

I hereby give notice that an ordinary meeting of the Transport and Infrastructure Committee will be held on:

Date: Thursday, 4 July 2024
Time: 10.00am
Meeting Room: Reception Lounge
Venue: Auckland Town Hall
301-305 Queen Street
Auckland

Komiti mō ngā Tūnuku me ngā Rawa Tūāhanga / Transport and Infrastructure Committee

OPEN AGENDA

MEMBERSHIP

Chairperson	Cr John Watson	
Deputy Chairperson	Cr Christine Fletcher, QSO	
Members	Cr Andrew Baker	Cr Mike Lee
	Cr Josephine Bartley	Cr Kerrin Leoni
	Hokura Member Billy Brown	Cr Daniel Newman, JP
	Mayor Wayne Brown	Hokura Member Pongarauhine Renata
	Cr Angela Dalton	Cr Greg Sayers
	Cr Chris Darby	Deputy Mayor Desley Simpson, JP
	Cr Julie Fairey	Cr Sharon Stewart, QSM
	Cr Alf Filipaina, MNZM	Cr Ken Turner
	Cr Lotu Fuli	Cr Wayne Walker
	Cr Shane Henderson	Cr Maurice Williamson
	Cr Richard Hills	

(Quorum 11 members)

Lata Smith
Kaitohutohu Mana Whakahaere Matua / Senior
Governance Advisor

1 July 2024

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1 Ngā Tamōtanga | Apologies

An apology from Cr C Darby has been received.

2 Te Whakapuaki i te Whai Pānga | Declaration of Interest

3 Te Whakaū i ngā Āmiki | Confirmation of Minutes

Click the meeting date below to access the minutes.

That the Transport and Infrastructure Committee:

- a) whakaū / confirm the ordinary minutes of its meeting, held on [Thursday, 6 June 2024](#), including the confidential section, as a true and correct record.

4 Ngā Petihana | Petitions

5 Ngā Kōrero a te Marea | Public Input

5.1 Public Input: Paul Miller and John Gardiner - New approach to infrastructure funding

Te take mō te pūrongo Purpose of the report

1. Paul Miller, Founder & Technologist for Completeview Software Ltd and John Gardiner, Managing Director for Candor will address the committee regarding a new approach to infrastructure funding.

Ngā tūtohunga Recommendation/s

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the public input address from Paul Miller and John Gardiner regarding the new approach to infrastructure funding; and whakamihi / thank them for their attendance.

5.2 Public Input: Ocean Flyer - New seaglider technology and how it can be used in public transport in the future

Te take mō te pūrongo Purpose of the report

1. Shah Islam representing Ocean Flyer will address the committee regarding their new seaglider technology and how it can be used in public transport in the future.

Ngā tūtohunga Recommendation/s

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the public input address from Ocean Flyer regarding their new seaglider technology and how it can be used in public transport in the future; and whakamihi / thank Shah Islam for his attendance.

5.3 Public Input: Brake, the road safety charity - Safe speed limits for Auckland

Te take mō te pūrongo Purpose of the report

1. Caroline Perry, NZ Director of Brake, the road safety charity, will address the committee regarding safe speed limits for Auckland.

Ngā tūtohunga Recommendation/s

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the public input address from Brake regarding safe speed limits for Auckland; and whakamihi / thank Caroline Perry for her attendance.

5.4 Public Input: Bike Auckland - Retain existing safe speeds and deliver Katoa Ka Ora

Te take mō te pūrongo Purpose of the report

1. Fiáin d'Leafy representing Bike Auckland, will address the committee regarding the draft speed rule in support of retaining existing safe speeds and delivering Katoa Ka Ora. Their perspective includes the importance of enabling transport options, and providing an accessible transport network, with consideration for disabled and mobility impaired people.

Ngā tūtohunga Recommendation/s

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the public input address from Bike Auckland regarding the draft speed rule in support of retaining existing safe speeds and delivering Katoa Ka Ora; and whakamihi / thank Fiáin d'Leafy for attending the meeting.

5.5 Public Input: Australasian College of Road Safety - Submission on the proposed new speed limits rule

Te take mō te pūrongo Purpose of the report

1. Australasian College of Road Safety will address the committee regarding developing their submission on the proposed new speed limits rule and provide impartial and evidence-based view of speed management including suggestions for sensible ways forward.

Ngā tūtohunga Recommendation/s

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the public input from Australasian College of Road Safety in relation to proposed new speed limit rules; and whakamihi / thank them for attending the meeting.

6 Ngā Kōrero a te Poari ā-Rohe Pātata | Local Board Input

7 Ngā Pakihi Autaia | Extraordinary Business

KiwiRail Update - July 2024

File No.: CP2024/08456

Te take mō te pūrongo Purpose of the report

1. To whiwhi / receive the July 2024 update from KiwiRail on its Auckland programme.

Whakarāpopototanga matua Executive summary

2. The Transport and Infrastructure Committee has responsibility for the oversight of major transport and infrastructure matters that affect the Auckland region.
3. KiwiRail Holdings Limited trading as KiwiRail is a New Zealand state-owned enterprise responsible for rail operations in New Zealand.
4. Senior Staff from KiwiRail will provide an update on its Auckland programme with specific reference to the issue of disruptions, works needed for CRL opening and associated disruptions and screeching trains, including work to improve that issue (as attached). There will also be an update on key strategic projects and initiatives in the region.

Ngā tūtohunga Recommendation

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the July 2024 update from KiwiRail on its Auckland programme.

Ngā tāpirihanga Attachments

No.	Title	Page
A⇄	Kiwirail Update - July 2024 - Presentation	

Ngā kaihaina Signatories

Author	Mara Bebich - Executive Officer Resilience and Infrastructure
Authoriser	Barry Potter - Director Resilience and Infrastructure

Auckland Transport Update - July 2024

File No.: CP2024/09225

Te take mō te pūrongo Purpose of the report

1. To whiwhi / receive the July 2024 update from the Chief Executive of Auckland Transport on the performance of the organisation.

Whakarāpopototanga matua Executive summary

2. The Transport and Infrastructure Committee has responsibility for the oversight of major transport and infrastructure matters that affect the Auckland region.
3. Auckland Transport is a Controlled Organisation of Auckland Council. Auckland Transport designs, build and maintains Auckland's roads, ferry wharves, cycleways and walkways, coordinates road safety and community transport initiatives such as school travel, and plans and funds bus, train, and ferry services across Auckland.
4. An update (attached) will be provided by the Chief Executive on strategic issues, operational updates and key performance metrics for the most recent reporting period.

Ngā tūtohunga Recommendation

That the Transport and Infrastructure Committee:

- a) whiwhi / receive the July update from Auckland Transport's Chief Executive on the performance of the organisation.

Ngā tāpirihanga Attachments

No.	Title	Page
A⇒	Auckland Transport Update June 2024 - Presentation	

Ngā kaihaina Signatories

Author	Mara Bebich - Executive Officer Resilience and Infrastructure
Authoriser	Barry Potter - Director Resilience and Infrastructure

Auckland Council Submission on the draft Land Transport Rule: Setting of Speed Limits 2024 (Covering report)

File No.: CP2024/09113

Item 10

Te take mō te pūrongo

Purpose of the report

1. To approve Auckland Council's submission in response to the Draft Land Transport Rule: Setting of Speed Limits 2024 (the draft Rule).

Whakarāpopototanga matua

Executive summary

2. This is a late covering report for the above item. The comprehensive agenda report was not available when the agenda went to print and will be provided prior to the 04 July 2024 Transport & Infrastructure Committee meeting.

Ngā tūtohunga

Recommendation/s

The recommendations will be provided in the comprehensive agenda report.

Open Process Report for Te Ararata and Harania flood resilience projects

File No.: CP2024/06733

Te take mō te pūrongo

Purpose of the report

1. To seek the Transport and Infrastructure Committee's support for flood resilience projects in Te Ararata and Harania catchments as part of the Making Space for Water programme.

Whakarāpopototanga matua

Executive summary

2. The Making Space for Water programme includes a range of initiatives to reduce flood risk to Aucklanders. Part of this is the construction of blue-green network projects which involve enhancing stormwater assets and green spaces to deliver increased flood management.
3. To fund this work, the Governing Body agreed to enter a co-funding arrangement of \$1.984 billion with central government as part of the National Resilience Plan in October 2023 (GB/2023/187). Of this, \$774 million is allocated for the Voluntary Buy-out Support Scheme and \$820 million is allocated to risk mitigation projects. Auckland Council is sharing the cost of flood resilience projects with central government, subject to business case approvals. These projects must demonstrate a flood risk reduction for the wider community, not just individual properties.
4. Māngere was one of the most impacted areas of Auckland following the Auckland Anniversary weekend floods. The densely populated urban catchments of Te Ararata (~550 ha) and Harania (~300 ha) were seriously affected. The same areas have since been affected by subsequent heavy rain, most recently in mid-May 2024. Given this significant risk, these catchments have been prioritised for Tranche 1 of the blue-green networks physical works. This work is expected to be co-funded by the Crown's National Resilience Plan.
5. Staff have analysed three options based on catchment modelling, property categorisation, and flood risk impacts of different scenarios. The options are:
 - Option 1: Do no infrastructure upgrades and purchase the properties where flooding poses intolerable risk to life (not recommended)
 - Option 2: Comprehensive catchment upgrade – flow enhancement at Te Ararata Stream and Harania pipe bridge construction (**recommended**)
 - Option 3: Comprehensive catchment upgrade package – flow enhancement at Te Ararata Stream and Harania box culvert construction (not recommended).
6. Option 1 is not recommended because it does not address serious flood risk for many properties. Option 3 is also not recommended because it is more expensive and poses a risk to the Eastern Interceptor wastewater pipe.
7. Overall, 376 properties in Te Ararata and Harania catchments will have a reduced flood risk if Option 2 proceeds. A map of the project locations is included as Attachment A.
8. The proposed works in Te Ararata broadly include the following activities:
 - installing debris capture structures upstream of Walmsley Road bridge
 - regrading and naturalising portions of Te Ararata Stream
 - Walmsley Road bridge replacement

- constructing a permanent maintenance platform and accessway to the Mahunga Drive culverts
 - ongoing long term maintenance activities to maintain efficiency of the Mahunga Drive culverts including mangrove clearance and sediment removal/dredging.
9. The proposed works in Harania broadly include the following activities:
- removing dams (including embankments, culverts, and sections of pipe within the dam) at Tennessee Avenue and Blake Road
 - constructing replacement wastewater pipes, including pipe bridges
 - constructing a footbridge to maintain access across the stream
 - relocating vulnerable services, including high voltage cables
 - accessory works to enable construction
 - potential mangrove removal and dredging of the watercourse and Coastal Marine Area to improve discharge flows.
10. The estimated total cost of these projects is \$53.36 million. The council portion of this funding has been approved as part of the overall Making Space for Water budgets through the Long-term Plan 2024-2034 (GB/2024/45).
11. Since the flooding events, staff from Healthy Waters and the Recovery Office have been in regular contact with the local board. The board has continued to advocate for rapid action to reduce flood risk to properties, especially for those that cannot be purchased through the Voluntary Buy-out process. The Māngere-Ōtāhuhu Local Board provided formal support for the project at its business meeting on 19 June 2024 ([MO/2024/71](#)).
12. To complete physical works and reduce flood risk sooner, Auckland Council is requesting that the Ministry for the Environment issue an Order in Council to allow legislation to be temporarily changed to enable rapid delivery of projects that will help communities continue to recover from the severe weather events in early 2023. For these projects in Māngere this proposed Order in Council would amend the Resource Management Act. Conditions will be put in place to minimise environmental impacts. A summary of proposed draft conditions is included in Attachment B.
13. When a local authority has reached an internal decision to request an Order, it then makes the request to either the Cyclone Recovery Unit or the relevant government agency. The relevant government agency will test the proposal and if it considers the statutory tests are likely to be met, the agency will progress the proposal and provide policy advice to Minister/s and Cabinet. Orders are made by the Governor-General on the recommendation of the relevant Minister.
14. An Order in Council is normally open for public feedback for three days. The Ministry for the Environment's current intended direction is to advise the Minister for the Environment that a three-week engagement period is preferable to provide more opportunity for the community to provide feedback on the proposed works. Auckland Council staff are comfortable with this approach. In addition to this official engagement period, staff will undertake further project engagement with the local board, affected communities, and iwi Māori through working groups.
15. In previous engagement on flood resilience by Auckland Council, mana whenua have advocated for rapid reduction of flood risks to their communities and interest in being involved going forward. Subject to Cabinet approval in July 2024, the Ministry for the Environment will work with Auckland Council to undertake engagement on the proposed Order in Council, including with mana whenua.
16. Staff will establish a blue-green network working group for the projects in Māngere. This will enable mana whenua, the local board, and community and environmental organisations to provide input on the finer details of the project.

17. The full business case is provided as a confidential item in this meeting agenda.
18. The committee will be advised of the acceptance of the Order in Council, or any changes, and will be involved in the public engagement processes and ongoing updates on the works as they progress.

Ngā tūtohunga Recommendations

That the Transport and Infrastructure Committee:

- a) tautoko / support the comprehensive flood resilience projects for Te Ararata and Harania catchments, as described in Option 2 of the agenda report
- b) tuhi ā-taipitopito / note the feedback received from the Māngere-Ōtāhuhu local board for the project and request for an Order in Council
- c) tuhi ā-taipitopito / note that co-funding for the projects is subject to Ministerial approval
- d) tuhi ā-taipitopito / note that the business case for the projects and request for the proposed Order in Council will be considered by the Transport and Infrastructure Committee on 4 July 2024 as a confidential item
- e) tuhi ā-taipitopito / note that the Order in Council is subject to recommendation from the Minister for the Environment to the Governor-General to make an order under the Severe Weather Emergency Recovery Legislation Act 2023.

Horopaki Context

The early 2023 weather events highlighted a need for improved flood resilience

19. The 2023 Auckland Anniversary Day floods, followed closely by Cyclone Gabrielle, marked a period of unprecedented weather challenges for Auckland. The floods and cyclone caused significant infrastructural damage, with an estimated 8,000 homes destroyed or damaged and thousands of residents' lives affected.
20. The events underscored the city's vulnerability to extreme weather, prompting Auckland Council to endorse the Making Space for Water programme (GB/2023/203). The programme's seven initiatives include a series of blue-green networks to address critical flood-prone areas with sustainable stormwater solutions. Making Space for Water is part of the wider Tāmaki Makaurau Recovery Plan.
21. The council has assessed areas where Category 3 and Category 2c properties have been classified by the Recovery Office to focus on flood resilience projects in areas where there is intolerable risk to life and property. Staff have identified 12 areas where blue-green networks may be suitable to increase stormwater capacity, including Māngere. The council recovery website has further information on property categorisation.
22. Two specific areas identified are Harania and Te Ararata. The urban Harania and Te Ararata catchments, located in Māngere, were amongst the worst affected in Auckland in the early 2023 weather events, and are frequently affected by heavy rain events.
23. Of the 376 dwellings with flood risk in the 850-hectare catchment, there are at least 56 where there is an intolerable risk to life. A package of works has been proposed for each area to mitigate the risk to life and property in this area, and to increase resilience for Watercare's Eastern Interceptor pipe and for the wider community. A map of the project areas is included below, with further detail provided in Attachment A.

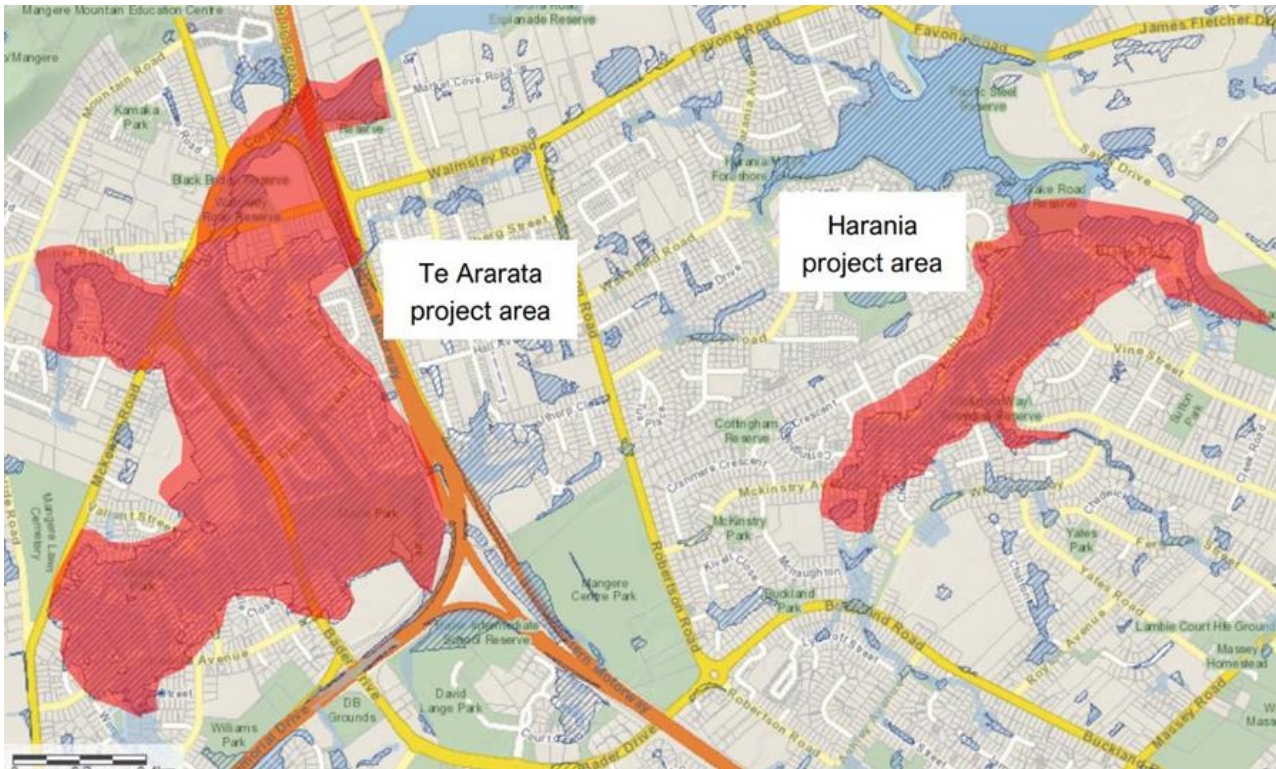


Figure 1. Te Ararata and Harania flood resilience project areas

Auckland Council and the Crown are co-funding resilience projects

24. On 6 October 2023, the Governing Body agreed to enter a co-funding arrangement of \$1.984 billion with the Crown (GB/2023/187) as part of the National Resilience Plan. Of this, \$774 million is allocated for the Voluntary Buy-out Support Scheme and \$820 million is allocated to risk mitigation projects.
25. There is \$380 million of Central Government National Resilience Plan funding that Auckland Council may access for risk mitigation projects, including Making Space for Water. To access this funding, the council will need to provide matched funding of 38 per cent capital expenditure plus operational expenditure for each project.
26. Te Ararata and Harania flood resilience projects will be co-funded by the Crown's National Resilience Plan funding. Although this funding was agreed under the previous government, staff have worked with current ministry staff and ministers to ensure that the use of the funding meets this government's expectations and priorities. There is a particular importance placed on delivering work that will reduce intolerable risk to life as quickly as possible.

Tātaritanga me ngā tohutohu Analysis and advice

Te Ararata and Harania projects are expected to reduce flood risk

27. Te Ararata and Harania flood resilience projects have been proposed to respond to high flood risk in these catchment areas. The location of these works is broadly identified in Attachment A, with flood risk areas shown in red.
28. The proposed projects are expected to reduce flood risk to 376 properties in residential urban areas of Māngere. These areas flood in heavy rain events and, despite the progressing property acquisition through the Voluntary Buy-out process, hundreds of properties will remain at risk if further resilience works are not done.

29. The physical works options have been assessed for feasibility, value for money, and compared to other options. These options are subject to the categorisation process. There will be two separate projects: stream works in the Te Ararata waterway, and culvert improvements in the Harania catchment. A map of the locations is included as Attachment A.
30. These catchments are prone to blockages from debris in heavy rain due to narrow channels, culverts and pipes, particularly at Walmsley Road and Mahunga Drive. The waterways near Blake Road and Tennessee Avenue are prone to blockage from debris as well as sedimentation. Access for maintenance is difficult at these locations, making it more difficult and dangerous for staff to undertake preventative and remedial maintenance.
31. These projects are scoped to:
 - reduce blockage risk of the Walmsley Road bridge and Mahunga Drive culverts
 - increase flood conveyance in the Te Ararata Stream between the Walmsley Road Bridge and Mahunga Drive culverts
 - increase flood conveyance under or through the Tennessee Avenue and Blake Road embankment dams
 - reduce or remove the potential for blockage, including potential sedimentation at Tennessee Avenue and Blake Road
 - improve maintenance access of stormwater assets in the Te Ararata stream downstream of Moyle Park, and in the Harania stream at the location of the dam embankments.

Options assessment for Te Ararata and Harania flood resilience

32. Staff have assessed three options for flood resilience in Te Ararata and Harania catchments. These are discussed in detail below.

Option 1: Do no infrastructure upgrades and purchase the properties with intolerable risk to life

33. This option proposes to make no changes to the infrastructure in the Te Ararata and Harania catchments and instead purchase the properties where flooding in extreme weather events (like that experienced in January 2023) will continue to pose an intolerable risk to life. Option one would require the purchase of 56 properties, of which:
 - 23 are owned by Kāinga Ora at a cost of \$22.7 million
 - 33 are privately owned at a cost of \$29.0 million.
34. If this option were selected, only those properties where flood risk was determined under the Voluntary Buy Out Scheme to pose an intolerable risk to life would have their flooding issues resolved. In a 1 per cent Annual Exceedance Probability event, this would leave:
 - 159 dwellings exposed to habitable floor flooding
 - 161 further dwellings likely to be surrounded by floodwater in future storms.
35. The estimated cost of option one is \$51.7 million. This is not the preferred option as it does not address serious flood risk for many properties.

Option 2: Comprehensive catchment upgrade – flow enhancement at Te Ararata Stream and Harania pipe bridge construction (recommended)

36. A comprehensive catchment upgrade package is proposed as part of option two. This option also includes some stream regrading, the removal of embankment dams near Tennessee Avenue and Blake Road and the construction of a Harania pipe bridge for the Eastern Interceptor wastewater pipes.

37. The upgrade package that forms part of option two would reduce intolerable risk to life flooding to the 56 properties across the lower Te Ararata catchment. This comprehensive catchment upgrades made up of three, interdependent project elements to remove the risk of intolerable risk to life flooding to the 56 properties across the lower Te Ararata catchment. The elements are:
 - a debris capture structure upstream of Walmsley Road bridge to reduce the risk of network blockage in heavy rain events
 - upgrades to Walmsley Road bridge to reduce flow restriction and improve conveyance
 - construction of a maintenance platform and accessway to the complex Mahunga Drive culverts to facilitate more efficient maintenance of the culvert outlets
 - some mangrove and sediment removal to improve conveyance to the harbour.
38. This option would also include some stream regrading and naturalisation. Regrading involves creating a gentle slope to the stream to help slow water movement. The degree of naturalisation that may be included in this upgrade package will be determined through the design development phase or as part of future projects.
39. The council is open to collaboration with Kāinga Ora to develop further naturalisation options to deliver wider community and environmental outcomes between Moyle Park and the Walmsley Road bridge. This project will assess this and develop a further business case in collaboration with Kāinga Ora to seek further flood reduction and facilitate planned growth in the catchment. This interdependent project is fundamental to the overall community outcomes in the lower Te Ararata catchment and is an initiative identified for delivery in Healthy Waters Asset Management Plan.
40. In addition, this option proposes removing the earth embankment dams near Tennessee Avenue and Blake Road, which support the Eastern Interceptor. Each of these embankment dams has two narrow culverts. The project would increase stormwater flow through the Harania Stream to the Māngere inlet, which would increase flood resilience for the upstream area. To remove these embankment dams, the Eastern Interceptor wastewater pipes would need to be relocated onto a new pipe bridge.
41. The above works would increase the capacity of the Harania and Te Ararata streams and reduce the flood risk of at least 376 dwellings. The total number of properties affected would be confirmed during the design development phase.
42. This option provides the following benefits for the catchment area:
 - Maximising the capacity of the narrowest points in the Harania and Te Ararata streams will minimise the size and impact of upstream flooding. This will significantly reduce the number of properties at risk of flooding.
 - Reinstatement of the natural stream flow at Blake Road and Tennessee Avenue will improve the water quality of the Harania Stream by regularly flushing the stream with a high volume of water.
 - The construction of a maintenance platform and accessway to the Mahunga Drive culverts will improve operational response times to address flooding during large rainfall events. It will make the culverts more accessible and easier to maintain, while also reducing the health and safety risk for the operations team, including contractors. These benefits will also free up resources to respond to other network issues causing flooding.
43. The estimated cost of option two is \$53.36 million.

Option 3: Comprehensive catchment upgrade package – flow enhancement at Te Ararata Stream and Harania box culvert construction (not recommended)

- 44. This comprehensive catchment upgrade package included in option three is made up of the same elements proposed in option two for the lower Te Ararata catchment, including the proposed upgrades to Walmsley Road bridge and the Mahunga Drive culverts.
- 45. Instead of replacing the Tennessee and Blake Road embankment dams with a pipe bridge as is outlined in option two, option three would install three box culverts.
- 46. This option is not recommended because it would provide lower stream capacity than option two, delivers reduced flood mitigation outcomes, requires increased maintenance and maintenance costs, and comes with an increased risk of damaging the Eastern Interceptor.
- 47. The estimated cost of option three is \$63.32 million.

Options analysis

- 48. Table 1 provides an analysis of the relevant outcomes associated with each identified option. Option two provides the highest outcomes in decreasing residual flood risk in the Te Ararata and Harania areas and ranked most highly in all categories.

Table 1. Analysis of options to address flood risk in Te Ararata and Harania catchments

Outcome	Option 1	Option 2	Option 3
Resolve the intolerable risk to life for most at risk properties	✓✓	✓✓✓	✓✓✓
Maximising the capacity at flow constraints in streams	x	✓✓✓	✓
Reinstatement of the natural stream flow to improve conveyance and water quality	x	✓✓✓	✓✓
Improving operational response times by improving access to key assets	x	✓✓✓	✓
Reduce risk of failure of Eastern Interceptor in flood event	x	✓✓✓	✓

x	✓	✓✓	✓✓✓
No outcomes	Low outcomes	Some outcomes	Highest outcomes

- 49. Under the recommended Option 2 some properties will still have flood risks, however the severity of risk will substantially reduce as described in Table 2 below.

Table 2. Residual flood risk if option two proceeds

Item 11

Property Risk	Definition	Dwellings with risk on 27 January 2023	Dwellings with risk after project
Intolerable risk to life	Intolerable risk to life using a rapid risk assessment methodology where the flood level from the January 2023 event was likely in excess of 0.5 m above floor level and the house was surrounded by floodwaters.	56	5
Habitable floor flooding	Properties where the rapid risk assessment methodology indicated that the flood level was likely to be above a habitable floor level.	159	10

50. The remaining risk is that some properties may be surrounded by flood waters in heavy rain events, but overall, 376 properties in these catchments will have a reduced flood risk if option 2 proceeds as recommended. Final categorisation and project design may change these numbers, particularly the five remaining dwellings with risk to life after the project, however the proportion of risk reduction is expected to be similar.

The engagement approach will be tailored to the local area

- 51. Staff are developing a communications and engagement plan for blue-green networks. It includes an enhanced level of engagement compared to usual engagement on physical works projects.
- 52. A range of communication and engagement methods will be used to raise project awareness, seek feedback on the design, provide updates on project outcomes and educate about continued flooding risk and the actions people can take to increase resilience.
- 53. The methods will be tailored to the Māngere community, with key collateral produced in multiple formats and languages as informed by the community. Meetings will be held in easy to access locations and information will be shared through local media channels.
- 54. Staff will leverage existing relationships with community groups to maximise the reach and effectiveness of communications and engagement. This will require collaboration with the Recovery Office, Kāinga Ora, the local board and mana whenua.
- 55. To raise the profile of this important project we will look for key community engagement and media opportunities including a sod turning, community site walks, planting days and open days during physical works. The local board has requested a site walk as soon as possible.
- 56. Working groups will be established with membership from the local board, mana whenua and/or marae, community organisations, and staff. This will enable detailed input through the design phase to maximise the positive outcomes of the projects.
- 57. These engagement opportunities will enable input from key stakeholders throughout the design phase. They will be arranged whether this project is approved for the proposed Order in Council or through the usual consent process.

An Order in Council would enable flood resilience projects to be expedited

58. Orders in Council are issued by the government to implement decisions that need legal force. The Ministry for the Environment is enabling Orders in Council to allow laws to be temporarily changed to help communities continue their recovery from the severe weather events in early 2023. Hawkes Bay has used this tool to make it easier to improve flooding resilience at specific sites in the Hawkes Bay.
59. Auckland council are requesting an Order in Council to expedite flood resilience projects in Māngere. The proposed Order in Council would enable these projects to continue to be defined following a consent application and provide certainty that the consents will be granted as a controlled activity that will not be notified. The normal consent process typically takes at least 12 months, or 24 months if there are variations or appeals. This would slow the delivery of the proposed flood mitigation work in Māngere and would delay the reduction of flood risk in this community.
60. Auckland Council and Ministry for the Environment will agree conditions through the proposed Order in Council to manage any adverse impacts of the projects. The council will make assurances through this process that the best environmental practices will be implemented during the construction phase. Healthy Waters delivers these types of works regularly and will ensure that environmental impacts are minimised or mitigated as much as possible. The proposed conditions are appended to this report as Attachment B.
61. The proposed Order in Council will be subject to recommendation from the Executive Council and Minister for the Environment to the governor-general to make an order under the Severe Weather Emergency Recovery Legislation Act 2023.
62. To ensure that communities have sufficient time to give feedback on the proposed works, staff have recommended to the Ministry for the Environment that the engagement period is extended from three days to three weeks. The Ministry for the Environment's current intended direction of travel is to advise the Minister for the Environment that a three-week engagement period is preferable to provide more opportunity for the community to provide feedback on the proposed works.

Tauākī whakaaweawe āhuarangi Climate impact statement

63. The Making Space for Water programme delivers on actions identified in Te Tāruke-ā Tāwhiri: Auckland's Climate Plan. Specifically, Action N3 "to integrate connected, nature based solutions in development planning", and Action B2, "to ensure new infrastructure is planned and designed to minimise climate risks and lifecycle emissions. It also responds to the challenge identified in the Auckland Water Strategy of "reducing exposure to water related natural hazard risk over time", and the strategic shift to regenerative water infrastructure.
64. Modelling shows that storm and flooding events will be both more extreme and more frequent as the climate continues to warm. This project responds directly to existing and predicted future flood risks in Māngere.
65. This project reduces risk to life for downstream properties and rectifies limitations in the stormwater network, exacerbated by extreme weather events. It therefore provides some protection for properties in the catchment against future extreme weather events.
66. By using the Order in Council as a regulatory control, the work can be delivered faster, reducing the community risk of future severe weather events.
67. The impact on carbon emissions will be considered in all Making Space for Water projects. Assessments will be conducted during the design, construction, and physical works stages to ensure all opportunities for reducing emissions are realised.

Ngā whakaaweawe me ngā tirohanga a te rōpū Kaunihera Council group impacts and views

68. Healthy Waters will work with Regulatory Compliance, Legal Services, the Recovery Office, Watercare, Auckland Transport, Eke Panuku, and Parks and Community Facilities for physical works projects enabling storm recovery.
69. Each of these parties is impacted by the proposed Order in Council process and has been invited to be involved in preparing the request.
70. Healthy Waters will still need to seek approval from Watercare and Auckland Transport to undertake work that will impact their assets during construction and have commenced discussions on these approvals. The works in Māngere, for example, will require works to protect the Eastern Interceptor and some road assets.

Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe Local impacts and local board views

Local impacts

71. The projects identified for this process are in some of the highest flood risk areas in Auckland. Not only were they impacted by the events of early 2023, but the Māngere area was also flooded in May 2024 by localised heavy rainfall. These recurring events impact community wellbeing, economic activity, and cost. Both the actual works and accelerating the consenting requirements through an Order in Council will reduce these impacts sooner.
72. As identified above, the number of properties that will benefit from flood risk reduction after the physical work are completed is substantially more than would be expected to benefit through the Voluntary Buy-out Scheme alone.
73. The works proposed to be delivered through the proposed Order in Council will be delivered faster through this process compared to the usual resource consent process. This means that the local community will benefit from reduced local flood risk sooner.
74. Other initiatives, including flood intelligence and community flood resilience will support the wider community through their recovery and will reduce individual risk outside of these catchments.

Local board views

75. Previous engagement with the Māngere-Ōtāhuhu Local Board (9 August 2023 and 22 November 2023) has indicated support for the project working group model to enable a collaborative design process. Further advocacy has been provided through numerous public forums which local board members have attended. The project working group will be a key part of the engagement process through the detailed design and construction phases.
76. The Māngere-Ōtāhuhu Local Board Plan 2023 identifies flooding and climate change adaptation as challenges for the local area and communities. These projects will contribute towards addressing these challenges. Other Making Space for Water initiatives such as community flood resilience and increased maintenance will also deliver on local board objectives and advocacy items outlined in the plan around increasing climate resilience and minimising flooding.
77. Staff note that the Māngere Area Plan update in September 2022 advocated for stream enhancements along the length of Te Ararata, seeking the following outcome:
 - In partnership with mana whenua as kaitiaki, the overall health of Tararata Creek is significantly restored and enhanced, and the area is resilient to the impacts of climate change. Tararata Creek and the area's open spaces are a focal point for the growing community and future development and are a source of community pride (MO/2022/104).

78. The current scope of this project partly enables this outcome to be achieved, however there are future opportunities for this work through collaboration with Kāinga Ora. Previous engagement with Māngere-Ōtāhuhu local board has indicated support for the project working group model to enable a collaborative design process. The local board have continued to advocate for rapid action to reduce flood risk to properties that cannot be purchased through the Voluntary Buy-out process.
79. Local boards have an important role in providing local context to staff on the impact of physical works. Staff presented detailed information on the proposed project and proposed Order in Council process to the local board on 12 June 2024. The local board formally resolved to support the project and proposed Order in Council on 19 June 2024 ([MO/2024/71](#)). Feedback from the local board has been collated and will be included in project design and the proposed Order in Council request as appropriate. This feedback is included in Attachment C.
80. In providing this advice, the local board was also advised of the alternative ways that staff will engage with them and their communities (also detailed in the engagement approach section above). Engagement will include targeted local communications, a community open day, and routine project updates to the local board.

Tauākī whakaaweawe Māori Māori impact statement

81. Works are proposed in the coastal marine area for both projects. Under the Marine and Coastal Area (Takutai Moana) Act 2011, the council has a duty to notify and seek the views of any group that has applied for recognition of customary marine title in the area to which they are applying for a resource consent. Under the proposed Order in Council process, council will notify these parties regarding the proposed works.
82. As kaitiakitanga, mana whenua are impacted by physical works in te taiao. Staff have been in discussion with Te Ahiwaru and Te Akitai Waiohua since the floods through individual hui and the Infrastructure and Environmental Services Operational Forum. At these meetings, Te Ahiwaru and Te Akitai Waiohua have advocated for nature-based solutions and enabling local Māori involvement in the projects.
83. There is a reasonably high chance of accidental discovery. In the event of accidental discovery, mana whenua is engaged through processes stated in the Auckland Unitary Plan E11.6.1 Accidental Discovery Rule.
84. The project is engineering focussed, with limited design option inputs business case includes provisions to engage with Māori through design and construction, as well as to monitor cultural impacts and benefits.
85. Staff have met with Te Ahiwaru and Te Akitai Waiohua representatives every month to provide programme updates and will continue to engage with mana whenua throughout this project.

Ngā ritenga ā-pūtea Financial implications

86. The estimated project cost is \$53.36 million, including allowance for additional acquisition.
87. Funding for these projects will be delivered under the Category 2 Risk Mitigation Programme cost-sharing agreement between the Crown and Auckland Council (see Table 3). This agreement provides for the Crown to provide cost-share funding of 62 per cent for qualifying projects, where works remove the intolerable risk to life associated with Category 2 properties. The funding split for this project between Crown Infrastructure Partners and Auckland Council.

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Table 3. Funding split

Funding Agency	Contribution %	Value \$
Crown	62%	\$33,083,200
Auckland Council	38%	\$20,276,800
Total		\$53,360,000

88. The Auckland Council funding contribution was approved by the Governing Body through the adoption of the Mayoral Proposal for the Long-term Plan 2024-2034 (GB/2024/45). These projects will be delivered through Making Space for Water regional budgets.
89. The proposed Order in Council request process will be accommodated through existing regional staff resources. There is a cost saving associated with following an Order in Council process, compared to the usual resource consent process, principally through reduced staff time.

Ngā raru tūpono me ngā whakamaurutanga Risks and mitigations

Projects

90. A range of high-level risks for this project are detailed in Table 4 below.

Table 4. Risks and mitigations for the Te Ararata and Harania flood resilience projects

Risk	Mitigation	Rating after mitigation
Work will impact other agency's assets (Auckland Transport, Watercare, Vector) and approval is required	Approval for works is required from all asset owners prior to commencement. Design input will be sought from all asset owners.	Moderate
Project commencement delayed by regulatory approvals	Council is seeking Order in Council to accelerate approval. Engaging with Resource Consents early to progress preapplication process.	Low
Purchase of necessary private property, including Kāinga Ora	Current assessments do not indicate that further property acquisition is likely to be required, however this is subject to the categorisation process and opting in which is ongoing.	Low
Not being able to access Auckland Transport land, and the property of private property owners, to upgrade the stormwater network	All affected parties will be engaged in advance and throughout the project to mitigate this risk.	Low

Risk	Mitigation	Rating after mitigation
Budget exceedance	Some extra funding or contingency has been set aside within the budget in case of the project encountering unforeseen costs. The scope of the project and the contract will be strictly managed to ensure the project is delivered within the allocated budget.	Moderate
Not being able to procure a suitably skilled and experienced contractor	Contractors will be consulted early under Auckland Council's Programme Framework Agreement to confirm the availability of suitable resources for this project.	Low
Health and safety risk for contractors excavating sediment	Contractors will implement best practice health and safety standards to manage risk to staff and the public during excavation.	Low
High cost for disposal of sediment and fill to a controlled landfill	Investigations will be completed during the design development phase to identify suitable disposal methods.	Moderate

91. The business case identifies risks associated with delivering these projects. These include: work impacting other agency's assets (Auckland Transport, Watercare, Vector), purchase of and access to private property, resource consent or Order in Council approval, and managing removal of contaminated soil.
92. Healthy Waters has been working with representatives from other asset owners through the options assessment process. They have all indicated a willingness to work together to manage any risks to their assets.
93. Current scoping has identified properties that would need to be acquired to enable project delivery. These are currently already going through categorisation or have already been deconstructed. There is a chance that detailed design identifies additional properties that would need to be acquired through the Public Works Act. Budget has been allowed for this and would be subject to committee approval.
94. The sediment and fill that is excavated for the construction is not clean fill and must be carted to a controlled landfill and disposed of at additional expense. Investigations will be completed during the design development phase to identify suitable disposal methods.

Proposed Order in Council

95. The risks associated with using an Order in Council are primarily regarding the alternative opportunities for engagement and public feedback, in lieu of public notification. The projects delivered by Making Space for Water have a high level of public interest. Pursuing an Order in Council could be perceived as looking to short-cut opportunities for communities to provide feedback.

96. To mitigate this risk, the Ministry for the Environment’s current intended direction of travel is to advise the Minister for the Environment that a three-week engagement period is preferable. Staff will also establish a blue-green network working group for the project. This will enable mana whenua, local boards, and community and/or environmental organisations to provide input on the finer details of the project including any placemaking, selection and placement of plants, and reflecting culturally significant features into the design.
97. Staff consider the risks of not using an Order in Council process, and instead following the usual resource consent, to be greater than those identified above. The most significant risk is the substantial time delay associated with a complex resource consent and any associated variations. Initial planning assessments estimate that completing the consent could take 12 to 24 months. This would have knock-on effects on securing suitable contractors who are competing in a high-demand market.

Ngā koringa ā-muri

Next steps

98. The Order in Council request will be submitted to the Ministry for the Environment and Crown Law for assessment. If accepted, it will be presented to Cabinet on 29 July 2024. This will be supported by the Recovery Office and Healthy Waters. If approved, public engagement will be open in August 2024.
99. If the proposed Order in Council request and extended engagement period is approved by Cabinet for proposed October 2024 enactment, staff could begin engagement, procurement and contracting processes in November, in order to begin construction during the 2024/2025 summer earthworks season.
100. Project updates will be provided to the local board and Governing Body in quarterly updates, and to the Transport and Infrastructure Committee in the six-monthly Healthy Waters update.

Ngā tāpirihanga

Attachments

No.	Title	Page
A⇒	Te Ararata and Harania flood resilience physical works locations	
B⇒	Draft consenting assessment (10 May 2024)	
C⇒	Māngere-Ōtāhuhu local board feedback and resolution	

Ngā kaihaina

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Open Process Report for Muriwai landslide and stormwater resilience upgrade

File No.: CP2024/08260

Item 12

Te take mō te pūrongo

Purpose of the report

1. To seek the Transport and Infrastructure Committee's support for the Muriwai landslide and stormwater resilience upgrade project under the Making Space for Water programme.

Whakarāpopototanga matua

Executive summary

2. The Muriwai landslide and stormwater resilience upgrade is an infrastructure-based project that will reduce landslide and flood risk to properties by constructing a reinforced stop-bank and stormwater upgrades.
3. After the Auckland Anniversary floods and Cyclone Gabrielle in early 2023, there were more than 200 properties that received red placards and 117 with yellow placards in Muriwai, due to damage which displaced much of the community from their homes. Since then, recovery has progressed to substantial property categorisation and purchases in the area to reduce risk to life in future events.
4. On 6 October 2023, the Governing Body agreed to enter a co-funding arrangement of \$1.984 billion with central government as part of the National Resilience Plan (GB/2023/187). Of this, \$774 million is allocated for the Voluntary Buy-out Support Scheme and \$820 million is allocated to risk mitigation projects. Auckland Council is sharing the cost of flood resilience projects with central government, subject to business case approvals. Projects must demonstrate a flood risk reduction with wider community benefit, not just individual properties.
5. Staff have developed options to address residual flood and landslide risk in Muriwai in the area mapped in Attachment A. All options include the purchase of properties with an intolerable risk to life from flooding or land instability through the Voluntary Buy-out Support Scheme.
 - Option 1: Buy properties with intolerable risk to life through the voluntary buy-out scheme only; do no infrastructure upgrades.
 - Option 2: Buy properties with intolerable risk to life through the voluntary buy-out scheme, purchase 73 Domain Crescent, install a reinforced stop-bank at Domain Crescent to protect downslope properties
 - Option 3: Buy properties with intolerable risk to life through the voluntary buy-out scheme, purchase 73 Domain Crescent, install a reinforced stop-bank at Domain Crescent to protect downslope properties, and upgrade the roadside stormwater network in Domain Crescent and Motutara Road (**recommended**).
6. Option three is the preferred option as it delivers the highest outcomes for protecting properties in the Domain Crescent and Motutara Road area (the green mapped area in Attachment A) from future flooding and landslide risk. This option will also increase resilience for the stormwater network and facilitate better network maintenance.

7. Option three proposes to physically protect four properties on Domain Crescent by installing a reinforced stop-bank. The project will also upgrade the roadside stormwater system at Domain Crescent and Motutara Road to:
 - upgrade the open channel roadside drains to increase the stormwater conveyance capacity and move sediment to sediment sumps and debris traps
 - upsize the driveway crossings to provide sufficient drain capacity
 - install regular sediment sumps and debris traps that reduce the frequency of blockages and improve maintenance of the network.
8. Land at 73 Domain Crescent needs to be acquired to enable this work. Although it is at risk of land instability, the section is currently vacant and is therefore ineligible for the Voluntary Buy-out Scheme. Acquisition of this land will be considered by the Transport and Infrastructure Committee on 4 July 2024 in the confidential part of the meeting as the information in the confidential report could prejudice negotiations.
9. The estimated cost for this project is \$6.23 million, which includes the cost of property acquisition and the physical works. Funding for the overall Making Space for Water programme was approved through the Long-term Plan 2024-2034 ([GB/2024/45](#)).
10. The business case will be approved by the Group Recovery Manager and the Director for Resilience and Infrastructure under delegation. There is a separate approval process through the Crown and Cyclone Recovery Unit.
11. Staff have discussed the Making Space for Water programme with the Rodney Local Board in August 2023 and April 2024. The board has indicated support for physical works that reduce flood risk and have continued to advocate for rapid action to reduce risk to properties that cannot be purchased through the Voluntary Buy-out process.
12. Te Kawerau ā Maki are kaitiaki in the Muriwai area. They have indicated support for the project and will work with staff to protect culturally sensitive sites without delaying delivery.
13. The Muriwai landslide and stormwater resilience upgrade project is expected to be completed in June 2025.

Ngā tūtohunga Recommendations

That the Transport and Infrastructure Committee:

- a) tautoko / support the Muriwai landslide and stormwater resilience upgrade as described in Option 3 of the agenda report
- b) tuhi ā-taipitopito / note that the acquisition of land to enable delivery of the Muriwai landslide and stormwater resilience upgrade will be considered by the Transport and Infrastructure Committee on 4 July 2024 as a confidential item
- c) tuhi ā-taipitopito / note the Rodney Local Board feedback in support of the project
- d) tuhi ā-taipitopito / note that the business case will be approved by the Group Recovery Manager and the Director of Resilience and Infrastructure under delegation and is subject to final approval by the Crown.

Horopaki Context

The early 2023 weather events highlighted a need for improved resilience

14. The 2023 Auckland Anniversary weekend floods, followed closely by Cyclone Gabrielle, marked a period of unprecedented weather challenges for Auckland. The floods, described as a 1-in-200-year event, and the subsequent cyclone caused significant infrastructural damage, with an estimated 8,000 homes needing assessments.

15. The excessive rain caused widespread flooding and uncontrolled overland flow paths which eroded soils, creating debris avalanches (which included rocks and trees), some of which turned into saturated debris flows as they travelled downslope. These landslides resulted in loss of life and many homes being evacuated.
16. The events underscored the city's vulnerability to extreme weather, prompting Auckland Council to endorse the Making Space for Water Programme ([GB/2023/203](#)). The programme's initiatives include increased stormwater network maintenance, community led flood resilience and physical works across the region to address critical flood-prone areas with sustainable stormwater solutions. Making Space for Water is part of the wider Tāmaki Makaurau Recovery Plan.

The stormwater network at Muriwai was overwhelmed and requires upgrading

17. The piped networks in Auckland are generally designed to convey a 10-year frequency storm, which is a storm that has a 10 per cent chance of happening in any given year. When rainfall exceeds the capacity of the piped network, water naturally follows the contours of the land to the lowest point. These contours are known as overland flow paths, which are part of the secondary stormwater network.
18. The existing primary stormwater network servicing Domain Crescent and Motutara Road consists of open road-side channels, catchpits and an underground pipe network that discharge into the nearest stream. Secondary overland flow paths operate when the capacity of the primary network is exceeded.
19. The 2023 extreme weather events resulted in the primary system at Muriwai being rapidly inundated and filled with sediment and vegetation, changing the overland flow paths, and causing erosion. As landslide-related debris continued to build up, the overland flow paths were altered and erosion caused the shape of the land to change.
20. These changes have led to uncontrolled and continually changing overland flow paths, resulting in frequent flooding and restricted access for residents and emergency services. The Healthy Waters operations team now frequently respond to requests to clear debris in these areas of Muriwai.

Auckland Council and the Crown are co-funding resilience projects

21. The Making Space for Water programme responds to the extreme weather events that impacted Tāmaki Makaurau in the first half of 2023. The programme has been designed to prioritise flood readiness in stormwater operations, and support communities, households, and businesses to build their resilience to the impacts of increased rainfall and extreme weather events.
22. As part of the Making Space of Water programme, stormwater infrastructure projects will be delivered where clusters of Category 3 and Category 2C properties have been classified, to specifically focus on flood resilient projects in these areas to address intolerable risk to life and property. Muriwai is an urgent example of these areas.
23. On 6 October 2023, the Governing Body agreed to enter a co-funding arrangement of \$1.984 billion with the Crown (GB/2023/187) as part of the National Resilience Plan. Of this, \$774 million is allocated for the Voluntary Buy-out Support Scheme and \$820 million is allocated to risk mitigation projects. A further \$390 million is allocated for transport network repairs.
24. There is \$380 million of Central Government National Resilience Plan funding that Auckland Council may access for risk mitigation projects, including Making Space for Water. To access this funding, the council will need to provide matched funding of 38 per cent capital expenditure plus operational expenditure for each project.

25. The Muriwai landslide and stormwater resilience upgrade project will be funded by the Crown's National Resilience Plan. Although this funding was agreed under the previous government, staff have worked with current ministry staff and ministers to ensure that the use of the funding meets this government's expectations and priorities. There is a particular importance placed on delivering work that will reduce intolerable risk to life as quickly as possible.

Tātaritanga me ngā tohutohu Analysis and advice

26. The Muriwai landslide and stormwater resilience upgrade project has been proposed to respond to the residual flood and landslide risk. The location of these works is broadly identified in Attachment A.

Options to reduce landslide and stormwater resilience in Muriwai

27. Staff have considered three options to reduce flood and landslide risk in the Domain Crescent and Motutara Road areas. Options have been assessed by Auckland Council geotechnical staff for suitability.

Option 1 – Buy properties with intolerable risk to life through the voluntary buy-out scheme only; do no infrastructure upgrades (not recommended)

28. This option would only deliver property acquisition of houses where flooding poses an intolerable risk to life and includes the removal of any structure but would not deliver any stormwater network remediation works. This option would not provide any landslide debris control to protect affected properties on Domain Crescent.
29. Option one does not resolve the intolerable risk to life for properties at the southern end of Domain Crescent and so these properties would need to be reassessed as Category 3 and acquired through the voluntary buy-out scheme. This option does not improve the resilience of the stormwater network and would leave the local roads and remaining properties at risk of frequent flooding and/or landslides.
30. The cost for this option is estimated at \$4,025,000 for purchasing four properties through the voluntary buy-out scheme.

Option 2 – Buy properties with intolerable risk to life through the voluntary buy-out scheme, purchase 73 Domain Crescent, install a reinforced stop-bank at Domain Crescent to protect downslope properties (not recommended)

31. This option proposes installing a reinforced stop-bank at the northern end of Domain Crescent to protect the downslope houses from future landslides. While there may be a possibility of other landslides down slope from the areas identified, they would not likely be of the same magnitude or risk.
32. Four Domain Crescent properties have been identified that would need to be acquired and removed as part of this option to allow installation of the stop-bank. Three of the four properties have already been classified as Category 3 and property acquisition settlements have been reached. One property will likely be acquired through the Public Works Act as part of this project as the land at this site has not been developed and therefore does not meet the criteria for the voluntary buy-out scheme. However, early discussions with the landowners confirmed they are willing to sell to Auckland Council.
33. The stop-bank would be made of steel mesh baskets filled with compacted gravel fill and rock facing. The look of the roadside face of the structure may be softened with planting where possible.
34. Under option two, stormwater network upgrades would not be delivered, and silt and debris would continue to accumulate on public roads, private properties, and in the stormwater network every time it rains, which would continue to cause access issues for Motutara Road and Domain Crescent.

35. In heavy rainfall events, the existing system would rapidly become overwhelmed. This could trigger uncontrolled overland flow paths and increase the likelihood of further landslides downslope, in Domain Crescent and Motutara Road.
36. The cost for this option is estimated as \$1,725,500 for property acquisition and physical works. This element of the project will receive cost-share funding from the Crown.

Option 3 – Buy properties with intolerable risk to life through the voluntary buy-out scheme, purchase 73 Domain Crescent, install a reinforced stop-bank at Domain Crescent to protect downslope properties, and upgrade the roadside stormwater network in Domain Crescent and Motutara Road (recommended option)

37. Following on from the acquisition of approximately 60 properties and removal of any structures on those sites, this option proposes installing a reinforced stop-bank as described in Option 2 and upgrade of the roadside stormwater system at Domain Crescent and Motutara Road. The following upgrades to the roadside stormwater system are proposed in this option:
 - upgrade of the open channel roadside drains from 225mm pipes to 450mm half pipes to increase the stormwater conveyance capacity. Halfpipes would ensure that sediment entering the open channel roadside drains is captured into sediment sumps and debris traps to mitigate the risk of pipe blockage
 - upsizing of the driveway crossing pipes to provide capacity to the open channel roadside drains
 - installation of regular sediment sumps and debris traps to reduce the frequency of blockages and facilitate better maintenance of the network
38. This option includes protection of the four properties on Domain Crescent with an ‘intolerable risk to life’, as well as protection of at least 40 other downslope properties on Domain Crescent and Motutara Road that were impacted by nuisance flooding and sediment from uncontrolled overland flow paths during and since Cyclone Gabrielle.
39. To enable this, land at 73 Domain Crescent needs to be acquired due to its situation amongst Category 3 properties.
40. The estimated cost of this option is \$6,231,000 for property acquisition and physical works. The stormwater network upgrade to Domain Crescent would receive cost share funding from the Crown.
41. The Motutara Road stormwater network upgrade would be fully funded by Auckland Council (\$2,408,000). The Domain Crescent reinforced stop-banks works would be funded through the Risk Mitigation Programme cost-share agreement (Crown \$2,371,000 and Auckland Council \$1,452,000), subject to Crown approval of the project.
42. Option three is the preferred option because it delivers the highest flood mitigation, stormwater network resilience and property protection outcomes.

Options analysis

43. Table 1 provides an analysis of the relevant outcomes associated with each identified option. Option three provides the highest outcomes in decreasing residual flood and landslide risk in the Domain Crescent and Motutara Road areas.

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Table 1. Analysis of options for responding to the residual flood and landslide risk in the Domain Crescent and Motutara Road areas

Outcome	Option 1	Option 2	Option 3
Resolve the intolerable risk to life for properties at the southern end of Domain Crescent	✓✓✓	✓✓✓	✓✓✓
Decrease the likelihood of further flooding and/or landslides downslope, in Domain Crescent and Motutara Road	x	✓	✓✓✓
Increase the resilience of the stormwater network and allow for easier network maintenance	x	✓	✓✓✓
Resolve the need to clear silt and debris from public roads and in the stormwater network every time it rains.	x	x	✓✓✓
Reduce the discharge of sediments to local streams and waterways	x	x	✓✓✓
Improve access to Motutara Road and Domain Crescent	x	x	✓✓✓

x	✓	✓✓	✓✓✓
No outcomes	Low outcomes	Some outcomes	Highest outcomes

44. Option one of buying properties with intolerable risk to life and not upgrading the stormwater network has the lowest outcomes of the three options identified. While residents in the properties with intolerable risk to life would be moved, there would be significant risk to the remaining properties on Domain Crescent and Motutara Road of further flooding and landslides. Heavy rainfall would continue to regularly deposit sediment and plant debris onto local roads and private properties and create access issues.
45. Option two would provide some mitigation outcomes for further flooding and landslides in the mapped area, although these outcomes are significantly lower than those that would be delivered through the stormwater network upgrades under option three.
46. Through delivering stormwater network upgrades and installing debris traps and sediment pumps, option three will:
 - reduce nuisance flooding for Domain Crescent and Motutara Road, which often affects these roads with sediments from the upslope landslides. Both the flooding and sediments restrict access for locals and emergency vehicles
 - reduce further land instability in areas next to these local roads by reducing uncontrolled overland flow paths in larger storm events
 - improve the network’s resilience to blockages in future heavy rainfall events by increasing the overall capacity to respond to changes to landscape and make the system easier to maintain
 - reduce sediment loads being discharged into the local streams and waterways, improving water quality outcomes for local streams.

47. Subject to final property acquisition and consenting, physical works are expected to begin in September 2024, and be completed by 30 June 2025. The total project cost is estimated to be \$6.23 million. The works funded by Auckland Council will come from agreed Long-term Plan Healthy Waters Capital Expenditure.
48. The properties affected by the works, and under all options, have already been categorised and are proceeding through acquisition and deconstruction. One property will need to be acquired by council as it does not meet the Voluntary Buy-out scheme criteria but is critical to project delivery.
49. Staff intend to undertake this project as emergency works under section 330 of the Resource Management Act, to urgently address the risk to life and property. The council will apply for a retrospective consent. Going through consent processes first would extend the delivery time frame by at least 12 months and would leave a potential risk of ongoing flooding and landslide impacts.

Tauākī whakaaweawe āhuarangi

Climate impact statement

50. The Making Space for Water programme delivers on actions identified in Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan. Specifically, Action N3, "to integrate connected, nature-based solutions in development planning", and Action B2, "to ensure new infrastructure is planned and designed to minimise climate risks and lifecycle emissions". It also responds to the challenge identified in the Auckland Water Strategy of "reducing exposure to water-related natural hazard risk over time", and the strategic shift to regenerative water infrastructure.
51. Modelling shows that storm and flooding events will be both more extreme and more frequent as the climate continues to warm. This project responds directly to existing and predicted future flood and landslide risks in Muriwai.
52. This project reduces risk to life for downstream properties and rectifies some change to the existing stormwater network caused by Cyclone Gabrielle and its subsequent impacts. It therefore provides some protection for properties in the catchment against future extreme weather events.
53. Currently, Healthy Waters stormwater operations team are responding to an increased number of requests for service in the Muriwai area as the existing assets are not functioning as designed. This is increasing carbon emissions through increased travel, without providing long-term solutions.
54. The impact on carbon emissions will be considered in all Making Space for Water projects. Assessments will be conducted as part of the detailed design phase to ensure all opportunities for reducing emissions in the construction and physical works phases are realised.

Ngā whakaaweawe me ngā tirohanga a te rōpū Kaunihera

Council group impacts and views

55. Healthy Waters will work with Regulatory Compliance, Legal Services, the Recovery Office, Watercare, Auckland Transport, Eke Panuku, and Parks and Community Facilities for physical works projects enabling storm recovery.
56. This project has been developed by Healthy Waters with guidance from the Engineering, Assets and Technical Advisory department. They support the recommended approach as the best practical option for reducing landslide risk in this area.
57. Auckland Transport have committed to working with the Healthy Waters project team to facilitate the necessary approvals for the road-side stormwater upgrades.

Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe Local impacts and local board views

Local impacts

58. Residents of Muriwai have been significantly impacted by the Auckland Anniversary flood event, as well as subsequent flooding that is being experienced due to the reduced effectiveness of the existing stormwater network.
59. The ongoing uncertainty regarding landslide and flood mitigation public works are impacting the long-term recovery for this community.
60. Option three provides benefits to at-risk properties as well as the wider catchment to improve network operation. Progressing this work through emergency works would mean that the local community will benefit from reduced local flood and landslide risk sooner.

Local board views

61. This will be the first physical works project to be completed under the Making Space for Water programme, co-funded by the Crown. Staff have prioritised this catchment due to the severity of the adverse effects of the 2023 extreme weather events on this area and following advocacy from the local board.
62. The local board are a key advocate on their communities' aspirations for recovery. There is no funding impact on the board for the delivery and ongoing maintenance of the assets delivered through this project. Feedback from Rodney elected members on recovery has been received by Healthy Waters staff through workshops in August 2023, April 2024, and May 2024, as well as through their engagement with the Recovery Office.
63. Staff presented the project to the Rodney Local Board on 19 June 2024 to seek their support. They supported the project and urged staff to take all necessary steps to enable urgent delivery ([RD/2024/87](#)). The local board resolution is included as Attachment B.
64. There may be scope for local input on the use of some vacant land in the future. This will be subject to new council policy on the use of storm-affected land which is currently being developed.

Tauākī whakaaweawe Māori Māori impact statement

65. As kaitiaki, mana whenua are impacted by physical works in te taiao. Staff met with Te Kawerau ā Maki on 6 June 2024 to discuss a range of Healthy Waters projects. They were advised of the scope of the preferred option for Muriwai.
66. At this meeting, Te Kawerau ā Maki supported the project. They raised some concerns regarding culturally significant sites within the project area. To respond to these concerns, staff will provide specific information about the locations of physical works and enable cultural induction for those involved in physical works.
67. The project is engineering focused, with limited design option inputs. However, the business case includes provisions to engage with Māori throughout the design and construction, as well as to monitor cultural impacts and benefits.
68. Staff continue to meet with Te Kawerau ā Maki every month to provide project updates.

Ngā ritenga ā-pūtea Financial implications

69. The estimated project cost is \$6.23 million. This includes the purchase of 73 Domain Crescent. This will be funded by Auckland Council from the Healthy Waters capital expenditure budget.

Financial Sources:

70. Funding for these projects will be delivered under the Category 2 Risk Mitigation Programme cost-sharing agreement between the Crown and Auckland Council. This agreement provides for the Crown to provide cost-share funding of 62 per cent for qualifying projects, where works remove the intolerable risk to life associated with Category 2 properties.

71. The funding split for the Domain Crescent elements of this project is shown below.

Funding Agency	Contribution %	Value \$
Crown	62%	\$2,371,000
Auckland Council	38%	\$1,452,000
Total		\$3,823,000

72. Funding for the stormwater network upgrades will be fully funded by Auckland Council

Funding Agency	Contribution %	Value \$
Auckland Council	100%	\$2,408,000

73. There will be some costs associated with engaging residents affected by the physical works and the wider community. These have been factored into the project cost.

Ngā raru tūpono me ngā whakamaurutanga
Risks and mitigations

74. A range of high-level risks for this project are detailed in table 2 below.

Table 2. Key risks and mitigations for the Muriwai Landslide and Stormwater Resilience Upgrade

Risk	Mitigation	Rating after mitigation
Not being able to purchase one of the properties necessary for construction of the embankment, given it is not eligible under the voluntary buy out scheme	Purchase of this land can be facilitated through the Public Works Act process. The property owner has already indicated a willingness to sell to council.	Low
Zero tolerance for cost increase due to central government funding agreement	Budget allows for contingency in light of risks. Otherwise strict scope and contract management.	Moderate
Not being able to access Auckland Transport land, and the property of private property owners, to upgrade the stormwater network	All affected parties will be engaged with throughout the project to mitigate this risk.	Low

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Risk	Mitigation	Rating after mitigation
Not being able to procure a suitably skilled and experienced Tier 2 contractor to install these assets in Muriwai	We will engage in early consultation with contractors under Auckland Council's Programme Framework Agreement to confirm availability of suitable resources.	Low
Health and safety risk for contractors excavating sediment	Contractors implement best practice health and safety standards to manage risk to staff and the public during excavation.	Low
High cost for disposal of sediment and fill to a controlled landfill	Investigations will be completed during the design development phase to identify suitable disposal methods.	Moderate

Ngā koringa ā-muri

Next steps

75. Project updates will be provided through three-monthly reporting to the Governing Body and local boards, and six-monthly reporting to the Transport and Infrastructure Committee.
76. The Muriwai Landslide and Stormwater Resilience Upgrade project is expected to be completed in June 2025.

Ngā tāpirihanga

Attachments

No.	Title	Page
A⇒	Map of physical works catchment area	
B⇒	Rodney Local Board resolution	

Ngā kaihaina

Signatories

Authors	Elizabeth Johnson – Principal, Wai Ora Strategic Programmes, Healthy Waters Craig McIlroy - General Manager Healthy Waters and Flood Resilience
Authorisers	Mace Ward - Deputy Group Recovery Manager Barry Potter - Director Resilience and Infrastructure

Summary of Transport and Infrastructure Committee information memoranda, workshops and briefings (including the forward work programme) - 4 July 2024

File No.: CP2023/19999

Item 13

Te take mō te pūrongo Purpose of the report

1. To tuhi ā-taipitopito / note the progress on the forward work programme appended as Attachment A.
2. To whiwhi / receive a summary and provide a public record of memoranda or briefing papers that may have been distributed to the Transport and Infrastructure Committee.

Whakarāpopototanga matua Executive summary

3. This is a regular information-only report which aims to provide greater visibility and openness and transparency of information circulated to Transport and Infrastructure Committee members via memoranda/briefings or other means, where no decisions are required.
4. The following items were distributed.

Date	Subject
7/06/2024	Memorandum: Delay to Newmarket track work and service impacts, 7 June 2024
18/06/2024	Memorandum: Matariki Block of Line
19/06/2024	Memorandum: Release of the draft Land Transport Rule: Setting of Speed Limits 2024
25/06/2024	Memorandum: Opportunity to input to the Auckland Council submission to the draft Land Transport Rule: Setting of Speed Limits 2024

5. The following workshops/briefings have taken place for Transport and Infrastructure Committee:

Date	Subject
19/06/2024	CONFIDENTIAL: Preparatory work for the Integrated Transport Plan - results of project assessment
26/06/2024	CONFIDENTIAL: Rail Level Crossing Removal Programme

6. Note that, unlike an agenda report, **staff will not be present to answer questions about the items referred to in this summary.** Transport and Infrastructure Committee members should direct any questions to the authors.

Ngā tūtohunga Recommendation/s

That the Transport and Infrastructure Committee:

- a) tuhi ā-taipitopito / note the progress on the forward work programme appended as Attachment A of the agenda report
- b) whiwhi / receive the Summary of Transport and Infrastructure Committee information memoranda and briefings – 4 July 2024.

Ngā tāpirihanga Attachments

No.	Title	Page
A⇒	Transport and Infrastructure Forward Work Programme	
B⇒	Memorandum: Delay to Newmarket track work and service impacts, 7 June 2024	
C⇒	Memorandum: Matariki Block of Line	
D⇒	Memorandum: Release of the draft Land Transport Rule: Setting of Speed Limits 2024	
E⇒	Memorandum: Opportunity to input to the Auckland Council submission to the draft Land Transport Rule: Setting of Speed Limits 2024	

Ngā kaihaina Signatories

Author	Lata Smith - Senior Governance Advisor
Authoriser	Barry Potter - Director Resilience and Infrastructure

Exclusion of the Public: Local Government Official Information and Meetings Act 1987

That the **Transport and Infrastructure Committee**

- a) whakaae / agree to exclude the public from the following part(s) of the proceedings of this meeting.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution follows.

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

C1 **CONFIDENTIAL: Te Ararata and Harania flood resilience projects business case**

Reason for passing this resolution in relation to each matter	Particular interest(s) protected (where applicable)	Ground(s) under section 48(1) for the passing of this resolution
The public conduct of the part of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists under section 7.	s7(2)(i) - The withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations). In particular, the report contains information that could prejudice land acquisition negotiations.	s48(1)(a) The public conduct of the part of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists under section 7.

C2 **CONFIDENTIAL: Property acquisition for Muriwai landslide and stormwater resilience upgrade**

Reason for passing this resolution in relation to each matter	Particular interest(s) protected (where applicable)	Ground(s) under section 48(1) for the passing of this resolution
The public conduct of the part of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists under section 7.	s7(2)(i) - The withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations). In particular, the report contains information that could prejudice land acquisition negotiations.	s48(1)(a) The public conduct of the part of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists under section 7.