TĀMAKI MAKAURAU RECOVERY OFFICE

# Unlocking recovery

Strategic observations and recommendations from the Tāmaki Makaurau Recovery Office

June 2026

TĀMAKI MAKAURAU RECOVERY

# Recovery from the 2023 storms

2023

## Weather events

**Auckland Anniversary Storms**
Ex-Tropical Cyclone | 27 January – 1 February 2023
286 mm rainfall

**Cyclone Gabrielle**
Severe Tropical Cyclone | 13-14 February 2023
248mm+ rainfall and high winds

## Impacts

floods and landslides

**4500+** households needed assistance

**2000+** roading slips

**720** parks and community facilities damaged

## Response

**Local** and national states of emergency declared

**7000** rapid building assessments

**$2.47** billion insurance claims

**40,000** Civil Defence Payments ($25.6m)

## Recovery activities

### People

- **900+** Whānau in temporary accommodation
- **$5.5m** Rates relief for uninhabitable homes
- **2000+** Whānau supported by Storm Recovery Navigators
- **14** partner organisations delivering navigation services
- **$8.3m** total community grants
- **26** communities and **10** iwi involved in local recovery planning
- **33** resident recovery groups supported
- **4000+** Business support grants

### Homes

**3552** Residential risk assessments

- **1164** Homes purchased
- **138** Homes mitigated
  - **Over 1000** homes removed
    - **25%** of homes relocated
    - **17%** removal work awarded to Māori businesses
    - **Over 80%** building materials diverted from landfill
  - **155** shared ownership sites to resolve

### Infrastructure

**4** Blue-green / flood resilience projects

- **797** Roading projects
- **222** Water supply projects
- **1200+** Parks and community facilities projects
- **Increased** maintenance and hotspot monitoring

- **50+** Intolerable risk to life housing situations mitigated
- **500+** Homes and businesses protected from frequent flood risk

## Recovery legacy

| | | | | | |
|---|---|---|---|---|---|
| More resilient and better connected communities | Permanent removal of risk on 1164 properties | Storm affected land repurposed safely for service use, redevelopment, green space, flood resilience | Flood resilient waterways and communities | More resilient infrastructure | Improved public amenity |

Improved recovery preparedness in Auckland Council and delivery partners

Data as at 10 June 2026

# Foreword

**Being ready to recover**

Recovery from major storms is becoming an all too frequent reality in New Zealand. More than forty local states of emergency have been declared since the 2023 Auckland Anniversary Weekend floods and Cyclone Gabrielle – an average of one per month. If recovery is to become part of our 'new normal', we must ensure we are prepared to do it well, making the most of what we have, for the whānau and communities who are impacted.

Not every emergency will lead to a recovery of the scale or visibility of the 2023 Auckland recovery. But whether it's twelve hundred homes left damaged in the wake of a storm or just twelve, the impacts will be no less significant for the whānau who have been affected.

With each recovery operation, we can add to the body of knowledge that supports future recoveries. Key questions remain: What is it reasonable to expect recovery operations to deliver? Who should bear the costs? How can we reduce the need for recovery? And how can we support people and communities to be more resilient?

**What we can learn from the Tāmaki Makaurau recovery**

With an estimated cost of $2.5 billion, Auckland's recovery from the 2023 storms highlights the high price of reactive responses. It also begins to show what is possible with stronger resilience investment and better preparedness – reducing future recovery needs and enabling faster, more certain responses.

Some improvements, many outlined in the accompanying *Delivering Recovery* paper, sit within Auckland Council's control – but many require broader system change. Progress will depend on collaboration with central government and partners to 'unlock' some of the barriers to adaptation, resilience, and recovery readiness.

Prioritising resilience in a constrained fiscal environment may be difficult, but it is a prudent investment, with clear long-term economic, social and environmental benefits.

I am pleased to note that, since 2023, Auckland Council and its partners have been progressively improving the policies, systems, processes and tools we need to be ready for future emergency events. Improvements include strengthened emergency readiness, enhanced hazard modelling, and new provisions under the Auckland Unitary Plan – Plan Change 120. Significant challenges remain, especially in addressing the 'baked in' legacy of risk in our existing housing stock and supporting more vulnerable communities.

This recovery has relied on strong partnerships, and I want to acknowledge the critical role of our partners. The Crown, across two successive governments, has provided essential financial support. The joint response demonstrates the value of the Crown and council working together.

Community partners have been equally critical, delivering locally tailored support and walking alongside impacted Aucklanders. Communities are the foundation of resilience and will remain central to future recovery and adaptation efforts.

The legacy of the 2023 recovery is already visible. Through infrastructure investment and property interventions, we have begun adapting some of Auckland's most vulnerable areas. At the same time, communities and community leaders are building capability and planning a resilient future. The 2023 storms were a call to action for Auckland and for Aotearoa New Zealand. We all have a part to play.

Mace Ward

Group Recovery Manager

Tāmaki Makaurau Recovery Office

## Contents

# Executive summary

The Auckland Anniversary Weekend floods (27 January – 1 February 2023) and Cyclone Gabrielle (13 – 14 February 2023) triggered Auckland's first large-scale recovery from a severe weather event. The Tāmaki Makaurau Recovery Office ('the Recovery Office') operated for over three years, coordinating support for people and communities, housing, and infrastructure. Key functions included information and advice, infrastructure repair, wellbeing support, iwi partnerships, and community-led recovery.

The government announcement of a support scheme for impacted residential properties fundamentally changed the shape of the recovery. Over 3,500 properties were assessed, more than 1,100 homes identified as having intolerable risk to life were bought out, and over 130 properties had risks mitigated.

By the end of the programme in 2034, total recovery costs are expected to exceed $2.5 billion, largely driven by helping people move out of harm's way, and infrastructure repair and resilience improvements. These activities will leave a legacy of improved resilience for parts of the Auckland region, but come at a significant cost to the region.

Many of the activities managed by the Recovery Office were outside of Auckland Council's regular business and required a rapid and innovative approach to implementation. As we come to the end of our formal recovery period, it's important that we take time to evaluate what we have learned and apply it at all levels.

Our overarching conclusion: Auckland's recovery demonstrated both the scale of disaster impacts and the challenges of response. We need to be better prepared for future recoveries, with recovery efforts integrated with resilience planning and supported by clear roles, funding and delivery models to deliver timely, equitable, and people-centred support.

## Purpose of this report

This report draws on observations from the 2023 Auckland recovery effort to identify **strategic opportunities** that will improve recovery preparedness for Auckland and nationally. It focuses on areas where our experience in Auckland's recovery from severe storms, floods and landslides suggests possibilities for strategic and systemic improvements. The report reflects Recovery Office experience and does not represent Auckland Council policy.

In part one of this paper, we introduce the range of activities undertaken by the Recovery Office between April 2023 and June 2026, with a particular focus on the activities enabled by the Auckland Funding Agreement, which transformed the scope and scale of this recovery.

In part two, we identify three key areas for focus moving forward:

1. **Risk reduction, readiness and resilience**: the actions we can take to reduce the need for recovery from floods and landslides and, once in recovery, how we can use the momentum of events to achieve long-term resilience improvements
2. **Recovery support**: actions to improve how we support communities after an event
3. **Roles and responsibilities**: aligning the delivery of recovery with clear roles and responsibilities in a locally led, centrally supported model.

Each section contains high-level observations and evidence, a recommendation, and a range of possible actions that would respond to the recommendation. Some of the possible actions are already underway, indicating positive progress since the 2023 storms. Others would need significant further investigation and effort to develop.

This report is intended for agencies involved in recovery, including Auckland Council and other councils, central government, the insurance sector, and community organisations. Its findings, alongside the companion report *Delivering Recovery*, will inform a coordinated programme of work led by Auckland Emergency Management's Recovery Unit (discussed further in the final section of this report). A third report, *Together Auckland: Recovering from the 2023 Storms*, gives a complete account of the entire recovery effort – what was decided, how it was delivered, the impact on our people, and what the legacy of the storms will be for Tāmaki Makaurau.

## Improvements for future recoveries

The 2023 severe weather events in Tāmaki Makaurau exposed both strengths and gaps in regional and national recovery systems. While recovery delivered meaningful outcomes, systemic improvements are needed to ensure faster, more coordinated, and more resilient future recovery operations. Recovery needs to evolve from a reactive function – effectively redesigned after every severe weather event – into a proactive, integrated system capability that is ready to roll out when needed.

Part Two of this report focuses on improving future recoveries through system-wide changes made before disasters occur. The report assumes increasing frequency and severity of events, and emphasises that recovery must become a continuous, embedded capability rather than a reactive phase. It also reinforces commitments to equity and Te Tiriti o Waitangi.

Key observations include:

- Recovery is long-term and uncertain, requiring sustained coordination across social, economic, built, and natural environments, and integration with other resilience and adaptation efforts
- Early decisions significantly shape long-term outcomes, making preparedness and pre-event planning critical
- Iwi and communities are central to recovery success, and need structured support, not just consultation
- Future recovery systems need to be proactive, integrated, and people-centred. Clear roles, pre-event planning, and strong partnerships will enable faster, more equitable recovery outcomes and support long-term resilience and adaptation.

The report makes twelve recommendations to unlock recovery, focused on people, homes and infrastructure. (see Figure 1).

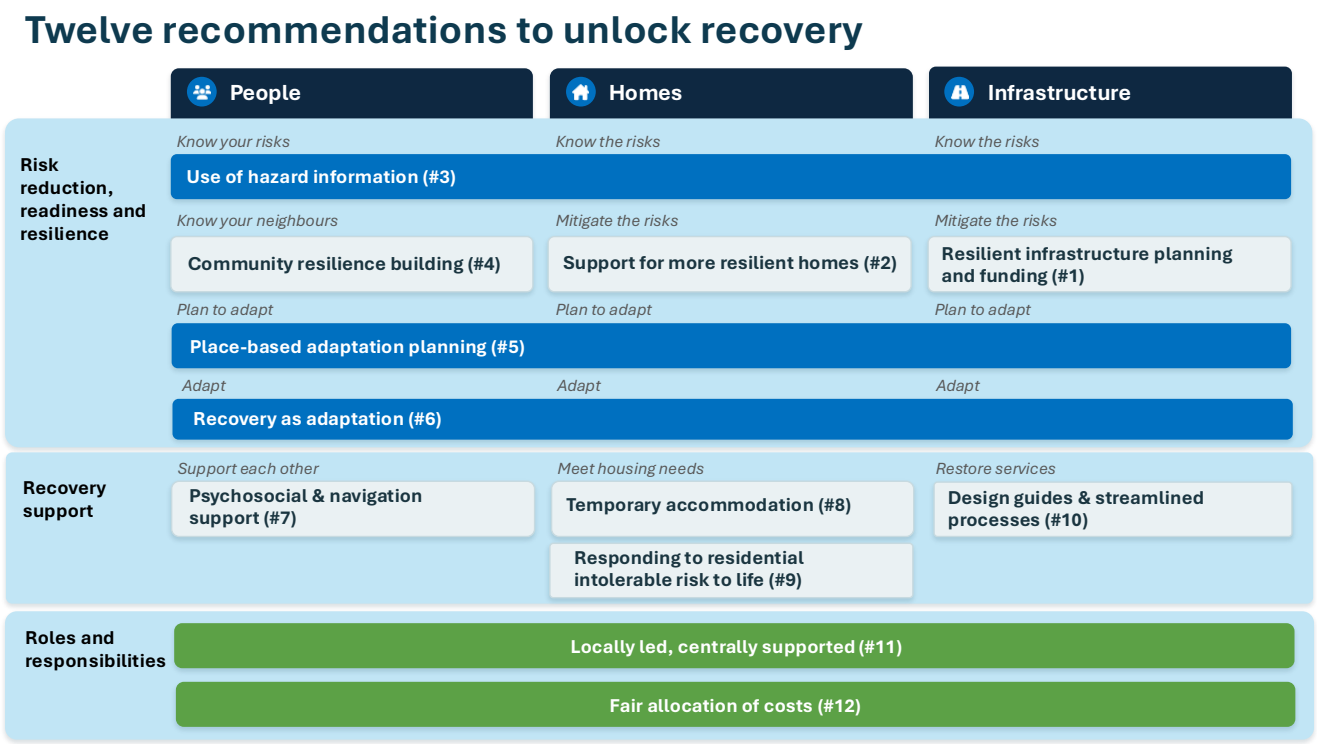



**Figure 1. Summary of recommendations**

**Risk reduction and resilience: investing before disaster and making the best of recovery**
New Zealand has historically underinvested in risk reduction, with significantly more funding directed toward response and recovery. Our experience after the 2023 storms suggests that proactive investment in preventive maintenance and hazard mitigation could deliver major savings for recoveries and better outcomes for communities.

Infrastructure recovery from the 2023 storms involved large-scale repairs across transport, water, and stormwater networks, costing close to $1 billion. The report stresses the importance of embedding resilience into repairs, rather than simply restoring assets to their pre-storm state. Programmes such as Making Space for Water illustrate how integrated, nature-based solutions can reduce long-term risk while enhancing community outcomes.

**Resilient homes: addressing the legacy of risk in the built environment**
Thousands of existing homes in Auckland are exposed to hazard risk. Establishing a national resilient homes programme could support wider adoption of the kinds of mitigation measures we applied in the Category 2P scheme. The scheme demonstrated that property-level mitigation can allow residents to remain safely in place, in a relatively cost-effective way, and could be made even more effective with improvements to address barriers such as cost, consenting complexity, and project management challenges.

**Natural hazard information: enabling better decisions**
Natural hazard information is critical but underutilised. Many people, particularly renters, are unaware of risks or how to access information. The report recommends normalising the use of natural hazard information in property decisions, improving accessibility, and strengthening disclosure requirements to support better decision-making.

**Iwi and community resilience: the social foundations of recovery**
Recovery outcomes are strongly influenced by the strength of social infrastructure, including relationships, leadership, and community organisations. Māori-led responses proved highly effective, underscoring the importance of tikanga-based approaches and culturally grounded support. Long-term investment in iwi and community capacity is essential to building resilience.

**Adaptation planning: connecting recovery to long-term change**
Recovery decisions made in the frame of the Auckland Funding Agreement and the categorisation scheme terms have resulted in adaptations to communities, homes and infrastructure, yet these decisions were made without the benefit of a long-term strategic plan for adaptation. The report calls for place-based adaptation planning to be undertaken before disasters occur, so communities can understand what the future may hold, and – when emergency events happen – recovery decisions can be faster and better aligned.

**Recovery as a catalyst for adaptation**
Recovery after an emergency event creates a unique opportunity to accelerate long-term resilience, supported by increased funding, political attention, and community motivation. To maximise this opportunity, actions taken in the course of recovery need to align with long-term adaptation and equity goals.

**Recovery support for impacted people**
The 2023 recovery showed that support for impacted people can be effectively delivered in a locally led, centrally supported model. Psychosocial and wellbeing support helped people come to terms with the challenges they were experiencing. Iwi and community delivery partners helped to ensure services were matched to local and population-specific needs. The Navigation Service provided critical assistance for people needing to access and engage with complex recovery systems.

Many support systems had to be created during the response, causing delays and uncertainty. Displacement was a major issue, with many households in unsuitable temporary housing for extended periods. Existing systems were not designed for long-term displacement, and inequities emerged due to different support settings and eligibility criteria.

We recommend:

- establishing nationally agreed systems for psychosocial and navigation support with clear roles and funding

- embedding navigation as a core recovery capability
- strengthening partnerships with iwi and community providers
- reforming temporary accommodation systems to improve flexibility, equity, and duration of support.

**Managing intolerable risk to life**
With co-funding from central government, the scope of the 2023 recovery extended to supporting people to remove themselves from residential situations of intolerable risk to life. The Category 3 buy-out scheme successfully supported 1164 whānau to remove themselves from intolerable natural hazard risks, without leaving risky properties in the housing market.

Voluntary participation in the risk assessment and buy-out schemes exceeded expectations, reflecting widespread exposure to risk and a genuine need for support to relocate. The pre-storm market valuation approach to setting the value for buy-out offers was effective in meeting the scheme objective of supporting people who chose to participate to remove themselves from situations of intolerable risk to life. We note that different property market conditions could have had a strong influence on the uptake and effectiveness of the scheme. There are further opportunities to improve scheme design, including how cross lease and unit title properties are managed, and considering the needs of tenants and vulnerable occupants as well as homeowners.

Signals from central government are that buy-outs at pre-storm market value will not be a feature of future recoveries. Based on the experience of the 2023 recovery, we suggest that – regardless of methodology – the need for some form of adequate support for relocation will remain. Pre-event national policy, frameworks and funding for relocation support are needed. This could be designed in various ways, considering needs-based or graduated financial assistance models of support.

**Key observations from Auckland's implementation of the categorisation approach**

Experience with the categorisation scheme offers insight for whatever comes next in supporting people living in hazardous areas and adapting Aotearoa New Zealand's housing stock. The following observations have been made through debriefs, workshops and survey responses in the lessons management programme, and are threaded through the discussion and recommendations in this report:

1. Homeowners and residents who were severely impacted by floods and landslides were likely to experience genuine hardship and need adequate support to make their homes safe or relocate
2. Buy-outs were an expensive but effective tool for relocating people and managing hazardous land: they permanently removed identified risk, avoided future response costs and generated opportunities for further resilience improvements
3. Risk mitigation was a cost-effective alternative to buy-outs, in situations where there were technically feasible and enduring options
4. Thresholds and frameworks for intervention needed to be timely (in future, preferably agreed in advance of events), consistent and technically robust
5. Recovery decisions would make more sense when aligned with other plans: in future, adaptation planning in advance of events is needed to establish longer-term trajectories, signal likely recovery measures in case of an event, and help set community expectations
6. Local government is in the best position to deliver local recovery programmes, provided there is clear government guidance and support, including fair financial mechanisms.

**Infrastructure delivery in recovery**
Infrastructure recovery highlighted the value of making use of pre-existing contracts and delivery pathways. Challenges included a need for consistent design standards and processes to accelerate approvals to meet recovery time pressures. For new infrastructure investment, we experienced challenges with long delivery timelines, and difficulty valuing broader benefits of resilience improvements. Future systems could benefit from streamlined processes, standardised design frameworks, and improved benefit assessment methods.

**Roles and responsibilities**
The locally led, centrally supported model proved effective but lacked clarity. Unclear responsibilities at the start of recovery led to delays and coordination challenges. Stronger national recovery frameworks and clearer role definitions are required across government, local authorities insurers, and communities.

**Funding and cost sharing**
Recovery costs are significant and unevenly distributed. Current systems do not provide clear guidance on cost-sharing. Future models need to take a long-term view and align costs with responsibility, benefit, and ability to pay, involving government, councils, individuals, insurers, and financial institutions.

# Summary of recommendations

Table 1 summarises the recommendations put forward in this report. Possible actions are identified for each recommendation in the body of the report, along with suggestions for key stakeholders who could progress the work. A full summary of recommendations and possible actions is provided as Appendix 1.

**Table 1. Summary of recommendations**

| Focus area | Recommendation |
|---|---|
| **Risk reduction and resilience** | |
| **Resilient infrastructure planning and funding** | 1. Prioritise and fund risk reduction and resilience within **council and Crown investment plans** so that infrastructure is progressively improved and maintained to reduce risks. |
| **Support for more resilient homes** | 2. Develop a **national resilient homes programme** that provides information, technical support and financial incentives for people to reduce risks to their homes in places where a natural hazard has been identified. |
| **Use of hazard information** | 3. Normalise accessing **hazard information** as a matter of course before people buy, rent or renovate a property. |
| **Community resilience building** | 4. Invest in the **social, cultural and community foundations** of resilience. |
| **Place-based adaptation planning** | 5. Develop **place-based adaptation pathways** for vulnerable communities and integrate them with emergency readiness and pre-event recovery planning. |
| **Opportunities in recovery to reduce risk and build resilience** | 6. Use **recovery as a catalyst** to accelerate long-term resilience, adaptation and equity outcomes. . |
| **Recovery support** | |
| **Psychosocial and navigation support** | 7. Formalise a model for **psychosocial and navigation support** in recovery at a national level, including how it is funded and delivered. |
| **Immediate housing needs** | 8. Review **temporary accommodation systems** to better reflect the scale and duration of recovery and the needs of displaced people. |
| **Long-term housing needs** | 9. Develop pre-event guidance to clarify how people will be supported to remove themselves from **residential situations of intolerable risk to life** as part of recovery from severe weather events, in ways that are adequate and effective, equitable and affordable. |
| **Infrastructure repairs and improvements in recovery** | 10. Agree design guidance and streamlined processes for **infrastructure repairs and resilience improvements** during recovery. |
| **Roles and responsibilities** | |
| **Applying a locally-led, centrally-supported approach** | 11. Confirm the **locally-led, centrally-supported** approach to recovery, with agreements in place establishing local and central roles and responsibilities. |
| **Fair contribution** | 12. Distribute **costs of recovery** between all parties to broadly align with respective roles, responsibilities, benefits and ability to pay. |

# Introduction

## He tangata, he tangata, he tangata

It's hard to convey the scale of the trauma and ongoing upheaval that the 2023 storms caused in Tāmaki Makaurau. Across the region, and particularly in our hardest hit areas of Māngere, Milford, Mt Roskill, Henderson-Rānui, Muriwai, Karekare and Piha, people clung to trees as floodwaters rose around them, swam to rescue their neighbours, and fled from their flooded or unstable homes with only the clothes they were wearing. Tragically, five people lost their lives.

In the aftermath of the storms, many people found themselves unmoored. Plans were upended, precious possessions were lost, and the security of home was destroyed. For those directly impacted by the storms, the physical, emotional and financial costs have been immense.

In the Recovery Office, our job was to coordinate and enable recovery efforts to help people and the region get back on course. Some of this work was technical and familiar – repairing damaged roads, pipes and facilities, cleaning up streams and parks. And some of it was much more personal, walking alongside whānau in their recovery and providing advice and support where we could.

For many impacted whānau, Recovery Office services helped provide clarity, direction, and the emotional and financial support needed to take their next steps. Iwi and community groups were funded to develop their own recovery plans, building the local connections and understanding needed for people to move forward together.

In some cases, the support we could provide within the scope of our programmes was simply not enough to meet whānau needs, due to the scale of impacts, the presence of pre-existing vulnerabilities, the challenges, uncertainties and delays involved in standing up brand new recovery services in the aftermath of the storms, and the limitations of the Crown- and council-designed schemes. This was a difficult reality for whānau and for staff who needed to balance the immediate needs of impacted whānau with the wider responsibilities of the public sector.

The 2023 weather events did not occur in isolation. Tāmaki Makaurau, like many places across Aotearoa and internationally, is facing increasing exposure to severe weather events and other complex disruptions, driven by climate change, infrastructure pressures, economic uncertainty and wider social vulnerabilities. These events place growing pressure on communities, infrastructure, institutions and public finances, and reinforce the need to strengthen how recovery is planned for, coordinated and delivered across the region. The lessons from the 2023 recovery therefore matter not only for future recovery operations, but also for Auckland's broader resilience and adaptation efforts in an increasingly uncertain future.

As we come to the end of our formal recovery period, it's important that we take time to evaluate what we have learned and apply it at all levels. The experience of the last three and half years offers real insights into what it takes to recover from severe weather events, and how pre-event resilience measures and better system preparedness could strengthen future recovery efforts.

We recognise that many people will still be rebuilding their lives and coming to terms with the shocks they have experienced. Through the lessons process, we hope that we will be able to build on the experiences of 2023 to make things a little better for the future.

## A localised view

Our experience and observations in Auckland's recovery are highly contextual, influenced by the nature of the storms, the way they made landfall across the region, and the circumstances of the people that were impacted.

In January 2023, Auckland was just emerging from the Covid-19 pandemic. The economy was rebuilding, optimism was returning, but many were still feeling the strain of the previous three years. A new local council term had started, and a national election was on the horizon. All of these factors influenced the shape of our recovery.

As recovery got underway, we made a series of policy and practical choices based on local needs and the tools that were available to us. Sometimes our approach differed from other impacted regions. The categorisation scheme for affected residential properties, announced by the government in May 2023, and the subsequent co-funding agreement, signed in October 2023, had a profound impact on the nature and scale of recovery operations.

We offer the following commentary from this localised and contextual position: these are some of the things that worked well for us in the Tāmaki Makaurau Recovery Office, the challenges we faced, and the areas where we think there's room for improvement.

We encourage further discussion and action on these ideas. The Recovery Unit in Auckland Emergency Management will be able to facilitate discussions with Auckland Council.

## Purpose of this report

This report draws on observations from the 2023 Auckland recovery to identify strategic opportunities to improve recovery preparedness for Auckland and nationally. It focuses on areas where our experience in Auckland's recovery from severe storms, floods and landslides suggests possibilities for strategic and systemic improvements.

In part one of this paper, we introduce the range of activities undertaken by the Tāmaki Makaurau Recovery Office between April 2023 and June 2026, with a particular focus on the activities enabled by the Auckland Funding Agreement, which transformed the scope and scale of this recovery.

In part two, we identify three key areas for focus moving forward:

1. Risk reduction, readiness and resilience: the actions we can take to reduce the need for recovery from floods and landslides and, once in recovery, how we can use the momentum of events to achieve long-term resilience improvements
2. Recovery support: the actions our communities need after an event
3. Roles and responsibilities: aligning the delivery of recovery with clear roles and responsibilities in a locally led, centrally supported model.

Each section contains high-level observations and evidence, a recommendation, and a range of possible actions that would respond to the recommendation. Some of the possible actions are already underway, indicating positive progress since the 2023 storms. Others would need significant further investigation and effort to develop.

This report is intended for agencies involved in recovery, including Auckland Council and other councils, central government, the insurance sector, and community organisations. Its findings, alongside the companion *Delivering Recovery* report, will inform a coordinated programme of work led by Auckland Emergency Management's Recovery Unit (discussed further in the final section of this report).

## Report limitations

The discussion presented in this report forms a part of the transition process for recovery efforts, capturing the insights from the debriefing and reviewing processes undertaken in fulfilment of our exit strategy requirements set out in section 158 of the National Civil Defence Emergency Management Plan 2015.

Auckland's recovery efforts centred on three main elements: people, homes, and infrastructure, so the report is focused on these issues too. Future recoveries may centre on different aspects.

Data in the report provides the best information available as of 10 June 2026, unless otherwise stated. As some recovery operations will continue for some time, some financial information will change.

Many of the recommendations identified in this report are already in development within the relevant Auckland Council teams and other agencies. The recommendations are still captured here, to give a full picture of the needs identified through the experiences of the Recovery Office.

The observations and recommendations in this report are drawn from the debriefing and review process, undertaken with staff, delivery partners, and governance groups. Although we draw on some community surveys and communications, the views of impacted whānau or the wider community have not been systematically canvassed in this lessons process. This is something we would recommend as offering further valuable insight into the impacts of the 2023 storms and the effectiveness, costs and benefits of the recovery.

The observations and recommendations in this report do not necessarily represent Auckland Council policy. They are offered as a contribution to the growing national discussion about emergency management, recovery, resilience, and adaptation.

# Part One: Storm recovery overview

## Auckland's first significant recovery

The Auckland Anniversary Weekend floods (27 January – 1 February 2023) and Cyclone Gabrielle (13 – 14 February 2023) triggered Auckland's first large-scale recovery from a severe weather event. Auckland Council established the Tāmaki Makaurau Recovery Office in April 2023. Up to $3 million was allocated in the 2022/2023 financial year to support operations, which were expected to last approximately one year.

The Recovery Office was formed to be the link between affected communities, council services and central government agencies, making sure support reached people in a coordinated way. As set out in the Tāmaki Makaurau Recovery Plan, this involved:

- providing information, advice and resources for Aucklanders
- delivering programmes and initiatives to support wellbeing and recovery
- making repairs and improvements to key infrastructure
- enabling mana whenua to partner and lead in the recovery
- empowering communities to lead their own recovery.

As the scale of recovery need became apparent, and as central government developed a national response for impacted homeowners, the scope of Recovery Office activities significantly expanded, with a strong focus on homeowners and residential property assessed as having an intolerable risk to life (see next section for discussion of the residential support schemes). In the end, the Recovery Office operated to June 2026 – just over three years to deliver a substantial programme of work supporting thousands of Aucklanders in wide-ranging ways. With the bulk of activities now complete, remaining recovery activity continues within the council's business as usual operations (see Next Steps for discussion).


**Figure 2. Auckland's Recovery Programme**

The range of activities delivered by the Recovery Office and its partners – for people, homes and infrastructure – is outlined in Figure 2. Many of these activities were outside of Auckland Council's regular business and required a rapid and innovative approach to implementation. As we come to the end of our formal recovery period, it's important that we take time to evaluate what we have learned and apply it at all levels.

### Costs of recovery

Auckland's recovery from the 2023 storms will cost more than $2.5 billion. Most of that spend has gone into repairing damage, improving regional resilience, and helping people move out of harm's way after the event (see Table 2).

Research in New Zealand shows this is not unusual. Around 97% of central government spending on natural hazards since 2010 has been on response and recovery, with only 3% directed toward reducing risk in advance.[1]

The 2023 recovery has increased investment in resilience and risk reduction in Tāmaki Makaurau. Investment in flood resilience, blue-green networks, resilient roading, and development planning changes in natural hazard areas is intended to reduce future impacts. But the scale of this recovery highlights the importance of investing in resilience and adaptation ahead of an event.

As extreme weather events become more frequent, decisions about when and where to invest in resilience will shape not only how future events are experienced, but how much they cost.

**Table 2. Estimated costs of recovery**

| Recovery activity | Cost $M | | Funding $M | | |
|---|---|---|---|---|---|
| | Estimated total June 2026 | Forecast total June 2034 | Crown | Council | External |
| 1. Repairing and strengthening public infrastructure | 608.8 | 984.9 | 431.0 | 555.8 | 0.0 |
| 2. Removed intolerable risk at residential properties | 1,333.6 | 1,409.3 | 655.9 | 753.4 | 0.0 |
| 3. Supported impacted Aucklanders, communities and businesses | 77.9 | 79.5 | 54.3 | 22.5 | 2.7 |
| 4. Safe management and future use of storm-affected land | 11.3 | 76.2 | 0.0 | 76.2 | 0.0 |
| 5. Coordinating the recovery | 23.6 | 24.4 | 0.0 | 24.4 | 0.0 |
| **Total estimated cost of recovery efforts** | **2,055.3** | **2,574.2** | **1,141.2** | **1,432.2** | **2.7** |
| **Share of cost** | | | **44.3%** | **55.6%** | **0.1%** |

**Notes**

- Costs are estimated based on the best information available in June 2026.
- Repairing and strengthening public infrastructure includes regional transport projects and road reserve scheme ($390m), water supply repair ($72.8m), council funded storm water repair and Making Space for Water activity ($291m), co-funded flood mitigation projects ($192.8m), parks and community facilities repair ($37.6m) and improved information on geotechnical risks and hazards.
- Removing intolerable risk at residential properties includes undertaking risk assessments ($25.7m), Category 3 buy-out scheme ($1,256m), Category 2P grant scheme ($39.5m), removal of category 3 homes ($76m) and people costs associated with delivery.
- Supporting impacted Aucklanders, communities and businesses includes grant support for businesses ($8m), rates relief ($5.5m), navigation service and delivery of local recovery programmes ($15.7m), community grants ($8.3m), temporary accommodation support ($39m) and other activity.
- Management of storm-affected land includes maintenance and ownership-related costs for around 1,160 category 3 sites ($47.4m) and costs associated with assessing and implementing decisions on the future use of this land ($28.8m).
- People costs have been attributed to the relevant activity where there is a direct relationship. Remaining people costs are included within costs for coordinating the recovery, along with other operational costs for the Recovery Office.
- Total costs do not include sales proceeds from the safe divestment of storm-affected land (estimated at $110m), interest costs or civil defence payments made by central government.

[1] White, A., C. Comendant, D. Yee, and D. Moore, 2025. *Natural hazards-related public spending in New Zealand: Tracking costs over time by the nature of spending.* Wellington: Sapere.

# Residential support schemes

## Government support for homeowners changed recovery's scope and scale

The scope and scale of recovery operations changed significantly with the government's announcement of a scheme to support impacted homeowners across the North Island. This included a categorisation framework to assess the future of flood and landslide affected properties[2] and Crown funding to support councils to undertake voluntary buy-outs for Category 3 properties and implement protections for Category 2 properties. [3]

Auckland Council entered negotiations with the Crown, consulted with Aucklanders on the prospective deal and, in October 2023, adopted the Auckland Funding Agreement as a one-off response to the significant weather events of 2023 (see Figure 3).[4] The cost to the council for the residential programme was balanced with Crown commitments to support public infrastructure recovery which the council would otherwise have needed to fund alone (see Table 3).

Auckland Council could not have initiated this kind of programme on its own. Directly purchasing or mitigating risks on private properties is not normal business for Auckland Council; the council is not a guarantor of private property interests, a compensator for weather- or disaster-related loss, or an insurer of first or last resort.[5] The scale of impact of the 2023 storms, coupled with the funding offer, made a compelling case for the council to agree to participate in a one-off response.


**Figure 3. Introducing the categorisation scheme**

**Table 3. Auckland Funding agreement, as agreed and modified**

| Auckland Funding Agreement | Initial agreement (Oct 2023) | | | June 2026* | | |
|---|---|---|---|---|---|---|
| **$M** | **Total** | **Crown** | **Council** | **Total** | **Crown** | **Council** |
| Category 3 buyouts | 774 | 387 | 387 | 1,252 | 626 | 626 |
| Category 2 risk reduction projects | 613 | 380 | 233 | 231 | 143 | 88 |
| Regional transport projects | 110 | 110 | | 110 | 110 | |
| **Auckland Funding Agreement** | **1,497** | **877** | **620** | **1,593** | **879** | **714** |
| Regional transport projects (NZTA) | 280 | 199 | 81 | 280 | 199 | 81 |
| **Total co-funding package** | **1,777** | **1,076** | **701** | **1,873** | **1,078** | **795** |

* June 2026 figures reflect $1.959 million of additional Category 3 funding confirmed by central government in May 2026 and matched by additional council funding as per the 50/50 cost share set out in the funding agreement. Buyout costs above this level are fully funded by council.

[2] Robertson, Hon. G., 2023. *Update on assessment of affected properties post Cyclone and flooding, 1 May 2023* (media release).
[3] Robertson, Hon. G., 2023. *Govt to support councils with buyout and better protection of cyclone and flood affected properties* (media release).
[4] Auckland Council Governing Body decision GB/2023/187
[5] Auckland Council, 2022. *Too much water – a statement of Auckland Council's current role and direction' 10 March 2022.*

There was no expectation of residential property buy-outs becoming a regular council activity. The decision to take up the government's offer was accompanied with a clear request to central government to 'establish national schemes to support recovery from future severe weather events, and to put in place better processes for managed retreat in advance of disaster'.[6]

Once the decision was made to proceed, private residential property and property owners were propelled to the centre of Auckland's recovery efforts. The programme moved rapidly, with most activity (risk assessment, buy-out and mitigation activity) completed within three and a half years. Managing the purchased land has led to a 'long tail' for recovery operations, with future land use decisions expected to take many years to resolve.

Auckland Council's scale provided the capacity to deliver and the ability to co-fund the programme. Smaller councils, and potentially Auckland Council in future recoveries, are unlikely to have the same capacity or financial scope.

**Category 3 and 2P: supporting people in residential situations of intolerable risk to life**

The Category 3 and 2P schemes have successfully achieved their objective of supporting storm-impacted Aucklanders to voluntarily move out of situations of intolerable risk to life, or to reduce those risks to tolerable levels. The Category 3 Voluntary Buy-out Support Scheme offered owners a buy-out at pre-storm market valuation (less a homeowner contribution of five to 20 per cent). The Category 2P Risk Mitigation Grant Scheme offered owners funding of up to 25 per cent of the capital value of the property to reduce the risk to their properties (e.g. lifting floor levels or installing retaining walls).

Homeowner uptake has significantly exceeded initial estimates. Within three and a half years of the schemes' launch:

- 3,552 properties have received a risk assessment
- 1,164 households have received a buy-out offer for their home
- 138 households have received funding to make their homes safer (see Table 4).

The categorisation schemes have delivered real benefits to storm-impacted Auckland homeowners and communities, but these benefits have come at a significant cost to ratepayers and taxpayers. The total to implement the schemes is forecast to be $1.41 billion, including $1.256 billion for Category 3 property purchases, $39.5 million for Category 2P mitigation works, as well as technical assessments, removal of category 3 homes and related people costs. The Crown provided 47 per cent of this total cost, at $656 million, with the council covering the balance.

**Table 4: Categorisations for floods and landslides**

| Risk assessments | |
|---|---|
| Category | Properties |
| 1 | 1,975 |
| 2C | 32 |
| 2P | 138 |
| 3 | 1,205 |
| **Total** | **3,350** |

| Participation in schemes | | | | |
|---|---|---|---|---|
| Category | Properties | Flood | Landslide | Flood & landslide |
| 1 | n/a | | | |
| 2C | 32 | 32 | 0 | 0 |
| 2P | 138 | 58 | 78 | 2 |
| 3* | 1,164 | 934 | 227 | 3 |
| **Total** | **1,334** | **1,025** | **305** | **5** |

*excludes 41 Category 3 properties that opted out

[6] Auckland Council Governing Body decision GB/2023/187(c)

**Government framing established the scope of delivery**

The government categorisation framework set important parameters for the development of Auckland Council's approach to the residential support schemes. It established:

- Residential property as the focus for funding support (noting other funds were made available for businesses)
- Intolerable risk to life as the threshold for funded intervention (via Category 3, 2C or 2P)
- Risk includes risk from future severe weather events
- Voluntary participation by homeowners

Guided by the government framework, Auckland Council developed a risk assessment and categorisation process that identified properties as belonging to one of four possible categories (see Figure 4). No further action was possible for Category 1 properties. Categories 3 and 2P established eligibility for a property-level scheme. Category 2C relied on implementation of community-level infrastructure and risk mitigation solutions. Further information on these categories and the wider programme is included in the accompanying *Auckland Together* report.

The impacts and lessons from the categorisation scheme are further discussed at Page 46.

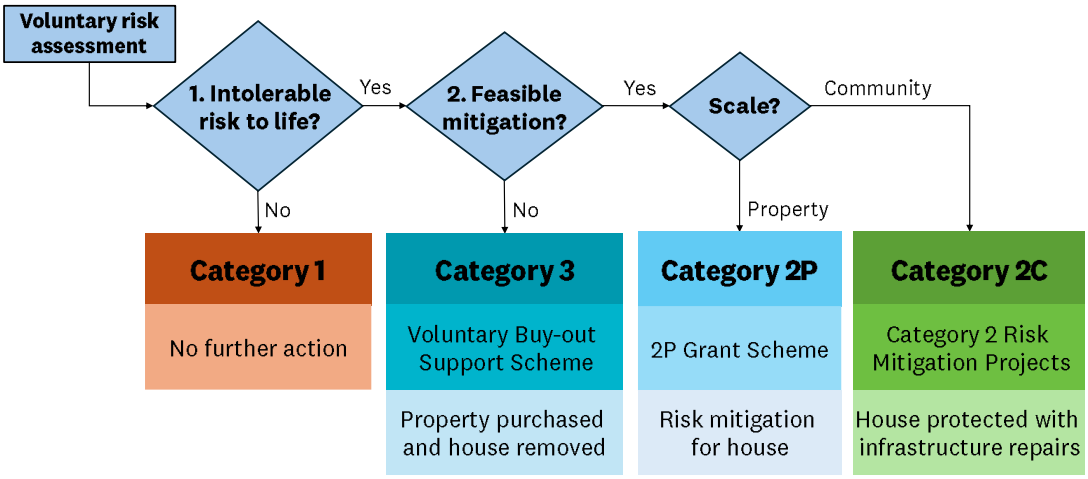



**Figure 4: Decision tree showing Auckland council's risk assessment and categorisation framework**

## An uncertain future for residential support schemes

*'Homeowners should not expect to receive financial assistance for property-level resilience measures [including buy-outs] based on a full pre-event property valuation.'*[7]

Looking ahead, there is no expectation that a residential support scheme of this scale would be repeated, except on an ad hoc and reactive basis in the aftermath of emergency events. Since the 2023 scheme was agreed, the government has signalled that it wishes 'to reset expectations of its role in providing financial assistance where homeowners suffer major losses after an event'.[8] While mitigating 'genuine hardship' will remain a government objective, the message is that buy-outs – particularly at the pre-event market value used in the Auckland buy-out – will not be repeated.

Frequent weather-related emergencies will continue to impact people across the country. As we progressed through the 2023 recovery, we asked: if residential property buy-outs are not a part of the future recovery picture, then what, if anything, will take their place? And what will the impacts be for affected communities?

[7] Cabinet Paper: Establishing a National Adaptation Framework, 22 September 2025.
[8] Cabinet Paper: Establishing a National Adaptation Framework, 22 September 2025.

Our recovery experience suggests that these questions will be central concerns for people immediately following a disaster, and – in the heightened environment of an emergency – difficult for decisionmakers to ignore:

> *"I have lost two properties, all income, my entire life's work and looming retirement are in tatters, with a large mortgage owing, bankruptcy is looming – PLEASE HELP US (homeowner's message presented to Governing Body, October 2023)*

A more planned and predictable approach is needed, to support impacted residents to make themselves safe, to manage residential property where risks are identified as 'intolerable', and to provide greater certainty in advance of any emergency event.

The recently released National Adaptation Framework and National Infrastructure Plan are two key frameworks for the national direction on these challenges, but significant work is needed to build out the details of their implementation and to ensure that planned recovery measures are sufficient and effective. We note in particular the detailed recommendations of the Expert Working Group on Managed Retreat,[9] which frequently align with Auckland's recovery experience and observations.

## Observations from Auckland's implementation of the categorisation approach

Experience with the categorisation approach offers insight for whatever comes next. This includes the categorisation framework, risk assessments, Category 3 buy-outs, and Category 2 risk mitigations (encompassing 2P property-level and 2C community-level mitigations).

The following observations have been made through debriefs, workshops and survey responses in the lessons management programme, and are threaded through the discussion and recommendations in the remainder of this report:

1. Impacted homeowners and residents are likely to experience genuine hardship and need adequate support to make their homes safe or relocate
2. Buy-outs are an expensive but effective tool for relocating people and managing hazardous land: they permanently remove risk, avoid future costs and generate opportunities for further resilience improvements
3. Risk mitigation can be a cost-effective alternative to buy-outs, in situations where there were technically feasible and enduring options
4. Thresholds and frameworks for intervention need to be timely (preferably agreed in advance of events), consistent and technically robust
5. Recovery decisions make more sense when aligned with other plans: adaptation planning in advance of events would help to establish longer-term trajectories, signal likely recovery measures in case of an event, and help set community expectations
6. Local government is in the best position to deliver local programmes, provided there is clear government guidance and support, including fair financial mechanisms.

[9] Expert Working Group on Managed Retreat. (2023). *Report of the Expert Working Group on Managed Retreat: A Proposed System for Te Hekenga Rauora / Planned Relocation.* Wellington: Expert Working Group on Managed Retreat.

# Part Two: Improvements for future recoveries

In the following pages, we identify opportunities for strategic and structural improvements before future recoveries need to be stood up, so that next time a recovery is activated, the need might be a little less extensive, and the solutions a little simpler and less costly.

We identify three key areas for focus moving forward:

1. Risk reduction, readiness and resilience: the actions we can take to reduce the need for recovery and, once in recovery, how we can use the momentum of events to achieve long-term resilience improvements
2. Recovery support: the actions our communities need after an event
3. Roles and responsibilities: aligning the delivery of recovery with clear roles and responsibilities in a locally led, centrally supported model.

Within each area, we provide high-level observations from the Recovery Office, set out a recommendation, and identify a range of possible actions that would respond to the recommendation. Some of the possible actions are already underway. Others would need significant further investigation and effort to develop. We discuss how this might happen in the final section of this report.

## Assumptions about future recoveries

Some assumptions underpin the recommendations made in this report:

- More frequent and high impact weather events are likely to lead to higher recovery needs nationally
- Severe weather and other emergency events can have devastating and long-lasting impacts on people and communities, with loss of housing and possessions, displacement from communities including school and workplaces, financial loss and psychological trauma among the consequences
- Impacted people and communities will need varying levels of multi-pronged support to get back on their feet, in part depending on the personal resources, skills and networks they can draw on
- Impacts are not experienced equally; tailored and targeted approaches will be needed to support disproportionately affected communities.
- Events will dictate how a specific recovery unfolds: different types and scales of emergency events will demand very different recovery operations, including the types of supports offered and whether a Recovery Office or other coordinating function is necessary
- The nature of any recovery operation will also be shaped by wider social, political, environmental and economic factors in play at the time of the event
- Recovery has a long tail – scenarios may arise where the country has multiple recovery operations underway at once, and at different stages
- Councils must maintain a level of recovery preparedness at all times to ensure that people, systems and processes are ready when needed
- Recovery must give effect to Te Tiriti o Waitangi by recognising Māori as Treaty partners, supporting rangatiratanga, enabling mana whenua leadership in place-based recovery and adaptation, and resourcing Māori-led responses for whānau and communities
- Councils and central government will continue to play central coordinating functions in recovery and will be looked to by communities for support, and, depending on the nature of emergency event, the model is likely to continue to be locally led and centrally supported
- Auckland Council, as the largest council in New Zealand and as a unitary authority, was uniquely positioned to undertake the 2023 recovery – that capability, capacity, and ability to debt fund unexpected costs is not likely to exist in other councils, or even in Auckland in the future.

# Risk reduction and resilience

*Since 2010, New Zealand has spent $64 billion on hazard-related costs. Of that, 97 percent was spent on response and recovery and only 3 percent on reducing risk.*[10]

This section focuses on the actions we can take in advance of emergencies to reduce recovery needs and once in recovery, how we can use the momentum of events to achieve long-term resilience improvements.

Observations from the 2023 recovery suggest that action in advance of emergency events is going to be effective for both reducing the scale of recovery needed and improving the effectiveness of recovery as it is delivered. Further, the actions taken during a recovery are an opportunity to advance risk reduction and resilience, for people, homes and infrastructure.

## Resilient infrastructure planning and funding

Auckland experienced widespread infrastructure damage from the 2023 storms, costing over $600 million to date to repair transport, stormwater, water and other community assets (see Table 5). Where possible, we have made sure repairs also deliver resilience improvements.

Auckland Council has either completed or is currently progressing:

- Transport repairs on 797 minor and major sites on the local roading network
- 222 water supply repair projects
- Critical works to repair and build resilience into the stormwater network and reduce the impact of future flooding events (Making Space for Water)
- Repairs and restored access to parks and community facilities assets, including landslide repairs
- Geotechnical studies, landslide susceptibility mapping and public information
- Improved flood modelling and education campaigns
- Flood mitigation projects at Harania, Te Ararata, Clover Drive (Manaawa aa Whenua) and Ngā Wairau Stage 1
- Grant support for property owners to repair assets such as vehicle crossings and retaining walls to restore access across road reserves.

**Table 5. Costs of infrastructure repair and resilience improvements**

| Activities | Cost $M | | Funding $M | |
|---|---|---|---|---|
| | Estimated total June 2026 | Forecast total June 2034 | Crown | Council |
| Transport repair programme (and road reserve scheme) | 390.0 | 390.0 | 309.0 | 81.0 |
| Water supply repair programme | 72.8 | 72.8 | -- | 72.8 |
| Stormwater network repair and resilience (council funded) | 49.0 | 290.8 | 2.0 | 290.8 |
| Parks and community facilities repair | 31.3 | 37.6 | -- | 37.6 |
| Improved information on geotechnical risk and hazards | 0.9 | 0.9 | -- | 0.9 |
| Flood risk mitigation infrastructure projects (co-funded) | 64.9 | 192.8 | 120.1 | 72.7 |
| **Total** | **608.8** | **984.9** | **431.0** | **555.8** |
| **Share of cost** | | | **44%** | **56%** |

[10] White, A., C. Comendant, D. Yee, and D. Moore, 2025. *Natural hazards-related public spending in New Zealand: Tracking costs over time by the nature of spending.* Wellington: Sapere.

Looking ahead to the prospect of infrastructure repairs in future recoveries from severe weather events, the following observations apply:

### Infrastructure's role in risk reduction

While the amount of rainfall we received in the 2023 events would overwhelm any piped stormwater network, there were situations where pre-emptive maintenance, repairs and improvements may have avoided or reduced the cost of emergency repairs, such as landslides over or under roads.

Auckland Transport has identified that preventive measures could significantly reduce the extent and cost of roading damage in severe weather events, with preventive projects costing approximately 15 to 30 per cent of the cost of recovery projects. In a ten-year period, $670m of prevention work on the road network could save between $2.2 and $4.4 billion in recovery (see box).

### The cost of doing nothing different

A landslide on Manukau Heads Road displaced 90,000 cubic metres of soil (enough to fill 36 Olympic swimming pools). Repairs cost around $3.5 million, took 3 years, and required a diversion route across private land. Assessing the project in hindsight, preventive work before the storm would have cost around $460,000 and taken two months, with one lane closure.

Auckland Transport has now developed a Landslide Susceptibility Framework to support proactive asset management for 8,000km of road network. The framework applies 30 different factors that influence landslide risk. This information will inform prioritisation and decisions to improve resilience. Further national funding, similar to that provided by the short-term NZTA fund of $100m (which Auckland successfully accessed), would support the application of this improved knowledge.

Auckland Transport has also developed a resilience framework which has populated a ten-year programme of prevention works across the transport network, to deliver value for money across a breadth of climate hazards and transport assets. This has been proposed as part of the 2027 Asset Management Plan for consideration through Regional Land Transport Plan and Long-term Plan decision-making processes.

**Figure 5. Slip on Manukau Heads Road** ***Source: Auckland Transport***

**Community-scale risk reduction**

Larger improvements to our stormwater, transport and community facilities can deliver substantial risk mitigation for some areas of Auckland. Since 2023, we have progressed our understanding of where this approach is feasible and makes economic sense and, equally importantly, where it is not.

A key part of the 2023 recovery is the Making Space for Water Programme, which includes development of blue-green corridors and networks to increase stream capacity and divert more water away from property and infrastructure (see Table 6).

**Table 6. Making Space for Water initiatives**

| Initiative | Overview |
|---|---|
| 1. Blue-green networks | Creating parks (green) around existing waterways (blue) to give stormwater space to flow and help reduce flooding in populated areas. |
| 2. Stream and waterway resilience | Enhancing the capacity of high-risk streams and waterways by de-lining concrete channels and replacing pipes with naturalised features like vegetated swales, ponds, or open channels. |
| 3. Increased maintenance | Boosting maintenance of both the pipe and stream stormwater networks to improve drainage capacity and prevent blockages. |
| 4. Flood intelligence | Investing in new planning, monitoring, and modelling tools while continually updating existing tools to assess and communicate flood risk. |
| 5. Overland flow path management | Identifying and enhancing the performance of overland flow paths at both a catchment (capital works) and individual property-scale. |
| 6. Community flood resilience | Supporting communities to take action to reduce their own flood risk and ensuring Aucklanders know what to do before, during and after a flood. Facilitating minor works on council assets and streams with community groups and providing guidance on how to manage flood risk. |
| 7. Rural Settlements | Responding to specific needs in rural communities including marae and papakāinga to improve community resilience and assess public stormwater assets. |

Four blue-green projects have been funded through the Auckland Funding Agreement between the Crown and the Council, but there is much more potential across the region. Concept design is underway for blue-green network projects in Whangapouri Creek in Pukekohe and Te Auaunga (stage 2) in Mt Roskill. The Healthy Waters and Flood Resilience Department is also exploring potential blue-green solutions at other locations including Whau Stream in Blockhouse Bay/Lynfield and Opanuku Stream in Henderson. These form part of a wider list of potential projects, ranging from simple to complex, that is being scoped and prioritised. The pace at which these projects can be rolled out is subject to funding decisions.

**Averting disaster through better infrastructure design**

The Te Kaitaka / Greenslade Reserve in Northcote demonstrated the benefit of smarter stormwater investment, lowering the playing fields for greater stormwater detention. During the Auckland Anniversary weekend storm, Te Kaitaka Greenslade was filled to capacity and prevented flooding on local streets and properties. By the next afternoon the retained water had safely drained away, and locals were again using the reserve for recreation.

### Evaluating long-term infrastructure options

There is strong pressure to repair damage to existing infrastructure in the aftermath of an event, reinforcing 'lock-in effects' of earlier infrastructure decisions. In some cases, it may be that damage is a trigger for change (e.g. reduced service levels or alternative provision), but this requires earlier understanding of triggers and options, ideally explored in partnership with communities. Adaptation planning is an opportunity to develop this approach.

**Recommendation one**

Prioritise and fund risk reduction and resilience within **council and Crown investment plans** so that infrastructure is progressively improved and maintained to reduce risks.

**Possible actions**

a. Review investment frameworks to **prioritise resilience as an outcome**, including within councils' Long-term Plans, 30-year infrastructure strategies and asset management plans, and government agency equivalents (government, councils)

b. Continue to progress development of **blue-green network and other resilience projects** across the region, recognising that this is a multi-decade endeavour (Auckland Council)

c. Revisit national and local funding models to enable investment in **lower-cost pre-emptive resilience works**, in preference to reactive emergency works (NZTA, government, councils)

d. Agree more **consistent methods to measure and value resilience benefits** to allow better evaluation of trade-offs in investment decisions (central government and councils)

e. Continue to invest in **maintenance, hazard monitoring and hotspot identification** as cost effective methods of risk reduction (asset managers)

f. Explore and apply **triggers for changing service levels** when natural hazards mean repeated repair is no longer appropriate (councils and communities)

g. Develop **pathways for adaptation in places where there is no feasible solution to make infrastructure more resilient** (councils and communities).

# Support for more resilient homes

**A legacy of risk**

We lack mechanisms to support property-level risk reduction for existing homes. If nothing changes, there is a likelihood of repeated cycles of damage and repair to homes in hazard zones, with increasing insurance premiums, property devaluation and little prospect for adaptation. Responding to this 'baked in' risk is one of the most significant ongoing challenges that we observed in the 2023 recovery.

Some observations:

- The 2023 storms mainly impacted homes that were built in earlier decades, when planning and building standards were less advanced and natural hazard risk modelling was less developed. Around 98 per cent of the properties we assessed as being at intolerable risk to life were consented and built before the Auckland Unitary Plan was made operative in 2016. Only around two per cent of the properties we assessed as being at intolerable risk to life were new builds.
- National assessments suggest that around 4,100 Auckland homes, valued at $5.2 billion, may experience internal flooding above 30cm in the next 30 years, out of the 55,000 existing homes that have been built in coastal inundation zones and flood plains in Auckland.[11]
- The categorisation schemes have directly purchased or mitigated risk to around 1,025 existing Auckland dwellings impacted by the 2023 flooding, which occurred across 60 per cent of the region (equivalent to around a quarter of the flood risk identified in the national assessment). Blue green network projects are reducing lower-level flood risks to over 500 properties. A significant number of existing homes remain in situations of intolerable or acute risk.
- Community-level infrastructure upgrades and blue-green network projects can reduce some – but not all – risk to existing homes. These projects (described as Category 2C in the government's framework) can deliver multiple benefits with more holistic outcomes for communities; however the scale, complexity and cost of work in Auckland's dense and highly fragmented urban catchments means it is a much longer-term proposition, potentially leaving impacted properties at risk for many years.
- The topography of Auckland, our mainly pluvial flooding mechanism and our diverse housing stock means that flood risk is highly variable - even between neighbouring properties. In some areas only a small number, or even a single property, may be at risk. Just one or two properties may have been built in a particularly low-lying area whereas the rest of the neighbourhood is okay. These localised properties are unlikely to attract community level schemes or large blue-green projects.
- Landslide risk is widely dispersed across the region.
- New homes and buildings need to meet the standards of the Unitary Plan and the strengthened provisions set out in Plan Change 120, meaning identified natural hazard risk should be avoided, remedied or mitigated. These requirements are not triggered for existing homes, unless the owner applies for resource consent for a new development project (physical works or subdivision).

[11] Storey B, Kloppenburg N, Knox D, & Zammit C. (2025). Estimated Number and Valuation of Residential Properties within Inundation/Flood Zones Impacted by Climate Change. Climate Sigma report, prepared for the Ministry for the Environment. https://environment.govt.nz/assets/publications/5.-CLIMATE-SIGMA-FINAL-REPORT_16-JAN2025.pdf. Nationally, the numbers rise to 219,000 homes in coastal inundation zones and flood plains, valued at $180 billion, and 14,500 that may experience internal flooding.

### Learning from Category 2P

We think there are strong opportunities to apply the lessons from the Category 2P Risk Mitigation Grant Scheme, to develop cost effective and efficient national support for people wanting to make their existing homes more resilient. This could respond to the mitigation needs of a much wider number of properties, including those with significant but not intolerable risk.

The Category 2P Grant Scheme supported homeowners to implement risk mitigation measures on their properties. 138 properties were provided with $39 million funding support to build retaining walls, lift or shift the home, or in a small number of cases, rebuild the home entirely.

**Top 2P risk mitigations**

- Retaining wall (59 properties)
- House lift or shift (42 properties)
- Other mitigations included house rebuilding, soil nails, catch fences and ground surface profile changes

The scheme was successful in supporting owners to stay in their homes and avoiding the significant costs of purchasing and removing another 138 properties with intolerable risk to life (in the order of $260 million, so a net benefit to the schemes of $221 million).

### Identifying properties with risk mitigation potential

Only ten per cent of properties with intolerable risk to life were categorised as 2P: 78 with landslide risks, 58 with flood risks, and two with both landslide and flood risks. This may partly be a consequence of the scheme settings:

- Entry to the scheme required an assessment of intolerable risk to life – it did not extend to homes where lower-level risks were present (e.g. frequent flooding, damage to property)
- Entry to the scheme relied on mitigation works being estimated to cost no more than 25 per cent of the property's capital value. This value was set as a reasonable threshold for works to be manageable and was estimated as part of property risk assessments using standardised cost schedules[12]
- The use of a percentage of capital value may have had the effect of excluding some lower-value properties from entry to the scheme, as the total costs of mitigation works came to more than 25 per cent of the capital value (see Figure 6). This would need further evaluation, considering other factors that could explain the intersection between valuations and mitigation potential.
- The feasibility process for the flood assessment required egress to a public place of safety for properties in urban areas. This ruled out many flood-impacted properties for consideration as a Category 2P because, even though the house could have been lifted out of floodwaters, there remained no safe evacuation pathway along flooded roads. It should be noted that this threshold was higher than the requirement in the Unitary Plan, so we had a couple of dozen properties where owners had already submitted or achieved resource and building consent to lift their homes, before being made Category 3 due to egress requirements. In some cases the lift was already underway. We worked with the owners to ensure that they understood the egress risks, and with their agreement recategorised them to Category 2P. This distinction in thresholds continues under Plan Change 120, where the egress requirement would not generally apply to risk mitigations for existing houses as any improvements are accepted as reducing an existing risk.

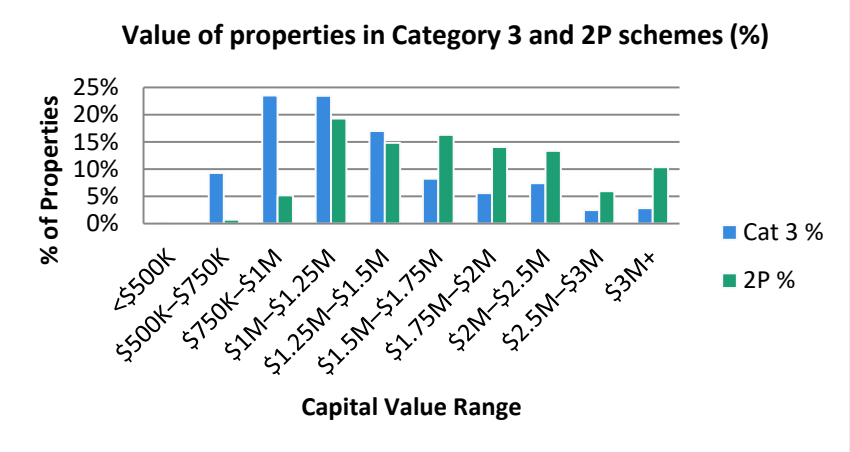



**Figure 6. Value of properties in Category 3 and Category 2P schemes**

[12] Governing Body decision GB/2023/220

**Variable costs to mitigate risk**

The value of 2P grants to date averaged $219,462 for landslide mitigations, and $305,016 for flood mitigations, but the range of costs was quite wide. Design and consenting costs were a significant component of the total cost, in advance of any construction costs. We think there is scope to reduce some of these costs through better procurement arrangements (for example, bulk procurement rather than individual arrangements).

**Project management experience helped**

Implementation of the Category 2P scheme revealed the challenges for homeowners undertaking this work themselves, with everything needing to be project managed for their single site. The Category 2P Grant Scheme relied on homeowners to drive their own projects – this was challenging for some, for example due to limited experience in construction and project management, difficult personal circumstances, and the cumulative impacts of prolonged uncertainty and disruption following the storms.

Quality assurance and ensuring council funds were disbursed appropriately led to a high administrative load for the Recovery Office. This included technical support to homeowners, quality assurance reviews to ensure projects would meet the levels of risk reduction needed to meet the scheme objective and that costs were adequately scoped, and grant administration.

**Achieving consent was a major component of the process**

Homeowners who had not engaged consultants may have relied upon the Risk Assessment and Categorisation technical reports as the 'final' conclusion on the feasibility of proposed mitigation works. In reality, more detailed specialist reports were required to support consenting requirements. In some cases, this led to delays once applications were formally lodged. Resource and building consents to date have taken an average of 71 days to process. Guidance was subsequently prepared for remaining Category 2P homeowners. Managing consents through the Streamline Unit helped to manage timeframes and ensure consistency.

**The cost of risk mitigation**

Table 7 summarises cost data (including GST) for flood and geotechnical risk mitigations for category 2P properties. Geotechnical risk mitigations typically involved catch fences, retaining walls, soil nails, earth bunds and planting. Most of the mitigation works were retaining walls.

**Table 7. Cost of property risk mitigations**

| Lifting a house in a flood plain | Cost | House sqm | Cost / sqm |
|---|---|---|---|
| Lowest cost to lift | $90,000 | 104 | $865 |
| Highest cost to lift | $770,000 | 281 | $2,740 |
| Average cost to lift | $325,000 | | |

| Geotechnical mitigations | Cost |
|---|---|
| Lowest cost | 28,000 |
| Highest cost | 628,400 |
| Average cost | 221,500 |

| Mitigation type | Average cost | # sites |
|---|---|---|
| Retaining walls and drainage | 244,600 | 57 |
| Other | 239,000 | 13 |
| Total | 242,000 | 70 |

**Work in progress**

The Healthy Waters and Flood Resilience department has commenced a joint project with the Building Research Association of New Zealand (BRANZ) and the Natural Hazards Commission to investigate the current state and opportunities for property flood resilience systems in Aotearoa NZ. This considers property products, regulatory settings, building practices and their relationship with rainfall and flooding mechanisms, land instability, human behaviour, and cultural context. It is intended as a first step on the journey towards a local and national programme including information and technical support.

We also note the new finance offer from some banks and new resilience allocations in some business insurance offers. These are positive steps towards helping people improve the resilience of their assets.

**Recommendation two**

Develop a **national resilient homes programme** that provides information, technical support and financial incentives for people to reduce risks to their homes in places where a natural hazard has been identified (central government, councils, building sector, research sectors, insurance sector, banks).

**Possible actions**

a. Offer staged, **graduated levels of support** for homeowners including:
   - **Guidance** on mitigation options, including design options and likely costs for different housing types (councils, building research groups, universities)
   - **Professional and trades training** to recognise and act on risk reduction opportunities in renovations (building research groups, trade associations)
   - **Regulatory support** with standardised or streamlined consenting processes for mitigation activities, with dedicated teams to process consents (councils, government)
   - **Financial support** (government, insurance and banking sectors)
   - Resilient home services to offer a 'one stop shop' for homeowners to obtain **risk mitigation packages** that homeowners can purchase or procure (private sector)

b. Explore the potential for cost efficiencies through centrally procured supplier panels to deliver risk mitigation services for multiple houses, including professional services and physical works

c. Work with the **insurance and banking sectors** to explore how insurance and home loan settings, including pricing, coverage and incentives, can better support property-level risk reduction and the potential role of insurance and finance in enabling or co-funding mitigation activities.

# Use of hazard information

**Knowledge is power**

Building awareness and education is one of the best opportunities to reduce the impacts of natural hazards.

Many people were genuinely shocked when their home experienced flooding or slips, even though much of the impact strongly aligned with council hazard models and maps and, in some cases, Building Act Hazard Notices on their property title.

Throughout recovery, renters appeared to have the lowest level of awareness of natural hazard information and tools. While obtaining a Land Information Memorandum (LIM) is a standard step in purchasing a house, there is no equivalent process for prospective renters. The Healthy Homes Standards provide tenants with information about heating, insulation, ventilation, moisture ingress and drainage, but there is no equivalent provision for information about lower-frequency but much higher-impact natural hazards.

We also encountered many examples in the Recovery Office where landlords prioritised rental returns over risk management. They repaired visible flood damage and rented properties to new tenants. In some cases, landlords went so far as to delay property settlements for as long as possible and asked our property advisors not to explain to tenants the reason for their presence on site.

Subsequent Auckland Council research with homeowners, prospective homeowners, renters and property professionals has confirmed low awareness of hazard information, and where to find that information – particularly among renters and property managers.

Other low-information situations that the Recovery Office encountered included retirement villages and pensioner housing, where occupants do not own their homes, and early childhood centres and schools, where vulnerable people are on site for extended periods of time. Property managers and occupants need to be fully informed of natural hazard risks, and ready to act in an emergency.

**Low awareness of hazard information**

Research[13] in 2025 with homeowners, prospective homeowners, renters and property professionals has confirmed low awareness of hazard information (and where to find that information), particularly among renters and property managers. Some notable findings:

- Only 4% of more than 1,000 survey respondents rated natural hazard risk as their top consideration when choosing where to live. Affordability remains the dominant factor (53%)
- People typically start looking for hazard information by using Google; of the under 30s, one third of survey respondents expect to be able to find hazard information on social media
- Recent purchasers were significantly more likely to know that the council provides online tools and guidance for understanding natural hazard risks (56%) compared to recent renters
- When they do source hazard information from the council, people often find it difficult to interpret – they want simpler access, clearer language, and guidance they can act on
- Most real estate agents and property lawyers surveyed said that they have had clients change their decision or take further action based on natural hazard information, with flooding being the most commonly cited hazard prompting this change. This experience was significantly less frequent for property managers.

**Continuing to improve hazard information**

Further action is needed to strengthen the national collection and management of hazard information. Currently, hazard information is collected and held in different ways by different agencies.

At Auckland Council, we're strengthening our systems using smarter technology to track rainfall, monitor hotspot locations and use predictive models, as well as considering how this is communicated and what actions people can take on the back of it. For landslides, we've released a regional landslide susceptibility assessment to help

13 Enlighten Me, 2025. *Understanding Engagement with Natural Hazard Information (report for Auckland Council, September 2025*). Auckland Council.

Aucklanders understand, avoid, and manage risks. The release of this new landslide information has added additional consenting requirements under Plan Change 120, including for resource consents already in process.

Auckland's Flood Viewer was launched after the 2023 storms. This is a more accessible way to view flood information and get explanations on what the information means and what can be done. Work on a new Natural Hazards Viewer is underway covering a range of hazards, as well as the work underway to deliver a national flood map. One of our next steps is to work with other users of our flood information - including infrastructure owners, property developers, mana whenua, banks and insurers - to better understand what decisions they make using our data, and how we can better serve them.

**Recommendation three**

Normalise **accessing hazard information** as a matter of course, including when people buy, rent, renovate or manage a property.

**Possible actions**

a. Improve availability and **plain-language explanations of hazard information** with guidance on actions that can be taken as the next step (councils)
b. Ensure hazard information is accessible to **diverse audiences**, including renters, new migrants, and those with limited technical skills. Consider communication methods, including tools multi-language support, alternative formats, and outreach to under-served groups (councils)
c. **Promote hazard information** to prospective buyers and tenants with targeted campaigns and media buying (councils)
d. Require landlords to disclose publicly available hazard information, as part of **Residential Tenancies Act requirements** for information to accompany tenancy agreements (central government)
e. Upskill **property professionals** to understand and use hazard information with their clients, including property managers (central government and councils working with professional associations)
f. Consider how to require management and disclosure of natural hazards risks for other forms of residential accommodation, including **retirement villages and boarding houses**, and other locations where there are vulnerable people on site for extended periods of time, such as **early childhood education facilities and schools** (central government)
g. Progress **consistent national frameworks for natural hazard information** including standardised formats for data collection and management, and access to national datasets (central government, NHC, councils, professional associations)
h. Develop a **national landslide strategy** (central government with involvement from all relevant agencies, local and central government, landslide scientists and practitioners, policy-makers, hazard managers, asset owners, emergency responders and insurers)
i. Continue to fund the **NZ Open Landslides Database** and work with other agencies to find an appropriate long-term host and funding stream (Auckland Council and other agencies).

# Iwi and community resilience building

**Investment in iwi and community is investment in resilience**

The 2023 recovery did more than help communities respond to a past event. It strengthened the foundations communities will need for future disruption, adaptation and change. Where recovery investment supported local leadership, trusted relationships, community planning, Māori-led approaches and place-based coordination, it also built enduring capability: the ability to share information, reach vulnerable whānau, make sense of risk, advocate collectively, support wellbeing, and work with formal systems.

These capabilities are part of Auckland's future resilience. They help communities act early, support one another, engage with complex information, participate in decisions about risk, and maintain connection through periods of disruption and uncertainty.

Local community infrastructure, trusted organisations, marae, community facilities and local leadership should therefore be understood as part of Auckland's resilience system. These assets and relationships support preparedness, response, recovery and adaptation, particularly where communities face higher exposure to hazards or greater barriers to accessing formal support.

The 2023 recovery reinforced that trust, relationships and local capability cannot easily be built during a crisis. They require sustained investment before disruption occurs. The same foundations that support recovery are also essential for longer-term adaptation. Communities need trusted relationships, local leadership, good information and support to understand changing risks, navigate uncertainty, make decisions about their future, and shape responses that reflect local priorities, identity and connection to place.

**Connection to people and place underpinned recovery**

In the 2023 recovery, we found that communities with strong social connections were generally better able to pull together, organise, and access support after the storms. These connections were often anchored in shared spaces and groups like community centres, marae, sports clubs and churches. In many places, recovery was also strengthened by a strong sense of identity, belonging, and shared commitment to the future of the community.

Connected communities are better placed to notice who needs support, share information quickly, maintain trust and take collective action before, during and after disruption. Recovery also showed that connection to place shapes how communities understand risk, loss and future adaptation choices. For some communities, attachment to neighbourhoods, whenua, marae, local facilities and shared histories influenced both recovery priorities and aspirations for the future.

**Māori-led approaches strengthened recovery**

The 2023 recovery highlighted the importance of Māori-led approaches grounded in whānau, whakapapa, whenua and tikanga. Some iwi contributed to recovery planning and adaptation discussions within their rohe, while marae, Māori providers and Māori community leaders provided practical, culturally grounded support for whānau and communities.

The recommendations from *Mai i te Atua ki te Marama* (see box) reinforce a central lesson from recovery: future resilience depends on the places, relationships and cultural systems that people already turn to in times of stress. For Māori communities, this means recognising marae, Māori providers, whānau networks, Māori staff and Māori leadership not as peripheral supports, but as core resilience infrastructure. Investing in these foundations before disruption occurs strengthens both immediate response and the longer-term ability of whānau and communities to navigate recovery, adaptation and change.

Evidence from recovery delivery, including feedback from Navigation Service providers and emerging Māori-led research, indicates that trusted Māori relationships, places and organisations played an important role in helping whānau access information, support one another, maintain cultural connection and navigate complex recovery systems.

These experiences reinforce the need for future resilience approaches to recognise and resource mana whenua, marae, Māori providers and Māori community leaders to contribute in ways grounded in tikanga, mātauranga Māori and enduring relationships with place.

**Mai i te Atua ki te Marama: From Affliction to Understanding**

Research undertaken for Te Kāhui Puhoro (the West Auckland Māori Thought Leadership Collective) has examined the compounding pressures of experiencing and navigating three emergency events in close succession: COVID-19, the Auckland Anniversary Weekend Floods, and Cyclone Gabrielle.

The research, funded by the Tāmaki Makaurau Recovery Office, was developed through wānanga, cups of tea, trusted relationships and a consistent questioning approach. It weaves together individual experiences, community perspectives and structural insights to offer a powerful analysis of Māori experiences through emergency events and recovery in West Auckland.

Taking an approach grounded in Kaupapa Māori rangahau principles, the research found both strengths and structural constraints for Māori.

Resilience, cultural knowledge and relational capability enabled Māori communities to mobilise quickly and effectively. Across all events, whānau turned first to each other, to local marae, to Māori providers and to community hubs that acted like marae. These were the places that moved quickly, communicated clearly, and held people emotionally.

Long-standing inequities and disparities added to the difficulties of dealing with institutions for insurance, repairs, emergency accommodation and other supports. Structures that were not culturally grounded did not provide for tikanga. Māori staff were not empowered to act as cultural bridges and contributors to community resilience.

Six key recommendations (summarised here) offer a path forward:

1. **Strengthen the Places and Relationships that Already Work** – maintaining strong and trusted relationships with whānau, neighbours, marae and supportive organisations.

2. **Recognise Marae and Māori Providers as Community Anchors** – resourcing and equipping marae and community providers as central to preparedness and ways forward, recognising their roles as responders, cultural stabilisers and sources of practical support.

3. **Make Systems Easier for Whānau to Navigate** – exploring kaupapa Māori navigation roles to sit alongside whānau through complex processes, providing clarity, relationship, advocacy and shared understanding.

4. **Support Emotional Wellbeing Through Māori Ways of Healing** – culturally grounded approaches, reflecting the wellbeing practices identified by participants in this research, including karakia, wānanga, whānau routines, rongoā, cultural supervision, time at marae, and connection to identity.

5. **Build Community-Led Preparedness Grounded in Local Knowledge** – reflecting the Māori leadership, local knowledge, and lived reality of those will rely on any preparedness measures.

6. **Strengthen Relationships, Coordination and Local Leadership** – increasing coordination and capacity, including policy settings, funding structures and partnerships that recognise community expertise, support long-term capability and enable Māori leadership to guide decision-making at neighbourhood, organisational and regional levels.

*Te Kāhui Puhoro (the West Auckland Māori Thought Leadership Collective) acknowledges Mana Whenua, Te Kawerau ā Maki, for their koha to this kaupapa. We acknowledge whānau Māori, along with Māori working within organisations, Māori providers and marae, and the West Auckland Māori Thought Leadership Collective, who have all shared stories, experiences and their own research as part of this kaupapa. We also acknowledge the West Auckland Together Collective and Tāmaki Makaurau Recovery Office for resourcing research led by Māori, for Māori in West Auckland.*

### Local leadership emerged through recovery

Recovery helped reveal, strengthen and connect leadership that already existed within communities. As recovery progressed, volunteers and resident groups emerged as important local leaders and intermediaries between communities and formal recovery systems. They helped share information, organise responses, advocate for community needs, and support local participation in recovery processes and decision-making.

Many of the people who stepped forward during the storms remain active today, supporting their communities, strengthening local connections and contributing to preparedness and adaptation conversations.

**Fostering leadership with *Adapting Together***

In partnership with Leadership New Zealand, the Recovery Office supported a seven-month leadership programme, *Adapting Together*, designed for community leaders deeply involved in community recovery. This programme recognised the community leadership that emerged in the wake of the storms. These were people who checked on neighbours, opened community spaces, coordinated food and supplies, shared critical information, helped families find temporary accommodation, and provided reassurance in an uncertain time.

Nearly three years later, many of those same people are still supporting their communities, advocating for recovery needs, strengthening local connections, and helping their neighbourhoods prepare for what lies ahead.

The *Adapting Together* cohort of 23 participants spans neighbourhoods across Tāmaki Makaurau and reflects the diversity of the communities they serve - including volunteers, marae-based leaders, residents' group members, cultural and faith leaders, and organisers of local clean-ups and support efforts.

Over a series of in-person sessions, space was created to reflect, share experiences, and learn from one another - while building skills in collaboration, communication and advocacy. It combined practical tools with peer support, helping participants strengthen their leadership while staying grounded in their 'why'.

The group have now reconvened as Adapting Together Aotearoa, with an intent to continue to work together to support community adaptation and resilience.

**Trust accelerated recovery**

The recovery highlighted the importance of trust and pre-existing relationships between communities, the council and government agencies. Recovery Office staff and delivery partners observed that engagement was generally faster and more effective in places where positive relationships already existed. In other communities, lower levels of trust in institutions, limited prior engagement, or previous experience of not being listened to made participation in recovery more difficult.

Not all communities had the same level of connection, leadership, resources or experience advocating within formal systems. Some communities found it harder to access information, participate in recovery processes, or influence decisions, and needed more support to do so. Relational, place-based roles funded through the Recovery Office helped bridge this gap by building trust, connecting residents and local groups, and helping communities organise around shared issues.

These roles also acted as trusted intermediaries between communities and complex systems. As people were dealing with insurance, accommodation, recovery funding, risk assessments or future adaptation decisions, communities often needed support to understand processes, access the right information and engage effectively with decision-makers.

These lessons are important for future resilience. Communities facing future emergencies or adaptation decisions will again need trusted relationships, clear information and support to engage with institutions and decision-makers.

**Local recovery planning built community agency and revealed where others need to act**

Local recovery planning strengthened future resilience by helping communities come together, identify shared priorities, and turn individual experiences into collective action. It also revealed an important system insight: communities move faster when they can act within their own sphere of influence, and slower when the issues that matter most depend on institutions beyond their control.

Communities whose priorities focused on local, community-led actions often completed plans more quickly. These actions included strengthening local connection, sharing information, supporting wellbeing, building preparedness and organising community activity.

Other communities identified priorities relating to infrastructure, risk reduction, land use, insurance, regulatory settings or public investment. These plans often took longer, not because communities lacked capability, but because the solutions required council, government agencies, infrastructure providers, insurers or other decision-makers to act.

This is a critical resilience lesson. Community capability is necessary, but not sufficient. Future resilience also depends on system responsiveness: clear pathways for community priorities to be heard, tested, responded to and, where appropriate, acted on. Without this, community energy can become stuck in advocacy rather than translating into recovery progress, risk reduction or adaptation.

**Strengthening community in Milford**

Milford was one of Auckland's most severely affected suburbs following the 2023 storms, with a high concentration of Category 3 homes and up to 140 properties to be purchased in the buy-out programme. Residents faced displacement, uncertainty, future flood risk, and low confidence in the council following difficult response experiences and unresolved infrastructure issues.

These pressures were compounded by Milford's highly diverse and changing population, high rental turnover, limited community facilities, and few established networks to bring people together.

Investment in a community-based relational role helped connect residents, support emerging leaders, strengthen local networks and create opportunities for people to come together around shared concerns. Over time, this has contributed to stronger local connections and greater confidence, willingness, and capability to engage more effectively in decisions affecting their area.

Individual frustration and mistrust has made way for more constructive collective action and advocacy for local recovery decisions. This included presenting directly to decision-makers on the future of A F Thomas Park as part of a significant flood resilience programme affecting their community.

The Milford experience also demonstrates that trust, leadership and community capability are not fixed characteristics. They can be strengthened through deliberate investment and support, particularly in communities experiencing significant disruption, change and uncertainty.

**Recommendation four**

Invest in the **social and community foundations** of resilience**.**

**Possible actions**

a. Balance investment in physical resilience with **investment in community and social resilience**, recognising that resilient communities rely on both strong infrastructure and strong social foundations (councils, government).
b. Continue to invest in the **long-term foundations** of community resilience, including local shared spaces, organisations, social networks and leadership that communities can rely on before, during, and after disruption (councils).
c. Build and maintain **trusted relationships** between council, iwi, community organisations and local communities before disruption occurs, including through **relational, place-based roles** that help communities understand risk, organise around shared priorities, navigate complex systems and participate in recovery, preparedness and adaptation decisions (councils, community partners).
d. Strengthen **Māori-led resilience**, grounded in tikanga, mātauranga Māori and local knowledge, by recognising and resourcing mana whenua, marae, Māori providers and Māori community leaders as core parts of the resilience system (mana whenua, Māori organisations, councils, government).
e. Shift to sustained, **multi-year and relationship-based funding** approaches that strengthen long-term local capability, support community leadership and volunteer capability, and reduce reliance on short-term or crisis-driven engagement (councils, government).
f. Create **clearer pathways** for community priorities and advocacy to inform infrastructure, risk reduction, land use, insurance, recovery and adaptation decisions, with stronger feedback loops so communities can see how their priorities have been considered and what further action is required (councils, government).

# Place-based adaptation planning

**Adaptation through recovery**

The actions delivered by the Recovery Office have had a tangible impact on the resilience and adaptability of some of our most vulnerable communities in areas where there is a history of repeated flooding and land instability.

By implementing the Category 3 buy-outs, Category 2P risk mitigations, infrastructure repairs and Category 2C community resilience projects, we have been adapting parts of Auckland's built environment to the realities of more intensive weather.

Within three and a half years, large-scale infrastructure repairs and improvements have restored services to communities and reduced risks of repeated service failures in future storm events. Blue-green solutions in Māngere, Rānui and Milford will reduce future flood risk for hundreds of properties and people. As well as addressing intolerable risk to life on some properties, the solutions put in place will reduce lower-level flood hazards too.

The Category 3 Voluntary Buy-out Support Scheme has:

- supported 1,164 whānau to move out of high-risk housing situations
- permanently removed 1,164 hazardous dwellings from the housing market, reducing future risks and costs
- delivered wider resilience benefits to communities by directly reducing hazards in some areas and creating opportunities for greater resilience improvements through blue-green networks and other infrastructure upgrades
- avoided the 'trickle down' of keeping high-risk houses in the market, selling or renting to people with less financial capacity to recover.

The Category 2P Grant Scheme has:

- provided financial support to reduce the intolerable risk to life on 138 properties
- allowed 138 whānau to stay safely in place in their homes and communities
- provided a cost-effective alternative pathway to reduce risk without buy-outs
- developed a data set and case studies to inform further property-level risk mitigation efforts.

**Flood resilience in Te Ararata and Harania**

The first two recovery-funded blue-green projects are both in Māngere, at Harania Creek and Te Ararata Creek. The projects remove impediments to the streams, allowing stormwater to flow more freely into the Manukau Harbour. They are highly complex and include upgrading the country's largest sewerage pipe carrying around 85 per cent of Auckland's wastewater, and replacing a bridge on high-traffic Walmsley Road. A range of other interventions will help with flood conveyance, including channel realignment, culvert replacement, new debris capture structures, and mangrove clearance.

The projects will reduce flood risk to more than 370 properties, including 56 assessed as facing intolerable risk to life. Replacement of the wastewater pipe and other vulnerable services including high voltage cables will also improve regional resilience.

**Recovery without a systematic adaptation approach**

Recovery has been a reactive kind of adaptation. It responded to damage in the 60 per cent of the Auckland region that was most impacted by the storms, and it benefitted from the funding that became available from the Crown. The scope of the adaptation was defined by the government's categorisation framework and the Auckland Funding Agreement: the process for residential properties was voluntary, relying on owners to choose to opt into the scheme; non-residential property types were not included; and funding for buy-outs was available only for properties assessed as having an intolerable risk to life.

Decisions were made consistently within the agreed recovery framework, however that framework did not have the benefit of being nested within larger, more long-term and systematic adaptation plans that need to be developed. This has resulted in a patchwork of actions, with a long tail of work to resolve the future ownership and management of storm affected land purchased by the council.

The lesson is not that recovery should replace planned adaptation. It is that future recovery operations will inevitably make adaptation decisions, and those decisions will be better, faster and fairer if place-based adaptation pathways are agreed before the next major event.

**Working towards place-based adaptation**

Auckland Council has a number of projects planning for climate disruption work underway. Resilient Tāmaki Mākaurau's regional community planning approach is developing a regional approach to local community planning across Tāmaki Makaurau. A website, Auckland Climate Action, provides information about council programmes as well as initiatives people can take at home. Other main lines of action include strengthening the Unitary Plan, led by Planning and Resource Consents, and Making Space for Water, led by Healthy Waters and Flood Resilience.

**Manaawa aa Whenua Flood Resilience Project, Rānui**

Purchasing 55 Category 3 homes in Clover Drive and surrounding streets has provided a strong starting point for the development of the Manaawa aa Whenua flood resilience project, achieving a resilient outcome for the wider Rānui, Henderson and Massey area between Momutu Stream and Paremuka Stream.

A range of interventions will improve floodwater conveyance and the health of the stream, including widening a bridge, upgrading culverts, and creating a blue-green corridor along Clover Drive. Reusing material from stream widening will raise the surrounding land around Camphora Place.

To make the project work, a further 40 properties need to be purchased by the council (around half of which are owned by Kāinga Ora and so were excluded from the buy-out scheme). These purchases will fill in the gaps in the 'patchwork' of Category 3 properties to allow for a comprehensive design that reduces flood risk for the wider area.

This experience highlights the value of having place-based adaptation plans in place before disasters occur. Recovery funding can accelerate implementation, but without agreed adaptation pathways and funding mechanisms, recovery investments may not always align with the most effective long-term resilience outcomes.


**Artist's impression of the future of Manaawa aa Whenua.** ***Source: Healthy Waters and Flood Resilience***

**Recommendation five**

Develop **place-based adaptation pathways** for vulnerable communities and integrate them with emergency readiness and pre-event recovery planning.

**Possible actions**

a. Prioritise the communities most at risk from natural hazards and consider the future of homes, communities, businesses, infrastructure and services (councils)
b. Integrate adaptation planning, emergency readiness and pre-event recovery planning so likely recovery pathways and adaptation options are understood before a disaster occurs (government, councils)
c. Engage communities early in adaptation planning and pre-emergency event readiness and recovery planning, so that people can understand changing risks, explore future options, and make informed decisions before they are facing the pressures of a recovery (councils)
d. Partner with mana whenua to embed mātauranga Māori, support iwi-led adaptation priorities, strengthen connections to whenua and awa, and create opportunities for Māori enterprise and workforce participation (councils, mana whenua, government)
e. Include consideration of displacement, community continuity, access to services, cultural relationships to place, and the likely recovery pathways that may be needed after a future event, as part of pre-event adaptation planning (councils)
f. Establish nationally defined frameworks, thresholds and triggers for planned relocation, including guidance for a locally-led centrally supported approach to implementation and how that is activated in a recovery (government)
g. Establish national funding support for adaptation activities, including planned relocations and investment in risk mitigation activities (government).

# Opportunities in recovery to reduce risk and build resilience

**Using the momentum of recovery to achieve long-term resilience improvements**

Disasters can be catalysts for change. Recovery creates a rare window where funding, political attention, community motivation and public acceptance of change are often higher than under normal circumstances.

The 2023 storms allowed us to make investments in the resilience of people, homes and infrastructure, and demonstrated that recovery investment can do more than restore what was lost. It can also reduce future risk, strengthen local capability, improve infrastructure resilience, support adaptation, and address longstanding vulnerabilities that existed before the event.

This creates an opportunity - and a responsibility - to think beyond replacement and repair. Recovery decisions can influence the future resilience of people, places and systems for decades after an event.

**Recovery planning supporting the foundations for adaptation**

Local recovery planning following the 2023 storms enabled impacted communities to come together, identify ongoing needs, and begin shaping longer-term responses to climate risk and adaptation.

With support from the Recovery Office, communities were able to look beyond immediate recovery to consider future risks, emergency readiness, whenua and awa restoration, and longer-term adaptation priorities. A number of communities have since secured funding to progress this work, including neighbourhood-scale climate adaptation and emergency readiness planning in Sandringham, iwi-led whakapapa and mātauranga-based place storytelling in Te Henga, and community-led catchment restoration and land stabilisation in Kaipātiki.

The opportunity now is to connect this local work into a wider adaptation system and strengthen the links between pre-recovery and recovery planning and adaptation planning. Community planning can identify priorities, build local mandate and surface place-based knowledge, but it cannot progress long-term risk reduction on its own. A clear framework is needed to link community priorities with regional adaptation planning, infrastructure decisions, land-use planning and funding pathways.

Pre-recovery planning offers a practical way to build this connection before the next event. It can help communities, iwi, council and partner agencies consider known risks, local values, potential adaptation choices and recovery decision pathways in advance, rather than trying to resolve them under crisis conditions.

Without this connection, communities may be able to name the changes they need but remain unable to influence or progress them. Recovery demonstrated that local leadership is essential, but it must be matched by system pathways that enable community priorities to shape investment, planning and adaptation decisions.

**Supporting mana whenua to build resilience**

Recovery was an opportunity to support iwi to exercise kaitiakitanga, respond to the impacts of the severe weather events, and prepare for a changing climate. Funding enabled some iwi to lead work  priorities, including emergency readiness, environmental monitoring, cultural heritage protection, and capturing whānau priorities and mātauranga to inform long-term adaptation planning.

This recognised that recovery for mana whenua is not limited to immediate repair or service delivery. It also includes restoring and protecting wāhi tapu, strengthening marae preparedness, maintaining connection to whenua and awa, supporting whānau wellbeing, and exercising kaitiakitanga in the face of increasing climate risk.

Funding agreements were designed to provide flexibility within agreed recovery objectives, enabling iwi to set the direction of the work and progress priorities that reflected their rohe, responsibilities and aspirations. By resourcing iwi-led priorities, recovery funding supported immediate recovery needs while also building foundations for longer-term resilience in a changing climate.

This highlighted that iwi resilience priorities often span environmental restoration, cultural wellbeing, emergency readiness and adaptation. Supporting iwi to lead this work created benefits beyond immediate recovery and reinforced the value of flexible funding models that enable iwi-led responses grounded in kaitiakitanga, whakapapa and place.

### Adapting the built and natural environment

Purchasing Category 3 land has permanently reduced risk for areas affected by the 2023 storms and opened up opportunities for greater flood risk reduction and public amenity, with development of four blue-green network projects in some of the most impacted communities. However, these purchases have been opportunistic rather than planned, limited to where the storms had an impact and where owners have voluntarily participated in the risk assessment and categorisation schemes. Their location, and the need to resolve land use futures on purchased properties could have an influence on the prioritisation of works for years to come.

The house removal programme demonstrated the sustainability and resilience benefits of a more considered approach to removing homes from situations of intolerable risk to life. Resource recovery protocols enabled one third of homes to be relocated for use elsewhere and 80 per cent of materials to be diverted from landfill, with associated carbon emissions savings.

**Using resources sustainably: house removal and relocation**

Innovations in the house removal programme offer valuable insights for the construction and demolition industry, and for other regions entering recovery and needing to manage the waste consequences of severe weather events. If all the Category 3 houses scheduled for removal were mechanically demolished, the resulting demolition waste would exceed 70,000 tonnes and cost around $10 million to landfill.

Instead, through careful resource management, houses are removed through:

1. **Relocation** – Determining whether the house can be sold and moved for reuse elsewhere
2. **Deconstruction** – Recovering all or part of the house components for reuse or recycling
3. **Demolition** – Used only when houses are too severely damaged or located in unsafe or inaccessible areas.

So far, one third of the houses purchased under the Category 3 buy-out scheme have been relocated for a second life elsewhere (see Figure 7). An innovative house-auction system enables vetted buyers to access suitable properties. Buyers are also able to submit negative bids, allowing houses to be relocated at a cost lower than mechanical demolition. So far, the sale of houses has contributed $5 million to offset the costs of the programme. Many of the homes have been moved to remote communities where building costs are prohibitively high, contributing affordable housing in communities with high housing demand.

Tools developed for the house removal programme include the resource recovery schedule used to evaluate homes at the beginning of the removal process, the supplier panel for deconstruction which includes 17 per cent Māori suppliers, the development of markets for recovered materials, and the methodology for listing homes for relocation.

Removal contractors have also employed innovative methods to relocate houses, including moving houses over temporarily closed railway lines, lifting houses over neighbouring homes, and removing the top floor from two-storey homes for easier transport.

**Figure 7. New life for Category 3 homes**

**Recommendation six**

Use **recovery as a catalyst** to accelerate long-term resilience, adaptation and equity outcomes.

**Possible actions**

a. Use pre-event recovery and adaptation planning to guide recovery actions, including:
   i. determining the future of communities in natural hazard areas,
   ii. where mitigation solutions at property- and community-scale may be possible and
   iii. where permanent removal may be the most necessary and beneficial option (councils, communities)
b. Align recovery investment with long-term resilience and adaptation priorities wherever possible (councils, government)
c. Make provision for improving the resilience of infrastructure at the same time as recovery repairs are implemented (councils, government, asset managers)
d. Incorporate circular economy and waste minimisation targets in house removal and infrastructure programmes (councils, house removals industry)
e. Partner with mana whenua to advance iwi resilience priorities through recovery investment and delivery (councils, government, mana whenua)
f. Invest in community leadership and local capability as key partners in adaptation planning, with clear pathways for community priorities to inform regional planning, infrastructure investment, land-use decisions and funding processes (councils, government, community partners).

# Recovery support

This section focuses on improvements to recovery preparedness so that we are ready to deliver what communities need after an event.

Recovery support takes many forms. Some support helps people navigate uncertainty, access services and maintain wellbeing. Other forms of support help people secure safe housing, reduce future risk, restore essential services and rebuild the places they depend on.

The 2023 recovery required a broad suite of interventions, ranging from psychosocial support and navigation services through to temporary accommodation, property risk assessments, infrastructure repairs and resilience improvements. Together, these interventions helped Aucklanders respond to the immediate impacts of the storms while supporting longer-term recovery and adaptation.

While many of these initiatives delivered positive outcomes, several had to be designed, funded and implemented while recovery was already underway. This created delays, uncertainty and inconsistency at a time when people were seeking clarity about what support would be available, who would provide it and how long it would take.

The following sections focus on opportunities to strengthen recovery support systems before future events occur.

Actions to improve Auckland Council's recovery preparedness are covered extensively in the companion report, *Delivering Recovery*. This section focuses on the aspects that require systemic change, including arrangements for psychosocial and navigation support, temporary accommodation, long-term housing solutions, and streamlined infrastructure delivery.

---

## Psychosocial recovery and wellbeing

**The storms generated high psychosocial needs**

The 2023 storms affected people in many different ways. Aucklanders lost homes and belongings, faced physical and mental health challenges, experienced financial pressure, and were required to navigate insurance claims, repairs, property risk assessments and housing decisions, often simultaneously and over extended periods.

> *"Clients are grappling with profound disruption to their living situations following the destruction of their homes, leading to temporary relocations that have deeply unsettled their sense of stability and security. These upheavals have triggered intense emotional responses, including persistent anxiety, depressive symptoms and grief. For many, the trauma of the disaster has reignited earlier unresolved experiences, compounding their distress." – quarterly report from Age Concern Auckland Oct 2025*

For many people, the recovery process itself became a source of stress. Uncertainty, delays, complex systems and repeated requests for information added to the burden already created by the events. The impacts were not limited to those whose homes were damaged. Communities experienced disruption to social connections, local facilities, employment, schooling, cultural activities and everyday routines that contribute to wellbeing.

> *"It was a salutary lesson…from being in relative control of one's life, to a loss of control, feeling at the mercy of a whole lot of authorities and processes…" – Feedback from an impacted homeowner*

Research by the Mental Health Foundation[14] found that the 2023 weather events had strong, diverse and widespread impacts on wellbeing. In a survey of 644 Aucklanders, half said they had experienced a negative impact from the storms. Thirty per cent reported stress, mental health or emotional responses, and 20 per cent continued to feel anxiety about later weather and rain long after the extreme events.

Auckland Council's Community and Social Recovery Needs Assessment[15] identified similar themes. People described ongoing stress, uncertainty and anxiety about the future, alongside financial pressure, housing instability,

---

[14] SIL Research, 2024. Mental Health Foundation of New Zealand 2023-24 community wellbeing North Island weather events. Cyclone Gabrielle focus. Auckland overview

[15] Tāmaki Makaurau Recovery Office, 2024. Community and social recovery needs assessment: summary report - Knowledge Auckland. Auckland Council

disrupted routines, loss of connection to place, and difficulty navigating complex recovery systems. These impacts were often compounded for people already experiencing disadvantage, including those on lower incomes, people with disabilities, migrant and refugee communities, Māori and Pacific communities, and those with limited access to support networks.

> *"It's continued to escalate the amount of people who come for support for food. It is continued, it's ongoing. Our pātaka kai is just wiped out all the time. We could fill it 10 times a day and other people are filling it for us as well, but it's just so ongoing." – Community stakeholder, Puketāpapa Needs Assessment Research, 2024*

The impacts of recovery were not experienced equally. People facing pre-existing disadvantage, disability, language barriers, insecure housing, limited financial resources, or reduced access to support networks often experienced greater difficulty navigating recovery systems and accessing assistance. This reinforced evidence that disasters can deepen inequities unless support is deliberately designed to reach those facing the greatest barriers.

**Wellbeing recovery required more than mental health support**

One of the strongest lessons from the recovery was that psychosocial recovery is broader than access to counselling or clinical mental health services.

People needed practical support to meet basic needs, opportunities to reconnect socially, trusted information, culturally meaningful support, participation in decisions affecting their future, and help navigating complex recovery systems. Recovery required attention to both individual wellbeing and the wider social conditions that support people and communities to recover.

In 2023, the Recovery Office received $1.6 million from Te Whatu Ora and the Ministry of Social Development to support iwi and community organisations to deliver mental wellbeing services and initiatives for people impacted by the weather events. Funding was directed towards agreed cross-agency priorities, including youth-friendly tools, increased capacity for therapeutic support, and mental wellbeing recovery programmes that fostered community cohesion and social support.

Auckland Council also took on a coordinating role in developing and monitoring the Wellbeing Recovery Plan for Tāmaki Makaurau,[16] working with the Mental Health Foundation, Ministry of Health, Ministry of Education, Ministry of Social Development, Te Whatu Ora and the Auckland Regional Leadership Group.

The Plan provided a shared framework for understanding wellbeing recovery. It recognised that recovery is strengthened through connection: connection to people, culture, place, community and a sense of agency over decisions affecting everyday life. It focused on seven areas: meeting basic needs, strengthening social connection, supporting participation and voice, investing in community leadership and capability, supporting tamariki and rangatahi, improving access to mental wellbeing support, and strengthening the spaces and places that communities rely on.

**Healing through words and illustrations**

Following the flooding of the Kumeū River, students at Matua Ngaru School worked together to create *Ko Roimata te Awa (Tears Are Our River)*,[17] a book combining children's stories, reflections and illustrations about their experiences of the storms.

Supported through recovery funding, the project provided a way for young people to process what had happened, share their experiences with others, and explore their connection to the river and local environment. Rather than focusing on the event itself, the project created opportunities for creativity, storytelling, connection and reflection.

The project demonstrates that wellbeing recovery is not limited to formal services. Activities that strengthen identity, connection, participation and a sense of belonging can also play an important role in helping people and communities recover from disruption.

[16] Tāmaki Makaurau Recovery Office, September 2024. *Wellbeing recovery plan for Tāmaki Makaurau. September 2024.* Auckland Council.
[17] Students of Matua Ngaru School, 2025 *Ko Roimata te Awa (Tears Are Our River).* Available at: Healing through words and illustrations: Ko Roimata te Awa - OurAuckland

**Community-led wellbeing initiatives strengthened recovery**

Recovery funding supported a wide range of community-led wellbeing initiatives across Tāmaki Makaurau. These included counselling and therapeutic services, but also community events, cultural programmes, youth initiatives, leadership development, environmental restoration projects, arts-based activities, and opportunities for communities to come together, reflect and support one another.

Many initiatives were delivered through trusted local organisations that already had strong relationships within their communities. This enabled support to be tailored to local circumstances and delivered in ways that were culturally appropriate, accessible and responsive.

For Māori communities, wellbeing initiatives often reflected holistic understandings of wellbeing grounded in tikanga and mātauranga Māori. Funded activities included wānanga, māra kai, kapa haka, waka ama, cultural events and other initiatives that strengthened cultural identity, whānau connections and collective wellbeing. Feedback from delivery partners highlighted the importance of flexible funding arrangements that enabled Māori organisations to respond to locally identified needs and opportunities.

Community grants also enabled communities to mark important milestones in their recovery journeys. Anniversary events, memorial projects, storytelling initiatives, volunteer recognition activities and community gatherings provided opportunities for reflection, healing and reconnection. These activities helped strengthen social cohesion and local leadership and created space for communities to acknowledge what had been lost and what had been achieved.

The recovery demonstrated that investment in community wellbeing delivers multiple benefits. Activities designed to support wellbeing also strengthened local networks, built leadership capability, increased participation, and contributed to longer-term resilience and preparedness.

**Funding trusted local support**

After the 2023 storms, some refugee families faced having to rebuild parts of their lives for a second time, with the storms damaging homes and destroying belongings. The New Settlers Family and Community Trust (NFACT), a trusted community organisation, partnered with the Recovery Office to provide navigation and psychosocial wellbeing support to affected whānau.

Through its existing networks, NFACT was able to identify affected families quickly, provide practical recovery support such as replacing household goods, and connect people with emotional wellbeing support and counselling. This support was culturally relevant, targeted to those most severely impacted, and attuned to the specific needs and circumstances of refugee families.

The partnership with NFACT demonstrates the value of working through trusted, community-based partners. Their existing relationships, cultural credibility and local reach helped ensure recovery funding translated into support that was accessible, responsive and meaningful for affected communities.

**Recovery support systems were not ready**

Community and social recovery needs emerged immediately after the storms. However, responsibility for psychosocial support, navigation services, community wellbeing initiatives and other forms of community recovery support sat across multiple agencies, with no pre-agreed funding pathways, governance arrangements or activation mechanisms to support rapid delivery.

As a result, agencies had to negotiate what support was needed, who would provide it, and how it would be funded while communities were already seeking help. This created delays and uncertainty at a time when many Aucklanders were experiencing significant stress and disruption.

While effective arrangements were ultimately established, future recoveries would benefit from agreed national settings that enable community and social recovery supports to be activated quickly and scaled according to need.

**Navigation services walked with people in their recovery journey**

The Storm Recovery Navigation Service was one of the most effective initiatives delivered through the recovery, helping people navigate complex recovery systems and access the support they needed.

The 2023 storms created a recovery environment involving multiple agencies, funding streams, support services, insurance processes, housing decisions and technical assessments. For many people, particularly those

experiencing financial hardship, language barriers, disability, displacement, or low trust in government systems, understanding and navigating these processes was difficult and overwhelming.

> *"It made an enormous difference to have a responsive person to help guide me through the maze of protocols, procedures and people." – Navigation service client, Whānau Voice survey*

A lack of pre-agreed funding pathways and delivery arrangements meant the Navigation Service was not established until eight months after the Auckland Anniversary floods, despite clear evidence of need. Once operational, navigation became an important way to help people understand recovery processes, access available support, and make informed decisions about their futures (see Figure 8 for number of whānau supported).

The Navigation service provided a consistent point of contact for affected whānau. Navigators explained recovery processes, clarified available support, helped people understand next steps, connected them with services, followed up issues across agencies, and advocated on their behalf when required. This reduced complexity for households and helped ensure people were better able to access the support available to them.

The service adopted a strengths-based, whānau-centred approach that focused on helping people understand their options, build confidence, and progress their own recovery journeys. Rather than acting as case managers, navigators worked alongside people to help them navigate systems, make decisions and access the right support at the right time.

> *"Our navigator made such a difference - a friendly and empathetic ear, he connected us to services, gave advice, and advocated for us on occasion." – Navigation service client, Whānau Voice Survey*

The service worked best when people were connected early and had continuity of support from the same navigator over time. Partner navigators working within iwi, faith groups and community organisations were particularly effective at reaching people who faced barriers to accessing formal services. Existing relationships, cultural understanding, local knowledge and trusted community networks enabled support to be delivered in ways that were accessible and responsive to different communities.

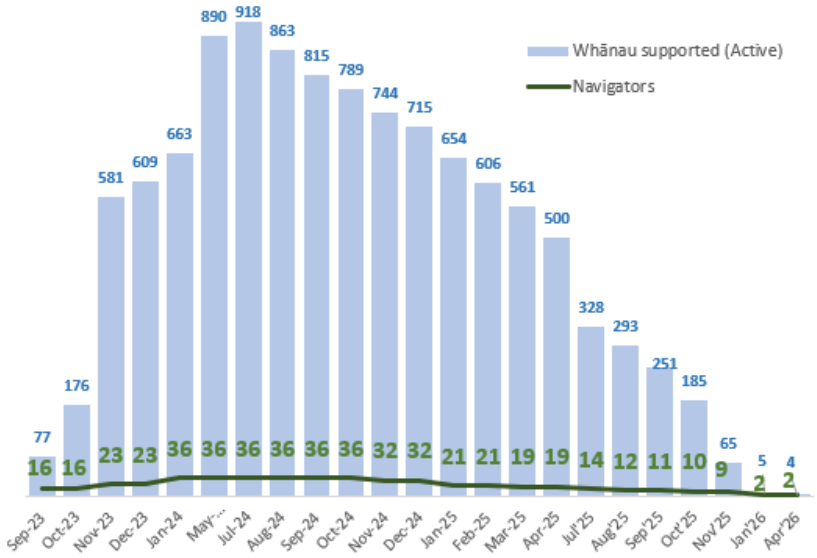



**Figure 8. Navigation Service support for impacted whānau.**

The service partnered with trusted local organisations to further reduce barriers to access. This extended support to whānau who may not have engaged directly with the council, and enabled assistance to be delivered through existing relationships, local languages, cultural understanding and trusted community pathways. This helped reduce barriers to access and improved equity of outcomes for people who may otherwise have struggled to engage with recovery systems.

The experience of the 2023 recovery suggests that navigation should be considered a core component of future recovery arrangements rather than an optional service. Recovery systems are often complex, and that complexity does not affect everyone equally. Without tailored support, recovery processes can reinforce existing inequities and leave those with the greatest needs facing the greatest barriers to accessing assistance.

Navigation services help bridge this gap by making recovery systems more understandable, accessible and responsive. Future recoveries would benefit from a nationally supported navigation model with clear funding pathways, delivery arrangements and activation triggers, enabling support to be mobilised quickly and scaled according to the nature and impacts of the event.

**Recommendation seven**

Establish **nationally-agreed arrangements for psychosocial and navigation support in recovery**, including clear roles, funding, governance and activation mechanisms.

**Possible actions**

a. Clarify national and local roles for psychosocial recovery, recognising that recovery wellbeing needs extend beyond clinical mental health services and require coordinated input from health, social development, education, local government, iwi and community partners (government, councils, iwi and community partners)
b. Establish dedicated funding pathways for non-clinical psychosocial recovery supports, including navigation, cultural wellbeing initiatives, community-led wellbeing activities, social connection, youth support and practical recovery assistance (government, councils)
c. Establish pre-agreed governance arrangements and activation mechanisms so psychosocial recovery support can be mobilised early, rather than negotiated after an event (government, councils, iwi and community partners)
d. Recognise navigation as a core recovery function and establish a nationally supported capability that can be activated and scaled to meet the needs of different recovery contexts (government, councils)
e. Design recovery support models to reduce barriers to access and address inequitable recovery outcomes, particularly for communities that face greater challenges engaging with formal systems (government, councils)
f. Invest in trusted relationships and partnerships between councils, iwi, community organisations and delivery partners before disruption occurs, recognising these relationships are critical to effective recovery delivery (councils, iwi and community partners)
g. Include funding pathways for trusted local delivery partners, including iwi, NGOs, faith-based organisations and culturally specific providers, to enable support to be delivered through existing community networks and relationships (councils, government).

# Immediate housing needs

**Temporary accommodation became a long-term recovery issue**

Hundreds of Auckland households were displaced from their homes, many for much longer than temporary accommodation systems were designed to support. Around 900 whānau, including around 600 school-aged children, urgently needed somewhere safe to live while continuing to manage damaged homes, insurance claims, categorisation processes, and major uncertainty about the future.

People experienced displacement in very different ways depending on their financial resources, insurance arrangements, social connections, and ability to secure alternative accommodation. Some households were able to stay with friends or whānau, or quickly secure rental accommodation using savings or insurance-funded temporary accommodation support. Others had no immediate alternatives and moved directly into government-provided temporary accommodation through the Ministry of Business, Innovation and Employment's Temporary Accommodation Service (MBIE TAS).

For many households, the Temporary Accommodation Service provided an essential immediate safety net. However, motel and hotel-based accommodation was often unsuitable for longer-term living. People were frequently placed far from their communities, schools, workplaces, and support networks, sometimes without cooking facilities, disability access, or sufficient space for family life. Many households were also required to move multiple times between accommodation providers.

Displacement itself became a significant recovery issue. Community feedback consistently highlighted severe financial strain, deteriorating wellbeing, disrupted schooling and employment, repeated moves, and difficulty maintaining community connections. Recovery evidence from Aotearoa New Zealand shows that prolonged displacement and unstable housing arrangements can significantly worsen long-term recovery outcomes for households and communities (see sidebar).[18]

We also found cases where tenants needed advice and support to terminate existing rental agreements for damaged homes, slowing their ability to find new permanent housing.

> Longitudinal research following the Canterbury earthquakes identified that recovery was slower for people in temporary accommodation. This group constituted a 'new vulnerable' population that needed targeted psychosocial services, supports and information.

**Support settings created inequitable outcomes**

Government temporary accommodation support settings were not well aligned to the scale and duration of Auckland's recovery. Existing systems were largely designed for shorter-term emergencies and recoveries, while many households affected in 2023 remained displaced for far longer as risk assessments, categorisation decisions, insurance processes, and buy-outs progressed (insurance-funded temporary accommodation generally lasted around six months).

Nearly eight months after the Auckland Anniversary Weekend floods, the government introduced Temporary Accommodation Assistance payments (administered through the Ministry for Social Development) to help households cover the cost of private rental accommodation while continuing to pay mortgages on damaged homes.

However, the different settings across accommodation support schemes resulted in materially different recovery experiences for households facing similar levels of impact. Households able to secure their own rental accommodation could access Temporary Accommodation Assistance payments of up to $650 per week to offset housing costs. In contrast, households reliant on government-supplied Temporary Accommodation Service accommodation were generally charged 90 per cent of market rent in the area.

In some cases, households accumulated significant debt through the accommodation system itself.

Along with impacted Aucklanders, we successfully advocated for changes to:

- extend eligibility periods
- include people whose homes were uninhabitable but had not received a red or yellow placard

[18] Morgan, J., Begg, A., Beaven, S., Schluter, P, Jamieson, K., Johal, S., Johnston, D. and M. Sparrow, 2015. *Monitoring wellbeing during recovery from the 2010–2011 Canterbury earthquakes: The CERA wellbeing survey*,

- include a wider range of accommodation types, such as flat-shares and caravans.

Strict eligibility criteria, directed by the Social Security Act 1938 meant some households still fell outside support settings entirely, including homeowners whose properties were held in family trusts (at least 100 cases that we knew of in Auckland.

| Estimated cost for temporary accommodation services in Auckland | | |
|---|---|---|
| **Service** | **Whānau supported** | **$M** |
| Temporary accommodation support (TAS) | 774 | 35.7 |
| Temporary accommodation assistance (TAA) | 129 | 3.3 |
| **Total** | **903** | **39.0** |

Note: Temporary accommodation costs are based on estimates for Auckland provided by MBIE and MSD in May 2026. TAS includes an adjustment for part payments made by families staying in temporary accommodation.

**Recommendation eight**

Review **temporary accommodation systems** to better reflect the scale and duration of recovery and the needs of displaced people.

**Possible actions**

a. Design accommodation support to be available as long as it is needed while supporting residents to progress their long-term housing solution
b. Increase the flexibility and suitability of temporary accommodation options so displaced households can remain connected to their communities, schools, employment, healthcare, and support networks wherever possible. This should include greater use of private rentals, community housing, flat-shares, tiny homed, and locally identified solutions.
c. Review future eligibility settings and funding arrangements be equitable between households facing similar levels of displacement, including for homes owned through family trusts (government)
d. Reduce prolonged reliance on emergency and motel-based accommodation by supporting households, particularly renters and tenants, to move into stable longer-term housing solutions as early as possible.
e. Work with the insurance sector to review the adequacy, duration and flexibility of insurance-funded temporary accommodation settings, recognising that recovery timelines may extend well beyond standard policy assumptions.

# Supporting people to remove themselves from intolerable risk to life

The Category 3 Voluntary Buy-out Support Scheme and the Category 2P Grant Scheme offered pathways for people living in residential situations of intolerable risk to life – either by exiting the property (Category 3) or implementing risk mitigations (Category 2P). The learning and opportunities from Category 2P have been discussed on pages 23 – 26 above. This section focuses on our experience implementing the Category 3 buy-out scheme. As noted in part one of this report, the prospect of future buy-out programmes is uncertain – the observations made through the 2023 recovery may help to inform any further discussion in this space.

### Substantial demand for buy-outs

The initial categories for residential support were determined by central government, with detailed development of the categorisation and buy-out methodology left for Auckland Council and other participating councils to determine (each for their own region). Urgently designing a process to evaluate thousands of properties quickly, consistently and accurately to support legally defensible decisions was a massive challenge – all while people were calling for solutions after the storms.

Uptake was significantly higher than originally expected. Initial high-level forecasts were that up to 700 properties would take up a Category 3 buy-out. As it turned out, we conducted 3,552 property risk assessments at the request of owners, and 1,205 were identified as being Category 3: 934 due to flooding, 227 due to landslides, and three due to both flooding and landslides. 1,164 homeowners are expected to agree to a buy-out offer, and forty-one homeowners opted out.

Of the Category 3 properties, the highest frequency for flooding occurred in the Albert-Eden, Henderson-Massey, and Devonport-Takapuna local board areas (see Figure 9). Rodney and Waitākere Ranges had the highest number of properties assessed Category 3 due to landslides.

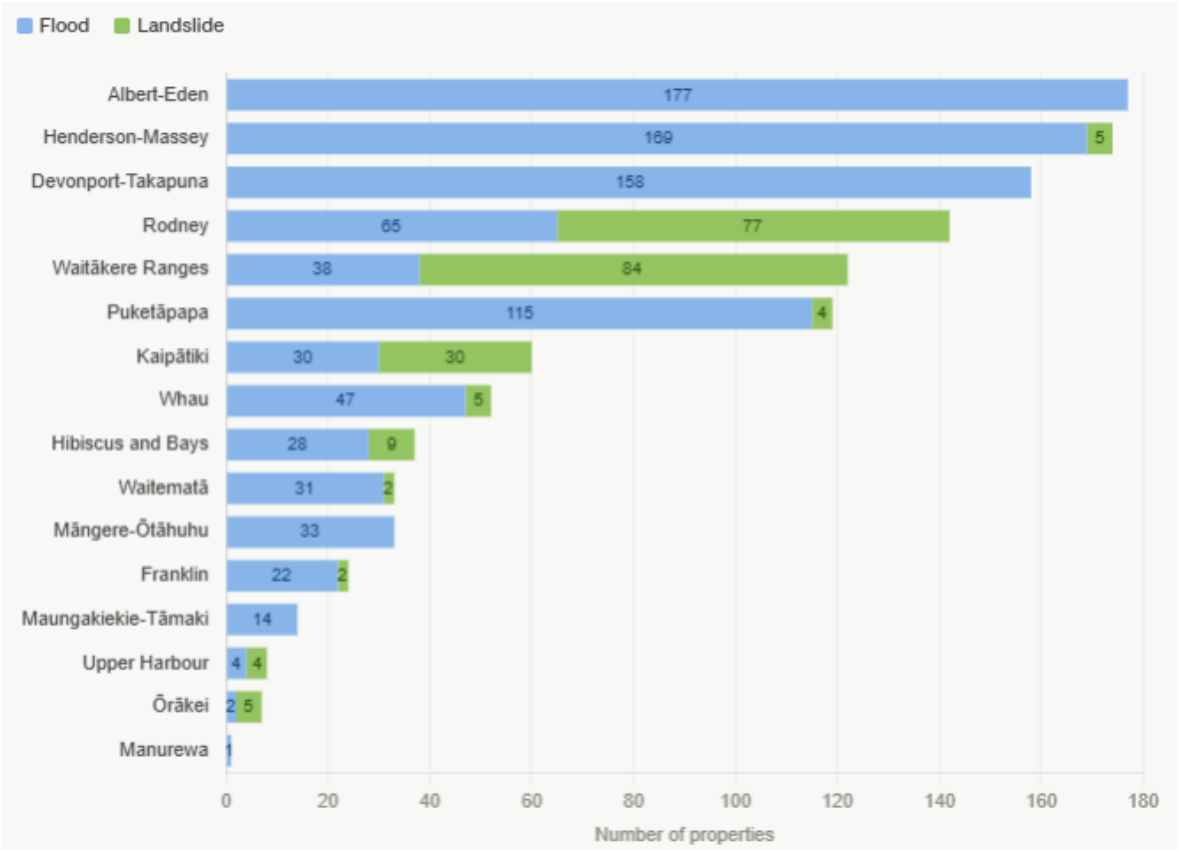



**Figure 9. Category 3 properties identified with intolerable flood or landslide risk, by local board area**

**The value of home**

The categorisation process reminded us that, for many people, 'home' is much more than the place where you live. Feedback from property owners emphasised the emotional value and stability of having a home. People grieved losing their 'forever home' and were astounded when their certainties around home ownership unravelled. Building consents did not guarantee safety; insurance did not cover the true costs of loss. Peoples' biggest single financial asset was now no longer the rock-solid investment they had believed it to be. New rain events triggered hypervigilance and unbearable anxiety for many impacted Aucklanders in the place where they should feel safest.

It was in this space of trauma and loss that we were asking people to make one of the biggest decisions of their lives. Delays, frustrations and disputes were inevitable and added to the challenge of concluding the programme as quickly as possible.

As far as we know, no longitudinal studies are in place to understand the long-term impacts of the 2023 storms and participation in the Category 3 and 2P schemes on people's life horizons. Exploring who got back on their feet, who suffered setbacks, and why would be a helpful area for further research.

The following observations about the Category 3 buy-outs are informative for the design of any future scheme (buy-out or otherwise) to support people to remove themselves from hazardous situations due to severe weather events.

**Genuine hardship and need for support to relocate**

Our interactions with homeowners suggest that most Category 3 homeowners needed financial support to be able to relocate to a safer place – they did not have the resources to simply walk away from their homes. For many, being unable to move to safety was a source of significant stress and genuine hardship (noting the government's position that mitigating 'genuine hardship' will remain an objective for future recovery events).

The scheme terms for the Category 3 buy-out were written to meet the objective of supporting homeowners to remove themselves from situations of intolerable risk to life. Support was not intended to compensate for financial hardships or losses.[19]

Because the scheme was voluntary, we needed to ensure any support would be adequate for whānau to be able to relocate to a safer place. Pre-storm market valuation was selected as the method of quantifying support that was achievable in a short timeframe and most likely to be effective.

As a result, **the Category 3 buy-out scheme supported 1,164 whānau to make themselves safe without putting anyone else in harm's way**. Without the scheme, many homeowners would have had to either stay in hazardous housing or else pass that risk to others by selling or renting their home. The buy-out scheme avoided the 'trickle down' of keeping risky houses in the market, selling or renting to people with potentially less financial capacity to recover.

**Financial hardship was a common experience**

The Category 3 buy-out scheme settings were focused on ensuring people could remove themselves from situations of intolerable risk to life; relief of financial hardship and compensation of property loss was expressly excluded from consideration.[20] This wasn't always a clear distinction for participating homeowners. Of the 200+ requests we received for consideration of special circumstances or reduction of the homeowner contribution, many included descriptions of financial hardship, including:

- levels of pre-existing debt and negative equity: this was particularly acute for people who had bought homes at the peak of the property market in 2021 or 2022
- reliance on housing ownership as a retirement fund and inability to take a loss, particularly for people at or nearing retirement age
- other reasons for financial vulnerability, such as low income, dependent family members and illness.

[19] Auckland Council, 2023. *Purchase Methodology Assessment. Storm Recovery Package 2023 Voluntary buy-out support scheme. 3 October 2023, Version 1.0.* Auckland Council.

[20] Outlined in Auckland Council, 2023. *Guidance on the application of special circumstances – Appendix Four of the Category 3 Voluntary Buy-Out Support Scheme Terms.*

**Permanent removal of risk**

The Category 3 buy-outs were an expensive but effective tool for relocating people and managing hazardous land. The scheme has permanently removed people and dwellings from known situations of intolerable risk to life and has therefore helped to reduce the likely risks and human and built environment costs of future events. Some Category 3 homes had flooded several times in the last decade and were already experiencing insurance retreat.

The scheme has also opened up opportunities for further resilience improvements. This is a long-term proposition; we acknowledge that the change can feel disruptive and upsetting for remaining residents, particularly as houses are being removed, and with the level of antisocial behaviour that vacant properties can attract.

Economic analysis is needed to calibrate any future buy-out or managed retreat scheme settings, evaluating the balance between the short-term and long-term costs and benefits of purchasing hazardous land, and between public and private costs and benefits. Essentially, when is the right time to act, and who should bear the cost?

**Defining intolerable risk to life**

Intolerable risk to life was established by the government as the threshold for support in the categorisation scheme, with the specification and assessment of that threshold left to be developed by participating councils. Technical teams in Auckland Council worked to develop frameworks to evaluate properties, cooperating with teams in other impacted regions.[21]

For landslides, the threshold was established as an Annual Individual Fatality Risk of 1 in 10,000 or greater, using the Australian Geomechanics Society's *Guideline for Landslide Susceptibility, Hazard and Risk Zoning for Land Use Planning*.

There was no equivalent threshold of intolerable risk to life available for flooding, particularly for assessing hazards in Auckland's steep topography and small catchments where flooding is highly localised and fast-moving. The Healthy Waters department developed an assessment methodology from scratch, to be applied at an individual property level, to assess the risk to vulnerable people in a 1% AEP event (see Figure 10). The assessment considers hazards to people inside a building, to people outside (e.g. if they try to evacuate), and to building stability.

Key challenges that had to be considered in the flooding assessment methodology included:

- how to account for the spatial variability of flood hazard at the property level
- how to account for the decision making of people who might be on a property at the time of flooding
- how to account for those who are most vulnerable
- how to integrate flood hazard assessments at multiple locations on a property into a single rating that represents risk to life in a 1% AEP event.[22]

Introducing intolerable risk to life as an assessment threshold faced some other challenges in implementation, including:

- Confusion with Rapid Building Assessments, which assess immediate risk after an emergency event (compared to the focus in categorisation on future, long-term risk to life if another extreme weather event occurs). Homeowners might have expected that a red placard would lead to a Category 3 risk assessment, however there was limited alignment between placards and categorisations.
- Impacts of categorisation on insurability, with insurance companies using Category 3 and 2P as grounds for not renewing policies – this proved particularly challenging for unit title properties, which are required to hold one policy for the entire property. Where only some units were identified as Category 3 or 2P, the whole site lost coverage, even where other units were assessed as Category 1.

[21] While there was strong cooperation between impacted regions, each regional scheme contained slight variations that accounted for local contexts.
[22] Macdonald, Brown, and Donnelly, 2024. Auckland Floods 2023: Assessing Risk to Life from Flooding at the Property Level (Conference Paper, delivered to the New Zealand Stormwater Conference and Expo, 2024).

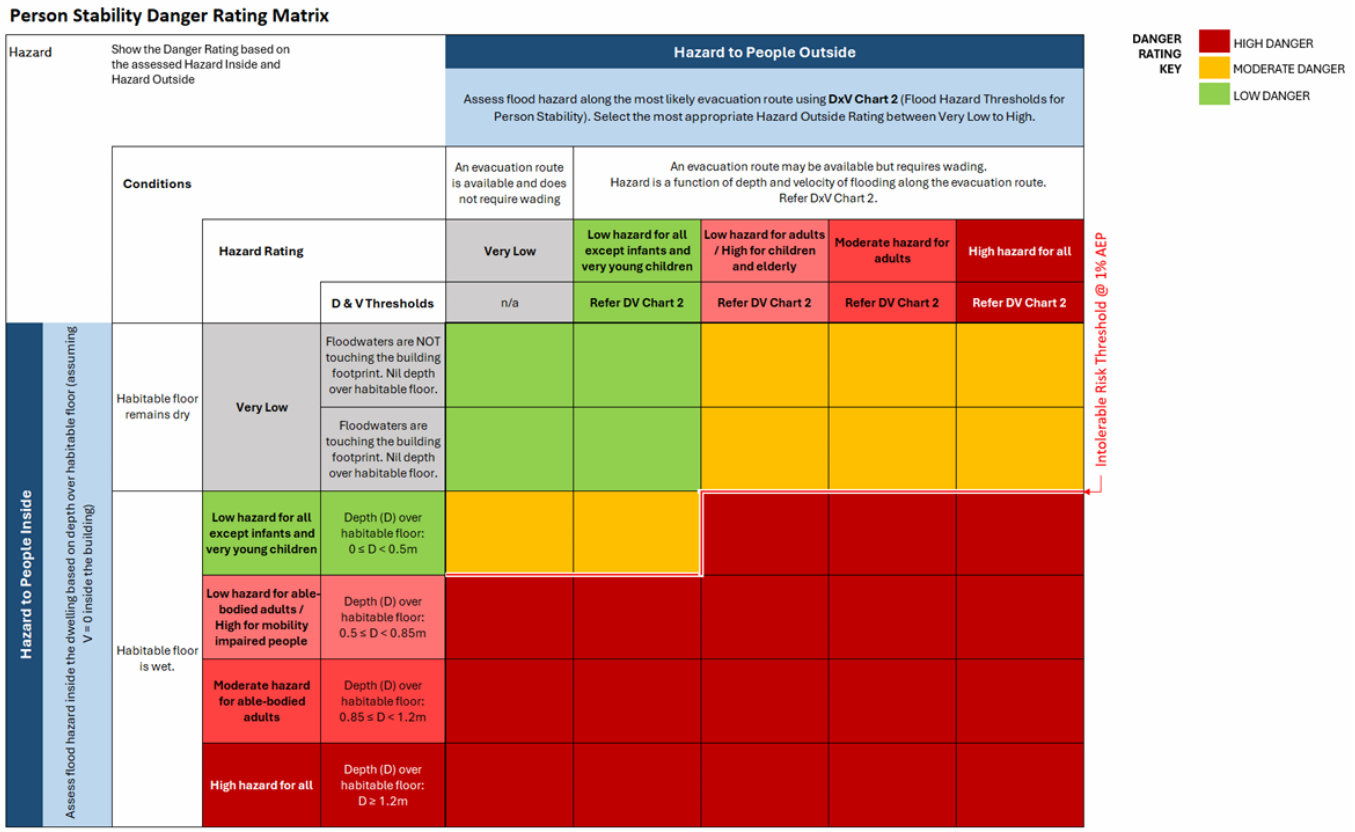



**Figure 10. The matrix used to assess intolerable risk to life from flooding**

### Thresholds and frameworks helped owners understand and trust recovery processes

Technically robust and consistently applied risk assessments were key to securing homeowner trust in the categorisation process. The methodology for assessment was shared with owners. Because the subject matter is technical and complex, we developed plain-language explanations and established flooding and landslide 'technical help-desks' to walk owners through the details of their assessments. Very often, people needed someone to answer their questions and work through the implications of their assessment.

Around 230 homeowners sought a review of their categorisation, with most seeking an increase in their category (e.g. from Category 1 to Category 2P or 3, see Figure 11). Around a third of these reviews led to a recategorisation, generally where further information was presented in the review process.

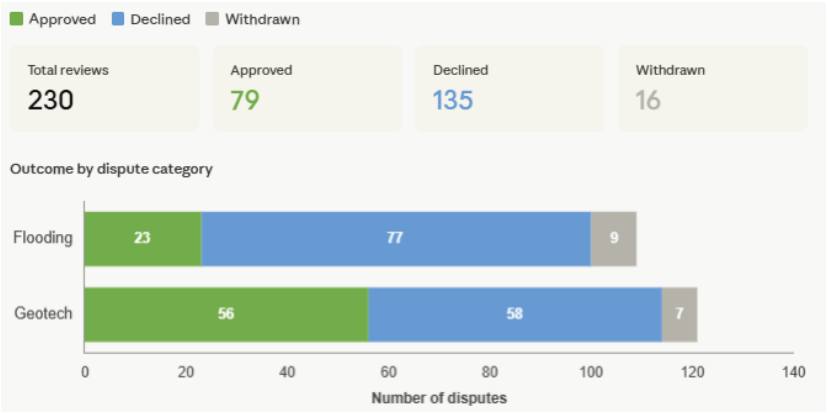



**Figure 11. Categorisation disputes**

**Deciding how far we should account for human behaviour in the assessment framework**

Human behaviour is a key contributor to risk – it is difficult to build this into assessment and may drive more conservative decisions that seek to manage all eventualities and vulnerabilities. The assessment framework evaluated risk to life of the property and the building on it, with consideration for vulnerabilities as well as how most people might be expected to act. It did not consider the specific circumstances of the current residents, or how individuals responded to the storms.

In the course of their site visits, risk assessors observed a wide and unpredictable range of responses to the storms, heavily influenced by people's circumstances, mobility requirements and previous experiences.[23]. Some people were comfortable to shelter in place, while others evacuated at the first sign of flooding. Others did not evacuate until it was extremely dangerous and rescues were needed. The uncertainty about how high flood waters would rise, or whether land would slip made for volatile and potentially fast-moving situations. This is useful information for understanding the risks of future events, as well as informing future work on education and awareness.

### Designing the administrative scheme settings

The following observations apply to the settings developed in the scheme terms – these governed eligibility criteria and how buy-outs were administered. The observations made here are not intended as a criticism of decisions that had to be made rapidly, with extremely limited information. Rather, this is an opportunity to reflect on the effect of those decisions and to identify learning for future approaches.

Balancing the need to ensure sufficient uptake of the scheme with public benefits and costs to ratepayers was a key driver for the Category 3 scheme design. Policy analysis considered a range of scheme settings, with the intention of being effective, equitable, affordable and fair and consistent (see Appendix 1 for further discussion of the Category 3 policy settings). Overall, we consider that the settings were effective in achieving this objective for most situations, with the following observations:

- **Voluntary participation:** We are aware that not all storm-impacted properties were opted into the risk assessment process, so the scheme did not reach all properties that may experience situations of intolerable risk to life. Impacts on insurance cover and mortgages meant that, once owners did opt in and properties were categorised with intolerable risk to life, almost all owners chose to take up the buy-out offer.
- **Focus on residential property ownership:** The scheme engaged with residential property owners and did not directly extend support to tenants or other people living in other occupancy arrangements. After consideration of policy options, the council did decide to include secondary properties (i.e. properties that were not the owners primary place of residence, including rentals and holiday homes). This was because, regardless of who was occupying these secondary properties, intolerable risks were still present. We did not collect data on the occupancy of Category 3 properties, so cannot give a breakdown of the owner-tenant split. However, given our observations of tenant experiences and vulnerabilities, we consider that this was a sensible inclusion in the scheme.
- **Focus on legally established dwellings:** Vacant residential land and non-residential properties were not eligible for inclusion (except where there was a residential component). This speaks directly to the objective. Ascertaining that dwellings were legally established was sometimes tricky for older homes, and for homes where basements, garages or other non-habitable spaces had been converted to bedrooms and living spaces without legal consent.
- **Use of pre-storm market valuation to calculate the value of the buy-out offer:** Pre-storm market valuations were adopted as a credible and readily available methodology for assessing the level of support provided to homeowners under the scheme. In practice, the timing of the storms coincided with the peak of a period of rapid property price growth, meaning that buy-out offers were generally sufficient to enable most homeowners to relocate. Different market conditions could have produced markedly different outcomes. Had the storms occurred during a market downturn or had property values continued to appreciate after early 2023, the adequacy and fiscal impact of the scheme may have varied significantly. In particular, a softer property market would likely have reduced the overall cost of the scheme.

[23] Nicholas, G., T. Nikkel, F. Macdonald, N. Brown, 2025. *Fitting Human Stories into a Matrix: Auckland Flood Recovery*.

We considered using property capital value as the basis for buy-outs, as was done in the Canterbury earthquakes, but recommended on balance that market value offered greater transparency and trust for homeowners and therefore was more likely to contribute to the scheme's effectiveness. Analysis shows that using capital value would have been broadly consistent with the market valuation approach, but that variance in valuations could have been significant for individual properties. It is possible that this may have affected scheme uptake or generated significantly more valuation disputes.

With time and appropriate tools (beyond the scope of a local authority to develop), a future buy-out or other managed relocation scheme could potentially be designed to more closely assess the value of assistance needed to support each whānau to relocate, taking into account their different financial starting points. This could result in a higher level of support for those who need it, and a lower level for those with greater personal financial capacity.

- **No differentiation for shared ownership arrangements:** Auckland's high number of properties held in unit titles and cross leases has led to highly complex and stressful situations, for example where one unit in a block of adjoined units has been assessed as Category 3. Auckland Council has purchased 257 cross lease and unit title Category 3 properties (see Figure 12). Challenges range from securing homeowner approvals to undertake house removals from cross lease properties, to deciding how to remove or otherwise retire attached units. Almost all of these situations remain unresolved at the time of writing.


**Figure 12. Shared ownership sites**

### Cost-sharing in the scheme

The total cost of the Category 3 buy-out scheme is forecast to come in at $1.256 billion. Buyout costs are shared 50/50 between the Crown and council up to $1.252 billion, with costs above this level met by council alone. Insurance contributions offset buy-out costs by $215 million. Homeowner contributions of between five and 20 per cent amounted to $86m.

Table 8 sets out the planning assumptions we made in setting up the Category 3 buy-out scheme, working with very limited information, and the expected final results. A lower insurance contribution than expected had a significant impact on the overall cost of the scheme.

**Table 8. Key assumptions for Category 3 scheme**

| Key assumptions | Planning (August 2023) | Forecast (June 2026) |
|---|---|---|
| Average property value | $1,303,000 (CV) | $1,416,000 (assessed market value) |
| Average insurance contribution | 20% | 9% |
| Average purchase price (excluding GST) | $993,000 | $1,079,000 |
| Average transaction costs | 15,000 | 18,000 |
| Number of properties purchased | 904 | 1,164 |

### The contribution of insurance to buy-outs

Under the Category 3 scheme terms, insurance and EQC proceeds were deducted from the purchase offer. This included all payments made, payable, or which should have been payable in respect of the severe weather events. Across the scheme, this has amounted to $168 million from private insurance and $47 million from EQC proceeds – a total of $215 million (currently nine per cent of the value of buy-outs). As shown in Figure 13, the amount of insurance proceeds applied to the buy-outs is highly variable. 173 properties did not receive insurance proceeds – either because they were not insured, or there was no claimable damage. More than 430 properties received only between 1 per cent and 10 per cent, and around 60 properties received more than 90 per cent of their buy-out from insurance proceeds. Figures 14 and 15 segment the data into purchases for floods and landslides.

In some cases, homeowners spent insurance proceeds in good faith on property remediation, before they received a buy-out offer. The scheme terms allowed for reimbursement, at the council's discretion, amounting to $63 million. Careful review of claims for reimbursement has saved the scheme $16 million.

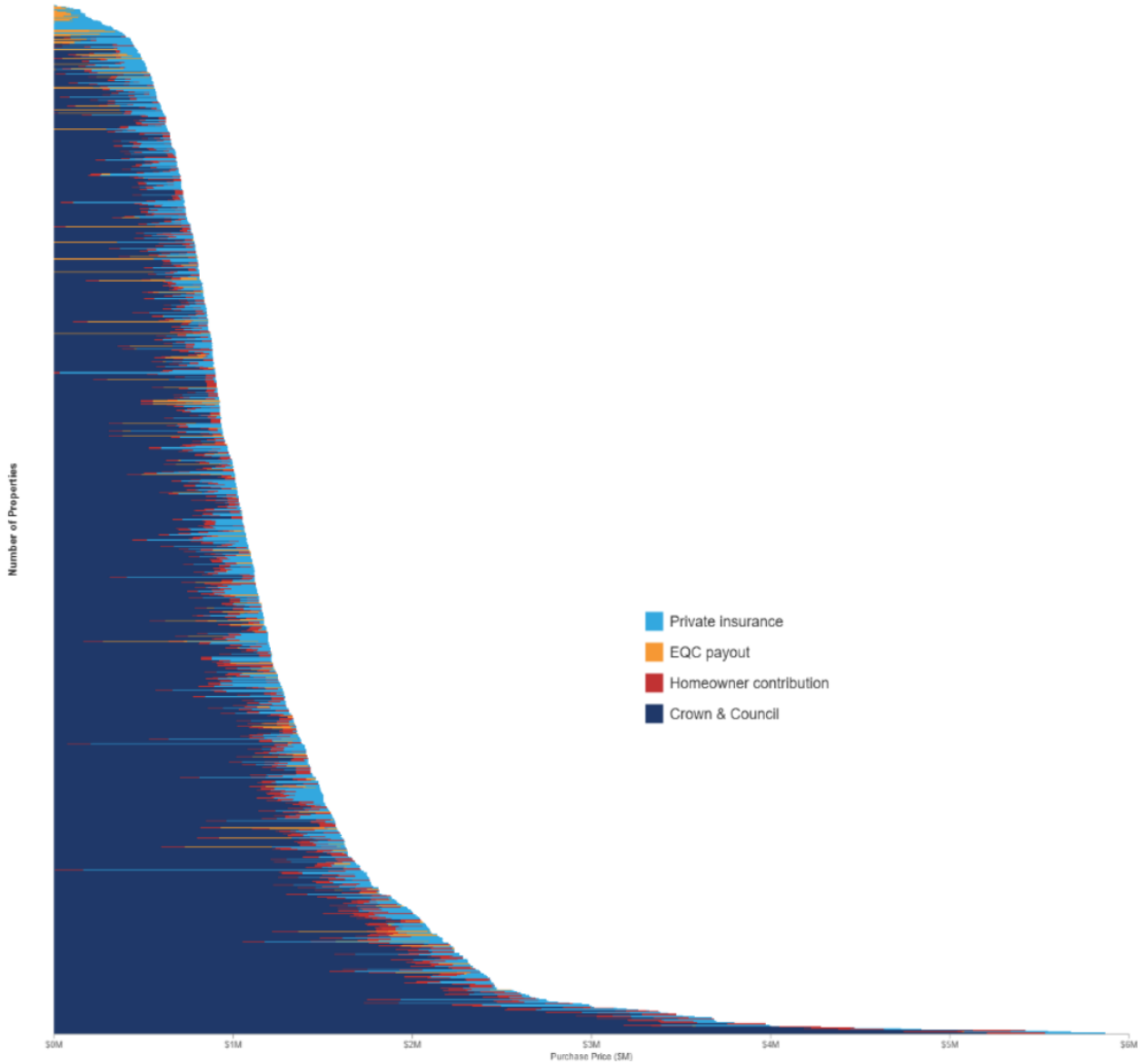



**Figure 13. Funding sources for Category 3 buy-outs**

*The graph stacks Category 3 purchases – the lowest cost at the top through to the highest cost at the bottom. Every purchase is made up of up to four components, shown from left to right: private insurance, EQC proceeds, homeowner contribution, and Crown and council funding. As shown in Figures 14 and 15, insurance contributions form a different picture for flood- and landslide-affected properties.*

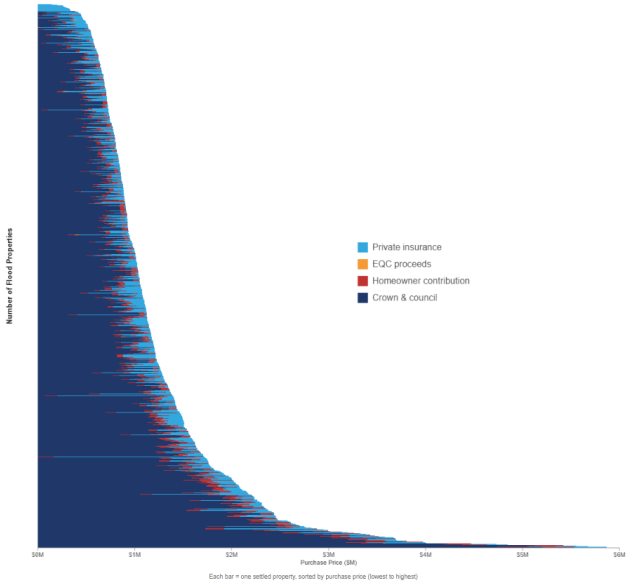



**Figure 14: Funding sources for Category 3 buy-outs due to floods**

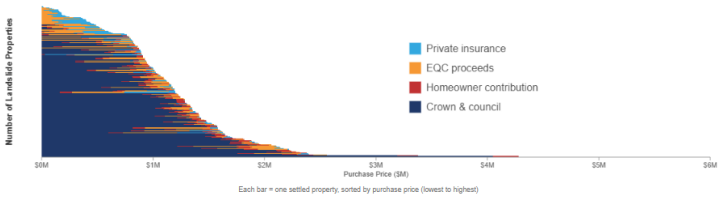



**Figure 15: Funding sources for Category 3 buy-outs due to landslides**

**Recommendation nine**

Develop pre-event guidance to clarify define how people will be supported to remove themselves from **residential situations of intolerable risk to life** as part of recovery from severe weather events, in ways that are adequate and effective, equitable and affordable.

**Possible actions**

a. Develop national policy on levels of adequate support for people to relocate to safer long-term housing, including pre-agreed frameworks and guidance for local implementation (central government)
b. Investigate other options for genuine and adequate support for relocation, including how those could be applied in recoveries, including guidance and tools to administer any necessary needs assessment (central government)
c. Consider caps, sliding scales and eligibility criteria to achieve adequate and reasonable levels of financial support (central government)
d. Identify mechanisms to enable faster resolution of the challenges of shared ownership (cross lease and unit title) arrangements, including co-owner approvals where a proposed recovery activity mitigates natural hazard risk, and simpler and faster processes for converting unit titles to freehold (central government, councils)
e. Conduct a longitudinal study to evaluate the effects (positive and negative) of the storms, the Category 3 buy-outs and Category 2P grants on impacted whānau and their life trajectories. (partnership between Auckland Council, researchers and central government)
f. Undertake economic analysis to calibrate any future buy-out or managed retreat scheme settings, evaluating the balance between the short-term costs and long-term benefits of purchasing hazardous land, and between public and private costs and benefits (government)
g. Quantify the housing support needs of residents who are not property owners and consider what future recovery operations might offer (councils, central government).

# Infrastructure repairs and improvements in recovery

A number of improvements could help to smooth the implementation of infrastructure repairs and improvements in a recovery.

**Established contracts and relationships helped to smooth delivery pathways**

Auckland Transport combined design and construction responsibility under their existing Road Asset Maintenance and Renewals contracts, with AT providing oversight and review. This meant that the programme was able to move from site assessment to construction more quickly than a traditional sequential 'design then tender' procurement approach would have allowed.

**Recovery-specific design guidance would support rapid implementation**

Auckland Transport found that resilience expectations and solution proportionality were not always consistent across their programme. Most sites received solutions that were appropriate and proportionate, but some designs were more risk averse relative to their traffic volumes, community importance, and likely future use.

**The time pressures of recovery create additional challenges for infrastructure managers**

Long lead times for infrastructure works are not compatible with recovery pressures. The normal time to carry out a large project's feasibility, design, consent, and land acquisition – before the first shovel hits the ground – is typically three to five years, or longer. In the 2023 recovery, this delay proved to be too long for communities to wait or to meet funding timeframes (e.g. within the Auckland Funding Agreement). It put extreme pressure on staff to deliver detailed and robust technical evaluations within unrealistic timeframes.

**Benefits were difficult to quantify**

The range of benefits delivered by blue-green network projects were difficult to quantify in a business case, compared to the clear-cut measure of intolerable risk to life that was applied in Category 3. A standardised approach to valuing and weighing the broader environmental, social and economic benefits, such as reduction in nuisance flooding and improved ecosystem health, would have enabled greater clarity and faster decisions. Auckland Council has initiatives underway in this space.

**Recommendation ten**

Agree design guidance and streamlined processes for **infrastructure repairs and resilience improvements** during recovery.

**Possible actions**

a. Establish design standard guidance, resilience expectations and solution proportionality for rapid application in the recovery environment (asset managers)
b. Provide standard design guidance for common recovery solution types (e.g. retaining walls, culverts)
c. Develop a recovery design framework that includes minimum investigation requirements, programme level geotechnical planning, clear guidance on temporary versus permanent solutions, approved solution types where appropriate, and explicit proportionality and risk appetite settings for recovery works (asset managers)
d. Factor in expected design life and whole of life maintenance requirements (asset managers)
e. Simplify regular project approval processes for application during recovery (asset managers)
f. Develop cross-agency collaboration protocols for use in recovery for decisions and approvals, addressing the interdependencies of infrastructure, and to ensure that communities receive consistent messages from all agencies (asset managers)
g. Conduct initial feasibility assessments and prioritisation for resilient infrastructure projects based on risk and need, in advance of emergency events (councils, asset managers)
h. Develop more consistent methodologies for measuring and valuing the benefits of resilience investments, to allow a better understanding of trade-offs in investment decisions (councils, government)
i. Once underway, use all available levers, including Orders in Council and Fast-track consenting, to assist the speed of delivery (councils, government).

# Roles and responsibilities

This section focuses on aligning delivery with clear roles and responsibilities in a locally led, centrally supported model.

Unclear roles, responsibilities and funding mechanisms at the start of recovery led to uncertainty, delays and frustrations for impacted Aucklanders. Pre-agreements for roles and responsibilities could offer significant improvements for future recoveries.

---

## Applying a locally-led, centrally-supported approach

Through the recovery, it has been apparent that local government in partnership with communities is in the best position to coordinate and deliver local recovery programmes, provided there is clear government guidance and support, including governance arrangements and fair financial mechanisms with funding support for new mandates.

Delivery was more straightforward where recovery could be managed as an extension to business as usual, for example the council group managing the repairs of council-owned assets like roads and pipes. Where roles had to be negotiated during active recovery – as it did for the psychosocial support, navigation services, and categorisation schemes – delivery was delayed.

The boundaries of the council's responsibility for recovery were not well defined and remain unclear for future recoveries. At the outset, the council was clear that it was not an insurer of last resort, and was not in the business of buying residential properties, except where there is a public service use.

In signing the Auckland Funding Agreement, elected members stated that the 2023 recovery was a one-off response to extreme circumstances and should not set a precedent for future recoveries. The decision to sign the Auckland Funding Agreement (GB/2023/187) was accompanied with a clear request from the council's Governing Body to central government to 'establish national schemes to support recovery from future severe weather events, and to put in place better processes for managed retreat in advance of disaster' (GB/2023/187(c)). The past three years have reinforced the need for these actions.

**Understanding the responsibilities of ownership: the road reserve grants scheme**

Land slips on road reserves damaged vehicle crossings and restricted some owners' ability to safely access their homes. Owners were unaware that they were responsible for constructing and maintaining vehicle crossings to their properties, with confusion arising because these private assets sit on public (council-owned) land. After the 2023 storms, owners found they couldn't access insurance or bank loans and were unable to finance repairs. Owners organised and advocated to the council and Auckland Transport to fully fund repairs in the road reserve. This did not accord with established practices and case law and risked setting a precedent for future events.

In the end, recognising the difficult circumstances for people unable to access their properties and unable to afford the repairs, the council decided to offer support in a one-off, 'no fault, no liability' grant scheme. Eligible projects were offered up to 50% of the cost of designing, consenting and constructing the works, up to a maximum of $400,000 or 25 per cent of the capital value of benefitting properties, whichever was the lower. By May 2026, grant funding was being delivered to five projects.

Further work is needed to communicate that homeowners are responsible for the private assets connected to their properties (including vehicle crossings, walkways, and retaining walls), and to encourage banks and insurance companies to provide finance and cover for the assets that allow residents to access their homes.

**Need to improve coordination between local and central government agencies**

The number of agencies working in the recovery effort, and the lack of pre-established mechanisms for cooperation meant that at times it was not clear who needed to talk to who, or who was responsible for responding to (i.e. funding and delivering) particular recovery needs. Improved cooperation mechanisms, including a central point of engagement between the council and whole of government would help.

**The role of insurance**

Insurance emerged as a critical but under-developed element of recovery, not just a private household matter. While insurance outcomes sat outside the council's direct control, they materially affected homeowner wellbeing, the design and cost of recovery schemes, programme timing, and the ability of households to make decisions about repair or relocation. Some homeowners faced prolonged claims, uncertainty about future insurability, and difficulty navigating overlapping responsibilities between private insurers, loss adjusters, the Natural Hazards Commission (NHC, formerly EQC), and Council processes. These pressures placed significant strain on both affected households and recovery staff.

The following observations about insurance have come up through the 2023 recovery and may offer insights for the ongoing and very active national discussion about adaptation, resilience, and the role of insurance moving forward:

- Insurance sat at the centre of a number of concerns of recovery, particularly in the early stages:
    - Concerns at the macro-scale, about the potential for wide scale insurer and reinsurer retreat from New Zealand as the frequency of natural hazard events escalates
    - Concerns at the household scale, with issues around claims delays, increasing premiums, loss of coverage for properties affected by the storms, and future insurability for homes in known hazard areas. We observed many households grappling with insurance uncertainty as a major factor influencing their recovery decisions to remain in or relocate from affected areas
    - Equity concerns, as changes to insurance availability or affordability could influence who is able to remain in a community, who can move, and whether risk becomes concentrated among households with fewer financial resources
    - Concerns that introducing a buy-out scheme would lead people to believe that the council will act as the insurer of last resort, when this is not and should not be a council role
    - Concerns over including uninsured and underinsured properties in the categorisation scheme, increasing the proportion of cost burden on public funds, and introducing moral hazard into insurance arrangements.
- Limitations around insurance led to challenges in the design and implementation of the categorisation scheme:
    - Little to no visibility of the number of insured, uninsured and underinsured properties impacted by the 2023 storms meant that we could not assess the likely contribution of insurance proceeds to Category 3 buy-outs. We worked with a provisional assumption that insurance proceeds would cover around 20 per cent of the buy-out cost. As it has turned out, insurance contribution to date has come in at seven per cent.
    - Limitations on data sharing, largely due to privacy concerns, led to information gaps and duplication of effort for insurers, the Recovery Office, and homeowners.
    - Limited understanding of each others' roles and processes. Dedicated insurance expertise inside the Recovery Office and a close working relationship with the Claims Resolution Service, NHC and ICNZ helped to improve this.
    - Insurance settlements and categorisation being out of sync. Delays in insurance settlements caused delays in property buy-outs. Equally, delays in categorisation led to people spending insurance proceeds, in good faith, on repairs and replacements in homes that would ultimately be purchased and removed.
    - The limits of insurance in providing for 'like for like' replacement of damaged items rather than taking the opportunity of rebuilding to reduce risks and improve resilience, particularly relevant for the Category 2P Risk Mitigation Scheme.
    - Loss of insurance for properties identified as Category 3 left owners holding an uninsured liability. Auckland Council was able to manage this within its own insurance provisions, but this could be an issue for smaller councils moving forward.

There is a strong overlapping interest between the insurance sector and local government, particularly in understanding existing and future natural hazard risks, so there is good opportunity to improve how we work together. The 2023 recovery demonstrated the importance of:

- early engagement between recovery operations and insurers to understand insurability risks;
- integrating insurance considerations into recovery scheme design;
- maintaining trusted, two-way relationships to enable data sharing, coordination, and problem resolution.

We would also advocate for transparency of risk-based pricing for homeowners, with the ability to adjust assessed prices based on evidence of risk mitigation, especially for Auckland where short catchments, steep topography and highly variable construction types means that risk is so site-specific.

**Recommendation eleven**

Confirm the **locally-led, centrally-supported approach** to recovery as an appropriate model for recovery from most severe weather events, with agreements in place establishing local and central roles and responsibilities.

**Possible actions**

a. establish national schemes to support recovery from future severe weather events and put in place better processes for managed retreat in advance of disaster (government)

b. create a central point of engagement between council and whole of government recovery operations (government, councils)

c. integrate insurance considerations into pre-event recovery and adaptation planning, including data-sharing arrangements, settlement timing, future insurability, property-level mitigation and the interface between insurance proceeds and public recovery schemes (government, councils)

d. communicate recovery roles, responsibilities and limitations so people understand what to expect (government, councils).

# Fair contribution

Recovery is expensive. Current financial arrangements are not geared for the scale of impacts we experienced in 2023, or for potential future events. Whether repairing roads and pipes, removing or mitigating houses from situations of intolerable risk to life, or remediating lower levels of property damage, the costs are high and the burden of bearing those costs is unevenly distributed.

In 2023, the government and the council – funded by ratepayers and taxpayers – stepped in to provide significant financial support to homeowners, but this may not be the standard for future events. Fundamentally, responsibility for private property does not – and should not – lie with councils.

At the same time, the intent of the categorisation schemes aligns with other council responsibilities for hazard management, climate change, adaptation, community wellbeing, place-making and land management. The psychosocial and financial impacts on people align with central government mandates for a healthy and well-functioning society.

**Collective effort**

The joint response to the 2023 storms is evidence of the benefits of the Crown and council working together. In partnership, we have unlocked significant resource to deliver tangible improvements for our people and our economy. The Crown's involvement also provided a level of scrutiny, credibility and momentum that we welcomed. Ongoing partnership and investment from central government will be essential to keep up momentum and achieve long lasting national benefits.

Crown funding covered 70 per cent of the community and social costs in the Tāmaki Makaurau Recovery Plan, in alignment with their health and housing responsibilities.

Other significant costs fell solely on council, including the cost of running the Recovery Office, house removals, and the long tail of costs associated with ownership of Category 3 land. Financial risk largely rested with the council as the provisions of the Auckland Funding Agreement limited financial exposure for the Crown.

**Community contributions**

The costings of delivering the Tāmaki Makaurau Recovery Plan do not take account the significant volunteer effort that has gone into recovery in the region. Māori and community providers stepped up to support people through the immediate aftermath of the storms, and continued to walk alongside whānau through their recovery. Some of this effort was supported through grants and contracts from the Recovery Office, but certainly not all. We acknowledge the significant mahi that has taken place in communities.

**Future funding uncertainty**

The 2023 cost sharing arrangements between the Crown and the council were understood to be a one-off response to the significant impacts of the storms. There is no clear pathway for future recovery costs, and it remains unclear where responsibilities lie. This is a national challenge, with a need for a long-term solution. Auckland Council is part of the mix, but relies on central government to establish a national position, including all sectors who have an interest in recovery and resilience.

For example, insurance provided some support for recovery, but did not generally provide for the kinds of resilience improvements homeowners needed to make to stay in place safely – with most insurance excluding betterment, superficial damage can be repaired, but the same future risk remains.

Banks did not actively contribute to recovery, even though they had financial interests in many of the impacted residential properties. Further work is needed to understand the potential role of banks and the insurance sector in resilience, adaptation and recovery moving forward.

**Recommendation twelve**

Distribute **costs of recovery** between all parties to broadly align with respective roles, responsibilities, benefits and ability to pay.

**Possible actions**

a. Commission economic analysis to:
    i. quantify the public and private benefits of supporting people to relocate and recover, including impacts on equity, insurability, productivity and social cohesion
    ii. evaluate the balance between short-term costs and long-term benefits to purchasing hazardous land, and between public and private costs and benefits (government).
b. Consider options to develop pre-event guidance for appropriate recovery cost allocation across homeowners, insurance, banks, crown and councils. Include the insurance and banking sectors in allocations of responsibilities and costs (government, councils).
c. Ensure that funding follows functions, with full accounting for delivery and overhead costs (government, councils).
d. Work with the Auckland Regional Leadership Group (ARLG) to explore and develop coordinated advice on strengthening future social recovery efforts, including an integrated cross-agency data and evidence framework, influence on national social recovery policy direction, a cross-sector workforce pipeline, and cross-agency funding approaches (Auckland Regional Leadership Group, underway).

# Next steps

The findings and recommendations in this report, alongside the recommendations and priority actions contained in *Delivering Recovery*, provide a foundation for strengthening Auckland's recovery capability and the wider resilience system. The next phase should focus on turning recovery lessons into practical changes that improve recovery preparedness before the next event and support long-term resilience, adaptation and equity outcomes.

In *Delivering Recovery*, we identify 54 recommendations and eight priority actions, centred on clarifying Auckland Council's purpose in recovery operations, building recovery capabilities in the organisation and with delivery partners, and ensuring council systems and processes are able to meet recovery needs. The Recovery Unit, in Auckland Emergency Management, will coordinate a work programme to deliver these priorities.

The recommendations in this report are a little more systemic and complex to achieve. Progress will depend on collaboration between councils, central government and partners.

Some of the possible actions we identify in this report are already underway, reflecting good progress since the 2023 storms. These include work to strengthen council's recovery capability, improve hazard data and infrastructure resilience, build community capabilities, and connect recovery learning into future adaptation planning.

Other actions will require further investigation, investment decisions, policy development, and coordination across Auckland council and its council-controlled organisations, central government, iwi, community partners and the insurance sector.

None of the changes we have set out can be delivered by one organisation alone. Auckland's recovery worked because people pulled together: the Crown and council unlocking resource, mana whenua leading in their rohe, and community organisations reaching people that formal systems could not. The same effort will be needed to prepare for what comes next.

The great news is there is national consensus that we need to take action now, and it's something we can no longer ignore. Auckland has learned a great deal over these three years, and we are ready to put that experience to work alongside everyone else who has a part to play.

# Glossary

| | |
|---|---|
| **Adaptation** | Long-term changes to systems, communities, and the built environment to respond to natural hazard risks and climate change impacts, including actions like relocation, infrastructure changes, and land-use planning. |
| **ARLG** | Auckland Regional Leadership Group |
| **Auckland Funding Agreement** | North Island Weather Events (2023) – Auckland Crown Funding Agreement: Financial Contribution for Category 3 Voluntary Buyouts; and Funding Reservation for Category 2 Risk Mitigation Projects and Regional Transport Projects – the funding agreement between the Crown and Auckland Council to support delivery of the 2023 recovery. |
| **Blue-Green Networks** | Integrated infrastructure systems that use natural (green) and water-based (blue) features—such as streams, wetlands, and open spaces—to manage stormwater, reduce flood risk, and improve environmental outcomes. |
| **Category 1** | An administrative category to describe residential properties for which the risk does not meet the threshold of intolerable risk to life. |
| **Category 2** | An administrative category to describe residential properties for which there is a feasible mitigation at either a community (2C) or property (2P) level. |
| **Category 3** | An administrative category to describe residential properties eligible for a buy-out under the Scheme Terms |
| **Community Resilience** | The ability of communities to prepare for, respond to, and recover from disruptions, supported by social networks, leadership, trust, and local capability. |
| **Displacement** | The temporary or long-term relocation of people from their homes due to disaster impacts, often resulting in social, financial, and wellbeing challenges. |
| **Hazard Information** | Data, maps, and modelling that identify risks such as flooding, landslides, or coastal inundation, used to inform planning, property decisions, and risk management. |
| **Infrastructure Resilience** | The ability of physical systems (e.g. transport, water, stormwater networks) to withstand, adapt to, and recover from hazard events while maintaining essential services. |
| **Intolerable Risk to Life** | A level of risk deemed unacceptable due to the likelihood and consequence of harm to people, used as a threshold for intervention (e.g. buy-outs or mitigation support). |
| **Locally led, centrally supported model** | A recovery approach where local authorities and communities lead delivery, while central government provides funding, policy direction, and support frameworks. |
| **Mana whenua** | Māori groups with ancestral authority over a particular area, recognised as key partners in planning, recovery, and adaptation decision-making. |
| **Mitigation** | Actions taken before or after an event to reduce hazard risk or impacts, including infrastructure upgrades, land-use controls, and property-level improvements. |
| **Navigation services** | Support services that help individuals and whānau understand recovery processes, access assistance, and coordinate across complex systems during recovery. |
| **NEMA** | National Emergency Management Agency |
| **NHC** | Natural Hazards Commission, formerly the Earthquake Commission (EQC) |
| **Place-based adaptation planning** | Planning tailored to the specific characteristics of a community or location, considering local hazards, people, infrastructure, and cultural factors. |
| **Psychosocial recovery** | Being when people and communities have established a relatively stable pattern of functioning, regained a sense of control and are orientated towards their future |
| **Psychosocial support** | Services that address mental health, emotional wellbeing, and social needs following a disaster, including counselling, community programmes, and cultural support. |
| **Recovery** | The coordinated process of supporting individuals, communities, and systems to restore, rebuild, and improve after an emergency or disaster. |
| **Resilience** | The capacity of systems, communities, and individuals to anticipate, withstand, adapt to, and recover from disruptions. |

| | |
|---|---|
| **Risk** | The combination of hazard, exposure, and vulnerability that determines the likelihood and consequence of harm. |
| **Temporary accommodation** | Short-term housing support provided to displaced households following a disaster, through government services or insurance |
| **Unitary Authority** | A local government structure (like Auckland Council) that combines regional and territorial authority functions. |
| **Vulnerability** | The characteristics that influence how severely individuals or communities are affected by hazards (e.g. income, housing, health, access to services). |
| **Whānau** | Extended family group; central to social and cultural wellbeing in Māori communities. |

# References


Auckland Council, 2022. *Too much water – a statement of Auckland Council's current role and direction' 10 March 2022.* Auckland Council.

Auckland Council, 2023. *Guidance on the application of special circumstances – Appendix Four of the Category 3 Voluntary Buy-Out Support Scheme Terms.*

Auckland Council, 2023. *Purchase Methodology Assessment. Storm Recovery Package 2023 Voluntary buy-out support scheme. 3 October 2023, Version 1.0.* Auckland Council.

Australian Geomechanics Society's *Guideline for Landslide Susceptibility, Hazard and Risk Zoning for Land Use Planning.*

Cabinet Economic Policy Committee, 2025. *Establishing a National Adaptation Framework (Minute of Decision, 17 September 2025, ECO-25_MIN-0146).*

Enlighten Me, 2025. *Understanding Engagement with Natural Hazard Information (report for Auckland Council, September 2025*). Auckland Council.

Expert Working Group on Managed Retreat, 2023. *Report of the Expert Working Group on Managed Retreat: A Proposed System for Te Hekenga Rauora / Planned Relocation.* Wellington: Expert Working Group on Managed Retreat.

Office of the Minister of Climate Change, 2025. *Establishing a National Adaptation Framework, 22 September 2025 (Cabinet Economic Policy Committee Paper).* New Zealand Government

Macdonald, Brown, and Donnelly, 2024. Auckland Floods 2023: Assessing Risk to Life from Flooding at the Property Level (Conference Paper, delivered to the New Zealand Stormwater Conference and Expo, 2024).

Morgan, J., Begg, A., Beaven, S., Schluter, P, Jamieson, K., Johal, S., Johnston, D. and M. Sparrow, 2015. *Monitoring wellbeing during recovery from the 2010–2011 Canterbury earthquakes: The CERA wellbeing survey*, International Journal of Disaster Risk Reduction Vol 14, Part 1, pp 9-103.

Nicholas, G., T. Nikkel, F. Macdonald, N. Brown, 2025. *Fitting Human Stories into a Matrix: Auckland Flood Recovery*. Paper to Stormwater Conference and Expo 2025.

Robertson, Hon. G., 2023. *Update on assessment of affected properties post Cyclone and flooding, 1 May 2023* (media release). Wellington: Department of Prime Minister and Cabinet.

Robertson, Hon. G., 2023. *Govt to support councils with buyout and better protection of cyclone and flood affected properties* (media release). Wellington: Department of Prime Minister and Cabinet.

SIL Research, 2024. Mental Health Foundation of New Zealand 2023-24 community wellbeing North Island weather events. Cyclone Gabrielle focus. Auckland overview

Storey B, Kloppenburg N, Knox D, & Zammit C. (2025). Estimated Number and Valuation of Residential Properties within Inundation/Flood Zones Impacted by Climate Change. Climate Sigma report, prepared for the Ministry for the Environment. https://environment.govt.nz/assets/publications/5.-CLIMATE-SIGMA-FINAL-REPORT_16-JAN2025.pdf.

Te Kāhui Puhoro (the West Auckland Māori Thought Leadership Collective), 2026. *Mai i te Atua ki te Marama: From Affliction to Understanding.* Auckland: Te Kāhui Puhoro.

White, A., C. Comendant, D. Yee, and D. Moore, 2025. *Natural hazards-related public spending in New Zealand: Tracking costs over time by the nature of spending.* Wellington: Sapere.

# Appendices

## Appendix 1. Recommendations and possible actions

**Table A1.1 Summary of recommendations and possible actions**

| |
|---|
| 1. Prioritise and fund risk reduction and resilience within **council and Crown investment plans** so that infrastructure is progressively improved and maintained to reduce risks. |
| *Possible actions*<br>a. Review investment frameworks to **prioritise resilience as an outcome**, including within councils' Long-term Plans, 30-year infrastructure strategies and asset management plans, and government agency equivalents (government, councils)<br>b. Continue to progress development of **blue-green network and other resilience projects** across the region, recognising that this is a multi-decade endeavour (Auckland Council)<br>c. Revisit national and local funding models to enable investment in **lower-cost pre-emptive resilience works**, in preference to reactive emergency works (NZTA, government, councils)<br>d. Agree more **consistent methods to measure and value resilience benefits** to allow better evaluation of trade-offs in investment decisions (central government and councils)<br>e. Continue to invest in **maintenance, hazard monitoring and hotspot identification** as cost effective methods of risk reduction (asset managers)<br>f. Explore and apply **triggers for changing service levels** when natural hazards mean repeated repair is no longer appropriate (councils and communities)<br>g. Develop **pathways for adaptation in places where there is no feasible solution to make infrastructure more resilient** (councils and communities). |
| 2. Develop a **national resilient homes programme** that provides information, technical support and financial incentives for people to reduce risks to their homes in places where a natural hazard has been identified (central government, councils, building sector, research sectors, insurance sector, banks). |
| *Possible actions*<br>a. Offer staged, **graduated levels of support** for homeowners including:<br>• **Guidance** on mitigation options, including design options and likely costs for different housing types (councils, building research groups, universities)<br>• **Professional and trades training** to recognise and act on risk reduction opportunities in renovations (building research groups, trade associations)<br>• **Regulatory support** with standardised or streamlined consenting processes for mitigation activities, with dedicated teams to process consents (councils, government)<br>• **Financial support** (government, insurance and banking sectors)<br>• Resilient home services to offer a 'one stop shop' for homeowners to obtain **risk mitigation packages** that homeowners can purchase or procure (private sector)<br>b. Explore the potential for cost efficiencies through centrally procured supplier panels to deliver risk mitigation services for multiple houses, including professional services and physical works<br>c. Work with the **insurance and banking sectors** to explore how insurance and home loan settings, including pricing, coverage and incentives, can better support property-level risk reduction and the potential role of insurance and finance in enabling or co-funding mitigation activities. |

3. Normalise **accessing hazard information** as a matter of course, including when people buy, rent, renovate or manage a property.

*Possible actions*

a. Improve availability and **plain-language explanations of hazard information** with guidance on actions that can be taken as the next step (councils)

b. Ensure hazard information is accessible to **diverse audiences**, including renters, new migrants, and those with limited technical skills. Consider communication methods, including tools multi-language support, alternative formats, and outreach to under-served groups (councils)

c. **Promote hazard information** to prospective buyers and tenants with targeted campaigns and media buying (councils)

d. Require landlords to disclose publicly available hazard information, as part of **Residential Tenancies Act requirements** for information to accompany tenancy agreements (central government)

e. Upskill **property professionals** to understand and use hazard information with their clients, including property managers (central government and councils working with professional associations)

f. Consider how to require management and disclosure of natural hazards risks for other forms of residential accommodation, including **retirement villages and boarding houses**, and other locations where there are vulnerable people on site for extended periods of time, such as **early childhood education facilities and schools** (central government)

g. Progress **consistent national frameworks for natural hazard information** including standardised formats for data collection and management, and access to national datasets (central government, NHC, councils, professional associations)

h. Develop a **national landslide strategy** (central government with involvement from all relevant agencies, local and central government, landslide scientists and practitioners, policy-makers, hazard managers, asset owners, emergency responders and insurers)

i. Continue to fund the **NZ Open Landslides Database** and work with other agencies to find an appropriate long-term host and funding stream (Auckland Council and other agencies).

4. Invest in the **social and community foundations** of resilience**.**

*Possible actions*

a. Balance investment in physical resilience with **investment in community and social resilience**, recognising that resilient communities rely on both strong infrastructure and strong social foundations (councils, government)

b. Continue to invest in the **long-term foundations** of community resilience, including local shared spaces, organisations, social networks and leadership that communities can rely on before, during, and after disruption (councils)

c. Build and maintain **trusted relationships** between council, iwi, community organisations and local communities before disruption occurs, including through **relational, place-based roles** that help communities understand risk, organise around shared priorities, navigate complex systems and participate in recovery, preparedness and adaptation decisions (councils, community partners)

d. Strengthen **Māori-led resilience**, grounded in tikanga, mātauranga Māori and local knowledge, by recognising and resourcing mana whenua, marae, Māori providers and Māori community leaders as core parts of the resilience system (mana whenua, Māori organisations, councils, government)

e. Shift to sustained, **multi-year and relationship-based funding** approaches that strengthen long-term local capability, support community leadership and volunteer capability, and reduce reliance on short-term or crisis-driven engagement (councils, government)

f. Create **clearer pathways** for community priorities and advocacy to inform infrastructure, risk reduction, land use, insurance, recovery and adaptation decisions, with stronger feedback loops so communities can see how their priorities have been considered and what further action is required (councils, government).

5. Develop **place-based adaptation pathways** for vulnerable communities and integrate them with emergency readiness and pre-event recovery planning.

*Possible actions*

a. Prioritise the communities most at risk from natural hazards and consider the future of homes, communities, businesses, infrastructure and services (councils)

b. Integrate adaptation planning, emergency readiness and pre-event recovery planning so likely recovery pathways and adaptation options are understood before a disaster occurs (government, councils)

c. Engage communities early in adaptation planning and pre-emergency event readiness and recovery planning, so that people can understand changing risks, explore future options, and make informed decisions before they are facing the pressures of a recovery (councils)

d. Partner with mana whenua to embed mātauranga Māori, support iwi-led adaptation priorities, strengthen connections to whenua and awa, and create opportunities for Māori enterprise and workforce participation (councils, mana whenua, government)

e. Include consideration of displacement, community continuity, access to services, cultural relationships to place, and the likely recovery pathways that may be needed after a future event, as part of pre-event adaptation planning (councils)

f. Establish nationally defined frameworks, thresholds and triggers for planned relocation, including guidance for a locally-led centrally supported approach to implementation and how that is activated in a recovery (government)

g. Establish national funding support for adaptation activities, including planned relocations and investment in risk mitigation activities (government).

6. Use **recovery as a catalyst** to accelerate long-term resilience, adaptation and equity outcomes.

*Possible actions*

a. Use pre-event recovery and adaptation planning to guide recovery actions, including:
   i. determining the future of communities in natural hazard areas,
   ii. where mitigation solutions at property- and community-scale may be possible and
   iii. where permanent removal may be the most necessary and beneficial option (councils, communities)

b. Align recovery investment with long-term resilience and adaptation priorities wherever possible (councils, government)

c. Make provision for improving the resilience of infrastructure at the same time as recovery repairs are implemented (councils, government, asset managers)

d. Incorporate circular economy and waste minimisation targets in house removal and infrastructure programmes (councils, house removals industry)

e. Partner with mana whenua to advance iwi resilience priorities through recovery investment and delivery (councils, government, mana whenua)

f. Invest in community leadership and local capability as key partners in adaptation planning, with clear pathways for community priorities to inform regional planning, infrastructure investment, land-use decisions and funding processes (councils, government, community partners).

7. Establish **nationally-agreed arrangements for psychosocial and navigation support in recovery**, including clear roles, funding, governance and activation mechanisms.

*Possible actions*

a. Clarify national and local roles for psychosocial recovery, recognising that recovery wellbeing needs extend beyond clinical mental health services and require coordinated input from health, social development, education, local government, iwi and community partners (government, councils, iwi and community partners)

b. Establish dedicated funding pathways for non-clinical psychosocial recovery supports, including navigation, cultural wellbeing initiatives, community-led wellbeing activities, social connection, youth support and practical recovery assistance (government, councils)

c. Establish pre-agreed governance arrangements and activation mechanisms so psychosocial recovery support can be mobilised early, rather than negotiated after an event (government, councils, iwi and community partners)

d. Recognise navigation as a core recovery function and establish a nationally supported capability that can be activated and scaled to meet the needs of different recovery contexts (government, councils)

e. Design recovery support models to reduce barriers to access and address inequitable recovery outcomes, particularly for communities that face greater challenges engaging with formal systems (government, councils)

f. Invest in trusted relationships and partnerships between councils, iwi, community organisations and delivery partners before disruption occurs, recognising these relationships are critical to effective recovery delivery (councils, iwi and community partners)

g. Include funding pathways for trusted local delivery partners, including iwi, NGOs, faith-based organisations and culturally specific providers, to enable support to be delivered through existing community networks and relationships (councils, government).

8. Review **temporary accommodation systems** to better reflect the scale and duration of recovery and the needs of displaced people.

*Possible actions*

a. Design accommodation support to be available as long as it is needed while supporting residents to progress their long-term housing solution

b. Increase the flexibility and suitability of temporary accommodation options so displaced households can remain connected to their communities, schools, employment, healthcare, and support networks wherever possible. This should include greater use of private rentals, community housing, flat-shares, tiny homed, and locally identified solutions.

c. Review future eligibility settings and funding arrangements be equitable between households facing similar levels of displacement, including for homes owned through family trusts (government)

d. Reduce prolonged reliance on emergency and motel-based accommodation by supporting households, particularly renters and tenants, to move into stable longer-term housing solutions as early as possible.

e. Work with the insurance sector to review the adequacy, duration and flexibility of insurance-funded temporary accommodation settings, recognising that recovery timelines may extend well beyond standard policy assumptions.

9. Develop pre-event guidance to clarify define how people will be supported to remove themselves from **residential situations of intolerable risk to life** as part of recovery from severe weather events, in ways that are adequate and effective, equitable and affordable.

*Possible actions*

a. Develop national policy on levels of adequate support for people to relocate to safer long-term housing, including pre-agreed frameworks and guidance for local implementation (central government)

b. Investigate other options for genuine and adequate support for relocation, including how those could be applied in recoveries, including guidance and tools to administer any necessary needs assessment (central government)

c. Consider caps, sliding scales and eligibility criteria to achieve adequate and reasonable levels of financial support (central government)

d. Identify mechanisms to enable faster resolution of the challenges of shared ownership (cross lease and unit title) arrangements, including co-owner approvals where a proposed recovery activity mitigates natural hazard risk, and simpler and faster processes for converting unit titles to freehold (central government, councils)

e. Conduct a longitudinal study to evaluate the effects (positive and negative) of the storms, the Category 3 buy-outs and Category 2P grants on impacted whānau and their life trajectories. (partnership between Auckland Council, researchers and central government)

f. Undertake economic analysis to calibrate any future buy-out or managed retreat scheme settings, evaluating the balance between the short-term costs and long-term benefits of purchasing hazardous land, and between public and private costs and benefits (government)

g. Quantify the housing support needs of residents who are not property owners and consider what future recovery operations might offer (councils, central government).

10. Agree design guidance and streamlined processes for **infrastructure repairs and resilience improvements** during recovery.

*Possible actions*

a. Establish design standard guidance, resilience expectations and solution proportionality for rapid application in the recovery environment (asset managers)

b. Provide standard design guidance for common recovery solution types (e.g. retaining walls, culverts)

c. Develop a recovery design framework that includes minimum investigation requirements, programme level geotechnical planning, clear guidance on temporary versus permanent solutions, approved solution types where appropriate, and explicit proportionality and risk appetite settings for recovery works (asset managers)

d. Factor in expected design life and whole of life maintenance requirements (asset managers)

e. Simplify regular project approval processes for application during recovery (asset managers)

f. Develop cross-agency collaboration protocols for use in recovery for decisions and approvals, addressing the interdependencies of infrastructure, and to ensure that communities receive consistent messages from all agencies (asset managers)

g. Conduct initial feasibility assessments and prioritisation for resilient infrastructure projects based on risk and need, in advance of emergency events (councils, asset managers)

h. Develop more consistent methodologies for measuring and valuing the benefits of resilience investments, to allow a better understanding of trade-offs in investment decisions (councils, government)

i. Once underway, use all available levers, including Orders in Council and Fast-track consenting, to assist the speed of delivery (councils, government).

11. Confirm the **locally-led, centrally-supported approach** to recovery as an appropriate model for recovery from most severe weather events, with agreements in place establishing local and central roles and responsibilities.

*Possible actions*

a. establish national schemes to support recovery from future severe weather events and put in place better processes for managed retreat in advance of disaster (government, councils)

b. create a central point of engagement between council and whole of government recovery operations (government, councils)

c. integrate insurance considerations into pre-event recovery and adaptation planning, including data-sharing arrangements, settlement timing, future insurability, property-level mitigation and the interface between insurance proceeds and public recovery schemes (government, councils)

d. communicate recovery roles, responsibilities and limitations so people understand what to expect (government, councils).

12. Distribute **costs of recovery** between all parties to broadly align with respective roles, responsibilities, benefits and ability to pay.

*Possible actions*

a. Commission economic analysis to:

i. quantify the public and private benefits of supporting people to relocate and recover, including impacts on equity, insurability, productivity and social cohesion
ii. evaluate the balance between short-term costs and long-term benefits to purchasing hazardous land, and between public and private costs and benefits (government)

b. Consider options to develop pre-event guidance for appropriate recovery cost allocation across homeowners, insurance, banks, crown and councils. Include the insurance and banking sectors in allocations of responsibilities and costs (government, councils)

c. Ensure that funding follows functions, with full accounting for delivery and overhead costs (government, councils)

d. Work with the Auckland Regional Leadership Group (ARLG) to explore and develop coordinated advice on strengthening future social recovery efforts, including an integrated cross-agency data and evidence framework, influence on national social recovery policy direction, a cross-sector workforce pipeline, and cross-agency funding approaches (Auckland Regional Leadership Group, underway).

# Appendix 2. Category 3 policy settings

Different settings were available for scheme design. Staff recommended a package, and elected members on the Storm Recovery Political Advisory Group (PAG) offered an alternative (GB/2023/187). High-level evaluation shows that different scheme settings may have changed the total buy-out cost. This analysis is offered with caution – it does not account for the impacts that settings may have had on voluntary uptake of the buy-out offer, or other consequences such as risks of increased disputes and litigation.

**Table A2.1. Scheme setting decisions and impacts**

| Setting | Options considered and agreed | Impact on Category 3 buy-out scheme |
|---|---|---|
| Valuation | • **Pre-storm market valuation (agreed)**<br><br>Both the staff and PAG packages preferred pre-storm market valuation as the approach that would be most likely to get voluntary uptake | Using pre-storm Capital Values (as recorded for rating purposes) was an initial option. This could have cost around $66 million less than pre-storm market valuations but decreased uptake, increased valuation disputes and introduced delays. |
| Maximum buy-out payment cap | • $1.5 million cap on buy-out offers<br>• **No cap (agreed)**<br><br>Staff recommended a $1.5 million cap on buy-out offers to stay within budgets. It could also negate the risks of the support scheme being perceived as too generous by the wider public.<br><br>The PAG package recommended no maximum buy-out cap but included a homeowner contribution for all properties (see next row). The reason was that this option was viewed as more likely to expedite uptake and to use resource to deliver the scheme rather than respond to legal/special circumstances challenges. | A quarter of the properties (304) offered a buy-out were purchased for $1.5m or more (incl GST). Fifty-six of these properties were impacted by landslides (18%) – mostly on the West Coast and Waitākeres – and 248 were impacted by floods (82%).<br><br>Around 175 have been identified as having potential for future blue green network and flood resilience projects.<br><br>The financial impact to the scheme needs to be considered in concert with the homeowner contribution, see next row.. |
| Homeowner contribution | • No homeowner contribution<br>• **5-15% homeowner contribution (agreed as 5% up to 20 per cent for uninsured properties, see next row)**<br><br>Staff recommended no homeowner contribution considering vulnerable people with greatest need. The PAG package proposed a sliding scale of five to fifteen per cent, as a recognition of property ownership risks and to improve affordability. | Homeowner contributions offset $86m of the cost to the scheme.<br><br>The proposed PAG package of no homeowner contribution and a cap of $1.5m would have resulted in a net saving to the scheme of around $115m. This is a high-level assessment that assumes that opt-in rates would have remained the same. |
| Insurance status | • Do not take insurance status into account<br>• **Increase homeowner contribution up to 20% from uninsured properties, with provision for special circumstances (agreed)**<br><br>Staff recommended no differentiation for insurance to reduce likelihood of disputes, and not impact homeowners likely to have the greatest need. The PAG package recognised that insured owners had effectively made their contribution to the scheme through insurance payments. | It is expected that homeowner contributions for 25 uninsured properties will account for $4.35m of homeowner contributions.<br><br>Eight uninsured homeowner contributions were reduced through special circumstances reviews. A further 18 review requests were declined. |
| Secondary properties | • Exclude secondary properties from the scheme<br>• **Include secondary properties from the scheme (agreed)**<br><br>The PAG package recognised that rental and temporary accommodation could still pose an intolerable risk to life to tenants and temporary occupants. | No data was collected on the occupancy type of Category 3 dwellings. |
| Special circumstances | • **Include a process for special circumstances reviews (agreed)** | Of 208 special circumstances reviews, 32 were approved or partially approved (15%). Many requests focused on financial hardship, which was expressly excluded from consideration in the scheme terms. |

# Appendix 3. Tāmaki Makaurau Recovery Lessons Management – Methodology

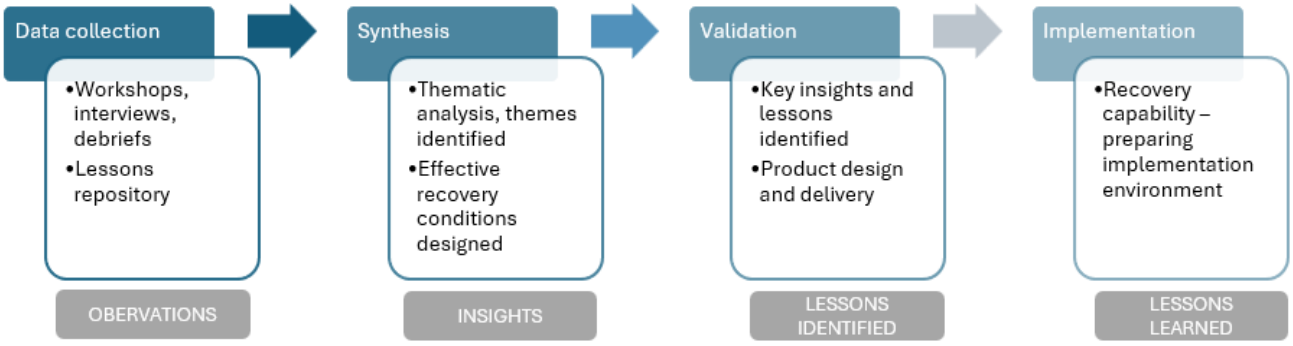
The scope of the Tāmaki Makaurau recovery lessons management programme is limited to the 2023 recovery experience up until May 2026. Some programmes are not yet complete and will undertake further evaluation in future.

The programme broadly applied the Observations, Insights, Lessons Identified, Lessons Learned (OILL) methodology set out in the Australian Institute for Disaster Resilience (AIDR) *Lessons Management Handbook* (2019).

OILL provides a structured, replicable framework for extracting and synthesising evidence from participant interviews, debriefs and workshops (Lesson Sessions), distilling large volumes of qualitative data into insights, lessons and recommendations.

Resulting reports are presented as observations and advice from the Group Recovery Manager and not necessarily reflective of council policy.

The AEM Recovery Unit will continue to progress this work after the Recovery Office closes and embed recommendations.




**The process**

The Tāmaki Makaurau Recovery Office led an overarching lessons management programme that started in February 2025. The key phases were:

| | |
|---|---|
| February – April 2025 | **Design**<br>• Initial exploratory phase with internal stakeholders.<br>• Findings informed the tailoring of OILL to Council context, designing participant groups and the sequencing of engagement across all recovery areas and key people involved in the 2023 recovery. |
| May – December 2025 | **Observations and insights**<br>• A series of workshops and operational debriefs were held across all aspects of the 2023 recovery. Workshops were scheduled to align to delivery timelines, recognising that most programmes were still in the delivery phase.<br>• Staff and elected member surveys were conducted and analysed.<br>• Interviews were held with key recovery kaimahi and supporting business areas.<br>• Dovetail was engaged to facilitate further engagement on lessons for community and social recovery activity. This included internal and external stakeholder interviews, and Whānau Voice survey insights. This approach strengthened the evidence base for the lessons work by bringing together operational experience, community perspectives, and national and |

| | |
|---|---|
| | international evidence on effective recovery practice, particularly in relation to wellbeing, displacement, inequity, trust, and system navigation.<br>• Observations were themed and captured in a lessons repository. |
| January – April 2026 | *Regional transport programme insights*<br>• Auckland Transport engaged Resolve Group to identify transport-specific lessons and recommendations. A structured review methodology adapted from Statistics New Zealand's lessons learnt process was used.<br>• The review team undertook background document review, site visits, and 44 structured interviews across funding, emergency response, recovery, and long-term advisory functions. From these interviews, 565 individual issues were logged in issues register and analysed through an iterative thematic process, which identified 28 themes across the agreed areas of interest.<br>• Draft findings were then shared with relevant participants for factual validation before finalisation. These outputs then informed the overarching recovery lessons programme outputs. |
| January – June 2026 | **Lessons identified**<br>• Thematic analysis grouped observations into insights, key lessons and draft recommendations.<br>• Topic-based debrief reports were developed and reviewed by business owners.<br>• Draft recovery-wide papers were developed and engagement undertaken.<br>• Final products released:<br>1. **Delivering Recovery –** a consolidated view of validated insights mapped to lessons identified, recommendations and owners, designed to drive internal operational readiness for future recovery events. This paper has been developed for an internal and recovery network audience.<br>2. **Unlocking Recovery –** a position paper examining what recovery from the 2023 required from a cost, community and infrastructure perspective, intended to inform central government, sector partners and the wider public.<br>3. **Auckland Together: Recovering from the 2023 storm –** a publication telling the story of what Auckland Council did throughout the recovery, honouring the contribution of kaimahi, partners and communities. |
| July 2026 onwards | **Lessons learned**<br>• AEM Recovery Unit will progress the lessons management work to embed recommendations and build recovery capability.<br>• It is recommended that lessons continue to be tracked through to learned status as agreed actions are implemented and embedded, providing a continuous feedback loop within the newly created recovery capability in Auckland Emergency Management.<br>• An **internal recovery toolkit** has been developed and will continue to be refined and updated by the AEM Recovery Unit and council business owners. The toolkit aims to preserve institutional knowledge by providing a practical resource to help build recovery capability and preparedness across the Auckland Council group. It supports existing guidance including the NEMA Director's Guideline on recovery preparedness and management and WREMO (Wellington Region Emergency Management Office) practices. |

Unlocking recovery. Strategic observations and recommendations from the Tāmaki Makaurau Recovery Office. June 2026

June 2026

ISBN 978-1-991415-89-9 (Pdf)



TĀMAKI MAKAURAU RECOVERY