocate risk identification and management across the organisation. Assure the Risk and Assurance Committee and Council that risks to WRC's objectives are identified and managed. Assure the Risk and Assurance Committee and Council that systems to manage risks are implemented and operating effectively.
Executive Leadership Team	<ul style="list-style-type: none"> Assure the Chief Executive Officer that risks to WRC's objectives are identified and managed. Identify and manage strategic risks in accordance with the risk management framework including holding Strategic Risk Owner responsibilities themselves where allocated.
Strategic Risk Owners	<ul style="list-style-type: none"> A nominated ELT member who is responsible for: <ul style="list-style-type: none"> Owning and understanding the strategic risk, including its causes, impacts, and interdependencies, ensuring it remains clearly defined and aligned to organisational strategy. Monitor, report, and escalate the risk by assessing changes in the risk environment, evaluating control effectiveness, and providing updates to senior leadership and governance groups. Coordinate cross-organisational mitigation activity, by engaging with nominated Reporting Officers to ensure effective controls and treatments are in place and WRC continues to operating within the organisation's risk appetite.
Reporting Officers	<ul style="list-style-type: none"> Support strategic risk owners by providing assurance that mitigations, controls, and treatment plans are implemented effectively. Identify and manage risks in accordance with the risk management framework, as required.
Risk Forum	<ul style="list-style-type: none"> Assure the ELT that Strategic and Directorate risks are identified and managed.



Risk Management Framework

Position	Roles and Responsibilities
Health and Safety Governance	<ul style="list-style-type: none"> Assure the ELT that Health and Safety risks are identified and managed.
Project and Programme Governance	<ul style="list-style-type: none"> Assure the ELT that project and programme risks are identified and managed. Identify Risk Owners and assign responsibility for identification and management of risks.
Risk Owners	<ul style="list-style-type: none"> Identify and manage risks in accordance with the risk management framework.
Strategic Risk Advisor	<ul style="list-style-type: none"> Support Risk Owners to identify and manage risks. Advocate risk identification and management across WRC in accordance with the risk management framework. Report on risks to the Risk Forum, ELT and the Risk and Assurance Committee.
All Staff	<ul style="list-style-type: none"> Identify risks and report to Team Leader, Manager or Project/Programme Manager. Follow WRC risk management processes to mitigate risks.

Risk identification and management (including consideration of risk mitigation) is the responsibility of all WRC staff; however, the following table outlines the **primary** risk management responsibilities *by process* at WRC.

PRIMARY RESPONSIBILITY				
Process	Strategic	Directorate	Health and Safety (H&S)	Project
Scope and Context	ELT	Director	H&S Team Leader	Project or Programme Manager
Identify	ELT	Director	H&S Team Leader	Project or Programme Manager
Analyse	ELT	Director	H&S Team Leader	Project or Programme Manager
Evaluate	ELT	Director	H&S Team Leader	Project or Programme Manager
Treat	ELT	Director	H&S Team Leader	Project or Programme Manager
Record/Report	ELT	Director	H&S Team Leader	Project or Programme Manager
Monitor/Review	Risk Forum/ELT	Risk Forum/ELT	ELT	ELT
Communicate/Consult	ELT	Director	H&S Team Leader	Project or Programme Manager

12. Risk Management Process

The following diagram illustrates the risk management process as per ISO31000:2018 - Risk Management – Guidelines, which underpins the risk management process at WRC.



Risk Management Framework



12.1 Identify

The following factors and the relationship between these factors are examples that should be considered when identifying risks:

Factors	Example
Threats and opportunities	Generative Artificial Intelligence
Vulnerabilities and capabilities	Workforce demographics
Changes in internal and external context	Central government policy changes

Once risks have been identified, they should be recorded on the strategic, directorate, health and safety or project/programme risk registers. The following guide is used to record identified risks:

There is a risk that **[uncertain event occurs]** caused by **[cause of uncertain event]** that may result in **[consequence to Waikato Regional Council]**.

12.2 Analyse

Once risks have been identified and recorded in the appropriate risk register, the likelihood of the risk occurring and consequences associated with the risk occurring are analysed.

12.2.1 Likelihood

The following guide is used to analyse the likelihood of a risk occurring, e.g. how often the uncertain event is expected to occur pre-controls and post-controls (before and after existing and/or additional controls are considered):

Rating	Likelihood	Description	Probability (%)
1	Rare	Highly unlikely, but conceivable	1 - 10
2	Unlikely	Unlikely to occur, but possible	10 - 33



Risk Management Framework

Rating	Likelihood	Description	Probability (%)
3	Possible	Might occur	33 - 66
4	Likely	Will probably occur	66 - 90
5	Almost Certain	Is expected to occur, perhaps more than once	90 - 100

12.2.2 Consequence

The following guide is used to analyse the consequence of a risk occurring, e.g. consequence if the uncertain event was to occur pre-controls and post-controls (before and after existing and/or additional controls are considered):

Consequence →	Immaterial	Minor	Moderate	Major	Catastrophic
Risk Type ↓	1	2	3	4	5
Environmental	Adverse event that can be remedied immediately which can be met by current budget and/or internal resources.	Adverse event requiring additional work to remedy in the short term which can be met by current budget and/or internal resources.	Adverse event requiring additional work to remedy in the short to medium term which cannot be met by current budget and external resources may be required to resolve.	Adverse event requiring significant additional work to remedy in the medium term which cannot be met by current budget and external resources are required to resolve.	Adverse event requiring significant additional work to remedy in the long term or that cannot be remedied which cannot be met by current budget and external resources are required to resolve.
Financial	Loss less than \$50,000.	Loss between \$50,000 to \$250,000.	Loss between \$250,000 and \$1 million.	Loss between \$1 million and \$10 million.	Loss \$10 million or greater.
Health & Safety	Injury/illness requiring First Aid Treatment. No lost time injury days.	Minor injury/illness requiring medical treatment or lost time (< 1 day).	Moderate injury/illness requiring medical treatment and lost time (< 10 shifts/days).	Serious injury or illness requiring medical treatment or hospitalisation or lost time (> 10 shifts/days).	Loss of life, Permanent Total Disability.
Legislative	Breach of legislation which can be resolved internally and may give rise to penalties of up to \$50,000.	Breach of legislation which can be resolved internally and may give rise to penalties of up to \$250,000.	Breach of legislation that cannot be resolved internally and may give rise to penalties of up to \$1 million.	Breach of legislation that cannot be resolved internally and may give rise to penalties of up to \$10 million.	Breach of legislation that cannot be resolved internally and may give rise to penalties of over \$10 million.
Infrastructure	Infrastructure remains operational. Improvements	Infrastructure remains mostly operational. Minor	Infrastructure is not fully operational. Moderate	Infrastructure is not operational. Major improvements	Infrastructure is not operational. Significant improvements



Risk Management Framework

Consequence →	Immaterial	Minor	Moderate	Major	Catastrophic
Risk Type ↓	1	2	3	4	5
	or repairs up to \$50,000 required which can be met by current budget and/or internal resources.	improvements or repairs up to \$250,000 required which can be met by current budget and/or internal resources.	improvements or repairs up to \$1 million required. Unbudgeted and/or external resources may be required to resolve.	or repairs between \$1 million to \$10 million are required. Unbudgeted and/or external resources are required to resolve.	or repairs over \$10 million are required. Unbudgeted and/or external resources are required to resolve.
Reputation	Local negative multi-media coverage for 1 day requiring additional work to resume stakeholder confidence.	Local negative multi-media coverage for 2 to 5 days requiring additional work to resume stakeholder confidence.	Regional negative multi-media coverage for up to one week requiring significant additional work to repair stakeholder confidence.	National negative multi-media coverage for more than one week requiring significant additional work to repair stakeholder confidence.	National negative multi-media coverage for more than two weeks requiring significant additional work which may not result in the repaired stakeholder confidence.
Service Delivery	Disruption of internal service levels for up to 30 minutes (individual activities or sites) or immaterial disruption of service(s) to customers, iwi, partners and stakeholders.	Disruption of internal service levels for up to 4 hours (individual activities or sites) or minor disruption of service(s) to customers, iwi, partners and stakeholders.	Disruption of internal service levels for up to 1 week (multiple activities or sites) or moderate disruption of service(s) to customers, iwi, partners and stakeholders that could over time, have a moderate impact on Council's reputation.	Disruption of internal service levels for up to 2 weeks (multiple activities or sites) or major disruption of service(s) to customers, iwi, partners and stakeholders that could immediately or over time, have a major impact on Council's reputation.	Disruption of internal service levels for more than 2 weeks (multiple activities or sites) or catastrophic disruption of service(s) to customers, iwi, partners and stakeholders that could either immediately or over time, have a cumulative catastrophic impact on Council's reputation.
Cultural	Possible delays in service delivery, care required to	Delays in service delivery and minor damage to relationships.	Moderate impact to service delivery and reputation.	Major impact to service delivery and reputation.	Irreparable damage to relationships,



Risk Management Framework

Consequence →	Immaterial	Minor	Moderate	Major	Catastrophic
Risk Type ↓	1	2	3	4	5
	maintain relationships and reputation.	Some effort required to repair relationships.	Considerable efforts required to repair relationships.	Significant efforts required to repair relationships.	service delivery is unable to continue and critical risk of not meeting legislative requirements.

12.3 Evaluate

Once risks have been analysed, the following matrix and ranking are used to evaluate the risk rating pre-controls and post-controls e.g., low, medium, high, critical which is used to determine what action is required by WRC in relation to the risk:

Consequence → Likelihood ↓	Immaterial (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Rare (1)	1 Low	2 Low	3 Low	4 Medium	5 Medium
Unlikely (2)	2 Low	4 Medium	6 Medium	8 Medium	10 High
Possible (3)	3 Low	6 Medium	9 Medium	12 High	15 High
Likely (4)	4 Medium	8 Medium	12 High	16 High	20 Critical
Almost Certain (5)	5 Medium	10 High	15 High	20 Critical	25 Critical

12.4 Treat

Once risks have been evaluated, the following table outlines the general treatment actions based on the risk ranking. The table helps establish both the pre and post controls risk rankings. WRC understands that Health and Safety risk cannot be transferred to another person, business, stakeholder, or insurer.

Alternative treatment actions may be determined by the ELT, Director, Health and Safety Team or Project/Programme Governance responsible for managing the Strategic, Directorate, Health and Safety or Project/Programme risks:

ACTION	DESCRIPTION
Accept	Activity is managed to a low or medium risk rating through existing controls.
Transfer	Activity is managed to a low or medium risk rating through transferring risk to another party, e.g., contractor/ insurer/stakeholder.
Mitigate	Activity is managed to a low or medium risk rating through existing or additional controls. Director approval required for a high risk activity to continue.
Terminate	Activity is terminated if it cannot be reduced to a high or lower risk rating. CEO approval required for critical risk activity to continue.



Risk Management Framework

These actions are documented in a treatment plan or the risk register, outlining the:

- Action to be taken.
- Individual responsible for completing the action.
- Timeframe for completing the action.
- Status of completion.

12.5 Record and Report

Once risks have been treated, the following table outlines the reporting timeframe based on the post-controls risk ranking. Alternative reporting timeframes may be determined by the ELT, Director, or Project/Programme Manager responsible for managing the Strategic, Directorate, Health and Safety or Project/Programme risks:

Risk Rating	Recording and Reporting
Low Risk	Quarterly update of Risk Register.
Medium Risk	Quarterly update of Risk Register.
High Risk	Monthly update of Risk Register to ELT and relevant governance group.
Critical Risk	Weekly update of Risk Register to ELT and relevant governance group.

Note that project/programme risks are reported monthly via status reporting to project/programme Governance ([KB0011448](#)).

12.6 Monitor and Review

Once risks have been reported, the following table outlines the monitoring timeframe based on the pre and post controls risk ranking. Alternative monitoring timeframes may be determined by the ELT, Director, or Project/Programme Manager responsible for managing the Strategic, Directorate, Health and Safety or Project/Programme risks:

Risk Rating	Monitoring and Reviewing ²
Low Risk	Monthly
Medium Risk	Monthly
High Risk	Monthly or more frequently depending on the criticality
Critical Risk	Weekly or more frequently depending on criticality

Note that project/programme risks are monitored and reviewed more often (weekly to monthly) due to the temporary and changing nature of the activity ([KB0011448](#)).

12.7 Communicate and Consult

The following teams communicate and consult through promoting awareness and understanding of risk and risk management and utilising the risk management framework to inform decision-making and allocation of resources:

- Executive Leadership Team (ELT).
- The Office of the Chief Executive.
- Business Advisory Services section staff.
- The Health and Safety team.
- The Risk Forum.

² Risks are monitored and reviewed in accordance with the table outlining primary risk management responsibilities by process, i.e.:

- Strategic – Risk Forum/ELT	Health and Safety – Corporate Strategy Group
- Directorate – Risk Forum/Director/SLT	Project/Programme – Governance Group



Risk Management Framework

- The Enterprise Portfolio Management Office (ePO).

13. Interconnectedness of WRC Strategic Risks

Risk interconnectedness refers to the way different risks influence one another and collectively affect an organisation's ability to achieve its strategic goals. It recognises that risks rarely occur in isolation; instead, one risk can trigger or amplify others if not managed effectively. Understanding these connections provides a more comprehensive view of potential vulnerabilities and supports better prioritisation of proactive management activity.

When mapped visually, as seen in Appendix 3, interconnectedness illustrates both the potential impact of each risk and the likelihood pathways through which risks may interact. This helps audiences clearly interpret relationships, dependencies, and possible flow-on effects between risks. By understanding how risks influence one another, WRC can implement more integrated and holistic risk management strategies, strengthening overall effectiveness and resilience.

13.1 Emitters, Receivers, and Clusters

Appendix 3 visualises the interconnectedness of WRC's strategic risks (as identified by KPMG in 2023).

In this diagram, some risks act as emitters, meaning they generate impacts that flow into other risks. These are shown by arrows pointing away from the emitting risk. Because emitters can create downstream consequences across the WRC, mitigation efforts targeted at these risks often provide a higher return on investment.

Receivers are risks that have arrows pointing toward them, indicating they are affected by one or more other risks. These risks sit downstream and rely heavily on forward-looking planning to prevent emerging issues from materialising.

Some risks function as both emitters and receivers, meaning they both influence and are influenced by other risks.

Appendix 3 also highlights a cluster of three highly interconnected risks:

- Legislative Compliance,
- People, Capacity and Culture, and
- Financial Sustainability.

These risks have the highest number of connections across the network, acting as potential contagion points where the emergence of one could trigger multiple others. Identifying such clusters helps WRC understand escalation pathways and strengthen or adjust controls to prevent or limit cascading impacts from these influential risks.



Risk Management Framework

Appendix 1

Waikato Regional Council General Statement of Risk Appetite

Context

1. Risk appetite is the decision about the amount and type of risk Waikato Regional Council is willing to take to achieve its objectives. The council's risk appetite varies across risk types being very low where risk is to be avoided, such as health and safety, and more open to risk where the benefits outweigh the risks involved. Specific appetite statements for each key risk are recorded in Waikato Regional Council risk registers.
2. Risk appetite:
 - a. informs targeted residual risk for the key risks.
 - b. clarifies and communicates Council and Executive Leadership Team expectations on the amount of risk the council is willing to take and accept.
 - c. delegates authority at the operational level to proactively manage and monitor risks.
 - d. defines clear reporting and escalation thresholds and protocols.
 - e. enhances risk oversight and assurance by providing clarity to assume acceptable risk types and levels.
 - f. optimises risk management and control effectiveness by ensuring early actions are taken.
 - g. encourages consistent and desired risk behaviours across the organisation.

Risk appetite definitions

3. The following table outlines the council's risk appetite definitions. For example, a low risk appetite indicates that the council accepts little or no residual risk and that controls must be in place to mitigate risks to as low as reasonably practicable.

RISK APPETITE	DEFINITION
LOW	Acceptable level is no to little residual risk. Controls in place to mitigate risks to as low as reasonably practicable.
MEDIUM	Acceptable level of medium residual risk so that innovation and opportunities can be maximised to provide value, and threats are reduced to a safe level appropriately and cost effectively.
HIGH	Acceptable level of residual risk is high as it is either outside Council's control, provides opportunities that will result in rewards and value higher than the overall risk, or the investment required to mitigate the risk further is not prudent.
EXTREME	Acceptable level of residual risk is at a maximum tolerance.

Waikato Regional Council general statement of risk appetite

4. Risk appetite is the level of risk Council is prepared to accept while working towards its strategic objectives. Our appetite for risk is influenced by our business environment, our community's needs and wants, our culture, organisational systems, and policies.
5. Our aim is to consider all options, respond to risk appropriately and make informed decisions that are most likely to result in cost effective delivery of services to meet our purpose of working together for a healthy environment, strong economy, and vibrant communities.



Risk Management Framework

6. Constructive relationships matter to us. We listen to what matters most to our communities, iwi partners and stakeholders so we can deliver excellent services and good value.
7. Clearly defined risk appetite has a positive influence on our organisational culture and behaviours. It gives staff an understanding of what risk management means to their roles and helps them to manage risk and leverage opportunity.
8. Our Risk Management Framework aligns to international standards BS ISO 31000. This framework provides transparency of the responsibilities and process for managing our risks. Governance oversight is provided by Council's Risk and Assurance Committee, with external oversight by Audit New Zealand and the Office of the Auditor General.
9. Council applies systems thinking in reviewing risks and generally has a low appetite for risk taking that might result in harm to people or adversely affect our core objectives.
10. While effective risk management identifies threats, it can also identify opportunities. Waikato Regional Council is willing to support initiatives that optimise opportunities and innovation when the benefits outweigh the risks involved.
11. Differences between the council's agreed risk appetite and residual risk levels determine whether more controls are required to manage risk or whether there is space to seek bolder opportunities.
12. Where the adoption of strategies, initiatives or actions exceed the stated risk appetite the appropriate levels of authority, as detailed in the Risk Management Framework, will be consulted.



Risk Management Framework

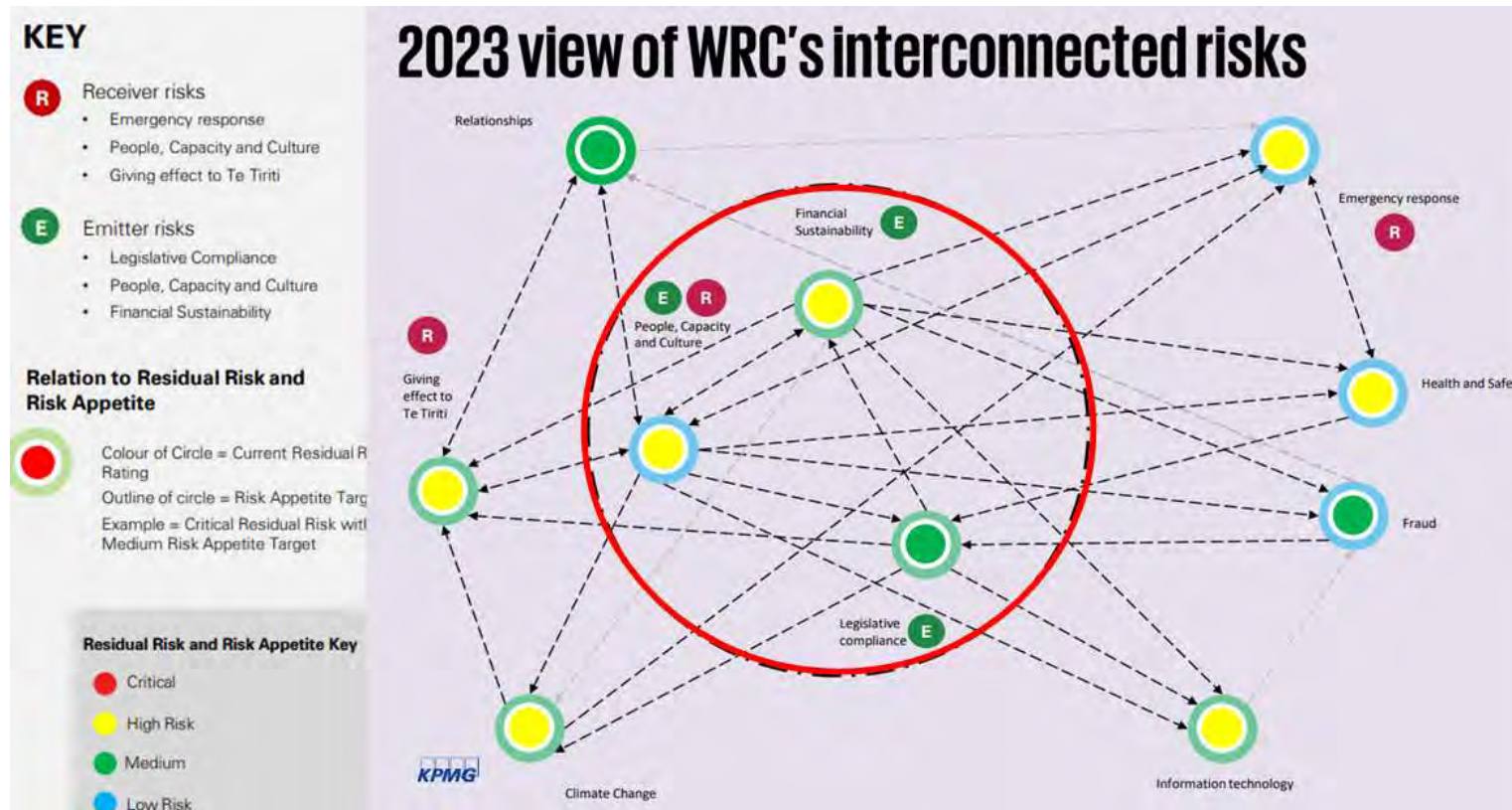
Annex 2: Terms and Definitions

Term	Definition
Consequence	Outcome of an event affecting objectives.
Control	Measure that maintains and/or modifies risk.
Emerging risk	These are ambiguous, chaotic, complex, uncertain, uncontrollable, and volatile, this means that they may arise and evolve quickly and unexpectedly. There are generally 3 types of emerging risk: A new risk in a known context; A known risk in a new context; A new risk in a new context.
Hazard	Source of potential harm. A hazard can be a risk source.
Incident	An event that is caused by interaction with a hazard is called an incident. Unlike an issue, an incident is something that has already happened.
Issue	An issue is something that is known. It is something that is happening, or going to happen, and the consequences are known. It's not a Risk as there is no uncertainty.
Likelihood	Chance of something happening. In risk management terminology, the word "likelihood" is used to refer to the chance of something happening, whether defined, measured or determined objectively or subjectively, qualitatively or quantitatively, and described using general terms or mathematically such as a probability or a frequency.
Objective	Result to be achieved.
Residual risk	Risk remaining after risk treatment.
Risk	Effect of uncertainty on objectives, what might happen (positive or negative) that could impact achieving objectives.
Risk acceptance	Informed decision to take a particular risk.
Risk analysis	Process to comprehend the nature of risk and to determine the level of risk.
Risk appetite	Amount and type of risk that an organisation is willing to pursue or retain.
Risk assessment	Overall process of risk identification, risk analysis and risk evaluation.
Risk avoidance	Informed decision not to be involved in, or to withdraw from, an activity in order not to be exposed to a particular risk.
Risk control	Measure that maintains and/or modifies risk.
Risk emitters	Risk emitters are those risks that may trigger other risks. Risks that emit or trigger other risks are also viewed as being upstream to other risks.
Risk evaluation	Process of comparing the results of risk analysis with risk criteria to determine whether the risk is acceptable or tolerable.
Risk event	Occurrence or change of a particular set of circumstances. An event can have one or more occurrences and can have several causes and several consequences. An event can also be something that is expected which does not happen, or something that is not expected which does happen.
Risk identification	Process of finding, recognizing and describing risks. Risk identification involves the identification of risk sources, events, their causes and their potential consequences.
Risk Interconnectivity or Risk Interconnectedness	Risk Interconnectivity or Risk Interconnectedness refers to the interconnected nature between various risks that can affect an organisation's achievement of its strategic goals.
Risk management	Coordinated activities to direct and control an organisation regarding risk.
Risk perception	Interested party's view on risk. Reflects the interested party's needs, issues, knowledge, beliefs and values.
Risk receivers	The opposite of risk emitters. Risk receivers are downstream to risk emitters.
Risk source	Element which alone or in combination has the potential to give rise to risk.
Risk tolerance	Organisation's or interested party's readiness to bear the residual risk to achieve its objectives. Risk tolerance can be influenced by legal or regulatory requirements.
Risk treatment	Process to modify risk.
Stakeholder	Person or organisation that can affect, be affected by, or perceive themselves to be affected by a decision or activity.
Uncertainty	State, even partial, of deficiency of information related to understanding or knowledge.



Risk Management Framework

Appendix 3: WRC's interconnected risks



2.2 REVIEW OF FUNDING FOR FLOOD MANAGEMENT AND DRAINAGE SERVICES

Rā | Date: 8 April 2026

Kaituhi | Author: Blair Keenan, Principal Economist

Kaituku | Authoriser: Janine Becker, Director, Customer and Corporate Services

TE ARONGA | PURPOSE

The purpose of this workshop is to introduce the work underway to support a review of the funding system for flood management and drainage, provide an orientation to the draft document, and brief elected members on the next steps to receiving the report in May 2026.

KŌRERO WHAKATAKI | EXECUTIVE SUMMARY

Waikato Regional Council is undertaking a review of the funding approaches and the targeted and general rating systems used to support capital and operational investment in flood management and drainage infrastructure. The last in-depth systemic review of the funding system was Project Watershed, which was completed nearly 20 years ago (bearing in mind this only covered part of the region).

The purpose of the review is to ensure the funding mechanisms for essential infrastructure are equitable and effective, and that other sources of funding outside general and targeted rates are understood and utilised where appropriate.

This is the first stage of the funding review, and no changes to the rating system are proposed to be included in the preparation of the next Long-Term Plan which is about to commence. Further phases of analysis will be required to propose, consult on, and then implement changes to targeted and general rates. Depending on the progress and timing of these activities, Council may wish to amend its Long Term Plan to reflect decisions ahead of the 2030 LTP.

The purpose of this workshop is to:

- Provide an overview of the funding review, the scope of this phase of the analysis, and the next steps required to review the funding of flood management and drainage services.
- Demonstrate how the review aligns with other WRC and national programmes focused on the funding challenges for flood risk resilience.
- Provide an overview of the methodology and approach used to assess how and where and to whom the benefits of flood management occur, including how monetary values are assigned.
- Provide an overview of the full range of funding mechanisms available to ensure costs and benefits are equitably and sustainably shared across different communities and sectors.
- Provide a roadmap for the review, including the current and future phases of work leading to possible changes to the funding and rating systems.

CONTEXT AND ALIGNMENT

This work is aligned with other key WRC flood modelling and flood prevention programmes, particularly those assessing risk and impact in the Hauraki catchment. That work provides input into the regional flood modelling, and this work in turn provides a valuation methodology for use within the Hauraki programme.

The work is also aligned with national strategies being pursued by Te Uru Kahika to achieve ongoing central government co-investment in flood risk resilience, and the methodologies used in this report are being utilised more widely in the sector in support of long-term funding certainty.

The work is further aligned with coastal inundation and flood protection planning in Tairua, which is using the methodologies to value the impacts of a specific scheme on a specific community. In turn, the findings from the TCDC project will inform and validate regional valuation models for WRC.

WORKSHOP FORMAT AND FACILITATION

This workshop has been intentionally scheduled to present a draft document to elected members for consideration and further input, ahead of an in-depth workshop in May where the findings and implications can be discussed in detail. The project team is therefore actively seeking input and insights from elected members during this session, following the workshop, and in the lead-up to the May discussion.

The methodology and the resulting document are necessarily complex, so the workshop approach is:

- Overview of the purpose, scope and context for the work, including strategic and programme alignment
- A walkthrough of the asset, economic and social valuation approaches for flood impacts, based on WRC flood modelling in the Hauraki catchment
- A discussion of how the costs and benefits of flood management are assigned to different communities, groups, and sectors
- A walkthrough of the different traditional and non-traditional funding models that can or could be utilised by WRC to finance flood management infrastructure.

Elected members will be provided with a copy of the draft document at the session, and the walkthrough will follow its structure to provide an orientation to the material. The intention is that elected members will have a common understanding of the concepts and approaches in the draft document, to enable in-depth consideration of the matters ahead of the more detailed discussions in May.

The workshop is intended to be highly interactive and will be professionally facilitated by Kent Duston from Habilis NZ.

POST-WORKSHOP ACTIVITY

Project team members are actively seeking perspectives from elected members as the document is further developed. Input can be provided through document review, by email, or verbally via Teams or similar. The team is similarly happy to receive and answer questions as elected members read and consider the draft document ahead of the May workshop.

Ahead of the May workshop, an updated version of the document will be provided. Ample time will be available during the session for elected members to ask questions, obtain clarification, and guide the project team on the final form of the document.

ĀPITIHANGA | ATTACHMENTS

Nil

2.3 DRAFT WHANGAMARINO ACTION PLAN

Rā | Date: 14 January 2026

Kaituhi | Author: Mike Scarsbrook, Manager - Environmental Science

Kaituku | Authoriser: Tracey May, Director, Science, Policy and Information

TE ARONGA | PURPOSE

1. Provide Councillors with:
 - (a) An overview of the revised Draft Waikare-Whangamarino Action Plan.
 - (b) Update on actions / feedback following the last Council workshop (19/2/26).
 - (c) A further opportunity to provide feedback prior to the Draft Action Plan going out for wider consultation with interested parties.

KŌRERO WHAKATAKI | EXECUTIVE SUMMARY

2. Lake Waikare and Whangamarino Wetland are in a highly degraded state and coordinated action is required to halt further degradation and improve these waterbodies over time.
3. The Whangamarino Working Group has been working since April 2024 to develop the Waikare-Whangamarino Action Plan. A Draft Action Plan was completed in January 2026 and has been reviewed by the Working Group.
4. The Draft Action Plan was revised following a Council Workshop on 19 February and a second round of Working Group feedback.
5. The Action Plan identifies a suite of actions that if implemented are likely to result in significant improvements in the health and wellbeing of Waikare and Whangamarino over time.
6. As a first step in implementation, the Action Plan recommends several collaborative initiatives over the next five years, with partner agencies contributing to programme governance, management and operational delivery:
 - (a) Integration of work programmes across partner organisations
 - (b) Integrated catchment management of water levels
 - (c) Mitigation of Lake Waikare discharge effects on Whangamarino Wetland
 - (d) Enhancement of taonga species populations and increased controls on invasive species (e.g. koi)
 - (e) Reducing contaminant loss from human land uses
7. The Draft Action Plan makes no commitments of funding. Any investment by Action Plan partners will require detailed funding proposals approved by appropriate governors.
8. Implementation will be guided by Te Ture Whaimana o te Awa o Waikato (the Vision and Strategy), the Operative Waikato Regional Plan (including Plan Change 1), Kaitiaki Taiao Framework and partner organisations' strategic priorities.
9. The next step would be seeking feedback on the draft Plan from all interested parties (May 2026), followed by a final review and design/formatting.

10. We are working towards final Working Group and Council approval of the Action Plan by June 30, 2026.

ĀPITIHANGA | ATTACHMENTS

1. **FINAL DRAFT Waikare-Whangamarino Action Plan Feb 27 2026. Doc# 34373470** [↓](#)

1

Final Draft: Waikare-Whangamarino Action Plan



Lake Waikare and Waikato River in flood from Rangiriri Pa –Alfred Sharpe, 1876.

**Whangamarino Working Group
March 2026**

Doc# 34373470

20/03/2026

2

Contents

Summary..... 3

Purpose..... 4

Waikare and Whangamarino..... 4

 Whangamarino Wetland 4

 Lake Waikare 5

 Summary of catchment issues..... 6

Vision, Objectives & Outcomes 6

Measures of Success..... 8

 Kaitiaki Taiao Framework 8

Actions..... 9

 Action Assessment..... 10

Implementation..... 18

 Governance 19

Acknowledgements 22

Map 1. Spatial extent of Whangamarino Catchment..... 23

Appendix 1: Description of Actions and tools to support implementation. 24

DRAFT

3

Summary¹

Lake Waikare and Whangamarino Wetland are highly valued, being of cultural, social, economic and environmental significance at local, regional and even international levels. Both waterbodies are highly degraded, with Lake Waikare ranking among the most polluted lakes in New Zealand. The current state of these waterbodies falls below statutory environmental outcomes and is not acceptable to the surrounding community.

Issues with these waterbodies have developed over a long time and both causes, and solutions, are extremely complex. There is a growing sense of frustration among the wider community regarding their current management and a common desire to improve their health and wellbeing. This is an intergenerational task, requiring significant investment of time and resources by multiple parties.

A collaborative Working Group, formed by interested parties, has built a collective understanding of catchment issues, defined environmental outcomes, collated and assessed potential restoration actions and made recommendations for implementation. Extensive engagement with iwi Māori, farming landowners, urban/rural community, youth and technical experts has ensured everyone has had opportunities for a voice in the process. The Group also benefitted from an extensive knowledge base on Waikare and Whangamarino, reflecting many generations of experience, decades of research and several previous catchment management initiatives.

It is important to recognize existing efforts of landowners, mana whenua and statutory agencies in reducing environmental impacts in the catchment. Over many years, investments of time and resources have focused on extensive riparian planting, improving farm management practices, pest management, erosion and sediment control and important upgrades in built infrastructure. This is a valuable base of rehabilitation efforts and the Action Plan seeks will build on this foundation over time. However, degrading trends are continuing despite this investment. Reversing decades of decline will require transformational changes in how we manage and use land and waterways in the catchment.

The Action Plan, while non-regulatory, identifies a suite of integrated actions that if implemented are likely to result in significant improvements in the health and wellbeing of Waikare and Whangamarino over time. It is important to note **there is no one solution to fix the complex issues in the catchment.**

Many actions identified in the Plan are already underway (e.g. predator control, farm environment plans) or can be implemented with existing knowledge (e.g. increasing wetland extent, protecting taonga species). However, there is a need for a major change in approach with several transformational actions identified (e.g. integrated management of water levels, widescale erosion control, reduced land use intensity and controls on invasive species) which require considerable investment and substantial planning as part of implementation.

These transformational actions are the most challenging aspect of this Plan, representing a major shift in current catchment management. Implementation of these Actions is likely to have significant implications for property owners in the catchment, requiring robust decision-making processes to ensure economic, social, cultural and environmental values are appropriately considered. Transformational actions will almost certainly require central government assistance and funding to support implementation and deliver improved outcomes.

¹ [Whangamarino Action Plan | Waikato Regional Council](#)

4

A detailed implementation plan will be developed in line with partner agencies² funding cycles. As a first step in implementation, the Action Plan recommends several collaborative initiatives over the next five years, with partner agencies contributing to implementation programme governance and management, while also being responsible for sourcing funding, driving implementation programmes, monitoring and reporting plan effectiveness and benefits gained from the work.

Measures of success will be determined on a project-by-project basis and combined to give an overall picture of progress. At a high level, these measures include delivering a improvements in overall water quality, reduced numbers of invasive species and increased native biodiversity in the catchment.

Effective delivery of the Action Plan will depend on early implementation readiness across partner agencies. This includes anticipating the need to respond to disturbance events e.g., fire, fish kills and delivery setbacks.

Purpose

The fundamental purpose of the Waikare-Whangamarino Action Plan is to identify actions that will drive significant environmental improvements in Whangamarino and Waikare. As such, the Plan responds to heightened community concerns about the continuing degradation of these highly-valued waterbodies.

The Action Plan seeks to give effect to the overarching vision provided by Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato and Waipaa Rivers (Te Ture Whaimana), which directs us to restore and protect the health and wellbeing of Waikare and Whangamarino for generations to come. There are additional legislated mandates to improve degraded waterways that will help ensure action over time.

Waikare and Whangamarino

The scope of this Action Plan covers Whangamarino Wetland, Lake Waikare and all the interconnected waterways and land that drains into these waterbodies within the area we term the Whangamarino Catchment (Map 1).

Relevant aspects of Whangamarino and Waikare are briefly described below. Please see the companion volume of this Action Plan for more details on catchment context and the process of Action Plan development.

Whangamarino Wetland

Whangamarino Wetland (7,100 hectares) is formally recognised as a wetland of international significance (a Ramsar Site)³. A key objective under the Convention of Wetlands is to maintain the ecological health of Ramsar Sites. This has been challenged in recent years by repeated fish and bird kill events caused by poor water quality, as well as habitat loss (e.g. fire) and loss of cultural and recreational values⁴.

² Partner agencies include Department of Conservation, Waikato-Tainui, Ngaa Muka Development Trust, Waikato River Authority, Auckland Waikato Fish & Game, Waikato District Council and Waikato Regional Council.

³ [Whangamarino | Ramsar Sites Information Service](#)

⁴ Robertson H, Moynihan Magsig R, Blyth J, Tupuhi G, Dixon L, Sandwell D (2026) Assessment of ecological

5

During summer and autumn, waterways within the wetland can experience periods of low dissolved oxygen and elevated water temperatures that stress aquatic life. These conditions can occur during both droughts and cyclonic storm events. In some circumstances low dissolved oxygen conditions can be severe and prolonged resulting in significant fish mortality. Fish kills and subsequent decomposition can trigger outbreaks of avian botulism, which if not appropriately managed can have devastating impacts on populations of both native and introduced waterfowl. The wetland is also under significant pressure from elevated inputs of nutrients and sediment from catchment sources, and an altered water level regime.

In October 2024, a human-induced fire burnt over 1,039 hectares of the Whangamarino Wetland. The fire led to the loss of indigenous vegetation and significant habitat for threatened species. Fire remains a major risk to Whangamarino Wetland, with the potential to trigger significant secondary impacts following events, including water quality degradation and rapid weed establishment, requiring active intervention and resourcing to prevent longer term degradation.

Lake Waikare

Lake Waikare is a culturally and ecologically significant natural waterbody. Recognising the significance of the lake to Waikato-Tainui, the bed of the lake is vested in the name of King Pōtatau Te Wherowhero, the first Māori King⁵.

Lake Waikare is the second-largest lake in the Waikato Region (3,442 ha). The lake is shallow (average depth of 1.5 m) and has very poor water quality. Based on 2024 monitoring data, Lake Waikare is the most polluted large lake in New Zealand, overtaking Te Waihora/Lake Ellesmere, a highly eutrophic coastal lake, in Canterbury⁶. Levels of nutrients and sediments within the lake breach environmental bottom lines set in current national regulation⁷.

Pre-1900, Waikare had clear water⁸ and extensive beds of aquatic plants. Native vegetation collapsed in the 1970s and the lake is now dominated by algae, including potentially toxic cyanobacteria (blue-green algae). Persistent cyanobacterial blooms render the lake unsafe for contact recreation, and public signage discourages any direct contact with the water⁹.

The lake also acts as an important flood storage reservoir for the Lower Waikato-Waipā Flood Control Scheme. Water level control gates placed between the Waikato River and Lake Waikare, and at the exit of Lake Waikare to the Pungarehu canal, have decreased the average lake level by approximately 1m. These gates primarily control the extent of lake level fluctuation to a narrow range to enable flood water to be diverted from the Waikato River into Lake Waikare when required. Without this diversion, downstream properties and scheme assets would be put at greater risk.

change of the Whangamarino Wetland Ramsar Site, New Zealand: Applying an integrated cultural framework to assess ecological character (health) of a Wetland of International Importance. Prepared for the Department of Conservation, February 2026.

⁵ The lakebed was formerly administered by DOC and Land Information New Zealand (LINZ) but was transferred to Waikato-Tainui as part of the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010.

⁶ [Land, Air, Water Aotearoa \(LAWA\) - Lake Quality](#)

⁷ [State of the environment monitoring Waikato lake water quality | Waikato Regional Council](#)

⁸ [Lucas, K. \(1904\) A bathymetrical survey of the lakes of New Zealand. Journal Royal Geographical Society 23:744-760.](#)

⁹ [Land, Air, Water Aotearoa \(LAWA\) - Lake Waikare](#)

Doc# 34373470

20/03/2026

6

Lake Waikare's poor condition is a result of modifications associated with the flood scheme (including lowering of lake levels), wastewater discharges, water takes, nutrient and sediment inputs from human activities (e.g. farming, forestry) in the catchment, and invasion by plant and animal pests (e.g. koi carp). These issues occur at a large scale and combine to create an extremely challenging restoration scenario.

Summary of catchment issues

Human activities over a long period within the Whangamarino Catchment have changed:

- i) The natural hydrological regime (e.g. diversion of Lake Waikare outflow to Whangamarino Wetland, Mangatangi Dam diversion to Auckland Region, changes to Waikato River levels/flows)
- ii) Vegetation cover on the land (e.g. shifts from indigenous vegetation to pasture and plantation forestry) and in waterbodies (e.g. loss of rooted aquatic plants from Lake Waikare)
- iii) Nutrient dynamics (e.g. increased inputs of nitrogen and phosphorus from human sources and continuous re-cycling within the system)
- iv) Physical habitat (e.g. sediment erosion, transport and deposition, as well as re-suspension)
- v) The invasive plant and animal species present in the catchment (e.g. Koi carp, alligator weed)
- vi) The environment's ability to respond to a changing climate
- vii) The health, numbers and distribution of taonga species (e.g. tuna/eel and kaeo/mussels)
- viii) The ability for people to connect with waterbodies in the catchment

These eight issues were translated into desired outcomes below, and these influenced the suite of actions in the Plan. They will also serve as a baseline to monitor benefits and success.

Adding to the complexity of catchment management, issues vary in extent and priority across sub-catchments within the wider Whangamarino Catchment. For example, the Matahuru Stream sub-catchment is a high priority for sediment controls, due to its susceptibility to erosion; nutrient and water level management is needed to reduce harmful algal blooms in Lake Waikare; and, in Whangamarino Wetland, pest control, fire risk mitigation and water level management are critically important. The tailoring of specific actions to individual sub-catchments was beyond the scope of this Action Plan but will be critical for targeting future implementation investments.

The human-induced issues above interact and contribute to significant degradation of the environmental, social, cultural and economic values within the whole catchment. The challenge is daunting, but if these pressures are reduced through restorative actions, the health and wellbeing of Whangamarino Wetland and Lake Waikare will improve over time.

Vision, Objectives & Outcomes

Te Ture Whaimana o Te Awa o Waikato (Vision & Strategy for the Waikato River) provides the overarching Vision for the Waikare-Whangamarino Action Plan:

"Our Vision is for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are all responsible for restoring and protecting the health and wellbeing of the Waikato River, and all it embraces, for generations to come."¹⁰

¹⁰ [Vision & Strategy - Waikato River Authority](#)

7

The Action Plan also responds to a directive in the Vision & Strategy to “Develop and implement a programme of action to achieve the targets for improving the health and wellbeing of the Waikato River”.

In addition to adoption of Te Ture Whaimana as the Vision, the Working Group defined a suite of Objectives and Outcomes for the Action Plan (Fig. 1). Achieving these outcomes includes strengthening ecosystem resilience and supporting recovery from disturbance events, recognising that recovery actions are sometimes required to restore and maintain ecological health.

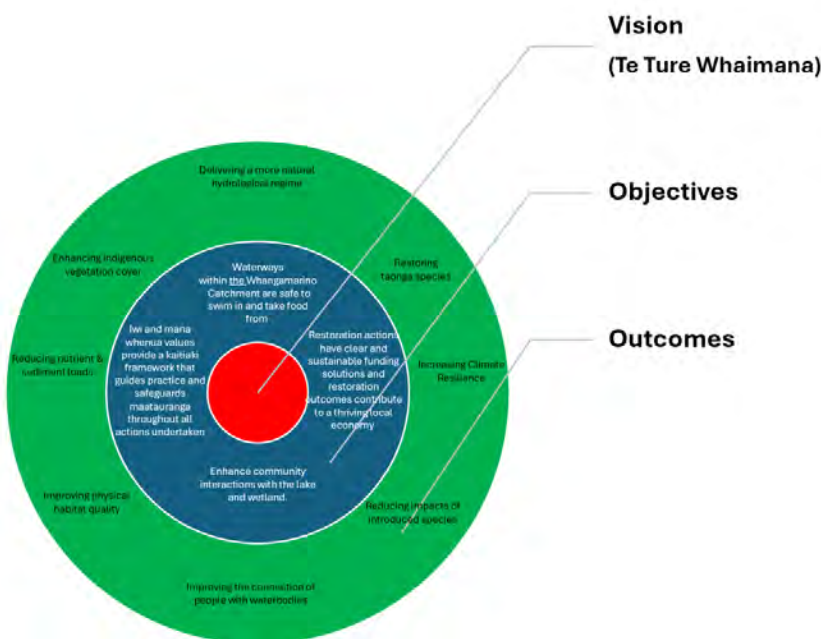


Figure 1. The relationship between the Vision, Objectives and Outcomes driving the Action Plan.

Measures of Success

The measures of success below are intentionally high level but indicate what we expect to see over the short-term (by 2036) and long-term (by 2096¹¹) due to implementation of identified Actions. More detailed numeric targets can be developed at the project/programme level once the approaches to implementation, responsibilities, funding and monitoring etc are confirmed. We recognize the multi-agency nature of delivery and the need for consistency across actions and partners, while still providing clear indicators of expected improvement over time.

Short-term (by 2036) – Achievable but challenging	Long-term (2096) - Aspirational
<ul style="list-style-type: none"> Improving trends for nutrients and indicators of ecosystem health (e.g. see Kaitiaki Framework) at long-term monitoring sites. Reduced sediment loading to waterways from hillslope and bank erosion. Reduced frequency and severity of harmful algal blooms in Lake Waikare. Reduced sediment and organic matter loading to Whangamarino Wetland. Reduced frequency and severity of anoxic events (reduced fish kills and botulism outbreaks). Sustained reductions in koi biomass within targeted sub-catchments. Reduced risk of fire within Whangamarino Wetland. Increased numbers of taonga species (e.g. Matuku-huurepo/bittern, tuna/eel, kaeo/mussels). All targeted plant and animal pests show declining populations. Increased wetland extent in the catchment. Community has greater opportunities for cultural and recreational connection with waterbodies. 	<ul style="list-style-type: none"> No harmful algal blooms in Lake Waikare (lake is safe to swim in and take food from). Lake Waikare is meeting water clarity and nutrient loading targets/limits set in the Regional Plan (or equivalent). Native aquatic plants are re-established in Lake Waikare. Ecosystem health of Whangamarino Wetland is considered 'Good'. Taonga species (e.g. Matuku-huurepo/Bittern, tuna/eel, kaeo/mussel) are flourishing. Pest plants and animals are controlled to low numbers, with eradication where feasible. Koi have been eradicated from targeted sub-catchments and maintained at low biomass throughout the catchment. Lake Waikare and Whangamarino are treasured and protected by all.

Kaitiaki Taiao Framework

Recognising the need for co-governance and co-management under Te Ture Whaimana, mana whenua partners have developed a Kaitiaki Framework that will provide a partnership approach to restoring and protecting the Whangamarino Wetland and Lake Waikare catchment. Grounded in whakapapa and

¹¹ This 2096 timeframe aligns with Plan Change 1/Te Ture Whaimana.

9

maatauranga, the framework aligns with Te Ture Whaimana and responds to generations of environmental degradation by reinforcing the central role of marae, hapuu, and iwi in decision making.

The catchment holds deep cultural, historical, and ecological significance for Waikato Tainui and associated marae, with strong involvement from entities such as the Ngaa Muka Development Trust and Waahi Whaanui Trust. The taiao is recognised as a living taonga, home to both physical and spiritual kaitiaki, and a repository of maatauranga, taonga species, mahinga kai, and intergenerational responsibility.

Waananga with mana whenua will be central to the framework, supporting the development of shared understandings of historical relationships with the taiao and collective aspirations for its present and future health.

Key guiding principles include upholding mana whakahaere, protecting mauri, embedding maatauranga Maaori across all processes, and applying integrated and precautionary management approaches. Framework components include cultural values mapping, dual-knowledge (tikanga and science) environmental assessments, and tikanga-centred governance through a Project Kaitiaki Roopuu that ensures decisions align with Te Ture Whaimana and the Waikato Regional Policy Statement.

Monitoring is grounded in cultural indicators—such as sensory assessments and identification of atua influences—alongside scientific measures including hydrology, sediment and nutrient tracking, taonga species monitoring, and fish passage evaluations. These insights inform regular reporting and annual adaptive review.

The framework aims to deliver key mana whenua outcomes: strengthened kaitiakitanga and leadership; culturally grounded environmental action; effective collaborative governance; measurable recovery of taonga species and ecosystems; enhanced capability and capacity within marae and hapuu; sustainable resource use; active rangatahi involvement; and full adherence to Treaty settlement obligations and Te Tiriti o Waitangi principles.

Overall, the framework sets a clear path for restoring the mauri of Lake Waikare and Whangamarino while empowering mana whenua as leaders and guardians of their ancestral taiao.

Actions

An initial 'longlist' of over 300 actions was collated from previous catchment management initiatives, advice from technical experts, literature reviews, koorero tuku iho¹² and direct input from the Whangamarino Working Group, marae and the wider community. As expected, there was substantial overlap and repetition in this longlist.

The longlist was refined with the support of an Artificial Intelligence tool (Microsoft Co-Pilot) to cluster actions according to the eight outcomes being sought for the catchment (Fig. 1). This process generated a list of around 40 actions. Further analysis refined this list down to a shortlist of 18 primary actions.

¹² Koorero tuku iho – Mana whenua stories that have been passed down by tupuna.

10

A Waikare-Whangamarino Action Framework (Fig. 2) was developed linking the 18 primary actions to three tiers of environmental benefit and implementation challenge:

- **Good Management Practice (GMP).** These are actions where we know what to do and could start today. Indeed, many of these actions are already underway. Cumulative benefits are positive but would not deliver on all outcomes across the catchment.
- **Stretch Actions.** Technical knowledge exists to carry out these actions, and some may be underway, but there may be unresolved barriers to implementation. These actions will deliver catchment-scale benefits. They will improve system resilience but do not necessarily address major drivers of degradation. Costs to deliver these actions are significant and likely to require specific and collaborative business cases and programmes to deliver them.
- **Transformational Actions.** These actions focus on the primary drivers of current degradation. It is unlikely that desired outcomes will be achieved unless these actions can be addressed. They are often extremely challenging technically, socially and/or financially, and may require intergenerational change. All four of the Actions at this level will require substantial investment. Funding pathways must be identified as well as roles and responsibilities, and phasing of these transformational actions.

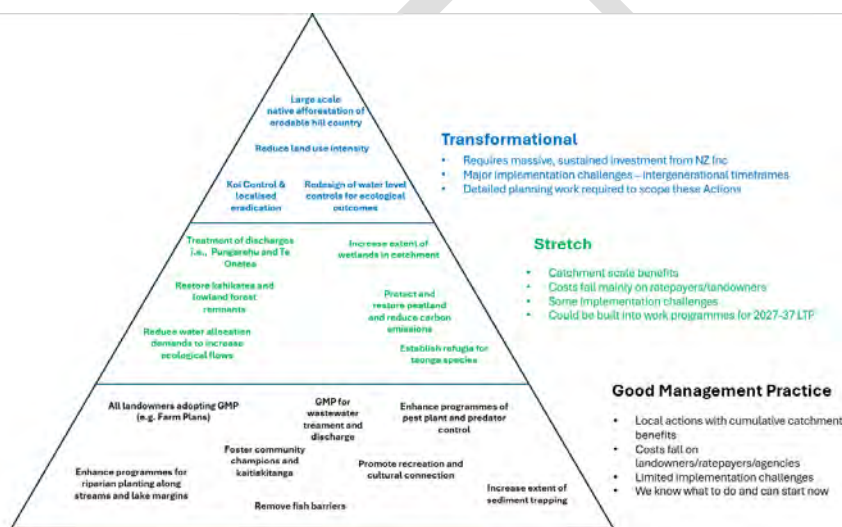


Figure 2. Waikare-Whangamarino Actions Framework. Note: The colours used for the three tiers of actions are repeated in the assessment figures below. Description of individual actions is given in Appendix 1.

Action Assessment

A Representative Panel, drawn from the Working Group, assessed the shortlisted options. The Panel met four times to consider the assessment approach and undertake scoping. The Panel ranked actions according to

Commented [MS1]: There has been a proposal to add two additional Actions:
 1.Reduce risk of human-induced fires and implement post recovery
 2.Reestablish Lake Waikare aquatic plants

 The first could be considered a GMP action, whereas the 2nd is extremely challenging (aquatic plant reestablishment will only when other Transformational action have been achieved (much less). Our view is that both can be considered as Outcomes rather than specific actions and we have incorporated these into the Measures of Success.

Doc# 34373470

20/03/2026

overall environmental benefit, technical feasibility, rough order costs of implementation and the likely timeframes for benefits to accrue (See Fig. 4).

Summary of Action Assessment findings:

- The most significant environmental benefits stem from the Transformational actions - these come with significant cost, complexity and extended timeframes.
- There are several Stretch Actions and Good Management Practice (GMP) actions that generate high levels of environmental benefit. Many of which are underway but will need bolstering to make a significant difference.
- The majority of actions are technically feasible with existing examples within the region or wider NZ. Some will require feasibility studies and modelling to implement.
- The majority of GMP actions could deliver benefits within five years, and the Stretch Actions within 10 to 20 years.
- The implementation plan will need to consider all the factors for delivering the highest environmental benefit at the lowest cost and in the quickest possible time. These actions will be phased in line with funding cycles (e.g. WRC Long Term Plan) and available resources.
- A low action rank does not mean it will not be implemented – all actions have environmental benefits.
- An important recommendation from this Panel was that maatauranga Maaori, koorero tuku iho, and other forms of specialized knowledge must be integrated into all restoration actions. This is consistent with objectives in Te Ture Whaimana.
- Total rough order costs, across the three tiers, are very significant and likely to extend over several generations. This staged, multigenerational investment is represented by a hypothetical example in Figure 3. They are included to reflect the scale of change required, rather than to prescribe fixed funding commitments. Decisions on investment will be staged over time and informed by feasibility work, monitoring results, and demonstrated progress against agreed milestones.



Figure 3: Hypothetical breakdown of investment in restorative actions over time. This reflects a continued baseline investment in Good Management Practice (GMP) and increasing investments in Stretch and Transformational actions as resources become available over the next 70 years.

Doc# 34373470

20/03/2026

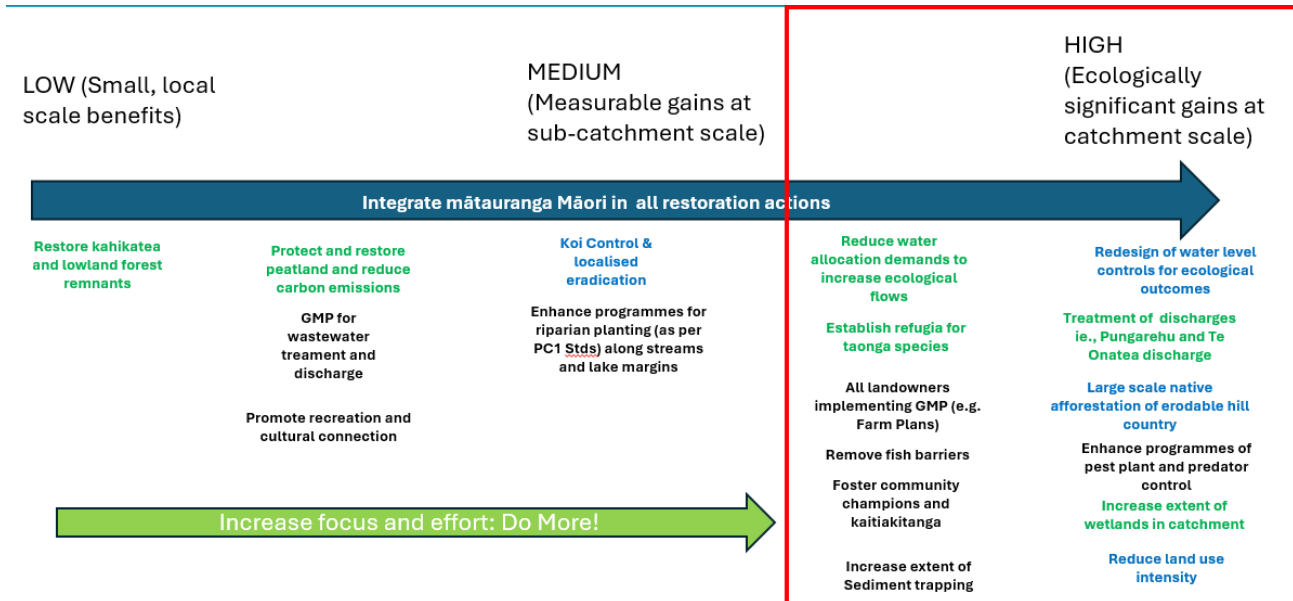
12

It is important to note that the Action Plan identifies actions that are likely to drive significant environmental improvements in Waikare and Whangamarino. The potential impacts of these actions on other outcomes (e.g. regional economy) have not been fully considered at this stage, as this was beyond the scope of the Action Plan. Such analysis will be critical when seeking funding for Plan implementation and covered as part of the business cases for Annual Plan and LTP investment cycles.

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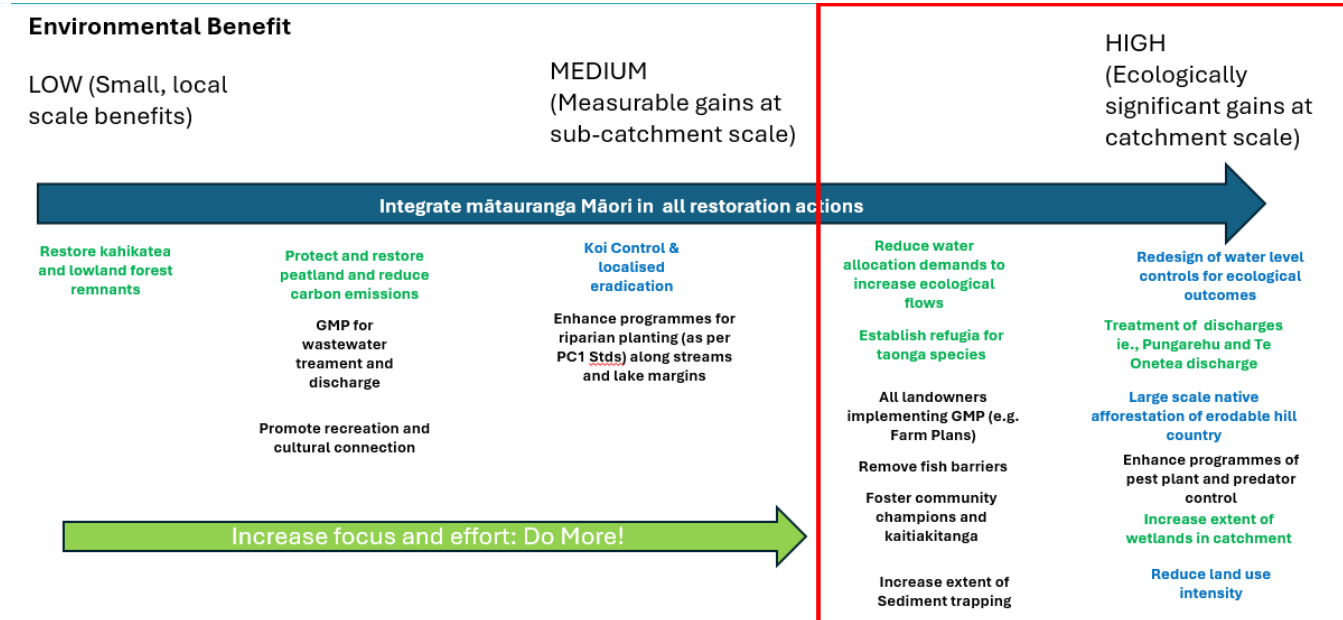
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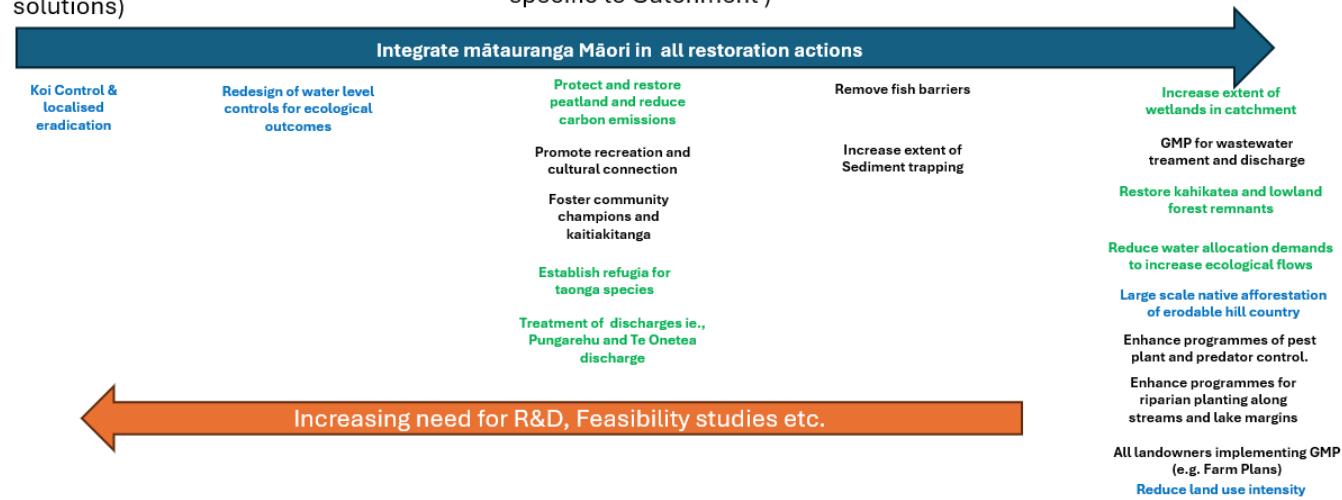
15

Technical Feasibility

LOW
(We don't have solutions)

MEDIUM
(Solutions exist but not specific to Catchment)

HIGH (We know what to do)



Doc# 34373470

27/02/2026

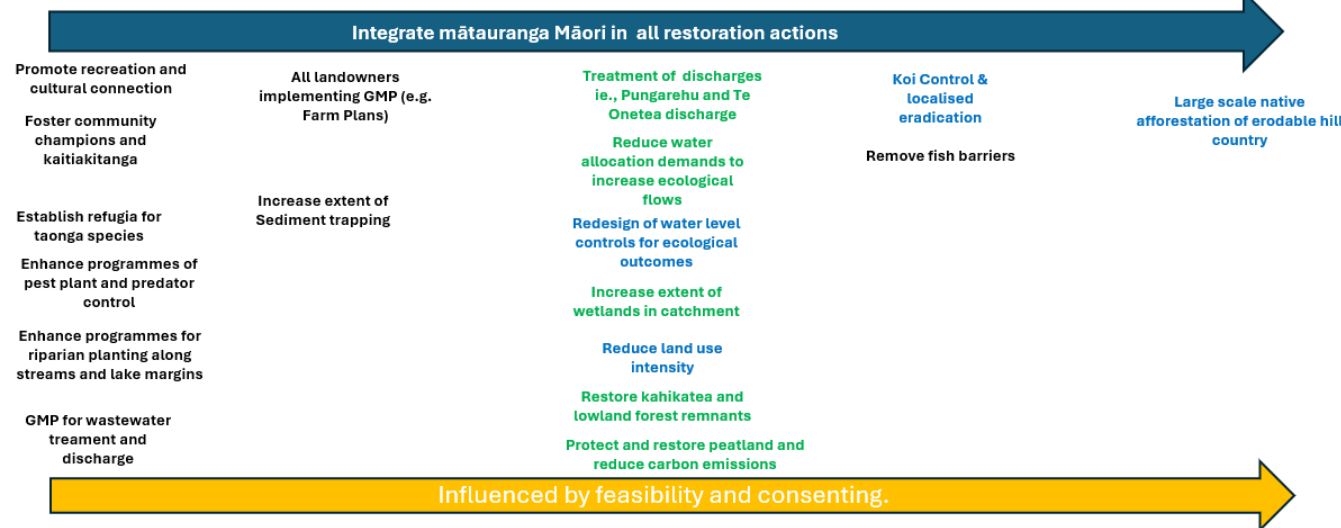
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Timeframe

SHORT (<5 yrs)

MEDIUM (10-20 yrs)

LONG (25 yrs+)



17

Overall Rough Order Costs

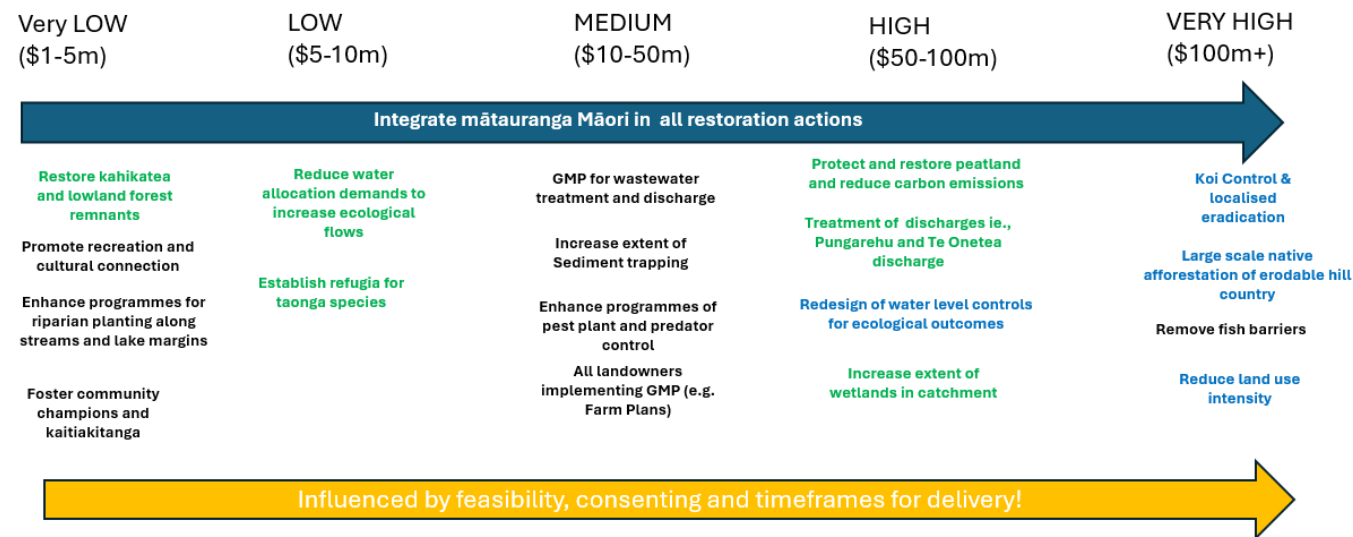


Figure 4. Rankings of 18 individual actions by Environmental Benefit, Technical Feasibility, Timeframe for Benefits realization and Estimated Costs.

Implementation

It is recommended that the initial Implementation Programme will cover a five-year period (2026-2031) and will involve close collaboration among all Action Plan partners.

The initial focus of implementation is on actions that commence immediately or within the first year of adoption. These early actions are intended to stabilize degrading trends, build momentum with delivery, and support readiness for more substantial investment, such as large-scale system change. Progress on these actions will be used to inform sequencing, resourcing and refinement of subsequent stages of implementation.

Effective implementation will require preparedness across partner agencies, including clarity on delivery structures, roles, and responsibilities at governance, management, and operational levels. This includes identifying which existing roles across partner organisations can be formally aligned to support delivery, and where additional or time-bound roles may be required to coordinate implementation, integrate technical inputs, and respond to emerging issues. Early agreement on these arrangements will reduce implementation risk and support a smooth transition from plan adoption into action.

The Action Plan itself is another step in a long-term, adaptive management process for the catchment. We recommend a full review of this Action Plan within five years (i.e., by 2031) with annual reporting to interested parties on progress in the meantime.

Implementation assumes a baseline level of operational capacity across partner organisations to deliver planned activities. However, unplanned events or system pressures may require additional surge capacity to maintain progress toward outcomes. Fire is a clear example where additional recovery effort may be required, but similar pressures may arise from hydrological events (e.g., blackwater), infrastructure issues, or other disturbances. Anticipating and planning for this flexibility is an important component of early implementation risk management.

The following timeline is proposed as a starting point:

1. Year 0 (30 June 2026)
 - Action Plan finalised and approved
2. Year 1 (July 2026-June 2027)
 - Adoption of the Action Plan by partners, including taking opportunities to incorporate Plan priorities into existing operational plans.
 - Establishment of an appropriate governance structure to oversee the initial implementation phase (see below).
 - Confirmation of delivery structures and roles across partner agencies, including formal alignment of existing roles and identification of any additional capacity required to support coordinated implementation and readiness to respond to disturbance events.
 - Development of Whangamarino Catchment Programme business case for WRC's 2027/37 Long Term Plan. [Note: Planning for this will start in January 2026]
3. Years 2-5 (July 2027 to June 2031)
 - Whangamarino Catchment Programme implementation
4. Year 5 (July 2030 to June 2031)
 - Review of Whangamarino Catchment Programme
5. Year 6-10 (June 2031 – July 2036)
 - a. Implementation of reviewed catchment programme

Doc# 34373470

27/02/2026

19

Within the first year of implementation, priority will be given to actions that reduce the most significant risks to ecological health, improve system resilience, and enable faster recovery from environmental disturbances. These priorities are not exhaustive but represent areas where early intervention is expected to deliver immediate and visible benefits.

Based on our prioritisation of actions, the following elements are recommended for inclusion in the initial 5-year Implementation Programme:

1. Integration of agreed work programmes across partner organisations to ensure efficiency and sharing of information (e.g. integrated environmental monitoring and reporting, and coordination of critical pest management, erosion control and riparian planting initiatives). [Noting that individual organisations would still make final decisions on their individual work programmes].
2. Development of a whole catchment approach to water level management (covering all flood control, land drainage, water take and water level infrastructure). This will ensure investments in major infrastructure are affordable, sustainable and generate multiple benefits. Short-term ('no-regret') improvements in water level management would also be in scope.
3. Design and implementation of measures to mitigate impacts of Lake Waikare's discharge on Whangamarino Wetland. This recognises that efforts to rehabilitate Lake Waikare will take many decades and mitigation measures are needed in the short-medium term.
4. Implementation of a programme to enhance populations of taonga species (e.g. tuna, kaeo) in the catchment.
5. Reduction of water quality impacts from koi carp and other invasive species through targeted control measures (noting that critical biosecurity issues are addressed under 1).
6. Development and implementation of measures to mitigate the risk of human-induced fire in Whangamarino Wetland.
7. Reduction of catchment nutrient and sediment sources to improve water quality in Lake Waikare and Whangamarino.

Those priority actions that fall within the responsibility of Waikato Regional Council will be captured within a Whangamarino Implementation Business Case for consideration under the 2027-37 Long Term Plan. The Business Case will include an overall assessment of the environmental, economic, social and cultural aspects of the actions and will be and will be aligned with (or incorporate) any implementation programme required once Plan Change 1 becomes operative.

Governance

Implementation of the Waikare-Whangamarino Action Plan will be executed through robust governance and coordinated management. It is recommended that a core of partner agencies contribute to oversight of the implementation programme.

The following Principles will be applied to governance:

1. Use existing governance and management structures wherever practicable to reduce complexity and overhead costs.
2. Ensure governance (either standalone or as part of existing structure) has Terms of Reference and representation that are closely aligned with the purpose and scope of the Waikare-Whangamarino Action Plan.

Doc# 34373470

27/02/2026

20

3. The Whangamarino Working Group operated in an inclusive and collaborative environment. Positive relationships and trust have been built during this process. This environment of trust and collaboration must be reflected in any governance and operational structures.
4. The primary task of governors will be oversight of Action Plan implementation. Aligning with the implementation timeframe, governance should be in place for 5 years from July 2026.
5. Governance should include representation from mana whenua (including marae representation), landowners, the local community and potentially youth/rangatahi, as well as those organisations with statutory responsibility relevant to the catchment area (i.e., Waikato Regional Council, Waikato River Authority, Waikato-Tainui, Waikato District Council, Department of Conservation, Auckland Waikato Fish & Game and Ngaa Muka Development Trust. Collectively known as the Partner Agencies).
6. The governance structure for the Action Plan should reflect the mana whakahaere of mana whenua in accordance with the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 and Te Ture Whaimana. This would include:
 - a. A Kaitiaki Roopuu (or Mana Whenua Governance Group) represented at the highest decision-making level
 - b. Co-design of governance processes and monitoring frameworks
 - c. Tikanga-based decision-making procedures
 - d. Direct reporting channels between governance bodies and marae/hapuu
 - e. Visibility of mana whenua priorities across all workstreams
7. The Kaitiaki Taiao Framework should be used as a guiding document for governance and management processes, ensuring decisions uphold cultural values, protect maatauranga, and restore the mana and mauri of the Taiao.

Delivery of the implementation programme would be managed by a lead agency (to be determined). A Programme Manager, reporting to a Programme Sponsor and appropriate Programme Governance Group, would lead delivery of the Implementation Plan and be supported by staff from partner agencies as detailed in associated programme and project management plans. The Programme Manager would also be responsible for producing and communicating an annual report on implementation of the Action Plan. This report would be approved by governance prior to public release.

How we will operate:

Partner agencies are committed to operating in a way that is:

- **Transparent:** We're clear about our priorities and expectations of all stakeholders in achieving these collectively.
- **Risk-based:** We prioritise our actions and expectations to address the biggest risks to catchment health.
- **Proactive:** We anticipate risks/challenges, provide proactive guidance/communication and support and look for opportunities to improve how we do things.
- **Proportionate:** We consider the size, complexity and risk profile of all agreed actions, as well as the costs of different options to improve catchment conditions while ensuring compliance.
- **Consistent with the Te Ture Whaimana and gives effect to the Kaitiaki Taiao Framework** (see Appendix X in Companion volume).

21

Monitoring

Partner agencies undertake a wide range of monitoring activities in the catchment. There are also multiple resource consents that have requirements for environmental monitoring. The coordination of these monitoring efforts is an important element of the Implementation Plan.

In addition, Plan Change 1 is likely to impose a range of controls on farming in the catchment¹³, with this likely providing a further source of monitoring data over time. For example, implementation of farm environment plans could provide an important source of information on local-scale restoration actions and land management practices.

Reporting will also include the assessment of changes in the ecological character (health) of the Whangamarino Wetland Ramsar Site as required under the Convention on Wetlands.

Potential Funding

Many of the actions identified in this plan will require transformational changes over an inter-generational timeframe. This scale of change is beyond the scope of local communities to resource.

Linking back to one of the Plan's four Objectives, it is critical that restoration actions have clear and sustainable funding solutions and restoration outcomes contribute to a thriving local economy. Multiple funding sources will need to be utilised for implementation of this Action Plan, including targeted investment from central government (e.g. relating to actions with national or international significance) and long-term investment from regional ratepayers (both via general and targeted rates).

There is an expectation that all Plan partners will contribute to accumulating the resources needed to deliver the Plan. In all cases, robust business cases will be required that quantify the costs and benefits of action across environmental, economic, social and cultural criteria.

¹³ [Proposed Waikato Regional Plan Change 1 \(PC1\) | Waikato Regional Council](#)
Doc# 34373470

27/02/2026

Acknowledgements

The Whangamarino Working Group acknowledges the funding support provided by Waikato Regional Council and Waikato River Authority. The contributions of many salaried and non-salaried working group members and other contributors are also gratefully acknowledged. We also recognise the input of a wide array of technical experts for sharing their extensive knowledge of the catchment.

We mourn the recent passing of Aareka Hopkins. His extensive knowledge is reflected in the Action Plan and will help restore the mauri of Waikare and Whangamarino. **Haere ki tua, e te whetū.**

Whangamarino Action Plan Working Group



Members of the Whangamarino Working Group (2024-2026).

Mike Scarsbrook – Chair - WRC	Noel Smith – WRC Councillor
Shaun Hodson – Project Director - WRC Contractor	Robbie Cookson – WRC Councillor
Kelvin Tupuhi – Ngaa Muka Development Trust	Michelle Lewis – Department of Conservation
Nadia Coombe – Ngaa Muka Development Trust	Niwaha Jones – Department of Conservation
Jaedyn Falwasser – Waikato-Tainui	Tuti Cooper – Waikato River Authority
Lorraine Dickson - Waikato-Tainui	Tracie Dean-Speirs – Waikato River Authority
Tamoko Ormsby - Waikato-Tainui	Antoine Coffin – Waikato River Authority
Mike Peters – Landowner	Michelle Hodges – ex Waikato River Authority
Peter Buckley - Landowner	John Cunningham – Te Kauwhata Community Board
Robyn Budd – Landowner	David Klee – Auckland Waikato Fish & Game
Oliver McLeod – WRC	Danielle LeLievre – Auckland Waikato Fish & Game
Liz Tupuhi – WRC Contractor	Kawekura Nikora – Waahi Whaanui
Julian Williams – WRC Contractor	Te Ngaungau Tukiri – Ngaati Hine
Tracy Nelson – WRC	Kim Parker – Waikato District Council
Bill Malone – WRC	Garret Huelson – ex Waikato District Council
Brendan Manning - WRC	

23

Map 1. Spatial extent of Whangamarino Catchment.



Doc# 34373470

27/02/2026

Appendix 1: Description of Actions and tools to support implementation.

Action Tier	Actions	Description	Tools to support implementation
Transformational Actions	Native Afforestation of Erodible Hill Country	<ul style="list-style-type: none"> Native afforestation is preferred because pine afforestation generates significant sediment during forestry operations. WRC has a prioritisation framework in place to identify areas to target for afforestation with Whangamarino being a priority catchment. Large-scale afforestation will likely require land purchase. Sediment loads to Lake Waikare and Whangamarino Wetland are excessive and have significant adverse effects on freshwater ecosystems. The most effective way to substantially reduce sediment loads in the long term is to reforest erodible hill country. 	<ul style="list-style-type: none"> Catchment modelling tools will support prioritization of afforestation and likely benefits of change. Application of SedNetNZ in the Waikato region to support NPS-FM 2020 implementation Waikato Regional Council Catchment-scale LiDAR-based SedNetNZ modelling of erosion and suspended sediment loads in Waikato CEM catchments Waikato Regional Council Home QEII National Trust
	Redesign of Water Level Controls for Ecological Outcomes	<ul style="list-style-type: none"> A range of options have been proposed to reduce environmental impacts of Flood Protection and Land Drainage assets (e.g. raising Lake Waikare levels, re-designing Whangamarino Weir, re-connecting Lake Waikare and Waikato River). This action requires a formal review of water level management throughout the catchment with improved environmental outcomes as a fundamental design principle. Current water level management throughout the catchment is poorly understood and integrated. This is a key driver of degraded ecological outcomes. The Whangamarino Catchment is an integral part of the Lower Waikato Flood Control Scheme (LWFCS). There are also multiple drainage compartments within the catchment. Whangamarino Weir controls minimum water levels in Whangamarino Wetland and contributes to summer low flow water quality issues, while reducing risk of wetland drying out due to modifications elsewhere in the catchment. 	<ul style="list-style-type: none"> Ecosystem and Hydrological models will be needed to test scenarios for future changes. Rehabilitation of Lake Waikare: Experimental investigations of the potential benefits of water level drawdown Waikato Regional Council Modifying hydrological regime and catchment land use to improve water quality in Lake Waikare: Modelled insights Shallow lakes restoration review: A literature review Waikato Regional Council Hydrodynamic modelling of Lake Whangape and Lake Waahi Wetland restoration handbook Chapter 7 Hydrology Rangiriri and Lake Waikare Hydraulic Review
	Koi Control	<ul style="list-style-type: none"> Develop a national strategy with the support of central government that identifies how koi will be addressed. Koi populations are uncontrolled and have unimpeded access throughout a large portion of the lower Waikato River catchment. Koi contribute to lowland waterway degradation. Koi control in the whole Waikato River system is not technically feasible. Koi control in closed systems (e.g. physically isolated waterbodies) may be feasible but will be costly and require long-term commitments to stop re-invasion. 	<ul style="list-style-type: none"> Koi carp control tools Responses of the fish community and biomass in Lake Ohinewai to fish removal and the koi carp exclusion barrier Waikato Regional Council "The CarP-N neutral Project": Removal, processing and reuse of invasive fish in local terrestrial conservation projects - David - 2018 - Journal of Applied Ecology - Wiley Online Library

Doc# 34373470

27/02/2026

		<ul style="list-style-type: none"> Koi biomass reduction does have benefits (e.g. nutrient removal) but may be less cost-effective than dealing with contaminants at source. 	<ul style="list-style-type: none"> Evaluation of koi carp as a fertiliser for establishing native sand binders on coastal dunes in the Waikato region – first year trials Waikato Regional Council
	Reduce Land Use Intensity	<ul style="list-style-type: none"> Many waterways within the Whangamarino Catchment do not meet current National Bottom Lines for water quality. Lake Waikare requires very significant reductions in nitrogen and phosphorus to achieve targets. Substantial land use change and/or reduced land use intensity may be needed to meet targets. Land use change may require ratepayer/tax payer investment to compensate land owners. 	<ul style="list-style-type: none"> Proposed Waikato Regional Plan Change 1 (PC1) Waikato Regional Council Investment approaches to land use change in Upper Waipā River catchment Waikato Regional Council State of the environment monitoring Waikato lake water quality Waikato Regional Council
Stretch Actions	Increase Wetland Extent	<ul style="list-style-type: none"> Much of the wetland area within the catchment has been lost. Continued wetland loss contributes to the release of greenhouse gases into the atmosphere. Increasing wetland extent will increase biodiversity but also provide opportunities for contaminant removal and sediment trapping, as well as greenhouse gas (GHG) mitigation. Develop a specific programme of work to identify potential areas for wetland creation or restoration, including investigating opportunities for constructed wetlands and woodchip bioreactors integrated with wetlands. 	<ul style="list-style-type: none"> There is a wealth of information on both constructed wetlands and restoring natural wetlands: <ul style="list-style-type: none"> Fresh water wetlands Waikato Regional Council Wetlands: Habitats Whangamarino Wetland: Arawai Kakariki wetland restoration programme Constructed wetland guidelines Earth Sciences New Zealand NIWA Baldwin Dairy Farm Wetland - Waikato River Authority
	Treatment of Pungarehu Discharge	<ul style="list-style-type: none"> The discharge of Lake Waikare water into the Pungarehu Canal represents a significant and ongoing risk to the health of Whangamarino Wetland. Treatment of the discharged water to remove sediment, organic matter and nutrients would be a valuable medium-term action to reduce the potential impacts on Whangamarino Wetland. Treatment technology including constructed wetland and other natural options already exist, although implementation in a natural lake could be challenging. This action includes options to change or remove the outlet structure to reduce sediment discharge (e.g. Obermeyer Gate). 	<ul style="list-style-type: none"> Advanced Pond Systems Earth Sciences New Zealand NIWA Pneumatically Actuated Gates Obermeyer Hydro, Inc.
	Reduce Water Allocation Demands	<ul style="list-style-type: none"> Mangatangi Dam has a capacity of 39 million m3, supplying nearly a quarter of Auckland's bulk water, removing a substantial amount of water out of the Mangatangi/Maramarua and Whangamarino rivers. There are multiple other consumptive water takes in the catchment. A review of consumptive takes should be undertaken to determine if greater environmental flows might be achieved, particularly in summer. 	<ul style="list-style-type: none"> Waikato Regional Plan: Variation No. 6 - Water Allocation Waikato Regional Council Water security in the Waikato Waikato Regional Council Auckland Water Strategy

	Restore Kahikatea and Lowland Forest Remnants	<ul style="list-style-type: none"> Significant biodiversity benefits would be achieved by increasing the extent of lowland forests. Kahikatea, Kohekohe and other local species flourish in wet areas and can be re-established alongside wetland restoration, strengthening biodiversity and helping retain peatland. This action could include creation or extension programmes. 	<ul style="list-style-type: none"> Planting guide for Hamilton Basin - Kahikatea remnants Kahikatea Green Wheel Waikato Regional Council Home QEII National Trust
	Protect and restore peatland and reduce GHG emissions	<ul style="list-style-type: none"> Drainage of organic soils leads to land subsidence and significant greenhouse gas emissions. Areas of peatland within the catchment will be prioritised for restoration work. This could be associated with increased wetland restoration, so could be added to development of a wetland extent programme in the catchment. Includes measures to reduce the likelihood of human-induced fire through prevention, advocacy, and land management practices. 	<ul style="list-style-type: none"> Managing peat Waikato Regional Council Review of potential management interventions to reduce peat subsidence and CO2 emissions in the Waikato
	Establish refuges for taonga species	<ul style="list-style-type: none"> Restoring the health and wellbeing of Whangamarino will take generations. Providing spatial refuges for taonga species (e.g. tuna/kaeao) enables remnant populations to retain a foothold in the catchment, while also providing a source of recruitment to new areas of the catchment as habitat and water quality improve. This action would be incorporated into specific taonga species enhancement programmes such as tuna or kaeao. Develop a specific programme of work to identify and remove existing constraints on taonga species populations (e.g. barriers, habitat quality, competitors) An objective to increase taonga species populations would link with many other actions in this list. This may be an important 'integrating' action that would have high community buy-in. Re-establish native plant communities in Lake Waikare 	<ul style="list-style-type: none"> Environmental Plan – Waikato-Tainui RotoTurf: Aquatic plant 'life rafts' in degraded lakes Earth Sciences New Zealand NIWA Kākahi Earth Sciences New Zealand NIWA 8. Restoring and enhancing tuna. Handbook: Te reo o te repp – kei konei tonu au The Voice of the Wetland – I am still here WRA14-019-Restoring-Tuna-A-Guide-For-The-Waikato-and-Waipaa-River-Catchment-2016.pdf Annual monitoring data for Matuku-huurepo/Bittern and other wetland bird populations in Whangamarino / DOC Monitoring of fish populations in Whangamarino / DOC
Good Management Practice (GMP) Actions	Landowners adopting GMPs (Farm Environment Plan)	<ul style="list-style-type: none"> It is likely that all catchment farming operations will be required to develop and implement a Farm Environment Plan (FEP). The FEP will identify actions that can be put in place on farm to address environmental risks that are relevant to the catchment context. This constitutes a major collective action across pastoral farming in the catchment. 	<ul style="list-style-type: none"> Fonterra Farm Environment Plans Online tools for FEP - Dairy Country Freshwater farm plans Ministry for the Environment

Best Management Practice applied to Wastewater Treatment and Discharge	<ul style="list-style-type: none"> Removal of all wastewater discharges to waterways in the catchment is considered best management practice. 	<ul style="list-style-type: none"> Wastewater standards The Water Services Authority - Taumata Arowai Te-Kauwhata-Fact-Sheets.pdf
Increase Extent of Sediment Trapping	<ul style="list-style-type: none"> There are already successful sediment trapping initiatives in the catchment. Using natural solutions to trap sediment before it reaches sensitive downstream waterbodies is an important practice and should be considered as a priority for more investment. 	<ul style="list-style-type: none"> Sediment reduction and mitigation principles – a review of New Zealand literature A guide to sediment trap construction.pdf
Remove Fish Barriers	<ul style="list-style-type: none"> Most of our native fish species undergo migrations during their life cycles. Removing barriers to native fish migration is an important component of health fish populations. Any assessment of fish barriers needs to consider the risks of spreading invasive fish species. This action could be incorporated into a tuna enhancement programme. 	<ul style="list-style-type: none"> Pathways to the Sea Strategy (PTTS) New Zealand Fish Passage Guidelines Earth Sciences New Zealand NIWA
Foster Community Champions and Kaitiakitanga	<ul style="list-style-type: none"> We need leaders in the community who can speak for the waterways and ensure the issue and actions remain high on the public agenda. These leaders need to be properly supported to reduce risk of burnout. There also needs to be clear succession planning to develop future leaders. 	<ul style="list-style-type: none"> Community Waikato Capability and capacity building with community organisations New Zealand Landcare Trust - Sustainable Land & Water Management Small Scale Community Initiatives Fund (SSCIF) Waikato Regional Council Natural Heritage Fund (NHF) Waikato Regional Council Environmental Initiatives Fund (EIF) Waikato Regional Council
Enhance Riparian Planting Programmes	<ul style="list-style-type: none"> Significant progress has been made in the catchment to date. These programmes need to be sustained and broadened to support other programmes (e.g. wetland extent programme). 	<ul style="list-style-type: none"> Plant Selection Tool - Waikato River Authority Funded Projects - Waikato River Authority
Enhance pest control programmes	<ul style="list-style-type: none"> Our collective biosecurity programmes assist our native ecosystems but with limited resourcing, new threats (e.g. gold clam) and a changing climate, not all pest species are being successfully controlled. Pest control programmes must be sustained and enhanced to include a wider range of pest species. 	<ul style="list-style-type: none"> Regional Pest Management Plan Operational Plan 2022-2032 Waikato Regional Council 2022-2032 Regional Pest Management Plan Tūtohu Mahere Whakahaere Ā-Roheo Waikato Mō Ngā Kirearea Waikato Regional Council Wetland restoration handbook Chapter 11 Pests
Promote Recreational and Cultural Connections	<ul style="list-style-type: none"> We recognise that stronger connections between people and nature builds the wellbeing of both. We need to invest in re-connecting people with waterways in the Whangamarino catchment. Sites of significance can be recognised in the catchment, bringing people to the area to learn of the joint history that has taken place 	<ul style="list-style-type: none"> Te Kauwhata Community Committee Plan Koi Classic (Bow hunting) Auckland/Waikato - Fish & Game Whangamarino Wetland: Waikato places to visit

2.4 WAIKATO REGIONAL COUNCIL FRAMEWORK AND PLAN FOR RESILIENCE TO NATURAL HAZARD RISK

Rā | Date: 1 April 2026

Kaituhi | Author: Lisa Armstrong, Project Manager, Integrated Catchment Management

Kaituku | Authoriser: Greg Ryan, Director, Integrated Catchment Management

TE ARONGA | PURPOSE

1. The purpose of this report and workshop is to:
 - (a) Provide an overview of the project to deliver the “Waikato Regional Council Framework and Plan for Resilience to Natural Hazard Risk - our approach and plan to reduce and adapt to natural hazard risk” (Framework and Plan);
 - (b) Seek feedback on the draft natural hazard risk prioritisation approach that will form part of the Framework and Plan; and
 - (c) Inform councillors of upcoming planned engagement.

KŌRERO WHAKATAKI | EXECUTIVE SUMMARY

2. Waikato Regional Council has a long-standing commitment to building regional resilience, reflected in successive Strategic Directions and the Climate Action Roadmap. This commitment is further reinforced through investment in understanding and adapting to natural hazard risk via the Long Term Plan (LTP) 2024-34.
3. Current legislative uncertainty and resource constraints associated with central government reforms have prompted a revised approach to delivering the LTP performance measure for a regional resilience strategy, which has been reported through quarterly LTP performance reporting.
4. In response, staff are developing an internal Framework and Plan for Resilience to Natural Hazard Risk to guide the council’s organisational approach to reducing and adapting to natural hazard risks over the short, medium, and long term. The Framework and Plan will support a consistent, coordinated, and natural hazard risk-informed decision-making across the organisation and assist with prioritising future programmes, projects, and investment.
5. The project has two key deliverables: the development of the Framework and Plan (to be completed by June 2026) and the establishment of a cross-organisational Natural Hazards Resilience and Adaptation Advisory Group, which is now in place. Together, these will support advice to councillors and the Executive Leadership Team on delivering the strategic priority *Kia manawaroa ake te rohe - building regional resilience*, while remaining flexible to future legislative change through a “no-regrets” approach.
6. A core component of the Framework and Plan is a draft natural hazard risk prioritisation approach, which is presented at this 22 April workshop for early councillor feedback. This proactive, risk-based approach is intended to provide a transparent and defensible basis for

identifying priority locations and actions, enable better alignment across council functions, and support targeted, integrated investment in natural hazard risk reduction and adaptation.

7. The Framework and Plan is intended to guide internal decision-making and will be informed through engagement with councillors, staff, iwi and iwi partners and territorial authorities. Subject to the impact of recent weather events on staff capacity and availability, feedback received through workshops and engagement will inform refinement of the Framework and Plan ahead of presentation for adoption by the Strategy and Policy Committee in June 2026.

BACKGROUND

8. Waikato Regional Council has an ongoing commitment to regional resilience, as reflected in the strategic priorities of its past three strategic directions (2026-2036, 2024-2034, 2021-2031). The latest strategic direction includes *Kia manawaroa ake te rohe - building regional resilience* as one of five strategic priorities.
9. The council's Climate Action Roadmap also sets out its direction and commitments with respect to resilience to natural hazard risk in the Waikato.
10. Through the Regional Hazards and Emergency Response Group of Activities in its Long Term Plans, the council has provided longstanding leadership and guidance on natural hazard risk and resilience.
11. Reflecting the importance of this commitment and the increasing natural hazard resilience challenges our region faces, the council has invested in the Understanding and Adapting to Natural Hazard Risk and regional resilience business cases in the last two long term plans. The business case in the Long Term Plan (LTP) 2024-34 and resulting programme (the Programme) included an investment objective to "provide a strategic and co-ordinated approach to enabling the Waikato region's communities to understand and adapt to natural hazard risk".
12. A new performance measure for the development and delivery of a regional resilience strategy and plan was included in the Resilient Communities activity of the council's Long Term Plan 2024-34. This measure provided for Waikato Regional Council (WRC) to "collaborate with communities, iwi and stakeholders to develop and deliver a regional resilience strategy and plan", with performance targets over three years to develop, implement and review a strategy and plan, leading to a revised plan for inclusion in the 2027-37 LTP.
13. As reported in the quarter 2 LTP performance reporting for 2025/26, an adjusted approach to this performance measure has been developed due to substantial changes in the operating environment.
14. The drivers for this change are that the legislative operating context is substantially changing since the LTP performance measure was agreed and the resource management system reforms are creating substantial uncertainty and resource constraints for both staff and stakeholders.
15. Recognising that a need still exists for some form of co-ordinated and formal framework and plan to build on and guide the council's organisational response to resilience, the project associated with the performance measure will now focus on the delivery of the following for 2025/26:
 - (a) Development of an internal framework and plan to guide Waikato Regional Council's organisational response to natural hazard risk reduction and adaptation over the short, medium and long-term and support the prioritisation of future WRC projects and allocation of resources in this context.

- (b) Establishment of an organisation-wide advisory group to focus on a whole-of-organisation approach to the investment of resources in regional resilience.
16. The above deliverables will also support staff thinking and advice to the Executive Leadership Team and councillors on delivery of the *Kia manawaroa ake te rohe - building regional resilience* strategic priority with respect to natural hazard risk reduction and adaptation.
17. A subsequent project may still be required to develop an external-facing strategy, but this will be determined after the upcoming legislative changes are confirmed and this project is delivered.

PROJECT OVERVIEW

18. There are two key project deliverables:
- (a) The development and adoption of the WRC Framework and Plan for Resilience to Natural Hazard Risk (**planned completion 30 June 2026**)
 - (b) The establishment of the Natural Hazards Resilience and Adaptation Advisory Group, comprising 10 senior staff representing all directorates to provide strategic advice and cross-organisational alignment to guide the current and future delivery of Council's responsibilities and functions to reduce and adapt to natural hazard risk (**completed March 2026**).
19. The project has been designed to meet one of the *Kia manawaroa ake te rohe - building regional resilience* progress measures: "The framework and plan for resilience to natural hazard risk meets adaptation legislation and helps inform the region's developing spatial plan." However, due to the pending legislation amendments, some aspects of the Framework and Plan may be subject to change.
20. A key project risk is the impact of central government reforms on local government and regional council functions. As much as possible, the Framework and Plan will be developed with a "no regrets" approach that will be relevant irrespective of legislative change and will support our strategic priority of *Te whakarite mō āpōpō - Future-fit organisation*.
21. The Framework and Plan will include:
- (a) Definitions of regional resilience and adaptation
 - (b) How and when resilience to natural hazard risk integrates across the council's functions, strategies and plans
 - (c) Consideration of existing adaptation principles adopted by the Strategy and Policy Committee in 2023 (integration into the framework/rescinding/further development)
 - (d) How we will prioritise the council's activities in response to natural hazard risk reduction and adaptation and how these activities integrate (e.g. community adaptation planning, adaptation planning in a general sense, infrastructure and catchment planning, spatial planning, natural hazard risk management and emergency management)
 - (e) How we will work with others
 - (f) How we will implement the prioritisation approach and use it to inform targeted natural hazards work
 - (g) Where we are now, where we want to be over the short, medium and long term and how we will get there.
 - (h) Identification priority work/projects and information needs.

- (i) How we will operationalise the framework by identifying specific actions, high level timelines and implementation pathways.
22. The following items are out of scope of the project:
- (a) The development of programme and project management plans to deliver actions/solutions.
- (b) Decisions on whether or not a business case/s will progress as part of the LTP process. These decisions will form part of Enterprise Work Management processes.
23. A working draft of the content outline for the Framework and Plan is attached as Appendix 1. The full draft of the Framework and Plan will be presented for feedback at the 11 May councillor workshop.
24. Table 1 below sets out key milestones for the project, although it is noted that these may be impacted by weather events.

Table 1: Key milestones.

Key Milestone	Due date	Status
Project plan approved	11/03/2026	Completed
Communication and engagement plan approved	11/03/2026	Completed
Terms of Reference for RAAG approved	11/03/2026	Completed
RGRC updated on project via Programme update report	17/2/2026	Completed
Resilience and Adaptation Advisory Group established and kick-off meeting held	12/03/2026	Completed
First draft of prioritisation approach presented to ELT	14/04/2026	Completed
Councillor workshop 1 held (project socialisation, feedback on prioritisation approach)	22/4/2026	
Staff workshops completed	17/4/2026	
Recommendations and first draft of Framework and Plan reported to ELT	28/4/2026	
Councillor workshop 2 held (feedback on Framework and Plan)	11/5/2026	
Report to RGRC - project update	11/5/2026	
Final draft of Resilience and Adaptation Framework and Action Plan developed	29/5/2026	
Report to Strategy and Policy Committee for adoption of Framework and Action Plan	18/6/2026	
Publication of Framework and Action Plan on WRC website	30/6/2026	
Planned engagement to 30 June 2026 completed	30/6/2026	

PRIORITISATION APPROACH

Overview

25. Staff wish to seek feedback from councillors on the draft natural hazard risk prioritisation approach that is attached as Appendix 2 (Prioritisation Approach). The Prioritisation Approach will form part of the Framework and Plan.
26. A proactive risk-based Prioritisation Approach will allow the council to systematically identify, define and plan key projects within the natural hazards risk reduction and adaptation work programme. It will also enable the council to prioritise and manage natural hazard risk in a way that strengthens long-term regional resilience.
27. The Prioritisation Approach supports good governance by providing a transparent basis for decision-making and informs targeted risk-informed investment. A clear approach producing a list of prioritised locations also enables greater alignment and integration with external agencies, partners and stakeholders.
28. The proposed approach builds on an Otago Regional Council natural hazards prioritisation methodology, experience and learnings from WRC staff on Waikato community adaptation projects (Wharekawa Coast 2120, TCDC SMP and Hauraki Plains Adaptation Plan), as well as national direction and guidance, such as the National Policy Statement on Natural Hazards, ISO 31000: Risk Management Standard.
29. The Prioritisation Approach will need to be further tested as it is implemented. It will also potentially need to be adjusted to take account of the resource management system reforms and adaptation legislation and the planned New Zealand Standards for Natural Hazard Risk Assessment.

Using the Prioritisation Approach

30. The prioritised locations from the Prioritisation Approach can be used in the following ways:
 - (a) To develop WRC's adaptation and targeted hazard management work programme and inform the investment of WRC resources in adaptation and hazard management.
 - (b) Integrated with prioritisation work across other spheres of council functions, such as the Waikato Catchment Management Framework and the Biodiversity Strategy to spatially identify work and projects that can mitigate multiple risks and deliver multiple benefits. This information can then be used to inform the council's overall prioritisation of its investment across the region.
 - (c) To inform the identification of priority locations for adaptation planning in regional spatial planning, as signalled in the resource management reforms and National Adaptation Framework. This will be confirmed once adaptation legislation is passed, noting that some adjustments may be required

Key elements and steps

31. Key elements of the Prioritisation Approach include:
 - (a) **Data and analysis:**
 - (i) Use of a mix of data sources, analysis techniques and outputs will be used, including both qualitative and quantitative.
 - (ii) As suitable spatial datasets become available, exposure analysis and modelling will be undertaken to provide quantitative analysis of the region's exposure. The

flood modelling for the region currently underway is one of the new/enhanced datasets that will be utilised to undertake regional scale exposure analysis and modelling.

- (iii) Existing and new/updated natural hazard, element, consequence and risk datasets will be used to inform and update the Prioritisation Approach when available.
- (b) **Iterative and repeated process:** Prioritisation and risk classification/assessment are not one-off processes. This will be an iterative repeated process, as new or improved datasets, information and research becomes available, or a significant event occurs.
- (c) **Consideration of adaptation and hazard management enablers:** In addition to the technical risk characteristics used to inform the prioritised list of locations in section 6, a range social/political/economic enablers should also be considered. The presence of these enablers may help ensure the success of a community adaptation project, but should not undermine the objective of a risk-based prioritisation approach to inform the investment of WRC resources in adaptation and hazard management.

32. Diagram 1 below shows the key steps of the Prioritisation Approach.

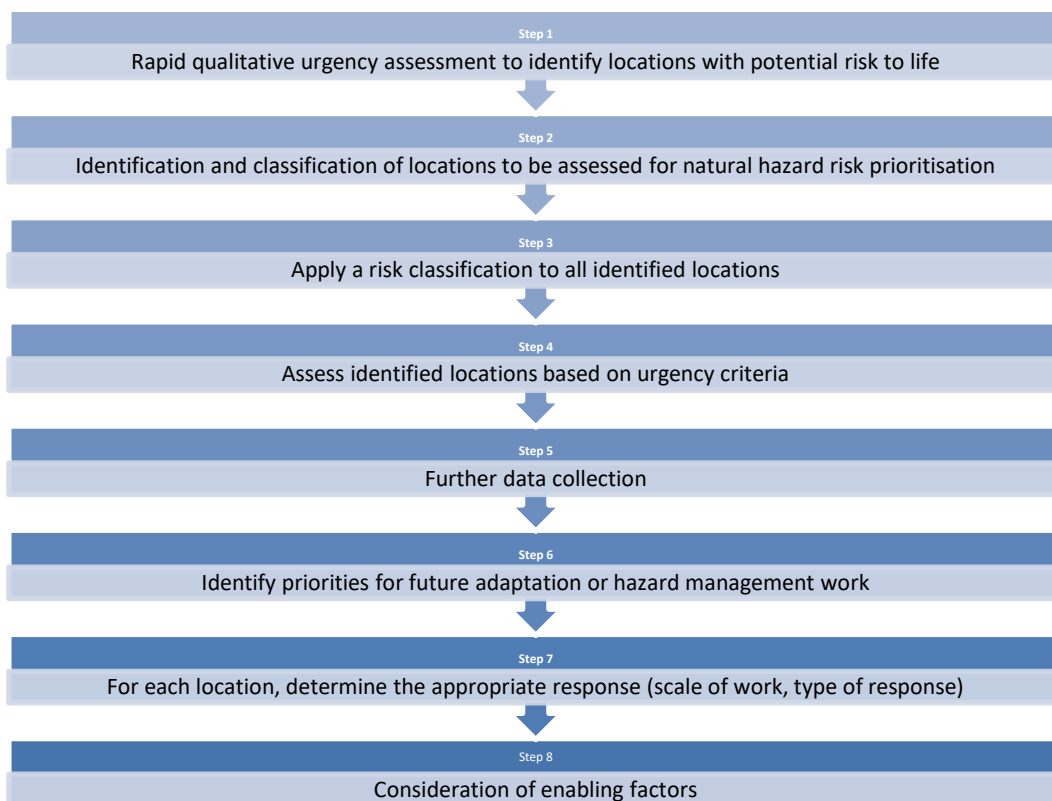


Diagram1: Key steps of the Prioritisation Approach.

Implementation

33. A process and tool are being developed to support the implementation of the Prioritisation Approach to compile and analyse the information required for each of the seven steps (the Waikato Natural Hazard Risk Prioritisation Tool). The process will be trialled on a proof of concept area and may be consequently refined as a result.

34. Assuming current levels of resourcing and the Programme's overall work programme for 2026/2027, it is intended that consideration of options for delivery, project planning, scoping and delivery of the Prioritisation Approach will begin in the 2026/2027 financial year. It should be noted that Steps 2 and 3 are of themselves substantial pieces of work.
35. Although implementation of the Prioritisation Approach is outside the scope of this project, some of the required information gathering and analysis will occur as part of the delivery of another LTP Performance Measure, for Flood Protection and Control Works. This provides that "we will undertake a review of region-wide risks and issues to identify specific catchments they are affecting and recommend areas where there is an opportunity to consider something fundamentally different to what is delivered now".

PLANNED ENGAGEMENT

36. Stakeholder analysis has been completed for the project and a communication and engagement plan developed.
37. Although the Framework and Plan are intended to guide the council's internal decision-making and planning, a number of external stakeholders may have an interest in the Framework and Action Plan and how it relates to their own work and planning. Staff at CDEM, territorial authorities, iwi and iwi partners have been identified as having a particular interest, as the council's approach is likely to impact their own planning and upcoming LTP processes. These groups will be consulted with as part of the development process.
38. Upcoming planned external engagement during development of the Framework and Plan includes:
 - (a) Key project messages to be shared during CE update at Waikato Chief Executives' Forum - 24 April 2026.
 - (b) Project presentation at Waikato Combined Forum - 4 May 2026.
 - (c) Invitation to iwi and iwi partners, and territorial authority staff involved in natural hazard management, adaptation planning, spatial planning, strategy, policy, climate change to provide feedback.
39. Wider communications and engagement will take place when the Framework and Plan are published.
40. A further councillor workshop is scheduled for 11 May 2026 to present the draft Framework and Plan and seek feedback on it from councillors.

CONCLUSION

41. Work is continuing at pace to develop the Framework and Plan, including the Prioritisation Approach that was presented for councillor feedback at this workshop. The project will progress as set out in this report, subject to the impact of recent weather events on staff capacity and availability, and the draft Framework and Plan will be presented for feedback at a councillor workshop on 11 May.
42. The final Framework and Plan will then be presented for adoption to the June Strategy and Policy Committee meeting. It is noted that some of its content may be subject to change, pending confirmation of legislative changes and adaptation legislation.

ĀPITIHANGA | ATTACHMENTS

1. **Content outline (working draft April 26) for Framework and Plan (Doc# 35563067)** [↓](#)
2. **Prioritisation Approach (working draft April 26) (Doc# 35564853)** [↓](#)

Content outline of Framework and Plan

Introduction.....	5
Part 1 – Setting the scene.....	5
An ongoing strategic priority	5
Scope.....	6
Some key definitions	6
How WRC contributes to resilience to natural hazard risk	8
Other regional strategies and plans which contribute to reducing and adapting to natural hazard risk	9
Why this Framework and Plan is important: purpose and scope	9
Purpose	9
What has informed this Framework and Plan?.....	10
Our progress on natural hazard risk reduction and adaptation.....	10
Part 2 – What does 'good' look like?	11
Where we want to be over the short, medium and long term.....	11
Outcomes.....	11
Objectives	12
Part 3 - Our approach	13
Key principles	13
Guidance.....	14
Risk reduction and adaptation responses	14
Understanding natural hazard risk	16
Future-fit decisions.....	16
Regional and catchment-scale solutions	16
Assessing our catchment-scale systems for resilience	16
Adaptation Planning and Sustainable Infrastructure	16
Collaboration and integration	17
Nature-based solutions	17
Our prioritisation approach for WRC activities and resource	17
How we will work with others.....	18
Part 4 – How we will get there - our plan	19
High level timeframes	21
Do now - 2025/2026 and 2026/2027	22
Do next - 2027/2028 to 2029/2030 (*subject to funding)	23
Do later – 2030/2031 onwards.....	24
How will we know we are making progress?.....	26
Appendices.....	27
Appendix 1 - Prioritisation Approach	30

WRC Natural Hazard Risk Prioritisation Approach (working draft – April 2026)

This Prioritisation Approach will ultimately sit within the WRC Framework and Plan for Resilience to Natural Hazard Risk. The work to implement it will be shown in the “Plan” part of the Framework and Plan.

Contents

WRC Natural Hazard Risk Prioritisation Approach (working draft – April 2026)	1
Waikato Natural Hazard Risk Prioritisation Approach	2
Key steps.....	2
Step 1: Rapid qualitative urgency assessment to identify locations with potential risk to life	2
Step 2: Identification and classification of locations to be assessed for natural hazard risk prioritisation.....	4
Identification and classification of locations	4
Step 3: Apply a risk classification to all identified locations.....	6
Step 4. Assess identified locations based on urgency criteria	10
Step 5. Further data collection	11
Step 6: Identify priorities for future adaptation or hazard management work.....	11
Step 7. For each location, determine the appropriate response (scale of work, type of response).....	11
Step 8. Consideration of adaptation and hazard management enablers	13
Using the outputs of steps 1 to 8	13
Appendix - How do we assess natural hazard risk?	15

Waikato Natural Hazard Risk Prioritisation Approach

Key steps

The below diagram shows the seven steps to be undertaken.

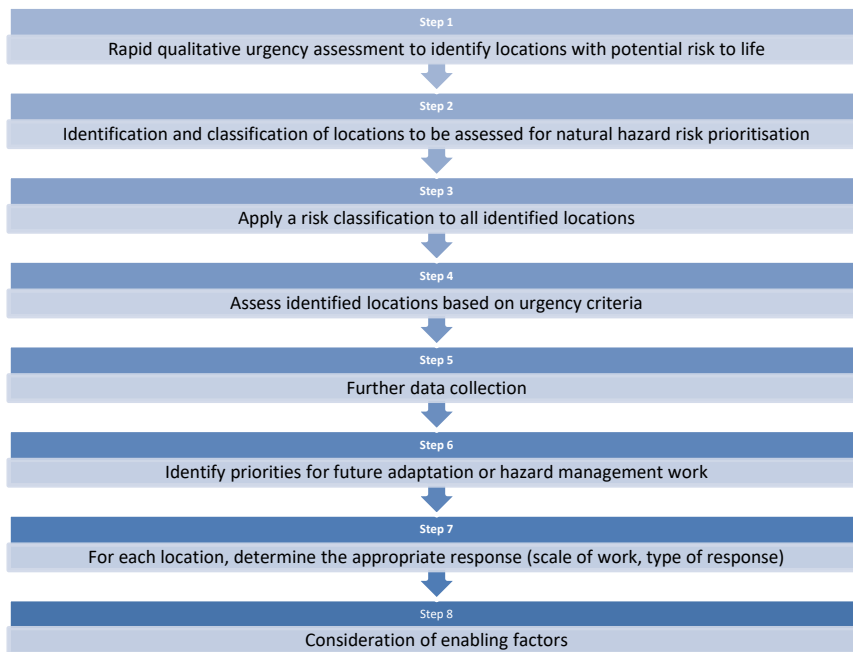


Table 1 – Key steps of Prioritisation Approach

Step 1: Rapid qualitative urgency assessment to identify locations with potential risk to life

Aim: Identify areas known by WRC staff to be exposed to hazards with a potential risk to life in order to initiate, in collaboration with Civil Defence Emergency Management (CDEM), immediate and short-term hazard risk mitigation actions that can be taken to reduce the risk (e.g. community awareness, emergency response planning). This step is designed to identify high-risk – high urgency known locations, acknowledging that both completion of this prioritisation process and longer term risk management will take some time.

Outputs:

- A list of areas known by WRC staff to be exposed to hazards with a potential risk to life and current risk management approaches may be inadequate to appropriately manage the risk.
- Recommendations to the responsible agency for action to mitigate the risk.

WRC subject matter experts are aware of locations in the region where there is both the potential for significant risk to life safety and current risk management approaches may be inadequate to appropriately manage the risk. While these locations will ultimately be identified through the full prioritisation process, the rapid qualitative assessment proposed is intended to quickly identify locations meeting the urgency criteria and enable to WRC, CDEM and TA staff to quickly begin improving the risk management approaches for those locations.

Collaboration with CDEM on community response plans to mitigate the risk for these locations is likely work that will result from the completion of this Step 1.

The process for the rapid qualitative urgency assessment includes:

- WRC staff, in conjunction with CDEM and TAs, will identify locations where there may be significant risk to life. These are likely to be locations where:
 - Little warning time is possible for evacuation, for example where natural hazards may have a rapid onset or are unpredictable
 - Locations that are difficult to evacuate.
- Compile available information
 - Some hazard information is likely to be sourced from national agencies, such as Earth Science New Zealand (ESNZ) including rainfall, landslip, seismic data etc.
 - Identify the gap in the current hazard risk management approach for each identified location and immediate/short-term actions that can be taken to mitigate the risk.
- Making recommendations to the appropriate response agency for action to mitigate the risk (i.e. urgent inclusion in their work programme).

Step 1 will rapidly identify the high risk – high urgency *known* locations. Further locations will be identified and prioritised through the prioritisation process (Step 2 onwards) which will be undertaken concurrently.

The rapid qualitative urgency assessment uses the same urgency criteria for the full prioritisation process (step 4) but is based on qualitative information primarily and quantitative information if available.

Historic and more recent weather events in the Waikato region and across NZ have shown the devastating consequences that severe weather events can have, particularly in conjunction with land instability, debris flows and flash flooding.

*WRC subject matter experts (SME) are aware of locations in the region where there is both the potential for significant risk to life safety and a lack of knowledge and resource to **better** manage the risk. This is particularly the case for communities on or at the base of steep catchments where targeted and timely impact-based warnings need to be enhanced.*

While these locations will be identified through the prioritisation process, the process will be time consuming and there is an urgent need to identify and start work addressing risks in these high risk-high urgency locations now.

Step 2: Identification and classification of locations to be assessed for natural hazard risk prioritisation

Aim: To identify and classify locations that are potentially exposed to natural hazard risk in the Waikato region to be assessed in the prioritisation process.

Output: There will be two outputs for step 2:

1. *A list of locations that identifies which of those locations is exposed or not exposed to a particular hazard*
2. *Where suitable quantitative data is available or becomes available, a regional natural hazard exposure assessment, showing whether a location is exposed or not exposed currently and/or in the future and the quantitative extent of that exposure.*

Considerations in this step include:

- Initially, the location classification will be undertaken using both qualitative and quantitative data in a spreadsheet tool (output 1 of this step).

- The location classification approach allows for flexibility on scale and detail. Depending on the information available, a location can be identified at any spatial scale, from a large geomorphological area or to specific land use type or element.
- As suitable spatial datasets become available, the location classification will be undertaken through a GIS process (exposure analysis and modelling) to provide quantitative analysis of the region’s exposure (output 2 of this step). The results would be aggregated to a common area unit such as LINZ suburbs, SA1, SA2 or even hex grids.
- This step may identify additional locations that are deemed to be high risk – high urgency and need to be escalated to the list created in Step 1 (locations requiring immediate steps to manage risk).
- Gap analysis of current data to assess data availability and suitability
 - Most existing spatial data on natural hazards in the Waikato region is already on the Waikato Hazards Portal, with further regional datasets (such as regional flood hazard modelling) becoming available in the near future. Existing data can be used for output 1 of this step, but there are limited datasets suitable for output 2 (regional exposure assessment).
- New or updated natural hazard and risk data becoming available over time. Flexibility to accommodate qualitative and quantitative data and at various scales through the subsequent steps of the process or an update of the prioritisation process with new information.

Identification and classification of locations

The identification and classification of locations will be through a hierarchal process using both hazard scape and land use factors outlined below. What follows provides the basis for the location classification, however further refinement is likely.

Yet to be determined: *Is is proposed that locations that already have a hazard risk mitigation in place (i.e. defended from fluvial flooding by a stopbank) will initially be classified as if the mitigation was not present. Incorporating risk mitigation and residual risk for the location is undertaken in Step 3. Further testing and consideration of this is required as we test the approach/methodology.*

Location identification and classification (work in progress) will be informed using the following element/land use and hazard scape tables:

A. Element/land use (table 1)

Element/land use (what is present)	Further element/land use detail
Urban	<ul style="list-style-type: none"> • Residential area • Commercial area • Industrial area • Public amenity
Rural	<ul style="list-style-type: none"> • Primary industry • Public amenity
Infrastructure	<ul style="list-style-type: none"> • Critical infrastructure • Private infrastructure • Public infrastructure
Others to be added as required	

B. Hazard scape (tables 2 and 3)

Geomorphological environment	Further geomorphological detail
Plain	
Base of slope	

Geomorphological environment	Further geomorphological detail
Slope	
Top of slope	
Coastal margin	<ul style="list-style-type: none"> • open coast <ul style="list-style-type: none"> ○ soft shore ○ hard/cliff shore • Inland coast <ul style="list-style-type: none"> ○ Low lying ○ Elevated • River mouth
River flood plain	
Others to be added as required	

Natural Hazard driver and type	Further hazard detail
Rainfall	<ul style="list-style-type: none"> • Fluvial flood • Pluvial flood • Debris flow • Land slip
Coastal	<ul style="list-style-type: none"> • Coastal erosion • Coastal inundation • Tsunami
Seismic	<ul style="list-style-type: none"> • Liquefaction • Fault surface rupture • Peak ground acceleration (direct shaking) • Land slip
Geothermal	<ul style="list-style-type: none"> • Hydrothermal eruptions • Land instability • Heat
Volcano	<ul style="list-style-type: none"> • Ashfall • Lava flow • Pyroclastic flow • Lahar • Poisonous Gas emissions
Others to be added as required	

Step 3: Apply a risk classification to all identified locations

Aim: To apply a risk classification for all identified locations in Step 2 using the best available information and a process that is consistent with the principles of the National Policy Statement -Natural Hazards.

Output: A list of locations which are classified as Low Risk to Very High Risk for each natural hazard (current and future) or identified that there is insufficient information available to classify.

Although the NPS-NH is specifically for natural hazard risk associated with subdivision, use or development, it provides useful direction and a method which broadly informs Step 3. The relevant principles for this step are:

- A risk-based assessment using the likelihood of a natural hazard event occurring and the consequence of a natural hazard event for life and property, using the tables and matrix in the NPS-NH.
- When assessing natural hazard risk, consider:

- Likelihood of increasing future hazard risk to at least 100 years:
- Existing and proposed mitigation measures
 - Residual risk that arises when design thresholds of any existing and proposed mitigation measures are exceeded.

The preliminary risk classification process will also be flexible to accommodate various sources (qualitative/quantitative), scales and detail.

Additional information to be assessed for each location identified in Step 2 will include:

- Existing and proposed mitigation measures
 - Flood protection infrastructure (built and nature based)
 - Defended area
 - Land drainage infrastructure (built and nature based)
 - Structures designed to mitigate risk (e.g. bridges, spillways, diversion walls etc)
 - Nature-based solutions to reduce risk (e.g. catchment restoration, biosecurity)
 - Emergency management processes
 - Early warning systems
 - Evacuation procedures / Community Response Plans
 - Residual risk
 - Over design event
 - Asset failure (i.e. stopbank breach)
 - Land use controls that have been put in place to manage the risk
- Historical events
 - Has the location experienced previous impacts.
- Likelihood of increasing future hazard risk to at least 100 years
 - Climate change
 - Land subsidence
 - Planned land development (known growth strategies/plans)
- Previous or current adaptation planning
 - Identify if the location is in an area that has or is currently undergoing an adaptation plan process.

The preliminary risk assessment will likely be based on the risk matrix from the NPS-NH (**Error! Reference source not found.**). To use this matrix, the two inputs of ‘likelihood’ and ‘consequence’ are needed.

Table 1 NPS-NH risk matrix

		Likelihood Level						
		Almost Certain	Very Likely	Likely	Possible	Unlikely	Rare	Very Rare
ARI (years)		up to 10	10-20	20-50	50-100	100-500	500-5000	> 5000
AEP		10% or more	10% to 5%	5% to 2%	2% to 1%	1% to 0.2%	0.2% to 0.02%	< 0.02%
Consequence Level	Catastrophic	Very High	Very High	Very High	High	Medium	Medium	Medium
	Major	Very High	Very High	High	High	Medium	Medium	Medium
	Moderate	High	High	High	Medium	Medium	Low	Low
	Minor	Medium	Medium	Medium	Medium	Low	Low	Low
	Negligible	Low	Low	Low	Low	Low	Low	Low

Note: The top end of the likelihood range includes the top end year, that is: Likely = over 20 years and up to and including 50 years.

For some natural hazards and locations, detailed data and modelling may be available which enables a semi-quantitative (numerical) risk assessment. For other natural hazards and locations this is unavailable so a qualitative (descriptive) assessment should be undertaken using available information and expert judgement.

Likelihood

The likelihood table from the NPS-NH will be used (Table 2) and applied to each natural hazard for the location.

Table 2 NPS-NH Likelihood table

Likelihood level	Annual exceedance probability (AEP)	Average recurrence interval (ARI) or 'return period'
Almost certain	10% or more	Up to and including 10 years
Very likely	10% to 5%	Over 10 and up to and including 20 years
Likely	5% to 2%	Over 20 and up to and including 50 years
Possible	2% to 1%	Over 50 and up to and including 100 years
Unlikely	1% to 0.2%	Over 100 and up to and including 500 years
Rare	0.2% to 0.02%	Over 500 and up to and including 5,000 years
Very rare	Less than 0.02%	More than 5,000 years

The likelihood level will be applied for each hazard type at each location using a combination of quantitative and qualitative methods where appropriate based on available information. The likelihood level will be updated overtime as new quantitative information becomes available.

The likelihood level will be based on current climate and future climate scenarios. The future climate scenarios will be aligned the best available climate change projection data (see the [Climate Change Adaptation Guideline for the Waikato Region](#) for guidance). Further refinement of both current and future likelihood levels will be undertaken during updates of the prioritisation outputs.

Some examples of qualitative assessment of likelihoods are provided below:

- For identified landslips, use expert judgement, considering the effects of climate change.
- For tsunamis, use expert judgement to select a feasible scenario that modelling has been completed for (where possible).
- For active faults and liquefaction, use expert judgement to select a feasible scenario that modelling has been completed for (where possible).

Consequence

The consequence criteria is applicable 'at place' and is not a regional level consequence matrix or risk assessment. Indirect impacts such as regional economic impact and isolation are not considered at this step.

To be further developed: *The consequence table from the NPS-NH (Table 4) will need to be refined to provide a more quantitative approach with clear criteria relevant for Waikato locations. It will also need to be consistent at a national level and with the planned New Zealand Standard for Natural Hazard Risk Assessment. The setting of clear criteria may need to be amended throughout the process to ensure consequence is being assessed appropriately.*

The consequence table from the NPS-NH (Table 4) is specific to damage to land and buildings and was developed to apply to new development. It may be used in part, but a bespoke consequence table will need to be created for the Waikato region. This table should include both numerical measures for quantitative

assessment and descriptive measures where there is insufficient data for this. This piece of work will require significant thought and may need to be amended throughout to ensure consequence is being classified appropriately.

To be determined/tested:

1. Where in the process to best address the regional significance of the consequences/interruption of regionally significant infrastructure. At present it is in Step 8, but potential for it to be addressed this step.
2. How to consider the economic impact on the region. Eg a single event in Wharekawa has minimal impact on the regional economy but multiple events or multiple events at multiple locations will. How do we factor in scale of impact? Eg 80% of Hamilton impacted vs 80% of Kaiaua impacted.

Table 3 NPS-NH Consequence table

Consequence level	Damage to property	Potential for injury or fatalities
Catastrophic	Severe damage to land and building(s), potential for collapse or total destruction of structures. Building(s) need to be demolished, rebuilt or relocated.	High threat to life safety, with probable fatalities and/or critical injuries.
Major	Major damage to land and building(s), including structural damage. Loss of use and substantial repair required.	Unsafe for people, with potential for many injuries, or critical injuries and/or fatalities.
Moderate	Some damage to land and non-structural damage to building(s). Limited loss of use, repairs required.	Unsafe for people, with potential for injuries, although expected to be minor.
Minor	Minor damage to land and building(s). No loss of use, minimal repairs required.	Isolated minor injuries possible.
Negligible	No loss of use, no building repairs required.	No injuries.

For quantitative risk assessment (where hazard modelling or hazard extent is available):

To achieve WRC's prioritisation approach, a detailed (quantitative) consequence assessment is not needed (damage, cost, isolation, etc.). Further, it would be impossible to complete a detailed consequence assessment for all locations with the resource and information available. Here, an exposure assessment (as completed in step 2 above) is sufficient for the 'consequence' component – this is similar to [the national flood exposure study](#) completed by Earth Sciences NZ in 2025.

This would calculate the number and proportion of each element that is potentially exposed to each natural hazard in an identified location. The results could be aggregated to a common area unit such as LINZ suburbs, SA1, SA2 or even hex grids. For the consequence table, the proportion of exposed elements (e.g. 10% of buildings exposed) must be used rather than actual counts (e.g. 200 buildings exposed), to allow for variation in size of long list locations.

Residual risk:

Two risk ratings should be assessed for areas where there is existing hazard mitigation:

1. A risk rating assuming an over design event for a hazard mitigation measure, such as a stopbank being overtopped.
2. A risk rating assuming a failure (part or whole) of the hazard mitigation measure, such as a stopbank collapses.

This incorporates residual risk into this risk classification step, recognising that the effectiveness of hazard mitigations (essentially a risk control) cannot always be relied upon and may also change over time.

Confidence:

Each natural hazard risk rating should be annotated with a confidence rating, which is based on WRC’s [Natural Hazard Information Hierarchy](#) (which guides appropriate use of hazard information) and the risk assessment process used (quantitative or qualitative).

Insufficient information

If there is insufficient information to determine a risk rating, then the location should be classified as “insufficient information” with the opportunity to address this in step 4.

Yet to be determined: *how to prioritise based on multi hazard exposure. Multiple hazards together may interact. There may also be options that can address multiple hazards.*

Yet to be determined: *how to consider other residual risks (above is flood protection centric). For example, with landslide risk, there is an element of uncertainty about where a landslide will occur and how it will be triggered. Likewise, with earthquake/tsunami risk there is uncertainty related to the nature of shaking that actually occurs (as opposed to modelled assumptions).*

Step 4. Assess identified locations based on urgency criteria

Aim: Assess urgency of those locations with ‘high’ or ‘very high’ risk (from Step 3) using urgency criteria. There may be many long-list locations that are classified as having a ‘high’ or ‘very high’ risk in Step 3. With limited resource to instigate hazard adaptation or mitigation processes, these risks must be further prioritised by assessing urgency (this step) and considering additional factors (step 5).

‘High’ or ‘very high’ risk areas will be assessed for urgency first. ‘Medium’ risk areas to be assessed in subsequent reviews. All ‘low’ risk areas will not be assessed for urgency.

The criteria in Table 4 below represent conditions where a natural hazard event may result in significant consequences. Thus, if any or multiple of these criteria are met, the location should be classified as ‘urgent’ and prioritised ahead of other locations. If multiple criteria are met, these locations should be given the highest priority.

Locations identified in step 1 as ‘urgent’ will be included and further triaged.

Table 4 'Urgency for action' criteria

Criteria	Description	Examples
Significant risk to life	Locations where natural hazards may have a rapid onset or are unpredictable, and therefore little warning time is possible for evacuation.	Flash flooding occurring in Waipa and Otorohanga Districts Feb 2026 (unexpected ARI-250 years event). Coromandel peninsula including Landslips, flash flooding and debris flow, local source tsunami, earthquake.
	Locations that are difficult to evacuate in a timely manner.	Areas such as eastern tributaries of the Waihou River with stop banks that have high risk of flash flooding, but no river level or rainfall telemetry for evacuation triggers.
	Locations with inadequate existing risk management or with no existing risk management.	
Known significant community vulnerabilities	Locations where it is known that significantly vulnerable populations are exposed to potential natural hazards impacts (e.g. school, rest home)	A high proportion of elderly people in Ngatea (low-lying and defended by stopbanks). Thames Hospital, Te Puru school.

Criteria	Description	Examples
Regionally significant infrastructure or services	Locations where regionally significant critical infrastructure or services are exposed and vulnerable, impacting multiple communities	Key regional transport routes such as SH1, 2 and 25, Huntly Power Station
Significant historical hazard impacts	Locations where there are known severe historical impacts from natural hazard events (e.g. flooding/debris inundation to above floor level or around dwellings), particularly repeated events.	1998 Waikato-Waipā Floods, 2023 Cyclone Gabriel, 1995-96 Mt. Ruapehu Eruption, Kaimai range landslides, 2018 coastal flooding of the Wharekawa Coast, erosion at Port Waikato.
Risk of climate change induced adaptation threshold being reached in the short term	There may be locations in the Waikato region where communities may reach an adaptation threshold (where adaptation is required to prevent intolerable risk) much earlier than others, e.g. if SLR caused the frequency of large coastal storms to become intolerable to the community.	Areas of the Wharekawa coast and Thames Coast have been identified as already reaching and exceeding community based risk thresholds.

Yet be determined (to refine in testing): The above criteria that define the level of urgency are potentially very broad and could result in a large part of the region being defined as urgent. The question then becomes, how do we prioritise this work if everything is "urgent", which is one objective of this project.

Step 5. Further data collection

Aim: If feasible, collect further data/information to enable a risk rating for locations classified as "insufficient information".

A. Further data collection

For locations with insufficient information to enable a risk rating, it is crucial that either:

- Work is planned and executed to fill this gap and enable prioritisation (such as filling a regional data gap to enable prioritisation); or
- The location is prioritised for an adaptation or hazard management process (which will include gathering more location-specific information to better understand the risk).

Yet to be determined: Does this need to be a separate step? Could it be information gap identified at step 2 and 3 and filling the gap is an interim response in Step 7? Once acquired, the prioritisation process is run again - as we now have new information/data.

B

Step 6: Identify priorities for future adaptation or hazard management work

Aim: To prioritise the locations identified in step 2 by considering the information compiled in steps 3 to 5.

Output: A prioritised list of locations, prioritised using the information gathered in steps 2-5.

The prioritisation should consider the following information/outputs from previous steps:

- Preliminary risk assessment classification (including residual risk where hazard mitigation is present) (step 3)
- Accuracy of information informing risk assessment (step 3)
- Urgency assessment (one or multiple criteria met) (step 4)

- Is further information required to inform prioritisation of certain locations? (step 5)

A matrix is one option for presentation of the prioritisation results.

Yet to be determined: *Further thinking is needed by WRC to determine the best way to incorporate all the above information into the overall prioritisation output.*

Step 7. For each location, determine the appropriate response (scale of work, type of response)

Aim: For each location identified in Step 2, identify the likely response (scale of work, type of response) to inform resourcing and further planning for future WRC hazard risk management/adaptation activities to address the risk.

Output: A list setting out the type of response and indicative scale of work for each location

Considerations:

- The NPS-NH advocates for a proportionate management of natural hazard risk, both when assessing the risk and when mitigating the risk (noting that the context is different). Lower risks should have a smaller scale and less complex response than higher risks.
- Appropriate responses may include risk management measures managed or led by other agencies, such as raising community awareness and emergency management.
- WRC has limited resource (staff time and budget) to respond to natural hazard risks, thus for lower priority risk locations the appropriate WRC response may be to do nothing.
- Natural hazard challenges vary in geographic scale, complexity, and potential suitable hazard management approaches. Consequently there is no 'one size fits all' approach for management of those natural hazards.

The two key criteria to be assessed for each location are:

- a. Type of response
- b. Scale of work

Together these factors will provide an indication of the general scale of resourcing and timeframes which may be required. This will help inform WRC's regional resilience work programme planning.

Type of response:

- Not all natural hazard risks across the Waikato region require a large-scale adaptation response. In some cases, a conventional 'hazard mitigation' approach may be more suitable, for example, the upgrade of an existing flood protection scheme or the addition of measures by others, for example emergency management and community awareness.
- Adaptation approaches:
 - Suited to locations with significant complexity in hazard-scape and social/political settings and expected (but uncertain) future increases in hazard risk.
 - Due to complexity and uncertainty, a holistic approach is required with significant engagement/collaboration with territorial authorities, mana whenua, communities, and other agencies.
 - Adaptation is expected to require multiple adaptation options, possibly following a dynamic adaptive pathways planning (DAPP) approach.
 - Can't "engineer" the natural hazard risk away, so community tolerability is a key consideration
 - Examples: Wharekawa Coast 2120, Our Plains Our Future (Hauraki Plains).
- Hazard mitigation approaches:

- Suited to more clearly defined hazards, where risks can be managed through targeted, largely technical or engineering led interventions.

Scale of Work:

- The scale of work should be proportional to the nature and severity of the hazard risk.
- Small scale projects typically involve basic hazard assessment, monitoring, and community readiness activities and are often managed through business-as-usual resourcing, e.g. Kaiaua
- Medium scale projects generally require modelling (or other analysis), basic risk assessment, limited optioneering, and targeted community engagement, e.g. Port Waikato erosion, Grahams Creek Flood Protection Scheme.
- Large scale projects involve comprehensive hazard management or adaptation programmes, including detailed risk assessment, thorough community engagement, and long-term, multiagency coordination, e.g. Hauraki Plains Our Plains Our Future.

Step 8. Consideration of adaptation and hazard management enablers

In addition to the technical risk characteristics used to inform the prioritised list of locations in section 6, a range social, political, economic and cultural enablers, such as those shown in Table 4, should also be considered when developing WRC's adaptation and hazard management work programme.

The presence of these enablers may help ensure the success of a community adaptation project, but should not undermine the objective of a risk-based prioritisation approach to inform the investment of WRC resources in adaptation and hazard management.

To ensure that enabling factors are well-considered, a key component of this step is expected to involve discussions and engagement with communities, iwi partners, territorial authorities and other agencies.

Table 4 Enabling factors to be considered

Enabling Factors	Examples
Desire from community for a hazard management or adaptation work programme (" <i>WRC should do something</i> ").	Wharekawa Coast 2120 – targeted rate for Haurahi Stream (Kaiaua)
Support from a territorial authority or other agencies to collaborate for a hazard management/adaptation work programme.	WRC working with HDC (HDC led) for Our Plains Our Future (Hauraki Plains) and Whakarewa Coast 2120.
Timing to inform land-use planning processes	Wharekawa Coast 2120 to potentially inform Hauraki District Plan Review (as HDC acquired this area from Franklin District and kept their plan provisions)
Timing and alignment with the WRC infrastructure maintenance and renewal programme	
Alignment with iwi priorities/planning for a hazard management or adaptation work programme	
Where the sequencing of the response/work is important, such as where the management decisions in one catchment/scheme will impact another or cannot be made independently of one another	Management of Lake Taupo and the impact on downstream flood risk
Opportunity for the response/work to mitigate multiple risks and deliver multiple benefits	
Availability of external funding opportunities, or potential for opportunistic responses due to alignment with other investment.	Working with NZSeaRise to include Waikato examples as a case study for local vertical land movement.

	Before the Deluge government investment designed to protect the interruption of regionally significant infrastructure.
High awareness of risks due to occurrence of recent hazard events.	Jan – Feb 2026 severe rains in Thames Coromandel and Waipa districts

Using the outputs of steps 1 to 8

The prioritisation (step 6), type of response (step 7) and enabling factors (step 8) will be used to develop WRC's adaptation and hazard management work programme and inform the investment of WRC resources in adaptation and hazard management via LTP and annual planning processes.

The information generated from this Prioritisation Approach is expected to also be helpful for territorial authorities.

Appendix - How do we assess natural hazard risk?

Understanding how risk is created is critical for understanding how we can reduce and manage it, and qualifying and/or quantifying risk enables risk-based decision-making, which allows us to plan, prepare, adapt and respond to the occurrence of natural hazard events.

The International Standards Organisation (ISO) definition of risk¹ has been adopted by Standards New Zealand for risk management. The ISO defines risk as the “effect of uncertainty on objectives”.

Natural hazard risk is commonly expressed² as a product of event likelihood and consequence (i.e., Risk = Likelihood x Consequence) and can be plotted on a simple matrix of these two factors (e.g., Table 3)

In natural hazard and climate change risk assessments, risk is often expressed as: Risk = Hazard x Exposure x Vulnerability. For example, the IPCC’s conceptual risk framework (Figure 1) which is used in existing climate change Risk Assessment guidance.

More advanced natural hazard risk definitions include additional elements accounting for complexity such as recognition of feedback loops and cascading hazard interactions, gradual onset impacts on systems or processes, and presence of hazard mitigation actions or residual risks.³

The key terms commonly used in natural hazard risk characterisation are explained in Table 2.

Term	Definition
Natural hazard	A natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.
Disaster	A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, social, cultural, economic and environmental losses and impacts
Natural hazard risk	The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined as a function of hazard, exposure, vulnerability and capacity
Exposure	People, infrastructure, buildings, the economy, and other assets that are exposed to a hazard
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards
Capacity	The combination of all the strengths, attributes and resources available within an organisation, community or society to manage and reduce disaster risks and strengthen resilience
Risk assessment	An assessment of the nature and extent of risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability to determine likely consequences
Residual risk	The risk that remains after risk treatment has been applied to reduce the potential consequences.

¹ AS/NZS ISO 31000:2009.

² e.g. in the New Zealand Coastal Policy Statement (2010) and the Civil Defence Emergency Management Act (2002).

³ Clarke LB et al., 2021. Stocktake of Existing Risk Tolerance Frameworks. GNS Science Consultancy Report 2021/71, October 2021.

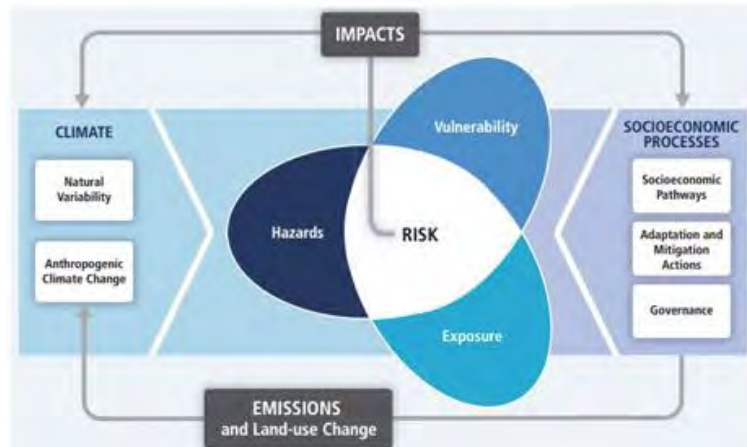


Figure 1: Illustration of the concepts of risk to climate change. (IPCC, 2014).⁴

⁴ IPCC, 2014. Fifth Assessment Report, Working Group 2. Chapter 19, Figure 19-1.
Doc # 32189287

3 KARAKIA WHAKAMUTUNGA

Unuhia, unuhia

Unuhia mai te uru tapu nui

kia wātea, kia māmā,

te ngākau, te tinana, te hinengaro,

i te ara takatū

Koia rā e Rongo

e whakairia ake ki runga

kia tina! TINA!

Haumi ē, hui ē, TĀIKI ē!

Draw on, draw on,

Draw on to the supreme sacredness

To clear, to free

our heart, body and soul

Our pathway prepared

Lo, there is peace

suspended high above

manifest!

draw together!

Affirm!