I hereby give notice that an ordinary meeting of the Manukau Harbour Forum will be held on:

**Date:** Friday, 16 August 2019  
**Time:** 12.00pm  
**Meeting Room:** Māngere-Otāhuhu Local Board Office  
**Venue:** Shop 17  
93 Bader Drive  
Māngere Town Centre

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**Manukau Harbour Forum**  
**OPEN AGENDA**

### MEMBERSHIP

**Chairperson**  
Saffron Toms  
Waitākere Ranges Local Board

**Deputy Chairperson**  
David Holm  
Puketāpapa Local Board

**Members**  
Alan Cole  
Franklin Local Board

Carrol Elliott, JP  
Māngere-Ōtahuhu Local Board

Joseph Allan  
Manurewa Local Board

Chris Makoare  
Maungakiekie-Tāmaki Local Board

Dawn Trenberth  
Ōtara-Papatoetoe Local Board

Bill McEntee  
Papakura Local Board

Tracy Mulholland  
Whau Local Board

**Alternate Members**  
Sharlene Druyven  
Franklin Local Board

Togiatolu Walter Togiamua  
Māngere-Ōtahuhu Local Board

Angela Cunningham-Marino  
Manurewa Local Board

Debbie Burrows  
Maungakiekie-Tāmaki Local Board

Nerissa Henry  
Maungakiekie-Tāmaki Local Board

Apulu Reece Autagavaia  
Ōtara-Papatoetoe Local Board

Michael Turner  
Papakura Local Board

Julie Fairey  
Puketāpapa Local Board

David Whitley  
Whau Local Board

Neil Henderson  
Waitākere Ranges Local Board

Steve Tollesstrup  
Waitākere Ranges Local Board

(Quorum 5 members)

---

Brenda Railey  
Democracy Advisor – Waitākere Ranges  
13 August 2019  
Contact Telephone: (021) 820 781  
Email brenda.railey@aucklandcouncil.govt.nz  
Website: www.aucklandcouncil.govt.nz

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**Note:** The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.
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1 Welcome

2 Apologies

At the close of the agenda no apologies had been received.

3 Declaration of Interest

Members are reminded of the need to be vigilant to stand aside from decision making when a conflict arises between their role as a member and any private or other external interest they might have.

4 Confirmation of Minutes

That the Manukau Harbour Forum:

a) confirm the ordinary minutes of its meeting, held on Friday, 21 June 2019, as true and correct.

5 Leave of Absence

At the close of the agenda no requests for leave of absence had been received.

6 Acknowledgements

At the close of the agenda no requests for acknowledgements had been received.

7 Petitions

At the close of the agenda no requests to present petitions had been received.

8 Deputations

Standing Order 7.7 provides for deputations. Those applying for deputations are required to give seven working days notice of subject matter and applications are approved by the Chairperson of the Manukau Harbour Forum. This means that details relating to deputations can be included in the published agenda. Total speaking time per deputation is ten minutes or as resolved by the meeting.

At the close of the agenda no requests for deputations had been received.

9 Public Forum

A period of time (approximately 30 minutes) is set aside for members of the public to address the meeting on matters within its delegated authority. A maximum of 3 minutes per item is allowed, following which there may be questions from members.

At the close of the agenda no requests for public forum had been received.

10 Extraordinary Business

Section 46A(7) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

“An item that is not on the agenda for a meeting may be dealt with at that meeting if-
(a) The local authority by resolution so decides; and

(b) The presiding member explains at the meeting, at a time when it is open to the public,-

(i) The reason why the item is not on the agenda; and

(ii) The reason why the discussion of the item cannot be delayed until a subsequent meeting."

Section 46A(7A) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"Where an item is not on the agenda for a meeting,-

(a) That item may be discussed at that meeting if-

(i) That item is a minor matter relating to the general business of the local authority; and

(ii) the presiding member explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at the meeting; but

(b) no resolution, decision or recommendation may be made in respect of that item except to refer that item to a subsequent meeting of the local authority for further discussion."
Elected members update

File No.: CP2019/15044

Te take mō te pūrongo / Purpose of the report
1. A period of time (15 minutes) has been set aside for the attending elected members to update the Forum on significant matters relating to Manukau Harbour.

Ngā tūtohunga / Recommendation/s
That the Manukau Harbour Forum:
a) receive any elected member verbal updates.

Ngā tāpirihanga / Attachments
There are no attachments for this report.

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Authors</th>
<th>Brenda Railey - Democracy Advisor - Waitakere Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Glenn Boyd - Relationship Manager Henderson-Massey, Waitakere Ranges, Whau</td>
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Te take mō te pūrongo
Purpose of the report
1. To receive for information the Public feedback on the Our Water Future – Tō Tātou Wai Ahu Ake Nei discussion document.

Whakarāpopototanga matua
Executive summary
2. The Manukau Harbour Forum is a collective comprised of representatives of the nine Auckland local boards on the shores of the Manukau Harbour.
3. The forum was created in 2019 following the amalgamation which form Auckland Council in response to concern about the deteriorating state of the Manukau Harbour and the urgent need for a collaborative response to improve its condition.
4. The Manukau Harbour Forum’s objectives are to:
   a) raise the profile of the Manukau Harbour
   b) ensure there is a robust knowledge base to support integrated management
   c) champion and advocate for the development and implementation of planning frameworks and projects to support the integrated management of the Manukau Harbour
   d) ensure there are sufficient resources, including staff input and budget, to support the forum to deliver on its vision.
5. The forum took up the opportunity to provide feedback to the Our Water Future: Auckland’s water discussion report submitted to its 15 March 2019 meeting with feedback delegated to the forum chair and deputy chair (Resolution MHFJC/2019/1).
7. The Public feedback on the Our Water Future – Tō Tātou Wai Ahu Ake Nei discussion document was presented to the Environment and Community Committee (Agenda Item 11) at its 11 June 2019 meeting and is attached as Attachment A for information of the Manukau Harbour Forum.
8. The Environment and Community Committee resolved (Resolution ENV/2019/75):
   a) note the public feedback received on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
   b) adopt the Our Water Future - Tō Tātou Wai Ahu Ake Nei framework, as shown in Attachment C of the agenda report, as the basis for developing the Auckland water strategy
   c) direct staff to consider the community priorities and issues raised in public feedback, (as summarised in Attachment B of the agenda report), in the development of the Auckland water strategy.
Ngā tūtohunga
Recommendation/s
That the Manukau Harbour Forum:

a) receive for information the Public feedback on the Out Water Future - Tō Tātou Wai Ahu Ake Nei discussion document.

Ngā tāpirihanga
Attachments

<table>
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<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
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<tr>
<td>A</td>
<td>11 June 2017 Environment &amp; Community Committee Item 11: Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document</td>
<td>11</td>
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</table>

Ngā kaihaina
Signatories

Authors  
Brenda Railey - Democracy Advisor - Waitakere Ranges

Authorisers  
Glenn Boyd - Relationship Manager Henderson-Massey, Waitakere Ranges, Whau
Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document

File No.: CP2018/25165

Te take mō te pūrongo
Purpose of the report
1. To note public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document. Also note the basis of the framework for developing the draft Auckland water strategy.

Whakarāpopototanga matua
Executive summary
2. To develop a water strategy Auckland Council engaged with the public about water issues. The discussion document, Our Water Future - Tō Tātou Wai Ahu Ake Nei (Attachment A) received over 7,200 written and in-person submissions.

3. Feedback demonstrated the public's depth of knowledge and passion about water issues.

4. The public supported the overall vision of the water strategy, values, principles and big issues identified in the discussion document (see analysis of feedback in Attachment B).

5. Support was slightly lower for the 'resilience value' included in the discussion document, with feedback suggesting some submitters found it hard to understand.

6. Many submitters expressed an expectation that the council will move quickly from strategy to action. Community priorities for action included cleaning up our waterways, providing safe and reliable drinking water, providing recreational opportunities and responding to climate change and sea level rise.

7. Some submitters raised issues they felt need more attention in the water strategy, including:
   - rural water issues, including the difference between urban and rural water values and future security of supply
   - the importance of water for cultivation, irrigation and food production
   - the importance of water for businesses, industries and economic development
   - the potential of rain tanks, water reuse and other measures to meet future needs.

8. Finally, submitters asked that a strategy be developed to align with existing council plans and policies (such as the Unitary Plan) and national legislation.

9. Submitters also said that mana whenua should be involved in an ongoing partnership to apply a Te Ao Māori lens to development of the strategy and its implementation.

10. Overall, public feedback showed support for the framework. Staff recommend it be adopted with minor alterations to the resilience value to clarify its meaning (see Attachment C).

11. The next step is to draft the strategy and proceed to public consultation in early 2020.

Ngā tūtohunga
Recommendations
That the Environment and Community Committee:

a) note the public feedback received on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document.
b) note the amended Our Water Future - Tō Tātou Wai Ahu Ake Nei framework, as shown in Attachment C of the agenda report, as the basis for developing the Auckland water strategy.

c) direct staff to consider the community priorities and issues raised in public feedback, (as summarised in Attachment B of the agenda report), in the development of the Auckland water strategy.

Horopaki Context

12. The health of Auckland’s waters is a critical issue. Decades of growth and development have had negative impacts on Auckland’s water quality, and on freshwater and marine environments.

13. Population growth and climate change will further amplify the challenges, with greater demand for water services, and an increased risk of flooding and coastal inundation. The Environment and Cultural Heritage outcome of the Auckland Plan 2050 identifies the need to proactively adapt to a changing water future and develop long-term solutions.

14. In response, Auckland Council has commenced a process to prepare a strategy for Auckland’s waters, with the following purpose:

   The strategy will provide strategic direction for the council group to meet the challenges and opportunities for improved management for water in all its forms. It will establish the outcomes needed for Auckland’s waters, as part of implementation of the Auckland Plan.

15. In December 2018 the Environment and Community Committee approved the release of the discussion document Our Water Future - Tō Tātou Wai Ahu Ake Nei for public feedback (see attachment A). Prepared collaboratively across the council family, the document identified the water issues that Auckland faces.

16. As a framework for discussion, it identified:
   - an aspirational vision for our water future
   - five values that describe the reasons we attach importance to water
   - four big issues that are at the core of our water challenge
   - six principles that will guide our actions at the council as we move forward
   - four processes that we need to work on, to support quality decisions.

17. The release of Our Water Future - Tō Tātou Wai Ahu Ake Nei had two main objectives:
   - raising public awareness of the significant water issues that are facing Tāmaki Makaurau
   - generating feedback on the proposed framework for a water strategy.

Public engagement process

18. The consultation period was open from 17 February 2019 until 19 April 2019. The council received 4,762 written responses and 2,667 in-person responses (see analysis of submissions in Attachment B).

19. By aligning the release of the document with the Annual Budget consultation, the council was able to improve the efficiency of the consultation and reach further with a limited budget. The consultation period was also timed to coincide with the water-themed month of Our Auckland, including the hard copy magazine delivered across Tāmaki Makaurau, billboards, and on-line content.
Public consultation events

20. Water was the focus of 70 public events during the consultation process involving more than 2,600 people, including:
   - Auckland Conversations
   - Business Improvement Districts
   - Regional Stakeholders Panel
   - Mana Whenua Hui
   - Developers Forum
   - two Pasifika Fono
   - three Radio Waatea live discussions
   - young water professionals workshop
   - four council advisory panels – Rural, Youth, Senior and Pacific.

21. Attendees at the events expressed strong support for the need to do better with our water management, especially in taking care of our natural waterways, beaches and harbours. Many participants stressed that water is essential to life and must be looked after accordingly. Submitters noted that as Auckland continues to grow, we should ensure that we are planning for future water needs, and that we aren’t creating new problems, such as building in places that are likely to flood.

22. Further details of the engagement process are provided in Attachment B.

Innovative Māori engagement

23. Staff placed emphasis on engagement with Māori and rangatahi. 18 per cent of submitters identified as Māori or Māori/New Zealand European compared to 11 per cent of the regional population. This high proportional response rate is likely due to staff working with community partners and tailoring engagement to suit audiences.

24. Community partners included Te Kaha o Te Rangatih, Te Ora o Manukau, Te Whanau Waipareira, Para Kere ki Tāmaki, and Hapai Te Hauora. Tailored engagement included a video call for submissions shared on social media, a simplified submission form, and three live-broadcast debates on Radio Waatea. Online and radio content reached more than 50,000 Māori through these networks.

25. A hui was held with the Mayor, councillors, and ten representatives from seven mana whenua entities (Ngāti Tamao Settlement Trust, Te Ara Rangatih o Te Iwi o Ngati Te Ata Waiohua, Ngati Whātua Ōrākei, Ngāti Whātua o Kaipara, Ngaati Whangang, Te Uri o Hau Settlement Trust, and Te Rūnanga o Ngāti Whātua). A summary of feedback from this hui is included in the submissions report in Attachment B.

A wide range of respondents

26. Participants at events were wide ranging with regards to age, ethnicity and location of residence.
27. Tables 1 and 2 show the ethnicity and age of submitters who provided written feedback.

**Table 1. Ethnicity of those providing written submissions**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Written feedback received (%)</th>
<th>Auckland 2013 census (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European</td>
<td>39</td>
<td>59</td>
</tr>
<tr>
<td>Māori</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Pacific</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Asian</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>

28. These show a good proportional representation from Māori, and people aged 15-34. These are both groups with typically low participation rates in consultation processes.

**Table 2. Age distribution of those providing written submissions**

<table>
<thead>
<tr>
<th>Age</th>
<th>Written feedback received (%)</th>
<th>Auckland 2013 census (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-34 years</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>35-54 years</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>55+ years</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>Not answered</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

**Tātaritanga me ngā tohutohu**

**Analysis and advice**

**High level of support in written submissions**

29. 4,675 written submissions were received, mostly responding to the Have Your Say questionnaire. Submissions were largely supportive of the values and issues included in the discussion document. They also highlighted the range of water related issues that Aucklanders are concerned about.

30. Figures 1 and 2 below show the level of support from questionnaire respondents for each of the proposed values and issues that were included in the discussion document.
Figure 1. Support for proposed values

31. Overall, many questionnaire respondents were strongly or somewhat supportive of all five proposed values.

32. Questionnaire respondents showed the lowest level of support for the resilience value, even as they identified concerns about resilience-related issues such as flooding and climate change. Some feedback indicated that the explanation of resilience was difficult for submitters to understand.

33. Māori respondents also expressed high levels of support for all the values, with particularly high levels of support for the Ecosystem, Recreation and amenity and Culture values. Like other submitters, Māori submitters expressed the lowest level of support for the Resilience value (see analysis in Attachment B).

34. Responses to the issues were consistent – with submitters showing high levels of support for all four issues but the lowest levels for ‘adapting to a changing water future.’

Figure 2. Support for issues
35. Mana whenua drew attention to the need for a holistic approach to water, and for continued collaboration in developing and implementing the water strategy. This will be particularly important when applying a Te Ao Māori lens to define and develop the concepts and issues raised in the discussion document.

36. A detailed analysis of the submissions is provided in Attachment B. This feedback will be used to guide preparation of the draft strategy.

**Implications for the proposed framework**

37. The proposed framework was set out in the discussion document (see Attachment A). The feedback from the engagement process suggests that the framework is generally fit for purpose, and that the priority for the public is to move quickly from words to implementation. This was a key theme from the feedback received.

38. A small number of key stakeholders proposed specific changes to the framework, often requesting stronger emphasis on an issue that they felt needed more attention. These are discussed in detail in the submissions report in Attachment B with staff advice on how the feedback should be incorporated into Auckland’s water strategy.

39. A summary of community priorities, issues and the recommended staff response is also provided below for the committee’s consideration.

**Summary of public feedback and staff advice for incorporating this into the strategy**

40. Adopt the framework as the basis for developing the water strategy.

41. Note the challenge to explain resilience concisely.

42. The water strategy development process should reflect the community priorities that were shared in feedback on the discussion document, including:

   - recognising the importance of water for life, and taking good care of it
   - the strong value placed on our natural environments and recreational opportunities
   - the desire to clean up our receiving waters and prevent further degradation (especially from land-based sources, wastewater, stormwater, litter and plastics)
   - the importance of safe and reliable drinking water
   - increasing the capacity of our networks for future growth, including developing alternative water sources and increased storage
   - the need to act on climate change and address flooding and sea level rise
   - the kaitiaki role of mana whenua and the opportunity to bring a Māori world view alongside western science and decision-making processes
   - an expectation that the council will move quickly from strategy to action.

43. The water strategy development process should reflect the following issues raised in submissions:

   - rural issues, including the different water values held in rural and urban areas, future security of rural water needs and the impacts of rural development as well as urban growth
   - the importance of water for cultivation, irrigation and food production
   - the importance of water for businesses, industries and economic development
   - the potential of rain tanks, water reuse and efficiency measures for meeting future water needs
   - the role of all Aucklanders in protecting and enhancing Auckland’s waters, and in building resilience
   - issues for marine waters such as marina infrastructure
   - management of groundwater.
44. The water strategy should ensure:
   - alignment with legislation, council plans and policies including the Unitary Plan
   - existing council group strategies and technical work are used to inform actions under the ‘adapting to a changing water future’ issue,
   - mana whenua are supported through an ongoing partnership to develop methods to apply a Māori world view in the strategy and its implementation,
   - a map of Auckland’s water catchments is included
   - stakeholders’ roles and responsibilities are described.

Recommendations arising from public feedback

45. Overall, public feedback showed strong support for most aspects of the draft framework. Staff recommend that it be adopted and used to guide development of the full draft strategy, with slight amendments to the resilience value (see amended framework in Attachment C).

46. Staff also recommend that the community priorities and issues raised in public feedback and summarised above be considered in the development of the strategy.

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

47. There is broad agreement across the council group that there is a need for better integration in water-related matters, and that improvements in investment and decision-making processes are possible.

48. The water strategy is being developed across the council group. A Political Reference Group has been established including representatives from Watercare, Auckland Transport. Panuku is also represented at management level, on the Executive Steering Group. Staff from Watercare and Auckland Transport contributed to the preparation of Our Water Future - Tō Tātou Wai Aku Ake Nei and will continue to be involved in developing the water strategy.

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

49. Staff held workshops with all local boards in late 2018 on the Our Water Future - Tō Tātou Wai Aku Ake Nei discussion document and sought their formal feedback through business meetings. Local board resolutions were provided to Environment and Community Committee in December 2018 when the discussion document was approved for public consultation.

50. Local boards hosted many of the Have Your Say consultation events and helped to ensure local views were fed into the engagement. They will continue to be actively involved in the development of the strategy.

51. Memos will be circulated to each local board highlighting issues raised in public feedback that relate to their areas. A detailed list of these issues is included in the submissions report in Attachment B. Examples include concern over:
   - local impacts on water - for example, the proposed landfill site in the Dome Valley, on-site wastewater treatment in the Waitākere Ranges, increasing intensification in the Upper Waitematā Harbour and sedimentation in Okura
   - local opportunities for improvement – for example, the water sensitive design in the Whenuapai development, Herald Island stormwater infrastructure
   - the health of local waterways – for example, Takapuna Beach, Mission Bay, Lake Pupuke, Makarau River, Manukau Harbour and beaches.
**Tauākī whakaaweawe Māori**  
**Māori impact statement**

52. Involving mana whenua in governance and decision-making roles has been identified as an integral part of developing the water strategy. Co-governance of Auckland’s waters is a possible future development. The strategy needs to acknowledge and prepare for this scenario.

53. Mana whenua priorities have been incorporated into the proposed framework, starting with the vision of te mau o te wai, as proposed by the Mana Whenua Kaitiaki Forum. A representative of the forum sits on the Political Reference Group, and staff regularly meet with the Mana Whenua Kaitiaki Forum.

**Feedback from Māori submitters**

54. As noted above, Māori engagement was a priority during the engagement process and written submissions were received from 843 individuals identifying as Māori.

55. Overall, responses from Māori submitters demonstrated high levels of ‘strongly support’ for all proposed values and issues, with particularly high support for the Ecosystem Value. Māori submitters expressed the lowest level of support for Resilience (like other submitters).

56. Māori submitters recorded higher levels of support for the ‘Culture value’ than ‘Water use.’ This response pattern differed from other submitters and may reflect the importance to Māori of ensuring that the cultural value of water is fully considered in the draft strategy.

**Mana whenua views**

57. The mana whenua hui provided a useful summary of perspectives from Ngāti Tamaoho Settlement Trust, Te Ara Rangatu o Te Iwi o Ngaati Te Ata Waiohua, Ngāti Whāitu Orākei, Ngāti Whāitu o Kaipara, Ngaati Whanaunga, Te Ura o Hau Settlement Trust, and Te Rūnanga o Ngāti Whātau (see summary in Attachment B). A submission from the Mana Whenua Kaitiaki Forum reinforces the messages received in the hui.

58. Discussion at the hui emphasised that water is a taonga – we need to stop wasting it, and we should be able to gather food from rivers, estuaries and their margins. Participants in the hui expressed the view that this is a birth right and we need to increase the value we place on being able to live in harmony with natural environments.

59. Participants wanted the strategy to drive holistic management of land and water, and account for the cumulative effects of human activities on the maori of Auckland’s waters.

60. Mana whenua emphasised the importance of collaboration between council departments and effective partnership between the council and mana whenua, from governance to project design and delivery. Continued partnership is necessary to enable:

- the vision advanced by the strategy is well understood and implemented faithfully
- matauranga Māori effectively informs decision-making
- immediate actions are taken to address pressing issues (like cleaning up rivers and preventing sewage overflows) and balanced with far-sighted actions in preparation for future issues (like climate change, water allocation and water supply).

61. Mana whenua at the hui acknowledged the apparent openness of the council to developing a strategy that shows a genuine commitment to improving the health of Auckland’s waterbodies. Mana whenua noted the importance of reporting outcomes in a transparent way.
Ngā ritenga ā-pūtea
Financial implications

62. By combining communications with the Annual Budget consultation, the costs of carrying out consultation were substantially reduced. Approximately $60,000 was expended on the Have Your Say and standard communication channels for Our Water Future - Tō tātou wai ahu ake nei. An additional $25,000 was allocated to support the focus on Māori engagement.

63. Consultation on the draft water strategy (mid 2020) is expected to cost in the order of $180,000 – depending on the scale of engagement and whether the consultation can be aligned with other council consultations. Funds for this are available through the council’s operational budgets, approved in the Long-Term Plan 2018-2028.

64. Any financial implications of the strategy will be captured in the Long-term Plan 2021-2031.

Ngā raru tūpono me ngā whakamaurutanga
Risks and mitigations

65. An initial risk assessment was carried out in June 2018, with four main risks identified to delivering the project on time and within budget. Table 3 updates this assessment.

**Table 3. Risks to the water strategy, performance to date and proposed mitigations**

<table>
<thead>
<tr>
<th>Risk description</th>
<th>Performance to date</th>
<th>Updated assessment</th>
<th>Mitigation/control</th>
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<tbody>
<tr>
<td>Difficulty mobilising resources</td>
<td>A virtual team from across the council group has contributed their expertise to the project and deadlines have been achieved.</td>
<td>Medium risk. Balancing the demands of developing the strategy with pre-existing workloads continues to be a challenge.</td>
<td>Continued support from the Executive Steering Group for staff dedicating time to strategy development and completion</td>
</tr>
<tr>
<td>Scope creep</td>
<td>Initial plans were revised to include a discussion document phase, in part due to the breadth of the subject. The discussion document and public engagement have helped to confirm the scope.</td>
<td>Medium risk. There is a continuing challenge to present a succinct strategy when covering such a broad subject.</td>
<td>Guidance from the Political Reference Group and Executive Steering Group to keep scope of strategy focused</td>
</tr>
<tr>
<td>Central government changes to legislation and policy</td>
<td>These changes have yet to be announced. The vision, values and issues identified in the discussion document are unlikely to be incompatible with legislative or policy change.</td>
<td>Medium risk. Changes to legislation and policy may affect how the council develops and implements the strategy. Consequences could be either positive or negative depending on the nature of the changes.</td>
<td>Maintain involvement in central government processes and communicate with central government officials about the strategy</td>
</tr>
</tbody>
</table>

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Environment and Community Committee
11 June 2019

Risk description | Performance to date | Updated assessment | Mitigation/control
--- | --- | --- | ---
Inconsistent practices and adoption of the strategy | This has not yet been an issue, as the strategy is still under development. Internal cross-council engagement has built understanding of the mandates and priorities for different parts of the council family. | **Medium risk.** The strategy will need strong buy-in across the council to ensure proactive implementation. | Ensure that council staff with water responsibilities are engaged in the development of the strategy, and that the strategy is relevant to their needs.

Ngā koringa ā-muri
Next steps

66. Staff will now develop Auckland’s water strategy. The timeline is shown below in Table 4.

Table 4. Timeline for completion of Auckland water strategy

<table>
<thead>
<tr>
<th>Month</th>
<th>Milestone</th>
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<tbody>
<tr>
<td>June – Dec 2019</td>
<td>Preparation of draft water strategy</td>
</tr>
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</table>
| Jan – Mar 2020 | Local board engagement on draft strategy  
 Mana whenua and council family engagement on draft strategy  |
| April 2020    | Report to appropriate council committee seeking approval of draft strategy for public consultation |
| May – July 2020 | Public consultation on draft water strategy                             |
| September 2020 | Approval of water strategy                                               |

67. Completing the water strategy by September 2020 will allow the strategy’s directions to inform development of the Long-term Plan 2021-2031, and any plan changes required by the National Policy Statement for Freshwater Management.

Ngā tāpirihanga
Attachments

<table>
<thead>
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<th>No.</th>
<th>Title</th>
<th>Page</th>
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<tr>
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<td>Our Water Future - Tō Tātou Wai Ahu Ake Nei: Discussion document and feedback form</td>
<td>343</td>
</tr>
<tr>
<td>B1</td>
<td>Our Water Future - Tō Tātou Wai Ahu Ake Nei: Public engagement and analysis report</td>
<td>395</td>
</tr>
<tr>
<td>C1</td>
<td>Framework for adoption, including amended Resilience value</td>
<td>495</td>
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Ngā kaihaina
Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Andrew Chin – Auckland Waters Programme Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Craig McIlroy – General Manager Healthy Waters</td>
</tr>
<tr>
<td></td>
<td>Barry Potter - Director Infrastructure and Environmental Services</td>
</tr>
<tr>
<td></td>
<td>Koro Dickinson - Executive Officer - Operations Division</td>
</tr>
</tbody>
</table>

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Feedback must be received by Friday 19 April.

All of the questions below are optional. We encourage you to give feedback online at akhaveyoursay.nz, or you can complete this form and return it to us using one of the options below.

**Email**
Scan your completed form and email it to akhaveyoursay@aucklandcouncil.govt.nz.

**By post**
Place your completed form in an envelope and send it to freepost address:
AK Have Your Say
Auckland Council
Freepost Authority 182382
Private Bag 92 300, Auckland 1142

**In person**
Drop your completed form off at your local library, service centre or local board office.
Our water future - consultation questions

To answer the following questions about our water future please view the full discussion document or executive summary at akhaveyoursay.nz.

All of these questions are optional.

Question 1: Our values

People value water for different reasons. We have identified five broad categories that we will use to evaluate our progress on water issues.

Do these values match what you value about water?

- Ecosystems: healthy water systems nourish the natural environment.
- Water use: we can meet our everyday water needs safely, reliably and efficiently.
- Recreation and amenity: we enjoy being in, on and near the water at beaches, lakes and streams.
- Culture: water contributes to our identities and beliefs, as individuals and as part of communities.
- Resilience: our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.

Please tell us why, and if there is anything else you value about water?

Question 2: The big issues: what we need to work on

We have identified four issues that are at the heart of Auckland’s water future.

How concerned are you about these issues?

- Cleaning up our waters, dealing with the pollution of our beaches and waterways, e.g. sediment, nutrients and contaminants from rural and urban activities and roads, litter and faecal contamination.
- Growth in the right places, thinking about the water and wastewater impacts of where and how we grow.
- Meeting future water needs, identifying how we will provide clean drinking water to a growing population, with a range of options to develop including more efficient water use, rainwater collection and storage, water re-use, or other water sources.
- Adapting to a changing water future, planning for changing water conditions, e.g. higher probabilities of droughts, flash flooding and coastal inundation, and making sure our communities and our infrastructure are resilient to the changes.

Please tell us why, and what you think we can do now to anticipate and adapt to the changes in our water future?
Question 3: Meeting our future water needs

As we develop options for meeting our future drinking water needs, we want to understand which criteria you think are most important.

Which of the following criteria are most important to you? (Select your top two)

☐ Safety and quality of drinking water
☐ Reliable supply of drinking water
☐ Cost of infrastructure needed to provide drinking water
☐ Environmental impacts of the infrastructure for supplying drinking water
☐ Becoming less reliant on water sources outside the region by being more efficient and exploring other sources

Please tell us why these criteria matter to you, or if there are others you think are more important?


Question 4: Adapting to a changing water future

We expect that water-related hazards, like droughts, flash flooding, erosion and coastal inundation will be more frequent in future and will cost us more to recover from. The effects will be felt unevenly across communities, based on where they live and their socio-economic status.

Which of the following should we prioritise as we adapt to this changing future? (Select your top two)

☐ Developing policy to define the extent of individual and council responsibilities for adaptation
☐ Helping communities to be more resilient to hazards/promoting community resilience
☐ Planning to withdraw from affected areas (moving off land affected by flooding and inundation)

Question 5: The framework for developing a water strategy

We are proposing a framework for how we think and make decisions about water in Tāmaki Makaurau / Auckland. The framework contains:

• A vision for what we want our water future to be
• Values that describe why water is important to us
• Big issues that are at the core of our water challenge
• Principles that will guide our actions as we move forward
• Processes that we need to work on, to ensure we make good decisions.

Do you have any feedback on the framework, or is there anything else you think should be included?


Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Question 6: Creating our water future together

Achieving a healthy, sustainable and affordable water future for Tamaki Makaurau will require energy and commitment from all of us. From the decisions we make in our own homes and communities, through to the regional investment choices that we will need to make, we all have the opportunity to make a better water future for our city.

What’s the most important thing you think we should do for our water future?

Need more room? You can attach extra pages, but please make sure they are A4 and also include your name and contact information.

Your feedback will be included in public documents. All other personal details will remain private.

First name:

Last name:

Email address or postal address:

Your local board:

Is your feedback on behalf of an organisation or business? (If yes, this confirms you have authority to submit on the organisation’s behalf)

☐ Yes  ☐ No

Name of organisation or business:

What age group do you belong to?

☐ Under 15  ☐ 15-24  ☐ 25-34  ☐ 35-44  ☐ 45-54  ☐ 55-64  ☐ 65-74  ☐ 75+

Which of the following describes your ethnicity? (Please select as many as apply)

☐ Cook Islands Māori  ☐ Pākehā/NZ European  ☐ Chinese  ☐ Samoan  ☐ Indian  ☐ South East Asian  ☐ Korean  ☐ Tongan  ☐ Māori  ☐ Other (please specify)

Which of these best describes where you live? (select all that apply)

☐ Urban  ☐ Rural  ☐ Coastal

The following information is optional but will help us know whether we are hearing from all Aucklanders.

Are you:  ☐ Female  ☐ Male  ☐ Gender diverse

All personal information that you provide in this submission will be held and protected by Auckland Council in accordance with our privacy policy (available at aucklandcouncil.govt.nz/privacy) and at our libraries and service centres, and with the Privacy Act 1993. Our privacy policy explains how we may use and share your personal information in relation to any interaction you have with the council, and how you can access and correct that information.
Our Water Future
Tō tātou wai ahu ake nei
A discussion document
February 2019
Item 12

Attachment A
Mihi

Ka mihi ake ai ki ngā maunga here kōrero,
ki ngā peri whakarongo tai,
ki ngā awa tuku kiri o ōna manawhenua,
ōna mana ā-iwi taketake mai, tauiri atu.
Tāmaki – makau a te rau, murau a te tini,
wenera u a te mano.
Kāhore tō rite i te ao.

I greet the mountains, recitatory of all that has been said of this place,
there I greet the cliffs that have heard the ebb and flow of the idea of time,
and the rivers that cleansed the forebears of all who came before born of this land
and the newcomers among us all.
Auckland – beloved of hundreds, famed among the multitude, envy of thousands.
You are unique in the world.

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A conversation we need to have: the purpose of this discussion document .............6
The proposed framework for an Auckland Water Strategy .........................................8
From ridge to reef: taking a systems approach ...............................................................9
Meeting current and future needs: the role of the council .........................................10
Water, water everywhere: the national conversation .................................................12
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Foreword
Kupu takamua

Protecting our streams, rivers, lakes and harbours is a top priority for Aucklanders, and there are big challenges we need to tackle. We’ve made a good start on some of the immediate issues, like cleaning up our beaches and replanting our streams. However, there is much more we need to do if we are to secure our water future.

We want to agree a vision for our waters, and identify the investments we need to make to achieve that vision.

It is all too easy to take water for granted. After all, getting clean, reliable drinking water is as easy as turning on a tap, and we can safely swim, fish or kayak in most places, most of the time. We rely on experts to manage the details for us. But perhaps that leads us to undervalue what we have.

Events around the world, from California mudslides to Cape Town droughts, remind us how fragile our water systems are. Too much water, or too little, can be disastrous.

The deluge of plastics and other pollutants in our oceans drives home how much damage we are doing to our waters and ultimately to our own future.

In Auckland, localised floods, slips and coastal erosion happen often. Although it rains frequently, we have to rely on our neighbours in the Waikato to meet our drinking water needs. As our population grows, and the impacts of climate change begin to bite, we need to think very carefully about our water future.

Working in partnership with Māori is an essential part of this process. Te mauri o te wai, recognising the lifegiving nature of water, is a view that treats water with the respect it deserves. With water at the centre of our decisions, it is my hope that we can begin to build a healthier, more resilient Auckland.

We can all contribute to a better water future. I invite you to read this discussion document and let us know what you think. Let’s work together to ensure a secure, sustainable and healthy future for water in Auckland.

Councillor Penny Hulse
Chair, Environment and Community Committee

On behalf of the Auckland Water Strategy Political Steering Group

Councillor Bill Cashmore - Deputy Mayor,
Margaret Devlin - Watercare Services Chair,
Lester Levy - Auckland Transport Chair,
Tane Te Rangi – Representative of the Mana Whenua Kaitiaki Forum

11,117km² of ocean
3200km of coastline
16,500km of permanently flowing rivers
72 natural and artificial lakes
multiple aquifers
**Water and Tāmaki Makaurau / Auckland: inseparable stories**

*Te wai me Tāmaki Makaurau: ōna pakiwaitara motuhake*

Water, or wai, is a precious taonga, a treasured resource. It gives us life, shapes our environment and adds to the beauty of our region.

**Our connection with water**

Our connection with water is part of what makes living in Tāmaki Makaurau / Auckland so special.

Historically, our harbours and streams were abundant sources of kai / food for mana whenua and manuhiri / visitors alike. They also formed important transport and trade routes.

Waka, ships, ferries and freighters brought trade and economic prosperity. This allowed us to grow into a city of 1.56 million people with more than a third of Auckland / New Zealand’s economic activity.

**The decline in water quality**

As the population grew, we built water infrastructure to keep us healthy and safe — but we didn’t always look after the waters that sustained us. Rivers were piped, wetlands were drained, and plumes of sediment and other pollutants were discharged into the harbours.

In both urban and rural areas, water quality has declined. Freshwater and marine environments are showing the stress of decades of pressure.

As the population grows and the impacts of climate change take effect, these stresses will become more severe. Our water infrastructure — the networks that manage our drinking water, wastewater and stormwater — also faces new pressures.

Clean, healthy water is essential to our future.

The region is 75 per cent water. As we continue to grow and change, we need to look after this most precious taonga.
A conversation we need to have: the purpose of this discussion document
He kōrero me tutuki i a tātou: te take mō tenei pūrongo whakawhitī kōrero

Defining our water future is a task for everyone together. We know that we will face some big water challenges in coming years. What kind of water future do we want to create? What vision could we aspire to, and what are the big issues we need to tackle?

Problems with water concern us all
We’ve talked a lot about water lately. Aucklanders have very clearly told us that clean and healthy water is a top priority. Safeswim has raised awareness about the health risks we face when our infrastructure doesn’t work as well as we would like.

Storms, flooding and coastal inundation have made clear the challenges of living in an ever-changing water landscape. This is especially real for the communities that have been directly affected. Community restoration programmes have revealed strong personal connections to our natural ecosystems.

Developing a Water Strategy
In June 2018, we decided to prepare a Water Strategy for Auckland to ensure that our actions respond to the challenges and opportunities we have to improve water outcomes.

This discussion document is a first step in the strategy’s development. It looks across the full range of water issues, and begins to identify the choices that we, as Aucklanders, will need to make in coming years.

We all need to understand the issues, so that we can set some regional directions for how we:
• take care of natural waterbodies
• meet our daily water needs as our population grows
• look after our waters while managing our growth and development
• prepare for changes in our climate and our communities.
Manukau Harbour Forum
16 August 2019

Our water future a discussion document

Our challenges

We face some big challenges that will shape what we can do:

- Our waters are degraded, especially where they are close to urban areas. We need to clean up our rivers, lakes, streams and harbours.
- Freshwater is a scarce resource, even though it rains frequently. We have limited large rivers, lakes and groundwater resources in the region to draw water from, and we are becoming increasingly reliant on the Waikato region to meet our needs. We are going to need to make better use of the water that we have, or agree to develop new sources of supply by 2050.
- We live in an ever-changing environment, vulnerable to natural hazards such as flooding, coastal inundation, erosion, drought and the effects of climate change. We will need to make changes to be ready for the increasing risks.
- Responding to water issues takes money and time (and the costs of doing nothing will likely end up being higher in the long run). We want to make sure our decisions are improving our water future, not deferring the problems for future generations to resolve.

Decisions we have to make

In coming years, we will have to make big, potentially controversial decisions about how we manage water. We know that people have different perspectives on water issues. We also know that people are more likely to support decisions that they were involved in shaping.

To help us, as a starting point in this process, we want to sketch out a broad framework that we can agree to. After setting out the local and national context, this discussion paper steps through a proposed framework for how we think and make decisions about water in Tāmaki Makaurau (see framework, p. 8).

A framework for water decisions

The proposed framework contains:

- an aspirational vision for our water future
- five values that describe the reasons we attach importance to water
- four big issues that are at the core of our water challenge
- six principles that will guide our actions as we move forward
- four processes that we need to work on, to support quality decisions.

We want you to have your say

We want to hear what you think.

- Do the vision and values reflect what matters to you?
- Have we accurately described the ‘big issues’?
- Do you think the principles and processes will help us make progress towards the vision?

With your feedback on this proposed framework, we’ll be able to develop an Auckland Water Strategy that moves us toward an agreed water future.
The proposed framework for an Auckland Water Strategy
Te pou tarāwhao o te Rautaki Wai mō Tāmaki Makaurau e whakaaroa nei

The Auckland Plan

<table>
<thead>
<tr>
<th>Key challenges</th>
<th>Population growth</th>
<th>Environmental degradation</th>
<th>Shared prosperity</th>
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</thead>
</table>

Te mauri o te wai: putting water at the centre

Vision
Te mauri o te wai o Tāmaki Makaurau – the life supporting capacity of Auckland’s water – is protected and enhanced.

Values
- Ecosystems: Healthy water systems nourish the natural environment.
- Water Use: We can meet our everyday water needs, safely, reliably and efficiently.
- Culture: Water contributes to our identity and beliefs, as individuals and as part of communities.
- Recreation and Amenity: We enjoy being in, on and near the water.
- Resilience: Our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.

Issues we need to work on
- Cleaning up our waters
- Meeting future water needs
- Growth in the right places
- Adapting to a changing water future

Processes we need to work on
- Creating our water future together
- Setting priorities for investment
- Achieving net benefits for catchments

Principles to guide our work
- Recognize that water is a treasured taonga
- Work with natural ecosystems
- Deliver catchment scale thinking and action
- Focus on achieving right-sized solutions with multiple benefits
- Work together to plan and deliver better water outcomes
- Look to the future

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
From ridge to reef: taking a systems approach
Mai i ngā kahiwi ki ngā pūkawa: he tokonga ā-pūnaha te whāinga

This document considers water in all its different forms: in rivers and streams, in underground aquifers, and in estuaries, harbours and marine areas. It talks about drinking water, wastewater and stormwater – the ‘three waters’ that we manage most directly.

Only one water

Sometimes we need to deal with different forms of water in different ways. But they are all connected – there is only one water, constantly moving around the water cycle. We want to make sure we think about how activities in one part of the water system affect the health of the whole system. This is where we think an overarching vision will help.

Taking a system-wide view is much easier to say than to do. Developing processes to support us to keep the big picture in focus will be part of our challenge.
Meeting current and future needs: the role of the council

Te tūtaki i ngā hiahaia ināianei anga atu ana hoki: ko te āhua mahi mā te kaunihera

The council has a number of roles and responsibilities for water.

We work across the region to maintain, renew and improve our waters and our water infrastructure. The decisions we make across the council family have big implications for the health and the future of our waters. This includes council controlled organisations like Watercare, Auckland Transport and Panuku.

Every day, we:

- provide safe, reliable drinking water to 1.5 million Aucklanders
- treat wastewater so that it is safe to release into the environment
- manage an extensive stormwater network, including the roads that help to divert rainfall away from people and property
- anticipate and manage the impacts of storms, floods and other natural hazards
- restore and protect our natural waterways.

Most of our work is focused on freshwater, land-based activities and the coast, but we manage impacts on the marine environment too, by capturing and cleaning stormwater before it reaches the sea.

In the next ten years, we expect to invest $7.1 billion in diverse water projects of all sizes across the region.

We’re always improving

Our approach to water is constantly developing. We seek to innovate where we can, to find more effective ways to achieve the healthy, clean water outcomes our communities want.

We work with other councils to learn together. We’re pleased to be leading the development of water sensitive urban design in Aotearoa / New Zealand. This includes the Water Sensitive Design Guidelines.

All of this work is shaped by the council’s strategies, policies and plans, as well as national legislation and policy (see fig 1).

Auckland Council, Watercare and Auckland Transport look after:

- 365 million litres of drinking water per day
- 27 drinking water sources
- 450 million litres of wastewater per day
- 330,000+ manholes
- 474 rivers and streams
- 3200km coastlines
- 9200+ km of water supply pipes
- 8000+ km of waste water pipes
- 6300+ km of stormwater pipes
The main plans that we use to manage water are the Auckland Plan, the Unitary Plan, the Long-term Plan and our Asset Management Plans. Together they provide the direction, development rules, finances and work programme that determine the council’s activities. They also affect what everyone else can do too across the region.


![Diagram showing national, regional, and local strategies and plans.](image)

**Figure 1:** National, regional and local strategies and plans shape our approach to water.
Water, water everywhere: the national conversation
He wai, he wai i hea katoa: te takinga kōrero ā-motu

Water is a big issue for Aotearoa. The national conversation often sets the direction for regional and local efforts.

The National Policy Statement for Freshwater Management (NPSFM) is particularly relevant. It requires all regions to safeguard the life-supporting capacity of freshwater bodies and their associated ecosystems.

Te Mana o te Wai

The first objective of the NPSFM is ‘to consider and recognise Te Mana o te Wai in the management of fresh water’. This is to ensure that the health and wellbeing of freshwater bodies is ‘at the forefront of all discussions and decisions about water’.

Te Mana o te Wai is the integrated and holistic wellbeing of a freshwater body. Upholding Te Mana o te Wai acknowledges, protects and enhances the mauri of the water. It recognises the connection between water, people and the broader environment.

National reviews

Further national processes are currently underway to review how water is managed. The Essential Freshwater Work Programme is focused on stopping further harm to freshwater, reversing existing damage, and ensuring fair allocation of freshwater and nutrient discharges. It is expected to result in amendments to the Resource Management Act and the NPSFM, and introduce a new National Environmental Standard for Freshwater Management by 2020.

The Three Waters Review is looking at how to improve the regulation and delivery of drinking water, stormwater and wastewater to better support the prosperity, health, safety and environment of Aotearoa.

It is likely that the government will make changes to regulations, including higher standards for drinking water, the discharges from wastewater treatment plants and the stormwater system. They are also looking at changing how services are delivered. Some of the options include creating publicly owned drinking water and wastewater providers that operate across council boundaries.

These processes have implications for our water future in Tāmaki Makaurau; they might change how our water services are regulated and delivered. The council is an active participant in the national discussions, to ensure our region’s water needs are considered.

We have communicated our support for the government’s position that drinking water, wastewater and stormwater assets must remain in public ownership. We have also identified that any subsidies needed to support smaller communities to meet increased water standards should come from national revenue. Rates and local user charges collected in Auckland should only be used to fund services in Auckland.

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Implementing the Auckland Plan 2050
Te whakatinana i te Mahere a Tamaki Makaurau 2050

The Auckland Plan 2050 sets six outcomes and the development strategy for Tamaki Makaurau. It identifies the directions required to deliver the outcomes we want to see by 2050, supported by focus areas for action. The Auckland Plan 2050 sets the basis for the development of a water strategy for Tamaki Makaurau.

Three challenges sit at the heart of the Auckland Plan:

Population growth: More than 1.66 million people live in Tamaki Makaurau already. Over the next 30 years this could increase by another 720,000 people to reach 2.4 million.

The rate and speed of population growth puts pressure on our communities, our environment, our housing and our roads.

Environmental degradation: Decades of pressure have had negative impacts on the environment, including on our waters. This pressure will continue to increase if changes are not made to the way that the environment is valued and managed. Climate change will further amplify the challenges, with impacts such as sea level rise, more frequent extreme weather events, and increased risk of flooding and coastal inundation.

Shared prosperity: The success of Tamaki Makaurau is dependent on how well our prosperity is shared. As our population continues to grow, we need to ensure that all Aucklanders can benefit from the social and economic prosperity that growth brings and can participate in and enjoy community and civic life.

Better outcomes for water are supported across the six outcomes of the Auckland Plan 2050, highlighting the need to take an integrated approach across a range of areas. For example, one of the environmental focus areas is to restore environments as Tamaki Makaurau grows.

To read more about the Auckland Plan, click here.

The Auckland Plan 2050 at a glance

Our Key Challenges
- High population growth
- Shared prosperity
- Environmental degradation

Outcomes
What the plan aims to achieve

Belonging and Participation
Māori Identity and wellbeing
Homes and Places
Transport and Access
Environment and Cultural Heritage
Opportunity and Prosperity

Development Strategy
How Auckland will grow and change over the next 30 years, including sequencing of growth and development

The Auckland Plan sets the direction to 2050.

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Getting our bearings: international comparisons

He whakamau i te ara whāinga mō tātou: ngā whakatauritenga ā-ao whānui

How are other cities around the world thinking about their water futures?

To help us develop a locally-based vision, we have looked at international examples of water visions and strategies. Many cities describe their aim as to become ‘water sensitive cities’ or to apply a ‘one water approach’. A look at comparable cities reveals a number of themes – all of which could be readily applied to our water situation:

- recognising water supports prosperity, community and economic wellbeing
- future-facing, aiming for inter-generational sustainability and resilience
- a priority on looking after the environment and ecosystems
- managing hazards and ensuring security of supply
- an integrated approach to decision making across the water cycle.

SOME EXAMPLES OF WATER VISIONS:

- ‘Water is fundamental to our communities. We will manage water to support a healthy environment, a prosperous economy and thriving communities, now and into the future.’ - Water for Victoria (Australia)
- ‘By 2040, London will manage its rainwater sustainably to reduce flood risk and improve water security, maximising the benefits for people, the environment and the economy.’ - London Sustainable Drainage Action Plan
- ‘With our OneWaterSF approach, San Francisco will optimise the use of our finite water and energy resources to balance community and ecosystem needs, creating a more resilient and reliable future.’ - OneWaterSF (San Francisco)

In Australia, the Cooperative Research Centre for Water Sensitive Cities has supported stakeholders to develop ‘transition strategies’ for different cities. Each city process has defined its own vision, with some commonalities:

- ‘Adelaide is an attractive and resilient city that uses its diverse water resources and knowledge to drive prosperity, sustain healthy ecosystems, and connect communities.’ - Vision and Transition Strategy for a Water Sensitive Adelaide
- ‘Sydney is a beautiful, prosperous and resilient city with thriving communities, healthy ecosystems and cherished urban landscapes supported by active water stewardship.’ - Vision and Transition Strategy for a Water Sensitive Sydney
A vision that speaks to this place
He whakakitenga e taki kōrero ana mō tēnei wāhi

What kind of water future do we want for Tāmaki Makaurau? A vision statement helps us to define our destination and guide our choices along the way.

International examples affirm the issues and opportunities we have identified here in our region. We would like to take an approach that is more clearly connected to Tāmaki Makaurau.

Through the Auckland Plan and Long-term Plan consultations in 2018, Aucklanders have provided their views of our water future. They emphasised that improving water quality is an urgent priority for action. This is to improve environmental health and recreational amenity. They also noted concern about the impacts of growth and climate change.

Creating a vision
We want to create a vision that:
- is special to this place
- recognises the vital relationship between our water and our people
- recognises the role of mana whenua as kaitiaki within the region
- represents values that can unify us in our actions
- sets a long-term aspiration for the way we take care of our waters.

The vision doesn’t have to describe where we are today, but rather where we want to get to.

We want to make sure that we align with the national conversation about water and the objectives that have been set for us to achieve through the National Policy Statement on Freshwater Management.

We are fortunate to have concepts in te Ao Māori that can help us express this in a way that is unique to our place in the world. With the guidance of the Mana Whenua Kaitiaki Forum, ‘te mauri o te wai – the life supporting capacity of water’ has been identified as a concept that encompasses our aspirations for water in Tāmaki Makaurau.
Te Mauri o te Wai

Te mauri o te wai has many layers. It is about the health of water but also about the deep connections between water, the environment and people.

Water has mauri – a vitality or essence that supports life. The actions we each take can enhance mauri or, they can diminish mauri.

In turn, the mauri of water affects the mauri of people. When te mauri o te wai is compromised, so are we. This is a concept that we can all connect to. Knowing that some of our waters are polluted to the point where we can’t safely fish, or swim, or drink, is concerning for many Aucklanders. Te mauri o te wai evokes a future where our children and grandchildren are able to swim in, and harvest from, our rivers, estuaries and harbours.

While the National Policy Statement for Freshwater Management speaks of Te Mana o te Wai, we think te mauri o te wai is a better description of the aspiration that could unite us in Tamaki Makaurau. Waters with healthy mauri nourish us and allow us to meet our obligations to care for one another (manaakitanga). As mana whenua have observed, there can be no mana without mauri.

Guided by the Mana Whenua Kaiapoi Forum, we are proposing the following vision as an aspirational statement of where we would like to be by 2050:

Te mauri o te wai o Tamaki Makaurau
The life supporting capacity of Auckland’s water is protected and enhanced.
The importance of water: describing our values

Te take nui o te wai: te whakaahua i ō tātou uaratanga
When we talk about values, we are describing what is important to us

A value-based approach can help connect our decisions back to what we think matters most. In this way, our values are our navigational aids, helping us to stay on course towards our vision.

2. Water use: we can meet our everyday water needs safely, reliably and efficiently.
3. Recreation and amenity: we enjoy being in, on and near the water.
4. Culture: water contributes to our identities and beliefs, as individuals and as part of communities.
5. Resilience: our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.

On the following pages, we describe what it is that we value for each category, and the current and future state of our waters compared to those values. We connect the values to the ‘big issues’ (which we discuss in the next section). Finally, we identify where you can learn more and suggest some simple examples of how you can take action right now.

What our values look like

So, what is it that we value about water in Tamaki Makaurau?

In the next few pages, we describe values for water in five broad categories:

1. Ecosystems: healthy water systems nourish the natural environment.
Ecosystems

What we value: Healthy water systems nourish the natural environment

Healthy streams, rivers, lakes and coastal waters are home to diverse plants, animals, insects and other organisms. When the mauri of our water is enhanced, and water systems are healthy, they can clean up contaminants, absorb carbon dioxide, and provide us and other animals with the food we need to survive.

Many other contaminants accumulate from diffuse sources that are difficult to manage, like the heavy metals that come from car brake linings. Roads are a conduit for rain to wash these materials into the environment.

Current state

The health and mauri of our waterways is very closely connected to the activities that are happening on the surrounding land. Some streams are surrounded by native bush and have clean water and thriving animal and plant populations (see map p. 19).

By contrast, most of our urban streams are in poor health, with degraded mauri. The health of rural waterways is mixed, depending on how the surrounding farming, forestry and agricultural activities are managed.

Our estuaries, harbours and marine waters are home to diverse biodiversity, but sediment from land-based activities are muddying the waters and smothering sea life.

So, what’s causing the degradation? It’s not a simple picture. Sediment comes from land disturbance like earthworks, forest harvesting, stream erosion and slips.

FAST FACTS

- The Kaipara Harbour is the nursery for 88 per cent of snapper off the west coast of the North Island.
- 80 species of birds roost around the Manukau Harbour, including migratory birds like bar-tailed godwits. These birds fly continuously for eight to 10 days to get here from Alaska.
- Marine reserves are proven to help biodiversity. The ecosystems in the Goat Island Marine Reserve are healthier than many others in the Hauraki Gulf. It acts as a nursery for the wider fishery in the gulf. Around 11 per cent of young snapper in a 40km radius the offspring of adults that lived in the reserve.
Water quality is generally better in remote parts of the region, and worse in more populated areas.

Source: Research and Evaluation Unit, Auckland Council 2018
Although we are the nation’s largest city, most of Tamaki Makaurau is rural. Agriculture, forestry and horticulture can increase the levels of sediment, nutrients and bacteria in waterways. Even in natural forest areas, sediment and bacteria will wash into our streams. The more sediment that is released at one time, the harder it is for our ecosystems to recover.

Our ideas about what is okay have changed over time, and we are less accepting of activities that were once quite normal, such as clearing native forests or tipping waste into rivers. Now, we’re learning about the impact of litter and microplastics on wildlife.

Doing better

We’ve started to improve our impacts on ecosystems with:
- more water sensitive rural and urban development practices
- stock exclusion and nutrient management as part of good farming practices.
- rain gardens, litter traps and swales to filter contaminants out of urban stormwater
- restoration projects to improve the mauri of wetlands, lakes and streams.

Many of the actions we are taking for other reasons will also help water outcomes. This includes Auckland Transport encouraging Aucklanders to use passenger transport or walking and cycling to reduce the number of single occupancy cars on our roads.

We’re innovating and learning as we go. Different treatment systems are being trialled in the road corridor to treat the runoff before it reaches our harbours. New technology brings new opportunities, such as using smart water sensors and drones to carry out water monitoring programmes.

Future challenges and opportunities

Continued population growth and urbanisation will add to the pressures on our waterways. Land development is predicted to triple the amount of impervious surfaces (hard surfaces like buildings and roads that stop water from soaking into the ground) by 2048. Without careful design, this will increase the amount and speed of stormwater. This could erode waterways and have bigger effects on receiving waters.

Causes of degradation of our waterways:

- Rural activity
- Development
- Faecal contamination
- Transport
- Littering and spills

- Livestock
- Fertiliser
- Fertiliser
- Excess fertilisation
- Excess sediment
- Excess nutrients
- Pathogens
- Erosion
- Tyre abrasion
- Road runoff
- Chemical spills
- Illegal drainage

Figure 12: Ecosystem stressors impacting our waterways
The impacts of climate change, such as increased temperatures and more frequent storms will make it harder for our natural systems to recover after events.

**CASE STUDY**

Like many urban streams, Te Auaungā / Oakley Creek in Mount Albert has been known for its poor water quality. Over the last few years local residents have been planting native trees around the stream. This helps to reduce the amount of contaminants entering the water.

Recently students from Gladstone Primary discovered a spotty stonefly nymph at the stream. These are usually only found in areas of native bush and high water quality. Its presence is a reward for local residents, showing their efforts are paying off.

**What we need to work on**

This value connects to the following big issues and processes, that we discuss later in the document:

- cleaning up our waters (p. 36)
- growth in the right places (p. 37)
- creating our water future together (p. 42)
- achieving net benefits for catchments (p. 43).
**Water use**

**What we value: We can meet our everyday water needs safely, reliably and efficiently**

Access to clean water is essential to life, and critical for public health and the economy.

In urban areas, we value having an efficient, trustworthy system that provides safe drinking water as easily as turning on a tap.

In rural areas and on our islands, where we must manage our own water resources from season to season, we value every drop.

We rely on water for sanitation, with a large-scale wastewater system that helps to convey and treat sewage and minimise the risk of infectious diseases.

**Current state**

**Where our water comes from**

Providing Aucklanders with a secure supply of fresh water is one of the council’s most important jobs. Although it rains regularly, we do not have large fresh water resources; only 38 per cent of Watercare’s municipal water supply is sourced within the region (see fig iii).

The rest comes from Watercare-owned dams in the Hunua Ranges (part of the Waikato catchment) and the Waikato river.

The last dam built to supply Aucklanders with drinking water was opened in 1977. After the drought of 1983/84, Watercare undertook a detailed investigation of future sources of drinking water. The Waikato River was selected as the best source and a new treatment plant and pipeline was completed in 2002.

Today, our municipal system has proven to be safe, reliable and resilient. We work hard to keep it that way, even in the most testing of situations (see case study p. 23).

Our picture of rural water supply is less clear, because it’s not managed in the same way. Rural users source their own supply, from rain tanks, surface water takes, or groundwater.

The council issues resource consent for groundwater takes, so we know that aquifers below some parts of Tāmaki Makaurau are nearly fully allocated, which poses challenges for future water use.

For those using water tanks, storing enough water to last through summer can be difficult. There can be periods when rain is not frequent or heavy enough to replenish tank levels, and water has to be trucked in.
**CASE STUDY**

In March 2017, the Tasman Tempest dumped a record amount of rain on Ōtāhuhu, peaking at two months’ worth in only 12 hours. The rain caused massive slips in the Hunua Ranges and filled the dams with silt. The Ardmore treatment plant had to work a lot harder to get the water up to drinking quality. Aucklanders were asked to cut down their water use by 20 litres a day. Watercare was able to draw on other dams to continue supplying safe drinking water. Watercare is now looking at ways to reduce slips including planting native trees, and treatment technology to handle more silt from future storm events.
How our water is used

Watercare supplies around 365 million litres of water every day, for use in homes and businesses. That works out to 272 litres per person per day, down 26 litres since 2004.

More than half of that water is used in homes. At 160 litres per person per day, we have the lowest per capita residential water use in Aotearoa.1 Volumetric charging (paying for water based on the amount that is used) encourages us to be efficient. It also helps us to quickly detect when something’s gone wrong, like a broken or leaking pipe.

About a quarter of our reticulated water supply is used by the commercial sector. Some industries are particularly water intensive, including beverages, food and other manufacturing activities.

Where our water goes

We also use water to transport our sewage, as wastewater. The smell of wastewater is diminished. If it mixes with other waters, it can pollute the maori of those waters too.

1 2016 Water New Zealand performance review

Keeping untreated wastewater out of waterways is an important objective. This is especially so for our ecosystem, and recreation and amenity values (this is discussed further on in this document).

Before waterborne sanitation was introduced, Aucklanders used cesspits and night-soil carts. Because of this, residents suffered from regular outbreaks of typhoid and other infectious diseases. The first sewerage system was completed in 1914 and was an important milestone for public health (even if it simply moved the problem elsewhere – more on that on page 31).

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Treatment plants today
Today, 18 treatment plants discharge around 450 million litres of treated water each day. The flow from the largest plant at Māngere is comparable to some of our biggest rivers. Significant upgrades to treatment plants have greatly improved the standard of wastewater treatment. As well as removing solids and biological nutrients, Māngere’s treatment processes result in a 10,000-fold reduction in harmful pathogens, bacteria and viruses. The final effluent meets standards that protect public health, the local environment, and coast, estuaries and harbours.

CASE STUDY
Wastewater is now being valued as a source of energy and reusable products. Water reuse at the Māngere and Rosedale treatment plants means we don’t need to use high quality drinking water for this low-grade purpose. We save enough drinking water to supply 156,000 Aucklanders every year. The plants also generate energy from biogas to power themselves (56 per cent of Māngere’s energy needs, and 74 per cent for Rosedale). The goal: to run the Māngere and Rosedale plants on self-generated energy by 2025.

Future challenges and opportunities
We expect that population growth will drive demand for safe, reliable drinking water beyond supply by 2050. We will need to have new solutions in place. We currently have limited prospects for increasing either supply or storage within our regional boundaries. It is likely that we will need to use a mixture of tools to meet our urban and rural water needs, including managing our demand and securing new sources. We come back to this in ‘Meeting Future Water Needs’ on page 38.

The wastewater network and plants are also going to approach their design capacity. We can add further capacity, and need to think about the best ways to do this.

As our city grows, decisions about where and how this growth happens can have a big influence on how easy or expensive it is to provide water services. Getting water and wastewater to where we need it to go relies on infrastructure which is expensive to build, maintain and operate. We come back to this in ‘Growth in the Right Places’ on page 37.

We will also need to ensure that our current water sources remain fit to drink from, especially from smaller-scale bores and rural water takes. As groundwater allocations reach their limits in some places, we need to ensure farmers and growers are able to meet their water needs. They need to continue their important contribution to the economy and food systems of Tāmaki Makaurau. This includes thinking about how allocation is fairly managed, for example between existing and new activities.

FAST FACT
By being water efficient, Aucklanders have managed to defer the need for another water source by five years. Water efficiency gains by 2025 will buy us another five years.
Mangere wastewater treatment plant.

What we need to work on

This value connects to the following big issues and processes, that we discuss later in the document:

- meeting future water needs (p. 38)
- adapting to a changing water future (p. 39)
- setting priorities for investment. (p. 43)

Learn more

Auckland water efficiency strategy

Take action

An undetected leak can waste thousands of litres of water. Fix dripping taps and check under appliances for leaks. Watercare provides advice to help households and workplaces save water on their website.
Recreation and amenity

What we value: We enjoy being in, on and near the water

Spending time in or around water is one of the benefits of being an Aucklander: we are never more than 20 kilometres from the coast. The recreational possibilities and amenity value of our beaches, harbours, lakes and streams are highly prized. They enhance our place as one of the world’s most desirable cities to live.

Current state

Access

The waters of Tāmaki Makaurau are very actively used for recreation. Popular spots like Piha and Long Bay receive more than 10,000 visitors a day at peak times. Some of our recreational spots, like the west coast lakes, are also highly sensitive natural environments. There is a challenge to manage demand without undermining the very qualities that visitors enjoy.

To help people enjoy the water, the council provides facilities like boat ramps, jetties and carparks. To help people stay safe, we support essential services such as Surf Lifesaving and the Auckland Rescue Helicopter. The council’s community facilities delivered 400,000 swimming lessons last year.

Public health

Sometimes water gets contaminated with human and animal wastes. This can make people sick, and is a source of considerable public concern. Some of this we can fix (like...
broken sewer pipes and under-performing onsite wastewater systems), and some (like bird droppings) we cannot.

CASE STUDY

Some older areas of the city were built with combined stormwater and wastewater services (only two per cent of the serviced area). The Central Interceptor and Western Isthmus water quality improvement project will help with wet weather overflows.

New technology and better information makes it possible to detect and improve small-scale wastewater issues too, such as broken pipes and leaks.

Safeswim has been developed to help people make informed choices about where and when they swim. This is a partnership project with Surf Lifesaving Northern Region and the Auckland Regional Public Health Service.

Data from sensors on the wastewater network is combined with predictive modelling to provide the public with the best real-time information possible. Safeswim also allows Aucklanders to monitor progress towards our target of more swimmable days and better public health.

CASE STUDY

In 2018, the council and community of Clarks Beach banded together to find and fix the sources of contamination that were polluting their beach. Locals regularly collected water samples to feed into Safeswim. The causes of pollution are being traced, and the long-term alert on the beach has been lifted.
Amenity and connection
In urban and suburban areas, we are working to make hidden waterways visible again. Daylighting and naturalising our streams, providing pre-treatment for stormwater, and building boardwalks along esplanades are great ways to reconnect our communities with their natural environment. They are examples of maori-enhancing actions.

Future challenges and opportunities
As our population increases, it will be important to maintain recreational and amenity opportunities for all Aucklanders. It will also be important to manage increased demand for recreational use of waterways, beaches and the associated public facilities like boat ramps. Growth in tourism could add to these pressures such as hosting more visiting cruise ships.

More urban development will put further pressure on the health of our waters, and have an effect on their recreational and amenity values.

Climate change, coastal inundation and more severe storm events are likely to undermine access to water for recreation. Already-sensitive environments will become more vulnerable to the impacts of visitors.

FAST FACT
Since they began in 2002, volunteers of the Watercare Harbour Clean Up have collected 38 million pieces of litter from our waterways.

What we need to work on
This value connects to the following big issues and processes, that we discuss later in the document:
- cleaning up our waters (p. 36).
- creating our water future together (p. 42).

Learn more
Safeswim website

Take action
Think before you flush things down the drain. In 2016, around half of the wastewater overflows in dry weather were caused by people flushing rubbish down the toilet and pouring cooking fats, oils and grease down the sink.
Culture

What we value: Water contributes to our identities and beliefs, as individuals and as part of communities

For the many cultures that are part of Tamaki Makaurau, our waters add to our vitality and identity. They allow us to express our traditions. Being able to connect with water in places that are special to us, whether that’s through swimming, surfing, fishing or gathering shellfish, is part of what makes us an Aucklander. It’s also what we like to share with our visitors.

Our cultural attitudes shape how we value and use water. If healthy waterways are valued within our culture, we will place a higher priority on their protection.

Water holds particularly special cultural value to Māori. Mana whenua are iwi and hapū who have a genealogical relationship (whakapapa) to significant local waters. They have an obligation as kaitiaki to protect them as taonga tuku iho (treasures to be passed down to future generations).

Current state

Population increase, sedimentation and pollution have all had an impact on the cultural value of water, over a long duration. Water with degraded mauri reduces the quality of our experience. Swimming at a litter-strewn beach, or fishing in murky water diminishes our cultural wellbeing.

This has adversely affected mana whenua and their ability to exercise manaakitanga. Caring for guests is an important sign of mana (prestige and authority), and relies on gathering food from traditional harvesting grounds (mahi ngā kai).

To Māori, all things are deemed to have mauri; people, fish, animals and birds, lands, seas, waterways and rivers.
Initiatives in two of our harbours are bringing the cultural values of communities and mana whenua into decision-making processes:

- **Sea Change - Tai Timu Tai Pari**, a marine spatial plan and initiative for the health and sustainability of the Hauraki Gulf, with mana whenua views woven throughout all aspects of the plan.
- **The Integrated Kaipara Harbour Management Group**, created to ensure a healthy and productive Kaipara Harbour.

**FAST FACT**

The sewerage system that was opened in 1914 helped to reduce the problem of typhoid and infectious diseases in the city. It also created new problems. The system fed to an above-ground wastewater pipeline that was built across Okahu Bay, against the wishes of the Ngāti Whāitu Orākei iwi. It discharged raw sewage into this bay, polluting the shellfish beds, and turned the papakanga (village) into a swamp during heavy rain. The pipeline separated the people from their mahinga kai and contributed to a loss of mana for their hapū.

**Future challenges and opportunities**

Population growth and climate change could put further strain on the cultural values of water. These values include mana whenua's ability to gather kai from traditional food grounds.

Changing attitudes to water may play a big part in how we manage our water resources. Recognising significant natural features as a person in the eyes of the law could help to ensure the long-term protection and restoration of significant water bodies. The Whangakui River is an example of this.

Tikanga codifies Māori values into traditional practices and customs, to ensure that the mauri of water is not degraded. Tikanga is commonly based on experience and learning that has been handed down through generations, and its practice can vary between iwi and hapū.

Treaty settlements are creating new co-governance and management arrangements with iwi Authorities. These arrangements recognise Māori values as a fundamental driver for the sustainable management of natural resources.

**What we need to work on**

This value links to the following big issues and processes, that we discuss later in the document:
- **cleaning up our waters** (p. 36)
- **applying a Māori world view** (p. 42).

**Learn more**

Sea Change Marine Spatial Plan

**Take action**

Consider what you can do to restore the mauri of the waters you love. Be mindful of how the effects of your actions might wash downstream to those waters (e.g. littering, and using stormwater drains for anything but rain).

Community groups welcome volunteers to clean up and replant local waterways - lists of community programmes are available on the council's website, here and here.
Resilience

What we value: Our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change

We value resilience in our water systems, both natural and engineered. We want them to continue working through sudden shocks and more gradual shifts in conditions.

Tamāki Makaurau is vulnerable to a range of hazards that can risk our safety and our daily lives. Intense storm events, coastal erosion, and localised floods remind us of this.

We value our ability to weather such events with the least possible disruption. When disruptions do happen, we value being able to recover quickly and effectively.

Current state

The hazards

Storms, flooding, coastal inundation and droughts, are natural processes. They only become hazards when they affect the things that we value. These things include property, infrastructure, and — most importantly — our safety.

In some places, we have made the impact of natural hazards worse. We’ve done this by reclaiming coastal land, modifying landscapes, increasing impervious surfaces, and building in vulnerable locations.

Hazard events can be localised and frequent. Nearly every year, we will experience a damaging flood or other event somewhere in the region. This brings disruption to affected households and businesses. Some parts of Tamāki Makaurau are more vulnerable than others.

FAST FACT

Floods are the most frequent and costly natural disasters in Aotearoa. 137,000 buildings in Tamāki Makaurau are prone to some form of flooding, of which 16,000 are at risk of flooding above floor level.
CASE STUDY

Five days of unusually heavy rain in March 2017 flooded more than 300 properties. Trees fell, slips blocked many roads, and more than 2800 homes were left without power.

In New Lynn, debris washed downstream and blocked a major culvert under the Clark Street and Great North Road intersection. Stormwater overflowed the culvert and flooded local buildings and residences. The footpath and road collapsed into a very large sinkhole, and one multi-storey building was so damaged that it had to be demolished.

Major urgent repair works were an opportunity to make things better than before. The new and improved culvert has two levels, to cope with regular flows and flash flooding. Embracing water sensitive design, roadside plants are used to capture excess water and act as a ‘biotower’ by catching contaminants before they enter the stormwater system.

Water infrastructure

The resilience of our infrastructure is an important consideration. We want to avoid disruptions to essential services such as drinking water supply and wastewater disposal. Floods can make roads impassable, and pose direct threats to our safety. These can be localised problems or have region-wide consequences. This depends on where the hazard occurs and how quickly services can be reinstated.

Communities

In the wake of the South Island earthquakes, we have learned a lot about the community dimensions of resilience, including the need for:

- Connected communities. Communities that are better connected to each other are better able to take care of each other in times of difficulty.
- Informed choices. Resilience requires that we are all able to make informed choices about risk. The council is working with scientists to develop robust data, such as flood mapping and coastal inundation and erosion studies. We need timely and effective ways to share that information with Aucklanders.

The five R’s of Tāmaki Makaurau emergency management: Reduction, readiness, response, recovery, resilience.

Future challenges and opportunities

Risks to resilience are expected to change over time. This is in part because natural systems are dynamic and ever-changing, and in part because of climate change. Sea level rise, changes in rainfall intensity and patterns,
A future with more weather extremes:

- Spring rainfall
- Autumn rainfall
- Total rainfall
- Extreme rainfall events
- Drought
- Hot days
- Cold nights
- Risk of fire

and more storms will all intensify existing risks.

For example, predictions for losses from coastal erosion in different parts of the region range from 6m to 56m in the next 100 years. With sea-level rise, these predictions extend to 200m in some areas. These kinds of changes will have significant effects on the future of coastal properties and activities.

What we need to work on

This value connects to:
- adapting to a changing water future (p. 39)
- growth in the right places (p. 37)
- creating our water future together (p. 42)
- setting priorities for investment (p. 43).

Learn more

Working together to build a resilient Auckland: Auckland Civil Defence and Emergency Management Group Plan;
Coastal Management Framework for Auckland

Take action

Have you checked the flood hazard maps for your property?

Keep drains and gutters clear of debris and pay attention to heavy rain warnings.

CASE STUDY

Capetown’s experience highlights how essential it is for our water systems to be resilient. A normally well-supplied city, severe drought dropped water storage levels close to the point where officials were counting down to when they would need to turn off the taps.

On ‘Day Zero,’ residents would only be able to collect 25 litres of water each from standpipes across the city. That drastic vision prompted residents to halve their water use, delaying Day Zero for now.

The city is pursuing further water efficiency and diversifying its water sources. The changes have come at significant economic and personal cost, but highlight the ability of communities to respond when they need to.
The big issues: what we need to work on
Ngā take nui: ngā mea he ki mahi mā tātou

The challenges for each of the five values highlight just how much we need to do if we are going to protect and enhance te marae o te wai o Tāmaki Makaurau.

As part of developing this discussion document, we talked with Councillors, local board members, the Mana Whenua Kaipaki Forum and staff from across the council family.

We asked them, what are the issues that we need to tackle. We also looked at the submissions from the Long term Plan and Auckland Plan 2060 processes.

Focusing on the big Issues
From those sources, we have distilled four big issues that we think are at the heart of our water future:

- cleaning up our waters
- growth in the right places
- meeting future water needs
- adapting to a changing water future.

These are challenging issues that we can’t afford to ignore. None of them have a quick fix, and we don’t yet have all the solutions that we need.

Making progress where it matters
We want to make sure that our work programmes are responsive to these big issues. We also want to make sure that we are always on the lookout for new opportunities to make progress. Developing an Auckland Water Strategy will help us to keep our focus where it needs to be.

We start to talk about the issues on the following pages, and suggest some lines of inquiry that we’d like to pursue as part of developing an Auckland Water Strategy.

We are proposing to work across the council and with mana whenua, stakeholders and the community to develop better understanding of the issues. We want to come up with options to move forward, and to implement the preferred approach. We’ll also look to define goals and outcomes for each of the big issues. That way, we’ll be able to evaluate whether we are making a difference.

We are interested to hear your views about whether we have identified the right set of issues, and what kind of actions we should prioritise.
Cleaning up our waters

Our biggest ecological effects on water come from our activities on the land. Contaminants wash down through catchments and into our waterways. This disrupts ecosystems and damages mahinga kai. Faecal contamination from humans, animals and birds poses health risks for recreational use.

What do we need to do on the land, to clean up our waterways?

A clear objective

Aucklaners want cleaner waters\(^2\). We want to be able to enjoy the water without risk of getting sick, and we want to get pollutants out of the waterways.

We want to restore the biodiversity of our natural waterways, and have confidence that our water infrastructure is providing reliable, clean drinking water.

A long-term investment

Cleaning up our waters is going to take time and money, and there's a connection between the two. With more money we can move faster, with less it might take us longer to get to our goals.

Through the targeted rate, we have committed an additional $452 million over the next ten years to deliver cleaner harbours, beaches and streams. The money is funding programmes to improve stormwater systems, reduce wastewater overflows, and rehabilitate urban and rural streams.

This is going to enable us to achieve in a decade what we had originally anticipated would take 30 years, but this investment is only part of the solution: there is still more to be done.

A targeted approach

The needs are going to be different across the region. It’s going to take more effort to clean the waters in some areas compared to others.

We take a risk-based approach to deciding how we stage our investments, for example the places with the highest human health risk.

How do we make these choices transparent, with a level of reassurance that the objective of cleaning our waters applies to the whole region, even if its implementation has to be staged?

Our proposed actions

We would like to explore how we can move further, faster with cleaning up our waters. Some of the possibilities include better data-sharing, streamlining processes to encourage water sensitive design, identifying other sources of funds and stepping up the effort to identify and fix sources of pollution.

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Growth in the right places

Managing growth is the most pressing challenge for Tāmaki Makaurau. We need to provide for the housing, employment and social needs of our growing population, while meeting concerns about affordability and the environment. The impacts of growth on water are significant: whether we like it or not, human activity inevitably has effects on our waters.

What would growth look like if we made water – te mauri o te wai – the priority in our decision-making processes? And are there changes we can make to enable that kind of growth?

Our monitoring programmes tell us that water quality is usually best in the most remote and natural parts of the region. It is worst in the most urbanised areas, with a mixed picture in the rural and suburban areas in between.

An opportunity to improve

If our goal is to improve te mauri o te wai, we think we need to do our best to protect the places where water is relatively healthy, and use growth as an opportunity to improve the impacts on areas that are already degraded.

Redevelopment in our town centres is a good time to address some of our existing water problems, such as reducing flood hazards and improving stormwater capture and treatment.

It also helps us manage our infrastructure investments, concentrating demand in a smaller area.

This approach aligns with the compact urban form promoted in the Auckland Plan 2050 and the Auckland Unitary Plan. It also lines up with our transport objectives of increasing public transport patronage. The less time we are stuck in congestion, the less pollution will come from our cars, onto our roads and into the sea.

Our proposed actions

We would like to look further at the tools that are needed to manage and enable growth in ways that will protect and enhance te mauri o te wai.
Meeting future water needs

We need to ensure we continue to have enough water to meet our needs, for drinking, agriculture and industry, even as our population grows. We will also need to ensure we are fairly allocating the water we have, across the range of water demands. This includes making sure we leave enough water in streams and aquifers so they still have enough base flow to be healthy.

Where will our water come from by 2050?

Freshwater is a scarce resource in Tamaki Makaurau, even though it rains frequently. We have limited large rivers, lakes and groundwater resources in the region to draw water from, and we are becoming increasingly reliant on the Waikato region to meet our needs.

In urban areas, water demand is forecast to outstrip current supply within 10 years, prompting planned additions to our existing water supplies. This is expected to meet our urban supply needs until around 2050, or...

Water supply and demand in metropolitan Auckland

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
Adapting to a changing water future

We know that conditions for our water future are changing, and that many of the changes – like droughts, flash flooding and coastal inundation – will be rapid and disruptive. We expect that effects will be felt unevenly across communities and different industry sectors, due to geography, socio-economic status, and the level of their water needs.

What can we do now, to anticipate the changes in our water future and be ready to adapt? How much additional capacity (redundancy) do we need to build into our systems, and how do we balance what is efficient today with what might be necessary tomorrow?

A HIERARCHY OF RESPONSES

On the coast, there are four key approaches we can take: do nothing, protect, adapt, and retreat. Here are some examples:

- Do nothing: No measures put in place
- Protect: Building seawalls and planting dunes
- Adapt: Raising buildings to account for sea level rise
- Retreat: Moving back from the coast

more efficient water use (demand management)
rainwater collection and storage, from rain tanks to reservoirs
other water sources in the region, such as aquifers and surface water taken from rivers
water re-use for non-potable and potable purposes
water sources from outside the region.

We would also like to improve our groundwater monitoring, so that we can better quantify demand and ensure our allocation systems are working and that our ecological effects are appropriately managed.

In the rural parts of Tamaki Makaurau, we have a very limited understanding of how much water is being used. This is especially important for groundwater, because we think we are close to the limit of what we can sustainably take from aquifers in some parts of the region.

Large water users motor their takes (as part of their resource consent conditions), so we know that they aren’t all using their full allocation. But, we don’t monitor small-scale bores. We also know there are many illegal bores.

Our proposed actions

We need to evaluate a range of options for meeting our future water needs. This includes making the most of what we already have, and potentially developing other new sources of supply. Because our supply options within the region are very limited, the solution is likely to be a mixture of some or all of the following:
Our water future: a discussion document

Deciding what kind of approaches to take and where are not simple decisions. They require a balance between:

- technical feasibility
- affordability
- community expectations, and
- health and safety.

There is also a dimension of timing. Today’s hotspots require urgent responses, but as the effects of climate change are felt, we can anticipate many more hotspots emerging. How do we ensure our existing communities are able to adapt, and how do we make sure that we’re not still building in vulnerable places?

As is becoming evident nationally, it is not yet clear how the cost of adapting to a changing water future will be shared between affected individuals and communities. How should we prioritise our responses in Tāmaki Makaurau?

Coastal Management Framework

The Coastal Management Framework was approved in 2017. It is a good basis for our thinking. It sets health and safety as a key consideration, then looks at whole systems to understand what changes might be needed. It sets a long-term horizon for change (100 years), and uses interim measures to work towards more durable solutions. It recognises that not all technical solutions will be suitable, or even possible, for all areas, and that what might work for ten to twenty years may need to change over the longer term.

Our proposed actions

As the frequency and severity of hazard events increases, so will our need for a shared understanding of risks, responses and the allocation of responsibilities. We want to continue to develop this shared understanding with communities.

Coastal erosion at Stanmore Bay
How we will work: applying a principles-based approach

Ka pēhea ā tātou āhua mahi: he tikanga ā-mātāpono te āhua whakahaere mahi

We have a lot to do to make progress, both within the council and in partnership with mana whenua, stakeholders and communities. We are proposing the following six principles to guide us as we work:

1. **Recognise that water is a treasured taonga.** Water is life, and needs to be managed carefully to restore te mauri o te wai.
2. **Work with ecosystems.** Working with the natural environment, and mimicking its systems wherever possible is key to a water sensitive approach.
3. **Deliver catchment scale thinking and action.** The catchment is the best scale to think about water flows and uses, and the balance between different activities and effects.
4. **Focus on achieving right-sized solutions with multiple benefits.** Local variables will drive the fine-grained responses to our regional aspirations, with different solutions appropriate at different scales.
5. **Work together to plan and deliver better water outcomes.** We all have a stake in our water future. Engaging with mana whenua, communities, and across disciplines helps find durable and effective solutions.
6. **Look to the future.** Our planning and development takes future uncertainties into account, so that communities and infrastructure are future-proofed and resilient.

These proposed principles can be applied as we design and implement work programmes, and as we evaluate progress. This will help to ensure the details of how we work contribute to our vision and values.

*Note: the Urban Water Working Group has proposed a series of ten principles to support improved urban water outcomes across Aotearoa. The principles broadly align with what we have proposed here. We will review the alignment when the draft national principles progress to a final approved version.*

**POLLUTION PREVENTION**

More than 1000 litres of purple dye was spilled into the Oruawararua Stream in 2013, killing all the eels, fish and many of the plants. The company responsible was fined $103,000 plus $25,000 court costs. A significant example of the polluter pays principle in action.

Mana whenua, as kaitiaki of the awa, are working proactively with the council to ensure such an accident isn’t repeated. Through the Industry Pollution Prevention Programme they advise businesses on how to prevent contaminants entering waterways.
Improving the way we work

We think that there are four key elements that we need to improve within our processes, to help us apply the principles in our work:

- applying a Māori world view
- creating our water future together
- setting priorities for investment
- achieving net benefits for catchments.

As with the four big issues, we will need to work across the council and with mana whenua, stakeholders and the community to identify steps we can take to improve our processes.

Applying a Māori world view

Putting te mauri o te wai at the centre of our approach to water means that we must incorporate a Māori world view across all of the elements of our framework. So, how might a Māori world view shape our thinking and decision-making?

With advice from the Mana Whenua Kaitiaki Forum, we think there are three main issues:

- placing te mauri o te wai at the centre of decision making processes
- incorporating miatauraanga Māori (Māori knowledge and expertise)
- providing for mana whenua in governance arrangements.

We would like to explore how we might increase opportunities for mana whenua to exercise their enduring kaitiaki role over the waters of Tamaki Makaurau. It could include a range of opportunities, from co-governance arrangements to hands-on projects (some of which might be enabled through the council’s social procurement policy).

Creating our water future together

Achieving a healthy, sustainable and affordable water future for Tamaki Makaurau will require energy and commitment from all of us.

From the decisions we make in our own homes and communities, through to the regional investment choices that we will need to make, we all have the opportunity to make a better water future for Tamaki Makaurau.

There are a few things that we know work well already:

- engaging Aucklanders in their communities, about their local water issues
- empowering Aucklanders as citizen scientists
- working directly with industry, agriculture and other sector groups to support their leadership in water management
- ensuring we all take responsibility for our impacts, through pollution prevention and polluter pays programmes
- collaborating across teams within council and with central government agencies to ensure regulatory frameworks and practical projects are responsive to Aucklanders’ needs.

Community planting at Harbutt Reserve
Setting priorities for investment

Water needs to be affordable and accessible to everyone. At the same time, we have to be able to pay for our water systems. Put simply, we can’t afford to do everything today.

When we do spend money, we need to make sure that our spending lines up with our objectives, and that we’re getting value for money.

The next 30 years will require significant investment in our water infrastructure, for drinking water, wastewater and stormwater. Between now and 2048, we expect to have spent around $38.7 billion on water infrastructure. Rapid growth, historic underinvestment in assets, and high levels of expectations from the community have created significant financial challenges for the council.

Even without the pressure of anticipated population growth, we must continue to maintain, renew and replace our current assets to meet communities’ expectations. This needs to be balanced with the community’s ability to pay for the significant investments that need to be made.

We would like to investigate whether taking a ‘one water’ view of the water system would enable clearer prioritisation of our investments. Are there technological innovations or opportunities for partnership that would allow us to get further faster?

Achieving net benefits for catchments

Even with the best techniques, we can’t avoid all water impacts from land-based activities. This means that we need practical ways to balance our choices so that, overall, our waterways end up better off than they started.

Looking at this picture at the catchment scale would allow us to understand where impacts are coming from and – when impacts can’t be avoided or remedied on-site – how they can be mitigated or offset within a catchment.

For example, there may be opportunities to offset the impacts of new development by protecting significant environmental sites within the same catchment. This is about focusing our efforts on the activities that have the most impact on the whole catchment health.

We also need to look at the regional scale, and make decisions about the level of effect we can accommodate in different catchments. Te mauri o te wai is different in every catchment, with their own mix of impacts and abilities to absorb change (see Growth in the Right Places on Pg 38).

We would like to investigate practical methods to allow for decision-making at a catchment scale. These could include offset mitigation, environmental compensation schemes, and allocation and trading schemes.

### Total projected expenditure by infrastructure type 2019 – 2048

<table>
<thead>
<tr>
<th>Infrastructure type</th>
<th>Capital expenditure</th>
<th>Operating expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply</td>
<td>$7.7 Billion</td>
<td>$10.7 Billion</td>
</tr>
<tr>
<td>Wastewater</td>
<td>$11.6 Billion</td>
<td>$18.0 Billion</td>
</tr>
<tr>
<td>Stormwater</td>
<td>$6.1 Billion</td>
<td>$7.0 Billion</td>
</tr>
<tr>
<td>Total water</td>
<td>$25.4 Billion</td>
<td>$35.7 Billion</td>
</tr>
</tbody>
</table>

Source: Infrastructure Strategy
What happens next
He aha ka whai muri ake

The council has decided to develop an Auckland Water Strategy. This discussion document is an early part of that process. It reflects the current state of thinking, and what we know about the issues for the waters of Tamaki Makaurau.

We have proposed a framework to organise how we think and make decisions about water:

- **Our aspiration** is to protect and enhance te mauri o te wai – the life-supporting qualities of water. This sits at the centre of our values and drives our decisions.
- **Five values.** We recognise that we value water for a range of reasons. We describe these in five categories, to help us understand how the current situation measures up to our values, and to hone in on the stressors that are having an impact.
- **Four big issues.** We identify four ‘big issues’ that define our water challenge. If we are to restore te mauri o te wai, we will need to address these issues.
- **Six principles.** We propose six principles that will guide our actions as we move forward with developing the proposed framework into a Water Strategy.
- **Four processes.** We also identify four elements that we need to work on in our processes, to support quality decisions.

We have focused on high-level values in this document – the spaces where we can find agreement and unify our vision. We would like to get some feedback and agree on a framework as a way of organising our approach to what we do next.

The next steps in developing a Water Strategy for Tamaki Makaurau need to provide a line of sight, from vision to actions, to make sure what we are doing is going to build the future we aspire to. Defining outcomes, measures and processes for transparent reporting on our progress will be an important part of this.

Now, we want to hear from you:
- **Do these values match what you value about water?** Please tell us why, and if there is anything else you value about water?
- **How concerned are you about the ‘big issues’?** Please tell us why, and what you think we can do now to anticipate and adapt to the changes in our water future?
- **What criteria are important to you as we develop options to meet our future drinking water needs?**
- **What actions should we prioritise as we adapt to a changing water future?**
- **Do you have any feedback on the proposed framework, or is there anything else you think should be included?**
- **What’s the most important thing you think we should do for our water future?**

You can give feedback online at **akhaveyoursay.nz**. We are also running Have Your Say events across the region or you can fill out a submission form available at libraries, service centres and local board offices.

Feedback must be received by 19 April 2019. We’ll take all the feedback to the Environment and Community Committee later this year, as part of shaping the next steps in developing an Auckland Water Strategy. To receive updates about this discussion, sign up at **aucklandcouncil.govt.nz/ourwaterfuture**.
Glossary

Papakupu

Amenity The liveability or quality of a place that makes it pleasant and agreeable for individuals and the community.

Aquifer An underground layer of water-bearing rock or sand from which groundwater can be extracted.

Asset Natural or constructed features that are of value including natural assets such as waterways or constructed assets such as water storage reservoirs and pipelines.

Biodiversity The variety of life in a particular habitat or ecosystem including the totality of genes, species, and ecosystems.

Catchment Area of land in which rainfall drains toward a common stream, river, lake, or estuary.

Groundwater Water located beneath earth’s surface in pore space (the space within a rock body that are not occupied by solid material) and fractures of rock formations.

Hāpu A number of whenau sharing descent from a common ancestor; kinship group, sub-tribe.

Impervious Surface Any surface that is covered by materials such as asphalt, concrete, stone, brick, metal, etc. through which water cannot penetrate. In the urban environment, roads, footpaths, roofs, carparks, and other constructed assets often create impervious surfaces.

Infrastructure The fixed, long-lived structures that facilitate the production of goods and services and underpin many aspects of quality of life. ‘Infrastructure’ refers to physical networks, principally transport, water, energy, and communications.

Iwi A number of hapū (section of a tribe) related through a common ancestor.

Kai Food.

Kalmoana Seafood.

Kaitiaki Trustee, custodian, guardian.

Kaitiakitanga Guardianship, stewardship, trusteeship.

Ki Uta Ki Tai Conceptual term meaning ‘from the mountains to the sea’ or ‘from ridge to reef’.

Kotahitanga Unity, togetherness, solidarity, collective action.

Mehinga Kai Food gathering place (rivers, bush, sea, gardens etc.).

Mana whenua Hapū and iwi with ancestral relationships to certain areas in Tāmaki Makaurau where they exercise customary authority.

Menaaktanga The process of showing respect, hospitality, generosity and care for others.

Manuhiri Visitor, guest.

Mauri Life principle, life force, vital essence. The essential quality and vitality of a being or entity.

Natural Areas Places characterised by indigenous species or ecosystems, or a place or landform not or scarcely modified from an indigenous condition.
Non-residential water use Water used for industrial, commercial, institutional purposes and for irrigating public parks, gardens, and sports fields.

Nutrients Mineral elements absorbed by plants for nourishment. Excess nutrients in wastewater can lead to algal growth that impact on the environment and water quality.

Rain garden Specially designed systems to filter stormwater through soil mix and plants. These absorb and filter contaminants before stormwater flows to surrounding ground, pipes, drains and streams, and eventually to the sea.

Rain tanks On site storage used to collect and store rainfall runoff from roofs.

Runoff The portion of rainfall which runs off the land and into the drainage system and overland flow path.

Sewage Wastewater produced as a result of residential and non-residential uses of water that needs to be collected for treatment before further use or discharge to the environment.

Sewerage The system of pipes and treatment works to collect and safely dispose of sewage effluent.

Stormwater Rainfall runoff from land, including constructed impervious areas such as roads, pavement, roofs and urban areas which may contain dissolved or entrained contaminants, and which is diverted and discharged to land and water.

Tāmaki Makaua The Māori name for Auckland. Translates to Tāmaki desired by many.

Taonga A treasured item, tangible or intangible.

Taonga tukū iho A treasure passed down through the generations, either tangible (e.g. whenua) or intangible (e.g. Te Reo Māori).

Te ao Māori The Māori world view.

Three Waters Water services for water supply, wastewater, and stormwater; including both natural assets and physical infrastructure.

Tikanga Correct procedure, custom, lore, method, way, plan, practice, convention, protocol. The customary system of values and practices that have developed over time and are deeply embedded in the social context.

Wai Water.

Wastewater Liquid (and liquids containing solids) waste from domestic, industrial, commercial premises including (but not limited to) toilet wastes, sullage, trade wastes and gross solids.

Water efficiency Using the minimum amount of water possible without compromising the desired outcome or the liveability of our city and region.

Water sensitive urban design A range of measures that are designed to minimise environmental impacts of urbanisation. These encompass stormwater treatment systems, such as wetlands and rain gardens, as well as water saving and water harvesting systems (e.g., rainwater tanks).

Water quality The physical, chemical and biological characteristics of water in relation to a set of standards.

Wetland Permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.

Whakapapa Genealogy, lineage, descent.
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February 2019.
Our Water Future
Tō Tātou Wai Ahu Ake Nei
Public Engagement Analysis Report

OUR WATER FUTURE.
USE IT.

OUR WATER FUTURE.
LOVE IT.
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Executive summary

Auckland Council is preparing a water strategy. As part of developing the strategy, a discussion document Our Water Future – Tō Tātou Wai Ahu Ake Nei was released on 17 February 2019. Aucklanders were invited to have their say via an online questionnaire and at over 70 public events. It was also possible to make a written submission. Over 7,300 submissions were received. This report presents an analysis of the submissions received, with recommendations for uptake in the water strategy.

Key findings

The feedback from the engagement process demonstrates the depth of knowledge and passion about water issues in the community. It suggests that the framework is generally fit for purpose, and that the priority for the public is to move quickly from words to implementation.

Cleanliness of our waters was of paramount importance to the people of Auckland. They asked that we better communicate what we are doing now to improve water quality across the region and do more to fill the gaps.

Empowering communities to act on their local issues is important for many communities.

More than 30 per cent of open-form responses asked us to facilitate the use of rain tanks for one or more of the following reasons:

- providing a free source of water supply
- reducing our reliability on water sources outside our region
- reducing the amount of rain runoff
- increasing our resilience.

There was general comfort with the framework proposed for the water strategy, with some critique about the need for measurable outcomes rather than broad statements of aspirations. Many of the submissions asked for less talk and more action.

For mana whenua, wai and te mauri o te wai has always been a priority. Mana whenua expressed positive support for the framework which addresses key concerns they have long voiced. Submissions identified that the most significant element in the strategy will be how we partner with mana whenua to develop the next steps and implement the strategy.

Council’s relationship with mana whenua is vital in realising the vision the strategy is seeking to adopt as this requires us to apply a te ao Māori worldview.

Submissions from sector-based organisations raised more specific points, such as putting more emphasis on the compulsory values of the National Policy Statement on Freshwater Management. They highlighted the importance of water use for rural areas, farming and commercial and business purposes, and to support economic growth of the region.
This report is presented in six sections. Section two explains the engagement process. Section three presents the demographic analysis of the submissions received. Section four is structured to align with the proposed framework for the water strategy. For each part of the framework, we report on the findings of the questionnaire, other written submissions, and public engagement events. We then provide a brief discussion and staff advice on how to respond to the feedback. Section five offers a brief analysis of submissions from key stakeholder and demographic groups. Finally, section six summarises the recommended responses identified throughout the report.

Recommendations

Staff advice and the responses to feedback is identified throughout the report. Many of these speak to similar points so, for brevity, a set of consolidated advice is presented below:

1. Adopt the framework as the basis for developing the water strategy.

2. Make one amendment to the framework to clarify the meaning of the explanatory text of the resilience value, as follows:

   What we value: our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change. We are prepared for extreme events such as flooding and drought and are able to recover quickly.

3. Ensure that the draft water strategy reflects the community priorities that were shared in the feedback on Our Water Future, including:

   - recognising the importance of water for life, and taking good care of it
   - the strong value placed on our natural environments and recreational opportunities
   - the desire to clean up our receiving waters and prevent further degradation (especially from land-based sources, wastewater, stormwater, litter and plastics)
   - the importance of safe and reliable drinking water
   - increasing the capacity of our networks for future growth, including developing alternative water sources and increased storage
   - the need to act on climate change and address flooding and sea level rise
   - the kaitiaki role of mana whenua and the opportunity to bring a Māori world view alongside western science and decision-making processes
   - an expectation that the council will move quickly from strategy to action

4. Ensure that the following issues raised in submissions are addressed in the draft strategy:

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Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
• rural issues, including the different water values held in rural and urban areas, future security of rural water needs and the impacts of rural development as well as urban growth
• the importance of water for cultivation, irrigation and food production
• the importance of water for businesses, industries and economic development
• the potential of rain tanks, water reuse and efficiency measures for meeting future water needs
• the role of all Aucklanders in protecting and enhancing Auckland’s waters, and in building resilience
• issues for marine waters
• management of groundwater.

5. In the process of developing the water strategy, ensure:
• alignment with legislation, council plans and policies including the objectives of the Unitary Plan
• existing council group strategies and technical work are used to inform ‘adapting to a changing water future’
• mana whenua are involved in an ongoing partnership to apply a Māori world view to development of the strategy and its implementation,
• a map of Auckland’s water catchments is included
• stakeholders’ roles and responsibilities are described.
1 Introduction

Auckland Council is preparing a water strategy. As part of developing the strategy, a discussion document, Our Water Future – Tō Tātou Wai Ahu Ake Nei, was released on 17 February 2019. Aucklanders were invited to have their say via an online questionnaire and at over 70 public events. It was also possible to make a written submission. Over 7,400 responses were received. This report presents an analysis of the feedback, with recommendations for uptake in the water strategy.

This report is presented in six sections. Section two explains the engagement process. Section three presents the demographic analysis of the questionnaire responses. Section four is structured to align with the proposed framework for the water strategy. For each part of the framework, we report on the findings of the questionnaire, other written submissions, and public engagement events. We then provide a brief discussion and officer recommendations. Section five provides commentary on submissions from key stakeholder and demographic groups, and from local areas. Finally, section six summarises the recommendations identified throughout the report.
2 Engagement process

Ensuring widespread engagement, and involvement of key stakeholders was an important part of meeting the discussion document’s objectives:
- to raise public awareness of the significant water issues facing Auckland, and
- to generate feedback on the proposed framework for a water strategy.

The water discussion document consultations were presented to Aucklanders alongside the Annual Budget and a proposed amendment to the 10-year Budget, from 17 February – 17 March 2019. The water consultation period continued until 10 April 2019, after the Annual Budget closed. This was to allow for participants at a number of later events to make submissions. Engagement activities were supported with social media and the ‘Water Month’ focus for Our Auckland and the council communications team. Further details of the events and activities are included in Appendix 1.

A variety of engagement activities were rolled out including:
- A ‘Have Your Say’ questionnaire, available in hard copy and online (4,600+ responses)
- 70 public events (2,600+ participants)
- Receiving written submissions (17 submissions)
- Feedback received through the council’s social media channels (87).

A strength of the engagement process was enabling local boards, community partners and other organisations to use the ideas in the discussion document to tailor their own engagement processes.

Eight key community partners helped to achieve a greater mix of regional and targeted sub regional engagement with Māori communities, especially rangatahi. Community partners have the knowledge, experience and reach into Māori communities in Auckland. They are able to connect with communities in relevant and engaging ways. Details of this effort are discussed in Appendix 2 and Appendix 3.
3 Feedback received

Overall, we received just over 7,400 pieces of feedback from different sources (Figure 1).

Distribution of feedback sources

- Submissions: 0.2%
- Social media: 1%
- Simplified questionnaire: 5%
- In person feedback: 35%
- Written feedback: 4762 (6%)
- Online questionnaire: 32%
- Shared events with Annual Budget consultation: 5%
- Targeted engagements, workshops, panels: 1%

7429 pieces of feedback

Figure 1 – Sources of the feedback received

Submitters who responded to the questionnaire were asked to provide some demographic information. Approximately 85 per cent of respondents answered these questions. This is the basis for the demographic analysis that follows.

3.1 Demographic analysis of the questionnaire responses

3.1.1 Ethnicity

Table 1 sets out the ethnicity of respondents compared to the ethnicity of Aucklanders, as identified in the 2013 census. It highlights that we received a high rate of response from Māori.

1 Typical response rates from Māori to Auckland Council consultations is approximately 3 – 5 per cent of respondents.

For Information: Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
3.1.2 Age
Table 2 shows the age distribution of the written submissions. A high participation rate for youth under 25 years old (17.9 per cent) was an achievement for the engagement process. It reflects the importance of water issues to the youth of Auckland.

<table>
<thead>
<tr>
<th>Age</th>
<th>Written feedback received (%)</th>
<th>Auckland population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25 years</td>
<td>17.9</td>
<td>35.9</td>
</tr>
<tr>
<td>25-44 years</td>
<td>28.8</td>
<td>28.3</td>
</tr>
<tr>
<td>45-64 years</td>
<td>31.9</td>
<td>24.3</td>
</tr>
<tr>
<td>&gt;65 years</td>
<td>21.4</td>
<td>11.5</td>
</tr>
</tbody>
</table>

* Does not add to 100% due to some people selecting more than one ethnicity.
3.1.3 Spatial distribution

Figure 2 shows the distribution of the written submissions across Auckland with regard to the local boards. As the figure shows, 27 per cent of people were either not aware of their local board or chose not to answer.

4 Analysis of the feedback

The following analysis is structured in the same order as the proposed framework for the water strategy. For each element of the framework, the report discusses the three types of responses – questionnaire responses, written submissions, and in-person feedback. Note that the questionnaire did not ask a specific question about every section of the framework (for reasons of brevity), however, there was space for respondents to provide further feedback in an open question.
4.1 Vision
Te Mauri o te Wai o Tamaki Makaurau – the life supporting capacity of Auckland’s water is protected and enhanced

4.1.1 Questionnaire responses
The questionnaire did not ask directly about the proposed vision. A small number of comments were received in the open response section, including:

- Our vision should be to protect the eco-system that our life relies on.
- The vision must be mainly for clean, safe water as a community resource for drinking, recreation and to support our natural environment.
- Having a long-term vision is great, but the existing issues need urgent action.
- Funding the actions to successfully implement the vision is essential.
- The vision needs to make all 21 local boards accountable to the vision/framework similar to that of Māori responsiveness.
- If we can change the mindset and perception of water to ‘Te Mauri o Te Wai or water as a taonga, communities will take action to look after their local water bodies.

4.1.2 In-person feedback
The majority of people that provided in-person feedback were in support of protecting and enhancing the quality of our waters.

Feedback from mana whenua events supported recognising water as a taonga and the interdependency of mauri and mana. At the mana whenua hui with councillors, mana
whenua representatives noted that te mauri o te wai is a precious resource and birthright that supports clean drinking water, gathering kai, swimming and recreation (see summary in Appendix 3). Wai enables people and communities to be resilient and provide for their social, economic, environmental and cultural wellbeing, as well as the health of generations to come.

Forest and Bird proposed that the council should include the word ‘restore’ in the vision statement (currently protect and enhance).

4.1.3 Written submissions

Support for the proposed vision

- Several submitters submitted that they endorse and support the proposed vision.
- The Manukau Harbour Forum submitted that the bilingual goal of the life supporting capacity of Auckland’s water being protected and enhanced is a clear and strong cornerstone on which to build the conversation about water.
- The Mana Whenua Kaitiaki Forum appreciated that the concept of protecting te Mauri o te Wai has been picked up in the discussion document.

Economic development

- Auckland Business Improvements Districts (AKBIDS) would like clarification that the protection and enhancement of the life supporting capacity of water also includes its use for economic purposes.

Relationships with water

- Federated Farmers submitted that the vision could be improved by recognising all the relationships between water and people, including vital relationships, and recognising the role of all the people of Auckland as the stewards of Auckland’s resources, along with the role of mana whenua as kaitiaki within Auckland. They suggested the council should amend the kaitiaki statement (in the discussion document executive summary, rather than the text of the framework) as follows: Recognise the role of mana whenua as kaitiaki/guardian within the region Auckland, and recognise the role of all the people of Auckland as the stewards of Auckland’s resources.
- Federated Farmers submitted that there are noticeable differences between the relationships that rural people have with water, compared to that of urban people.
- The Manukau Harbour Forum identified accessibility as a key point which could be referenced within a vision.

4.1.4 Discussion

The proposed vision was developed with guidance from the Mana Whenua Kaitiaki Forum. It has many layers – it is about the health of water but also about the deep connections between water, the environment and people. Public engagement has reinforced the strength of this vision as a unifying ambition for Auckland’s water future.
Changing the vision to 'restore' as opposed to 'protect and enhance' sets a much higher benchmark for Auckland's waters, implying a return to a previous state of health. Given the unavoidable impacts of urban activity, staff consider that this may be beyond what is practicable.

The other specific changes sought by submitters can be accommodated in the text of the strategy without changing the wording of the vision statement or diminishing the particular role of mana whenua as kaitiaki.

4.1.5 **Recommendations**
1. Retain the vision statement with no changes.
2. Ensure that the use of water for economic purposes, the different relationship with water for rural and urban Aucklanders, and the role of all Aucklanders in protecting and enhancing Auckland's waters are addressed in the text of the strategy.

4.2 **Values**

4.2.1 **Questionnaire responses - overview**
We asked if the values identified in the discussion document matched what the respondents value about water. The respondent could pick only one answer from the three choices of (a) Not at all, (b) Somewhat, (c) Strongly. Figure 3 shows an overview of the responses.

![Bar chart showing values](image)

**Figure 3 – Overview of the questionnaire responses to the proposed values**

Overall, 4,203 people answered this question. The ecosystems value most strongly matched people's own values with 69 per cent of responses 'strongly' matching. This was followed by recreation and amenity 60 per cent, water use 56 per cent, culture 41 per cent and resilience 34 per cent. Each of the values is discussed in turn in the following sections.
Other general feedback

- The Manukau Harbour Forum submitted that the five proposed values were inclusive with utilitarian functions through to fun and excitement and to ecosystems, maori and the life force within water.
- The Auckland Youth Advisory Panel supported the identified values and believed they aligned with the views of water that many communities have.
4.2.2 Ecosystems

Healthy water systems nourish the natural environment.

4.2.2.1 Questionnaire responses
Overall, 69 per cent of submissions said that the ecosystem value presented in the Our Water Future Discussion Document strongly matches what they value about water followed by 12 per cent somewhat and 1 per cent not at all. 18 per cent of the submissions did not answer the question (Figure 4).

![Graph showing distribution of responses for Ecosystems value](image)

4.2.2.1.1 Māori questionnaire responses
Figure 5 shows Māori responses to the Ecosystems value. There was a high number of paper questionnaires where some people only selected one of the five values to respond to, hence the significant proportion of ‘not answered’ category (Figure 5 (a)). This high pattern was also repeated for all other questions.

Figure 5(b) shows Māori responses excluding the ‘not answered’ category. Compared to all questionnaires (Figure 4(b)) there was a higher Māori support for this value with only 7 per cent of the Māori respondents choosing ‘somewhat’ or ‘not at all’ answers and 93 per cent strongly supporting the proposed value.
4.2.2.2 In-person feedback
The health of our ecosystems was of high concern to most people that talked to us at the public events. They asked us to act on fixing the existing pollution problems and protect our waters from impacts of future development activities. Other points from the feedback include:

- we need to investigate innovative technologies to stop pollution of our waters;
- sediment from developments must be better managed;
- communities can help to improve the quality of their local waters;
- stormwater outlets are a cause of pollution to beaches, stormwater should be treated;
- we must give our waterways their life force (mauri) back.

4.2.2.3 Written submissions
Specific points raised in written submissions include:

**Overall management practices**

- Horticulture New Zealand submitted that good management practices are important. A multi-contaminant approach to management of water quality, rather than only sediment, is essential to achieving the overarching vision.

**Wastewater**

- Manukau Harbour Restoration Society requested the volumes of treated wastewater discharged to the Manukau not only be capped but be reduced over time to protect the harbour’s ecology, especially that of the inner harbour.

4.2.2.4 Discussion
The ecosystem value of water was the most strongly supported value. Feedback from the community revealed a good level of understanding of the human impacts on water and ecosystems, and a strong expectation that the council will be able to improve outcomes.
through increased activity, improved technology, and community efforts. A multi-contaminant approach (Horticulture New Zealand submission) is central to the council’s efforts, for example in developing the Auckland response to the National Policy Statement for Freshwater Management. The freshwater management tool that is currently under development will provide outputs of water quality parameters, including sediment and nutrients, at varying spatial and temporal scales across Auckland’s varied land use types and freshwater bodies (rivers, lakes, wetlands and aquifers).

The request to reduce wastewater discharges to Manukau Harbour will be considered during development of the strategy, while noting that the Auckland Council family is already delivering various initiatives to address this, including:

- infrastructural solutions including separating stormwater and wastewater networks in the Manukau catchment
- increasing the capacity of Mangere Wastewater Treatment Plant
- Watercare Wastewater Network Discharge Consent, which sets up the regime that Watercare operates the network under and the improvement programme required,
- investigating innovative practices to manage wet-weather flows to the plant
- developing the Manukau Harbour Hydrodynamic Model to better understand the impact of land-based activities on the water quality in the harbour.

These are among the works being done to improve water quality and ecosystem health in Manukau Harbour.

4.2.2.5 Recommendations

3. Retain the ecosystems value as part of the framework.
4.2.3 Recreation and amenity
We enjoy being in, on and near the water.

4.2.3.1 Questionnaire responses
Overall, 60 per cent of respondents said that the recreation and amenity value presented in the Our Water Future Discussion Document strongly matches what they value about water, followed by 16 per cent somewhat and 2 per cent not at all. 22 per cent of respondents did not answer the question (Figure 6).

(a)

(b)

Figure 6 – Distribution of responses for the recreation and amenity value for (a) all questionnaires and (b) excluding the ‘not answered’ category

4.2.3.1.1 Māori questionnaire responses
Figure 7 shows Māori responses to the Recreation and amenity value for (a) all questionnaires and (b) excluding the ‘not answered’ category. Similar to the Ecosystems value, there was a high support for this value with 92 per cent strongly supporting the proposed value. This was significantly higher than all submitters’ response of 77 percent strongly support (Figure 6(b)). This highlights the importance of recreational use of waters for Māori people, which is also directly linked to the ‘cleaning our waters’ issue that Māori people were most concerned about (see section 4.3.2).
4.2.3.2 In-person feedback
The recreational value of Auckland’s waters—especially beaches—was a common topic for discussion. We received a lot of positive feedback on the Safeswim programme for the way it has shared knowledge with the community. Issues raised include:

- more local beaches should be added to the Safeswim programme.
- communities can help with improving quality of their local waters.
- stormwater outlets are a cause of pollution to the beaches, stormwater should be treated.

4.2.3.3 Written submissions
Specific points regarding recreation and amenity were sought from the Auckland Marina Users Association Inc.

Marinas

- Auckland Marina Users Association requested that the following is addressed by the strategy: public access to and around the region’s marinas (and enhancement of these recreational open space provisions); opportunity to utilise marinas as focal points for safe access to water and support recreational activities and watercraft; and assessment of land ownership at and around marinas.
- Auckland Marina Users Association also requested that Auckland Council collaborates with stakeholders and establishes a steering committee for the marina strategy, with mana whenua and stakeholder representation, to capture opportunities in the development of the strategy budget and programme.

4.2.3.4 Discussion
Recreation and amenity is a well-supported value. The importance of clean water and beaches was a common theme in feedback. With regard to marinas, development of a
region wide marina strategy was endorsed by the Planning Committee on 5 March 2019 (after the release of Our Water Future). The decision includes direction to ‘commence the strategy process with stakeholder and mana whenua and matuwaka engagement…” The request for a steering committee for the marina strategy is a matter to be considered in that process. Connection to the marina strategy work, as it is developed, will be made in the water strategy.

4.2.3.5 Recommendations
4. Retain the recreation and amenity value as part of the framework.

4.2.4 Water Use
We can meet our everyday water needs safely, reliably and efficiently.

4.2.4.1 Questionnaire responses
Overall, 55 per cent of submissions said that the water use value presented in the Our Water Future Discussion Document strongly matches what they value about water followed by 21 per cent somewhat and 2 per cent not at all. 22 per cent of the submissions did not answer the question (Figure 8).

![Pie charts showing water use values](image)

Figure 8 – Distribution of responses for the water use value for (a) all questionnaires and (b) excluding the ‘not answered’ category

4.2.4.1.1 Māori questionnaire responses
Figure 9 shows Māori responses to the ‘Water use’ value (a) all questionnaires and (b) excluding the ‘not answered’ category. Similar to the above values, the support of Māori for this value (79 per cent) was higher than all submitters (71 per cent).
4.2.4.2 In-person feedback

- At Have Your Say events, people strongly supported the widespread use of rainwater tanks.
- Existing groundwater sources across Auckland was another source of water that some people believe we should be utilising to reduce our reliance on the Waikato region.
- At the Young Professionals event (see section 5.3.) 97 per cent of the participants indicated that we should be re-using wastewater as drinking water.
- At the water stakeholders event, the Pukekohe Vegetable Growers Association identified that access to water for irrigation is essential and is a big challenge as urban development grows. They would like to see more potential for on-site water storage and aquifer recharge.

**Drinking water quality and safety**
Points raised in feedback included:

- the need for water tanks to fully utilise water available in the region
- better utilising the available groundwater sources in the region
- concern over fluoride in drinking water
- concern over other chemicals (e.g. 1080, glyphosate and emerging contaminants) in drinking water.

4.2.4.3 Written submissions
Specific points were sought from some submitters, including:

**Water reuse**

- Water New Zealand highlighted the need for investigating recycling and reuse of wastewater as a reliable source.
Manukau Harbour Forum  
16 August 2019

Our Water Future Public Engagement Report

- Manukau Harbour Restoration Society recommend the investigation to alternate supplies of potable water and encourage Auckland Council and Watercare to pursue strategies to reduce water use as well as methods of reusing and alternatives for treating wastewater.
- St Lukes Environmental Protection Society Inc. recommends changing the value to “Water Use and Reuse”

Food production
- Horticulture New Zealand submitted that more emphasis is needed on the importance of water for domestic food supply. When considering current and future water needs (with population growth), commercial vegetable production should be taken into account.

Rural needs
- Federated Farmers asked for more emphasis on future security of rural water needs and stated that there is concern in rural communities about water availability and water quality issues
- Federated Farmers recommended to change the description of the water use values to: “We meet our everyday water needs safely reliably and efficiently and preparation is made for future needs.”

4.2.4.4 Discussion
Water use was strongly supported as a value, with the need for continued adequate and secure supply being a point of discussion. Many questionnaire responses and in-person submissions identified rain tanks as a possible solution to the region’s supply and storage issues. Several written submissions highlighted the need for water reuse. The discussion document (page 38) identified both of these methods as a potential part of our future water supplies and could be further scoped for development.

The submissions from Federated Farmers and Horticulture New Zealand pointed out that continued, reliable access to water is a more immediate concern for the rural and food production sectors, and that emphasis on this could be strengthened in the strategy.

As to the specific wording changes requested, staff did not consider it necessary to change the value to ‘water use and reuse’ in order to bring water reuse into the strategy. Similarly, staff considered that preparation for future needs was an axiomatic part of ensuring we can meet our everyday water needs.

4.2.4.5 Recommendations
5. Retain the water use value as part of the framework.
6. Ensure that rain tanks and water reuse are addressed in the water strategy.
7. Ensure that the future security of rural water needs and the importance of water for food production are addressed in the water strategy.
4.2.5 Culture

4.2.5.1 Questionnaire responses

Overall, 41 per cent of submissions said that the culture value presented in the Our Water Future Discussion Document strongly matches what they value about water followed by 26 per cent somewhat and 9 per cent not at all. 24 per cent of the submissions did not answer the question (Figure 10).

Some respondents provided comments on this value, such as:

- the waterways are part of our culture and identity they should be protected and used with care
- spiritual and cultural values of water will not be a priority if people don't have water for their daily needs
- water does not belong to one culture and every culture in the world values water.

![Diagram showing distribution of responses for culture value](image)

Figure 10 - Distribution of responses for the culture value for (a) all questionnaires and (b) excluding the 'not answered' category.

4.2.5.1.1 Māori questionnaire responses

Figure 11 shows Māori responses to the Culture value (a) all questionnaires and (b) excluding the ‘not answered’ category. It shows a strong support from Māori for the proposed Culture value with 83 per cent choosing 'strongly' as their answer. This figure for all questionnaires was only 54 per cent (Figure 10(b)). This finding further supports the proposed vision of ‘Te Mauiri o te Wai o Tamaki Makaurau – the life supporting capacity of Auckland’s water is protected and enhanced’ and the proposed overarching process of ‘Applying a Māori world view’ (see section 4.4.1 for detailed discussion).
4.2.5.2 In-person responses

We received invaluable feedback through the mana whenua engagement events (see summary in Appendix 2 and Appendix 3). The key messages we received include:

- Wai is very important to mana whenua identity, in terms of both connections to local catchments and waterways, and historical connections to waka. The health of water is connected to the physical and mental health of mana whenua.
- There should be increased transparency and mātauranga Māori underpinning analysis (such as cultural monitoring) and response (such as the maramatanga) to support a holistic sustainable approach.
- Ongoing and increased collaboration with mana whenua is required to define and develop the concepts and issues raised. This partnership will be particularly important when applying a te ao Māori lens in the implementation.
- The council should educate and increase awareness about water issues and encourage communities to assist each other and be more accountable.

4.2.5.3 Written submissions

The Mana Whenua Kahakuloa Forum submitted that they are keen to help council to lift its capacity, broker relationships with technical experts and local kaitiaki and ensure these discussions stay connected with discussions happening around governance table. They also stated that they are keen to play a role in helping council accurately communicate concepts such as Te Māori and Te Wai and effectively explain disciplines such as mātauranga Māori and maramatanga to the general public.

4.2.5.4 Discussion

Culture received a lower level of support as a value than the previous three values. This was different for Māori only responses where submitters’ support was higher for Culture than the Water use value but lower than Ecosystems and Recreational and amenity
values. Submissions identified that water is culturally significant for communities all around the world. Engagement events with mana whenua placed more emphasis on the cultural significance of water in Tāmaki Makaurau, particularly for the long historical relationship of mana whenua and wai. Questionnaire responses from people identifying as Asian also gave a higher than average support for the cultural value of water.

4.2.5.5 Recommendations

8. Retain the culture value as part of the framework.
4.2.6 Resilience

Our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.

4.2.6.1 Questionnaire responses

Overall, 34% of submissions said that the resilience value presented in the Our Water Future Discussion Document strongly matches what they value about water followed by 29% somewhat and 13% not at all. 24% of the submissions did not answer the question (Figure 12).

![Resilience pie charts](chart.png)

Figure 12 – Distribution of responses for the resilience value for (a) all questionnaires and (b) excluding the ‘not answered’ category.

4.2.6.1.1 Māori questionnaire responses

Figure 13 shows Māori responses to the Resilience value (a) all questionnaires and (b) excluding the ‘not answered’ category. The proportion of Māori responses that didn’t strongly support the Resilience value was 43% per cent (Figure 13(b)). This figure is much higher than that for the other values, but was in line with all questionnaire responses for this value, where 55 per cent of respondents did not strongly support it (Figure 12(b)).
Several people that were not strongly concerned about the resilience value nonetheless identified resilience-focused issues as concerns elsewhere in the questionnaire, such as the need for increasing the capacity of our networks to enable future growth, the need for alternative water sources and reuse and the need for measures to address flooding and sea level rise.

Some other participants commented on the lack of clarity of this value:

- Don't understand the resilience question. Is it an aspiration or an assertion?
- Not sure about the Resilience value is clear enough
- Not sure I've understood the last value...I do however strongly agree that the Resilience VALUE is important
Spotlight

Rural, urban, coastal

We were interested to understand if there were different views about water based on location. Did rural, urban and coastal respondents have different priorities? The only notable difference was in response to the question about what we should prioritise as we adapt to the changing future. About 43 per cent of the people living in coastal areas think that we should help communities to become more resilient. This figure was lower in other areas with 38 per cent and 35 per cent for urban and rural areas respectively.

![Rural, urban, coastal divide](image)

Figure 14 – Distribution of questionnaire responses across rural, urban and coastal areas

4.2.6.2 In-person responses
Feedback at events included the following points:
- we should stop building in hazard areas.
- rural properties are at higher risk from climate change because they are not connected to the urban network.
- Auckland Council should provide clear information about hazard areas to the public.

4.2.6.3 Written submissions
Specific points raised in submissions include:

Infrastructure to support resilience
- Horticulture New Zealand supported developing resilient infrastructure such as water storage and the collection and sharing of data to ensure informed decisions.
The Manukau Harbour Forum submitted that rainwater collection and detention measures need to be able to accommodate the more intense rain events that will develop as climate change impacts are experienced.

**Resilient approaches (diversifying resources, water reuse and a circular economy)**

- St Lukes Environmental Protection Society Inc recommended that for resilience Auckland Council should explore alternatives such as allowing some communities to reuse or dispose of wastewater locally.
- Horticulture New Zealand mentioned that Auckland’s horticulture is predominantly reliant on groundwater supply. However, with climate change there is a high chance that the industry will need to access surface water takes. This is important when considering the impacts of municipal takes on rural water users.

### 4.2.6.4 Discussion

Of the five values proposed, the resilience value has the lowest match with questionnaire respondents’ values. Possible reasons for this could be a lack of public knowledge about resilience, the wording of the resilience section of the discussion document, or the discounting of future concerns compared with today.

Many questionnaire respondents who did not support the resilience value also highlighted issues that concerned them such as flooding, drought and coastal inundation – all of which could be described as ‘resilience’ issues. Others noted that they did not understand what was meant by resilience. This suggests some respondents did not understand the wording of the resilience value, rather than not being concerned about the issues.

Staff consider that addressing resilience is a core issue for the council’s water strategy, to meet legislative requirements under the Local Government Act, Health Act, and Civil Defence Emergency Management Act. The public response speaks to the need for leadership and engagement by the council to communicate long-term challenges relating to resilience.

Three options to respond to the lower support for the resilience value are:

- delete resilience as a value from the framework
- retain resilience as a value in the framework, unchanged
- retain resilience as a value in the framework and amend the explanatory text to provide a simpler description.

### 4.2.6.5 Recommendations

9. Retain the resilience value as part of the framework.
10. Amend the explanatory text to state ‘we are prepared for extreme events such as flooding and drought and are able to recover quickly.’
11. Ensure the water strategy provides for the role of the community in building resilience.
4.2.7 Additional comments on values

The questionnaire asked ‘Please tell us why these values do or do not match your own values, and if there is anything else you value about water?’

4.2.7.1 Questionnaire responses

1,185 respondents answered this question. About 13 per cent of the respondents highlighted the life-giving nature of water and the need for everyone to have access to safe and reliable water for their everyday needs.

Just over 10 per cent of the respondents asked us to act on climate change as it will be an important issue for Auckland in the future. Around 1.7 per cent of questionnaire respondents (20 people) stated that they believe that climate change is not a proven fact and we do not need to take any action or invest to address that.

Other recurring themes in the responses are:

- we need a safe and secure drinking water source (6 per cent)
- we should improve our resilience (5 per cent)
- we need measures to address flooding and sea level rise (4 per cent)
- water is essential for the economic growth of the region and to be able to provide for the community (4 per cent)
- water, wastewater and stormwater networks should be sized to enable future growth (2 per cent).

4.2.7.2 Written submissions

Specific points were sought in written submissions, including seeking the inclusion of additional values:

Economic development

- The business improvement districts of Auckland (AKBIDS) proposed water use for commercial or business purposes should be recognised as a value in the strategy. They suggested aligning the strategy to the Unitary Plan, where the objectives also speak of the use of water for economic purposes.
- Business North Harbour recommended including a separate value to ensure that business uses are covered – suggested value: “Economy: that water supports and enhances Auckland’s commercial success, both now and for the future”

Rural needs

- Federated Farmers submitted that the values are set out appropriately but could be improved by making better provision for rural water uses. Water needs in rural areas are different to urban areas. They submitted there are different values placed on water by those living in Auckland’s urban areas, compared to those living in its rural areas and that there is no discussion of how the aspirations of other communities in Auckland are to be provided for in the decision-making process.
- Horticulture New Zealand recognised that there is a risk that taking such a generic approach does not adequately address the compulsory values included in the National Policy Statement for Freshwater Management. There is also a risk that specific characteristics and needs of different freshwater management units (catchments identified in the national policy statement) are not adequately provided for. The compulsory values of cultivation, irrigation and food production were not adequately reflected in the proposed values.

Existing Regulation
- Horticulture New Zealand asked for emphasis on addressing the compulsory National Policy Statement for Freshwater Management values.
- St Lukes Environmental Protection Society Inc. recommended that another additional value - Responsibility, is required. Auckland Council has primary responsibility under the current legislation.
- Federated Farmers stated that it is important that the strategy, when developed, be incorporated into the law by way of the Resource Management Act (the RMA).
- AKBIDS (Auckland Business Improvement Districts) submitted ‘Our Water Future’ should be reviewed to align with the objectives and policies of the Unitary Plan.
- Housing New Zealand did not support strategies which would impose significant financial obligations and statutory requirements on individual property owners and developers.

Approaches
- St Lukes Environmental Protection Society Inc. recommended that an additional value: ‘Agile Action and Transformation’ is required. Action is required for sedimentation, combined sewers and stormwater in brownfield Auckland.
- St Lukes Environmental Protection Society Inc. recommended that, given the threats and issues already occurring as our climate changes, a more sustainable overarching value is required, with reference to the ‘circular economy.’

4.2.7.3 Discussion
The values proposed in the framework follow the model established in the National Policy Statement for Freshwater Management, including the two compulsory values of ecosystem health and human health for recreation. The discussion document proposes that the values will form the basis for the values in Auckland’s response to the national policy statement, at a regional scale. It is anticipated that there will be a further examination of the national policy statement’s values as they relate to each sub-regional freshwater management unit identified in the policy. This will allow for local variation and bespoke provisions for the priorities of each area, and for the differences between rural and urban areas to be addressed.
Submitters have highlighted four additional values that they would like to see in the water strategy: Economic development, food production, responsibility, and agile action and transformation.

The value of water for economic development and food production is a part of ‘water use’ - how we harness water to meet our everyday needs. Staff consider that these aspects could be given more weight in the water use value explanation, rather than adding additional values. This will also provide scope for recognising sub-regional variations, such as the significance of the Pukekohe area for food production.

Responsibility and agile action and transformation are more about how we act towards water, rather than the reasons that we value water. Staff consider they can be addressed more usefully in the principles, and return to them in section 4.4.2 below.

Several submissions sought alignment between the water strategy and other council plans and legislation. This is the context that the water strategy is being prepared in, and staff will take these into account during the drafting process.

4.2.7.4 Recommendations
12. Do not add additional values to the framework.
13. Ensure the discussion of values in the water strategy recognises economic development, cultivation, irrigation and food production (in water use) and the different values held in rural and urban areas.
14. Ensure the water strategy aligns with legislation and council plans and policies, including the objectives of the Unitary Plan.
4.3 Issues

We asked how concerned people were about the four “big issues” presented in the discussion document. Results are shown in Figure 15.

![Bar chart showing concern levels for different issues]

Figure 15 - Overview of the questionnaire responses to the proposed issues

4.3.1 Questionnaire responses - overview

Cleaning up our waters was of most concern to the respondents. This is in line with what we heard through in-person feedback. Each issue is discussed in the sections that follow.

We also asked a more specific question about meeting future water needs and about adapting to a changing water future. The responses to these questions are incorporated in the relevant sections below.
4.3.2 Cleaning up our waters

4.3.2.1 Questionnaire responses
Overall, 71 per cent of submissions showed strong concern about the ‘cleaning up our waters’ issue presented in the Our Water Future Discussion Document, followed by 11 per cent somewhat concerned and 1 per cent not concerned at all. 17 per cent of submissions did not answer this question (Figure 16).

(a) 
(b)

Figure 16 – Distribution of responses for the cleaning up our waters issue for (a) all questionnaires and (b) excluding the ‘not answered’ category.

4.3.2.1.1 Māori questionnaire responses
Figure 17 shows Māori responses to the cleaning up our waters issue (a) all questionnaires and (b) excluding the ‘not answered’ category. A very high 95 per cent of people who responded to this question were ‘very concerned’ about this issue which was in line with the all submissions responses (Figure 16(b)).
4.3.2.2 In-person feedback

In general, people strongly supported the need for cleaning up our waterways and beaches. Some of the range of issues raised include:

- Littering is a major issue at our beaches and we need more public education on that.
- Auckland Council needs to regularly maintain stormwater catchpits for them to perform properly.
- The Environmental Defence Society identified that nitrogen and sediment are key priorities.

4.3.2.3 Written submissions

Specific points raised by submitters include:

**Stormwater infrastructure and treatment**

- Water New Zealand congratulated the council on their $450 million targeted rate to improve the stormwater system and the Central Interceptor. They recommended more stormwater infrastructure investment and treatment of stormwater before discharging to the sea and noted that daylighting streams and new green stormwater infrastructure requires investment.
- St Lukes Environmental Protection Society Inc recommended that local stormwater treatment systems are needed. They also noted that new standards are needed, including retrofitting existing stormwater to revive historic wetlands.
- Housing New Zealand requested clarification on the specific stormwater catchments and asked that they be visually presented in maps.
- Manukau Harbour Restoration Society submitted that a comprehensive plan is required to address any foreseeable requirement for collection and treatment of stormwater.
Wastewater overflows

- Water New Zealand recommended developing a plan to stop all wastewater overflows.
- Manukau Harbour Restoration Society requested the volumes of treated wastewater discharged to the Manukau Harbour not only be capped but be reduced over time.

Separation of combined networks

- Water New Zealand recommended separating combined networks.
- St Luke's Environmental Protection Society Inc. recommended separation of sewage and stormwater with commitments to strategies, dates, times, and infrastructure funding.
- Manukau Harbour Restoration Society recommended, to the maximum extent possible, separation be implemented to reduce flows of stormwater to Mangere Wastewater Treatment Plant and that a variety of methods be employed to treat stormwater prior to discharge to streams, harbours or transfer to treatment plants.

Land use (including forestry, agriculture and rural land use)

- Water New Zealand recommended improving land use practices which will improve stormwater runoff.
- Point Wells Community and Ratepayers Association recommended that Auckland Council encourage property owners alongside the Omaha River and tributaries to fence and plant to prevent sedimentation and run off; monitor clean fill dumping which appears to be uncontrolled and not policed and monitor and control forestry activities.
- Federated Farmers mentioned that livestock exclusion from waterways and restrictions on nitrogen use and cultivation setbacks are only interim measures, pending the development of a catchment and sub-catchment-based approaches to address the various water quality issues that exist in rural areas.

Development management

- The Bayswater Environment Action Coalition recommended the following key points:
  - Managing sediment load from development, requesting to set targets and maximum limits for total sediment loads entering natural environments.
  - Consenting of erosion and sediment controls as part of a development application: Any land disturbance proposal, and proposed erosion and sediment controls to avoid harm, be automatically notified and made available to members of the public and informal or formal groups who register as stakeholders, before consent is granted. No development
application, that will or may require land disturbance, be consented without conditions for erosion and sediment control being likewise consented.

Public education and research

- Water New Zealand recommended more education and public awareness e.g. on wet wipes and causes of dry weather flows.
- Manukau Harbour Forum noted that food chain vitality is associated with water health, and that data collection about the makeup and sizes of fish stock should be increased.
- The Bayswater Environmental Action Coalition asked that additional resources be allocated to understanding the ecosystems of our natural coastal environments and the effects of development and the urban environment on these areas and to testing and monitoring.
- The Auckland Regional Public Health Service highlighted the need for measurable outcomes, with monitoring and reporting to see if water quality is improving or declining.

4.3.2.4 Discussion

Questionnaire responses were strongly supportive of cleaning up our waters. Written submissions offered a number of points in relation to continuing, accelerating and extending programmes that are already underway, such as the separation of combined sewer systems, improving the treatment of stormwater before it is discharged to sea, and developing public education programmes. The challenge for the council is how quickly these programmes can be delivered, and how ambitious they can be. For example, it would be difficult to eliminate all wastewater overflows in the entire municipal network and all on-site wastewater treatment systems, especially in the context of frequent small-scale leaks and breakages. These are ongoing challenges that development of the water strategy will assist the council to progress.

4.3.2.5 Recommendations

15. Retain cleaning up our waters as an issue in the framework.
16. Take submitters’ views regarding cleaning up our waters into account in the drafting of the water strategy.
17. Ensure the water strategy includes a map of Auckland’s water catchments.
4.3.3 Meeting future water needs

4.3.3.1 Questionnaire responses
Overall 50 per cent of submissions showed strong concern about the ‘meeting future water needs’ issue presented in the Our Water Future Discussion Document, followed by 17 per cent somewhat concerned and 1 per cent not concerned at all. 23 per cent of submissions did not answer this question (Figure 18).

(a) ![Chart 1]
(b) ![Chart 2]

Figure 18 - Distribution of responses for the Meeting future water needs issue for (a) all questionnaires and (b) excluding the ‘not answered’ category

4.3.3.1.1 Māori questionnaire responses
Figure 19 shows Māori responses to the Meeting future water needs issue (a) all questionnaires and (b) excluding the ‘not answered’ category. The concern about this issue among Māori respondents was high with 86 percent being very concerned about it but was lower than the concern about Cleaning up our waters issue. This pattern was similar to that of all the questionnaires (Figure 18(b)).
Figure 19 - Distribution of Māori responses for the meeting future water needs issue for (a) all questionnaires and (b) excluding the 'not answered' category.

To further understand public perspectives on meeting future water needs, we asked which of these criteria are most important to you? (Select your top two)

Figure 20 - Distribution of responses for the future water needs question.

Overall, 4,099 people answered this question. Safety and quality of drinking water was the most important criterion with 92 per cent of respondents choosing it as their first choice (Figure 20). It was followed by reliable supply of drinking water with 63 per cent. The cost of infrastructure came last with only 1 per cent of submitters choosing it as an important criterion to them.
Q. Please tell us why these criteria matter to you, or if there are others you think are more important?

Overall, 1,185 people answered this question of which 28 per cent indicated the need for a safe drinking water supply. The other main topics from the feedback are listed below:

- We should reduce the environmental impact that we have because of development (12 per cent).
- We need to facilitate the widespread use of rain tanks and rainwater harvesting (11 per cent).
- We should become more water efficient and better manage our water demand (5.1 per cent).

4.3.3.2 In-person feedback

Availability of safe drinking water was the most repeated topic we heard from people. People were most concerned with the quality of their drinking water.

Participants in the mana whenua huis expressed concern at the capacity constraints of current water supplies and issues around appropriate consenting and monitoring of aquifers. They requested that the council take immediate action to build water supply resilience, acknowledging that strategies take time to come into effect. Incentivising water retention was suggested, along with the potential to recharge aquifers.

4.3.3.3 Written submissions

Specific points were raised in written submissions, including:

- Water New Zealand commended Watercare for delivering safe, reliable and cost-effective drinking water, fully treated and 100% compliant with New Zealand Drinking Water Standards for many years.

Water reuse

- Water New Zealand submitted that research and investigation is needed on the reuse of wastewater and that Auckland Council includes it as an element of the strategy for research and investigation.
- Federated Farmers also noted that there was no discussion regarding the re-use of water and the use of on-site water storage.
- The Manukau Harbour Forum supported that a public discussion be held around the process of reusing treated wastewater from the Māngere and Waiuku wastewater plants and bringing the treated water up to potable standards.

Rural needs

- Federated Farmers submitted that water use for rural areas needs more focus.
- The Manukau Harbour Forum submitted that most of the Manukau Harbour catchment is rural land which includes many agriculturalists and horticulturalists.
utilising aquifers. The aspect of rural demand and water use rights needs to be considered in the document.

Food production
- Horticulture New Zealand submitted that further exploration of water needs is needed to meet increasing food production demand as a result of increased population.
- Horticulture New Zealand pointed out that reliable access to quality water for vegetable production is critical to supporting human life.

Economic development
- AKBIDS (Auckland Business Improvement Districts) submitted that priority must be placed on ensuring adequate new water supply is provided to accommodate population and business growth beyond 2050.

Resilience of water resources (diversifying)
- Federated Farmers was concerned with the discussion about reliance on the Waikato region to meet Auckland’s drinking water needs.

Public education
- Business North Harbour submitted that we should start educating people about more efficient water use, rainwater collection and storage, and wastewater reuse for potable and non-potable purposes.

3.1.1.1. Discussion
All of the points raised by submitters have been addressed to some extent in the discussion document. We can ensure that they are strongly reflected in the water strategy as it is developed.

One point of interest is the very low selection of cost of developing drinking water infrastructure as a priority consideration. This result indicates that further infrastructure investment in continuing to provide safe and reliable water supply is firmly supported by most of our communities. It could also be influenced by the low price of water and wastewater services in Auckland.

3.1.1.2. Recommendations
18. Retain meeting future water needs as an issue in the framework.
19. Ensure the water strategy:
   - Elaborates on the importance of rural water needs and allocation in the strategy, and water needs for businesses and industries for economic growth of our region.
   - Investigates the potential and challenges for widespread use of rain tanks, and wastewater reuse for future water security.
   - Advocates for public education about more efficient water use.
4.3.4 Growth in the right places

4.3.4.1 Questionnaire responses
Overall 56 per cent of submissions showed strong concern about the growth in the right places issue presented in the Our Water Future Discussion Document, followed by 20 per cent who were somewhat concerned and 1 per cent not concerned at all. 23 per cent of submissions did not answer this question (Figure 21).

![Diagram showing concern levels for growth in the right places](image1)

Figure 21 – Distribution of responses for the growth in the right places issue (a) all questionnaires (b) excluding the ‘not answered’ category

4.3.4.1.1 Māori questionnaire responses
Figure 22 shows Māori responses to the ‘Growth in the right places’ issue (a) all questionnaires and (b) excluding the ‘not answered’ category.

![Diagram showing Māori concern levels for growth in the right places](image2)

Figure 22 – Distribution of Māori responses for the Growth in the right places issue for (a) all questionnaires and (b) excluding the ‘not answered’ category
4.3.4.2 In-person feedback

- Forest and Bird stated that urban development is leading to water quality decline, and a cap on growth is needed to limit it to sustainable levels.
- The Environmental Defence Society noted that unforeseen urban growth has overtaken infrastructure. Planning processes need to be fast tracked.
- Participants in the mana whenua hui raised the need to promote future growth in appropriate locations, including minimising development in flood plains and returning this land to wetlands, and managing the cumulative effects of infill housing.

4.3.4.3 Written submissions

Specific points were sought by submitters, including:

**Development**

- Federated Farmers submitted that the wording of this value be changed to "growth and development" in the right places". Federated Farmers supported the proposition that Auckland’s growth should take place in the “right” places but so should “development in the right places”. They stated that “it is more likely that rural activity will develop, as well as grow, in the future, and this development should be provided for.”
- The Manukau Harbour Forum acknowledged that growth and development will occur and supported a more compact city. Future change should be "positive development" where change improves the environment forward from its current state.
- Manukau Harbour Forum stated their expectations that Auckland Council, along with other territorial local authorities, will be working with central government around changes required to enable councils to stop growth and development in flood plains and coastal erosion areas.

**Sea level rise**

- St Lukes Environmental Protection Society Inc submitted that Auckland Council must publish and consult with the public, pointing out where sea level rise will inundate properties and damage infrastructure. Water issues and water planning must also be joined up with climate change planning at Auckland Council. The interactions between issues and Auckland Council’s responsibilities to make changes must also be addressed.

4.3.4.4 Discussion

There was a good level of support for this issue. A particularly strong message was to change practices that will lead to problems in future, such as building in hazard zones. There is scope in the strategy to strengthen the rural element of this issue. With regard to sharing knowledge, both the flood plains and Coastal Inundation hazards are already included in LIM reports. Coastal inundation areas are also available for the public to view.
on Auckland Council GIS maps for both the 1 metre and 2 metre sea level rise scenarios in the Emergency Management layers.

4.3.4.5 Recommendations
20. Retain growth in the right places as an issue in the framework.
21. Ensure that the growth in the right places issue discusses rural development as well as urban growth, and acknowledge the importance of retaining rural production land and ensuring water supply for rural activities.
4.3.5 Adapting to a changing water future

4.3.5.1 Questionnaire responses
Overall 53 per cent of submissions showed strong concern about the ‘adapting to a changing water future’ issue presented in the Our Water Future Discussion Document, followed by 20 per cent somewhat concerned and 3 per cent not concerned at all. 24 per cent of submissions did not answer this question (Figure 23). Fewer respondents were strongly concerned about this issue compared to the other issues. This is consistent with the lower level of support for resilience as a value.

(a) (b)

![Graphs showing concern levels]

Figure 23 – Distribution of responses for the Adapting to a changing water future issue for (a) all questionnaires and (b) excluding the ‘not answered’ category.

4.3.5.1.1 Māori questionnaire responses
Figure 24 shows Māori responses to the ‘Adapting to a changing water future’ issue for (a) all questionnaires and (b) excluding the ‘not answered’ category. Māori respondents were least concerned about this issue compared with the other issues with 80 per cent choosing the ‘very concerned’ answer. The same pattern was observed for all submissions with 70 per cent ‘very concerned’ answers for this issue (Figure 23 (b)). This result was in line with the support for Resilient value, which was lower among all the values.
Q. Please tell us why, and what you think we can do now to anticipate and adapt to the changes in our water future?

Overall 1,314 people answered this question.

- 23 per cent of people have concerns about flooding, with 6 per cent indicating that developing hazardous areas should not be allowed and consented.
- 11 per cent of people think that we should promote the use of rain tanks to mitigate the impact of rainfall.
- 10 per cent think that we need to invest in building more infrastructure to provide future resilience.
- 4 per cent of people asked us to investigate water recycling and reuse as a means for future water security.

Q. Which of the following should we prioritise as we adapt to this changing future? (Select your top two)

40 per cent of responses to this question said that we should prevent building in hazard zones, followed by 38 per cent that told us we should help communities to be more resilient. Planning to withdraw from affected areas received the least support with 22 per cent (Figure 25).
Figure 25 – Distribution of responses for the adapting to a changing future question

Q. Please tell us why these criteria matter to you, or if there are others you think are more important?

1,119 people answered this question.

Managing rain runoff and its impacts was a topic that many people had concerns about. We received specific feedback about:

- the need for capturing and using rainwater (14 per cent)
- the need for treating stormwater before discharging to the environment to reduce pollution of our waters (9 per cent)
- the need for improving our ageing stormwater infrastructure to prevent flooding (8 per cent)
- preventing building in flood hazard areas rather than trying to fix it in the future (6 per cent)
- helping and empowering local communities to take action on their local issues.

4.3.5.2 In-person feedback

The impacts of climate change, flooding and other changes to water systems were a common topic of discussion. Participants at the young water professionals event agreed on the need to increase resilience through improving water infrastructure, but were evenly split on the options of coastal retreat versus hard engineering defences. The Murray Bay Intermediate School students showed great insight into the widespread impacts of extreme events, and the need to make more environmentally friendly decisions, ‘so that to get one thing we need it doesn’t damage the other things in our environment we might need even more.’
4.3.5.3 Written submissions
Specific points were sought by submitter, including:
- Manukau Harbour Forum submitted that conservation, reuse, onsite capture and reduction of wastewater needs to be a key expectation.

Public engagement
- Water New Zealand submitted that climate change impacts are extremely important issues to engage on with the public and get a meaningful conversation started.
- Manukau Harbour Forum submitted that education and raising peoples' understanding of the true value of potable water and "easy choices" can significantly reduce and manage individual, family and business "water footprints".

Resilience infrastructure and standards
- Water New Zealand submitted that we should use existing plans and strategies such as Watercare's climate change action plan.
- Water New Zealand also recommended that we should invest in infrastructure for making communities resilient to flooding and start addressing sea level rise.
- St Lukes Environmental Protection Society Inc requested that infrastructure standards take into account climate change and sea level rise.
- Horticulture New Zealand mentioned that water storage is critical infrastructure to ensuring we can manage changing water needs in the face of climate change and population growth.
- Manukau Harbour Forum submitted that conservation, reuse, onsite capture and reduction of wastewater needs to be a key expectation.

Rural needs
- Horticulture New Zealand submitted that managed aquifer recharge is fundamental to building resilience and meeting future water needs.
- St Lukes Environmental Protection Society Inc submitted that rural water quality and quantity issues, marine related issues and groundwater need to be better reflected in the issues. It also emphasised the importance in linking the issues and the overlap between the issues and solutions.

4.3.5.4 Discussion
The risks of a changing water future appear to be well understood, with submitters raising a wide range of adaptation issues. Fewer submissions pointed to specific methods or actions that could be used to adapt. The most frequent questionnaire response suggests a precautionary approach – not continuing to make future problems with current decisions. This issue is closely tied to the development of the Auckland Climate Action Plan, and council programmes such as the coastal compartment planning currently underway.

4.3.5.5 Recommendations
22. Retain adapting to a changing water future as an issue in the framework
23. Ensure the Water Strategy draws on existing council group strategies and technical work to inform the 'adapting to a changing water future' issue.
4.4 Principles and Processes

The proposed framework includes a set of six principles, and four ‘processes we need to work on’. These two elements of the framework overlap (much as the ‘big issues’ share commonalities with the values). The principles and processes were not a focus of the questionnaire, due to limits on the number of questions people could reasonably be expected to answer. Respondents did still provide a range of relevant comments through the open response sections, and the in-person feedback and written submissions. Whilst most of the feedback was largely aligned with the discussion of the principles and processes, only one theme – Applying A Māori world view – received quite divergent feedback. This point is considered in more detail in section 4.4.1, before providing an overview of the range of issues raised on the other principles and processes.

4.4.1 Applying a Māori world view

Mana whenua, the Youth Advisory Panel and the Manukau Harbour Forum were among those who submitted in favour of the proposed approach. Federated Farmers sought to moderate the approach, for example by adding the phrase ‘where appropriate’:

- Participants in the mana whenua hui identified that incorporating mātauranga Māori into monitoring practices will be vital to put te mauri o te wai at the centre of decision making, and achieving the water strategy vision.
- Key points raised by mana whenua include:
  - Profound and urgent action is needed in order to truly apply a Māori world view. Auckland Council will need to adopt a more holistic view and approach, rather than seeing water issues as disconnected or fragmented. This involves considering indicators of mauri across existence (physical) values, use (activity-based) values, and (unique to mauri) intrinsic (metaphysical) values.
  - Mātauranga Māori must support decision-making and implementation. This will require:
    - a joint (mana whenua and council) understanding of priorities and decision-making criteria
    - increased education about mauri amongst Auckland Council staff and Aucklanders
    - council projects to be assessed against their contribution towards enhancing and protecting te mauri o te wai
    - reporting mechanisms that make results and progress towards the vision visible
    - clear systems and processes in place to respond to results (including adequate funding for monitoring).
- The Mana Whenua Kaiwhakari Forum has indicated that it is keen to play a role in helping the council accurately communicate concepts such as te mauri o te wai and effectively explain disciplines such as mātauranga māori and maramatanga to the general public.
- Federated Farmers argued that by emphasising matters in the Framework that revolve around the relationship of Māori and their culture with their ancestral land, water and sites, but not discussing other matters such as the ethic of stewardship, the Framework is downplaying the significance of other relevant matters, including matters which the RMA statutes are of national importance. They seek to delete the first process statement: Applying a Māori world view, and add it as part of two other process statements with the caveat ‘where appropriate’, as follows:
  - Creating our water future together. Empowering Aucklanders to take care of our waters, and ensuring we all take responsibility for our impacts, including by applying a Māori world view where appropriate.
  - Achieving net benefits for catchments. Developing practical methods to allow us to offset and mitigate effects so that, overall, our waterways end up better off than they started, including by applying a Māori world view where appropriate.

4.4.1.1 Discussion
This section of the framework identifies ‘processes we need to work on’ — that is, areas where the council recognises it could make substantial improvements in the ways that it works. While accepting we need to apply both western science and mātauranga Māori, it is considered that the council is fairly well practiced at applying the western view. By contrast, applying the Māori world view is an area where we can learn more and do better. This includes learning how the two world views may usefully coexist.

Applying a Māori world view to treasure and protect our natural environment (taonga tuku iho) is Direction 2 of the Auckland Plan’s Environment and Cultural Heritage Outcome (the text of this direction is reproduced in the box below).

For these reasons, Federated Farmers’ request to remove ‘Apply a Māori world view’ from the framework is not supported.

Environment and Cultural Heritage Outcome

Direction 2: Apply a Māori world view to treasure and protect our natural environment

Te ao Māori concepts such as kaitiakitanga, rangatiratanga, whanaungatanga and manaakitanga offer Auckland an integrated approach to protecting and enhancing our treasured environments for ourselves, and for future generations.

Embedding these concepts into our thinking and decision-making supports a focus on the interrelationships between the natural environment and people.

Mana whenua have a unique relationship with the natural environment as kaitiaki.

They hold an enduring relationship with the land, marine and freshwater environments and have deep and valuable knowledge.
Their body of knowledge – both tangible and intangible – cultural practices and heritage are all linked to the whenua and its life.

Though te ao Māori in origin, these broader concepts, which acknowledge the interrelationship between the natural environment and people in how the world is viewed, can be adopted and practised by everyone.

Almost every environmental indicator is in steady decline. This means that current approaches and practices are not working.

We have to change our way of thinking about the natural environment and make the links between what we value and our own behaviours and decisions.

Adopting a Māori world view as an approach provides us with a viable alternative.

Integrating this knowledge into our behaviours and decisions is essential to successful and sustainable environmental management, and ensuring we protect and enhance the mauri of the natural environment.

4.4.1.2 Recommendations
24. Retain ‘Applying a Māori World View’ as a process we need to work on
25. Work with mana whenua to understand and apply a Māori world view

4.4.2 Principles

4.4.2.1 Recognise that water is a treasured taonga
There was significant support from mana whenua for recognising water as a taonga. Similar sentiments were expressed in questionnaire responses. That water is a taonga and precious for life was repeated about 60 times in the questionnaire responses:

- Water is a taonga - for all New Zealanders. We should treat it with care and respect.
- Treat water as a sacred resource by educating people. If people viewed water as a taonga you wouldn’t pollute it with sewage, garbage etc. but conserve it.
- He taonga te wai, i tuku iho mai Rangi nui atea.

4.4.2.2 Work with ecosystems
Feedback was received in support of working with natural ecosystems and investing more in green infrastructure to reduce the impacts of urban development. Some issues raised include:

- A few questionnaire responses raised that massive areas of concrete and other hard surfaces create huge run off problems throughout the city. There should be far more use of innovative wetlands and soft surfaces (vegetation strips) to slow down and filter water runoff.
- Participants in the Young Water Professionals event highlighted that innovation is needed to implement low impact development relevant to each area.
The Auckland Youth Advisory Panel indicated the need to increase and strengthen blue and green infrastructure, corridors and networks to promote sustainable environments and handle the growing effects of climate change.

- Water New Zealand highlighted the need for investment in daylighting streams and new green stormwater infrastructure.

4.4.2.3 Deliver catchment scale thinking and action
There was support for delivering catchment scale solutions to our water issues, particularly from business and industry.

- Federated Farmers submitted that livestock exclusion from waterways, restrictions on nitrogen use and cultivation setbacks are only interim measures, pending the development of a catchment and sub-catchment-based approach to addressing the various (and varied) water quality issues that exist in rural areas.

- Federated Farmers also submitted that practical ways are needed to balance the choices that need to be made, with these choices best being made at a catchment scale, so that where the impacts are coming from can be properly understood.

4.4.2.4 Focus on achieving right-sized solutions with multiple benefits
Feedback from the questionnaire included:

- Multiple small options/measures provide more sustainable solutions than a few large options/measures.

- We need to move toward empowering local solutions and look for innovative solutions in all areas of water.

4.4.2.5 Work together to plan and deliver better water outcomes

- Housing New Zealand requests a clear definition of the responsibilities of all involved parties and stakeholders in the development of the water strategy.

- AKBIDS (Auckland Business Improvement Districts) supports council working directly with industry, other sector groups and academic researchers.

- The Mana Whenua Kaitiaki Forum is willing to play a role in helping the council to lift its capacity, broker relationships with technical experts and local kaitiaki, and ensure these discussions stay connected with discussions happening around the governance table.

- Beef and Lamb noted the work they already have underway, such as farm environmental plans. They would like to improve the pride, health and wellbeing of farmers. They stated that lots of work is being done that is not being recognised.

- Water New Zealand raised the issue of human capacity and capability. Nationally the three waters industry is seriously short of staff.

- Ongoing partnership and engagement with mana whenua is needed to ensure mātauranga Māori is properly embedded respectfully and appropriately communicated, and desired Water Strategy outcomes are achieved.
4.4.2.6 Look to the future
Of relevance to this proposed principle, the questionnaire concluded with the question:
What's the most important thing you think we should do for our water future?
2,032 people answered this question.
- 23 per cent of the responses emphasised that cleaning up our waters and preventing future pollution were most important to them.
- 14 per cent of responses highlighted the need for having a safe drinking water supply in the future.
- Making it easier to use rain tanks was highlighted by 5 per cent of the responses to this question.
- 5 per cent of the responses highlighted the need for a better public education on water issues.
- 2 per cent of responses raised concern about water bottling and selling water overseas.

4.4.2.7 Discussion
The discussion document noted that the proposed principles will be reviewed once the national Urban Water Working Group has progressed its draft national principles to a final approved version. This work is still in progress. In the meantime, the proposed principles are considered fit for purpose as part of the framework.

Some submissions highlight the regulatory changes that are likely to come from central government in the near future. These form a part of the context the water strategy is being developed in, and will be taken into account.

4.4.2.8 Recommendations
26. Retain the principles as part of the framework.
27. Retain 'look to the future' as a principle
28. Ensure submitters' issues, including promoting collaboration, describing stakeholder roles, and ongoing partnership and engagement with mana whenua are considered in the development of the water strategy.

4.4.3 Processes we need to work on
4.4.3.1 Creating our water future together
Many respondents noted the need for everyone to be a part of the solution to our water problems:
- Work together to find ways to save our water. Not only for the benefits of us now but our future generations.
- We are a nation of people who live near water, either lakes or sea. We need to work together to protect it. Not by vilifying farmers, but working together so we all can get what we need.
- Look after it together. Take responsibility as individuals.
4.4.3.2 Achieving net benefits for catchments
The comments about the principle of catchment-scale thinking and action are also relevant here.

4.4.3.3 Setting priorities for investment
Some questionnaire respondents identified the need to achieve value for money:

- Please spend money more wisely and on these issues, don’t ask for more just redistribute what we have. We have more houses, homes have higher rates so this needs to be used to fix our water concerns.

Issues raised in written submissions include:

- Auckland Business Improvement Districts (AKBIDS) recommend priority should be placed on identifying revenue sources to pay for the water infrastructure. This will equitably share the burden of the costs of cleaner waters across the community instead of relying on rates and targeted rates.
- The Property Council indicated support for the water quality targeted rate.
- Water New Zealand stated that it is important that the council takes the lead on three waters management, ensuring how to spend ratepayers’ money efficiently and appropriately.

4.4.3.4 Discussion
Feedback on the processes is consistent with the approach taken in the discussion document.

4.4.3.5 Recommendations

29. Retain the ‘processes we need to work on’ as part of the framework.
4.5 Framework

The discussion document set out a proposed framework, to be the basis for the forthcoming water strategy. While we asked specific questions about the vision, values and issues, we also asked an open-ended question about the framework.

#### The Auckland Plan

<table>
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<th>Key challenges</th>
<th>Population growth</th>
<th>Environmental degradation</th>
<th>Shared prosperity</th>
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#### Te mauri o te wai: putting water at the centre

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<th>Vision</th>
<th>Te mauri o te wai o Tāmaki Makaurau – the life-supporting capacity of Auckland’s water – is protected and enhanced.</th>
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<tr>
<td>Values</td>
<td>Ecosystems Healthy water systems flourish the natural environment. Water Use We can meet our everyday water needs, safety, reliably and efficiently. Culture Water contributes to our identity and beliefs, as individuals and as part of communities. Recreation and Amenity We enjoy being in, on and near the water. Resilience Our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.</td>
</tr>
</tbody>
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<tr>
<th>Issues we need to work on</th>
<th>Cleaning up our waters</th>
<th>Meeting future water needs</th>
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<td>Processes we need to work on</td>
<td>Creating our water future together</td>
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<th>Recognise that water is a treasured taonga</th>
<th>Focus on achieving right-sized solutions with multiple benefits</th>
<th>Work together to plan and deliver better water outcomes</th>
<th>Look to the future</th>
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<td>Deliver catchment-scale thinking and action</td>
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Figure 28 – The framework proposed in the Our Water Future document

4.5.1 Questionnaire responses

**Question: Do you have any feedback on the framework, or is there anything else you think should be included?**

1,036 people answered this question:

- 56 per cent simply stated that they were happy with the framework
• 23 per cent asked us to act on fixing the issues and put in processes to measure the progress.
• 2 per cent asked for more transparency on decision making processes.
• Other themes coming through included the need to be proactive and bold, to take a holistic approach to water, and to hold polluters to account.
• A small number of submitters were not satisfied with the framework, for example asking to remove the 'spiritual nonsense and take a scientific approach' and stating that 'a goal to be accountable to is better than fluffy slogans.'

Many responses highlighted the strong community expectations for action. This included submissions requesting 'less discussion and more fast action to make things move forward' or commenting on 'good intentions but little concrete action' or 'too much thinking, just get on with the job.'

Constructive comments for the development of the strategy included the need to be tangible, focusing on a few key actions that represent the most important issues/changes that need to be made. One response highlighted the challenge of converting all of these visions into specific actions early enough to mitigate the issues and have the necessary infrastructure and rules in place early enough to be effective.

4.5.2 In-person feedback
Participants in the mana whenua hui were positive about the proposed water strategy framework and the opportunity to address te mana o te wai across Tāmaki Makaurau. Participants considered that a strong implementation approach is needed – the actions that follow from our words are a priority.

4.5.3 Written submissions
Specific points raised by submitters include:

• The Mana Whenua Kaihauki Forum commented that the outline which has been proposed provides a useful framework for dialogue, moving from values to issues, principles and processes. They noted that the tone of the discussion document suggests that the council is open to developing a strategy that embodies an ethic of genuine commitment to improving the health of Auckland’s waterbodies and reporting honestly and transparently on council’s actions and their effectiveness.

A number of submissions noted the legal and institutional context that the water strategy is being delivered within:

• Housing New Zealand submitted that primary responsibilities for water quality outcomes should remain with Auckland Council. Strategies that would impose significant financial obligations on individual property owner and developers would have an impact on Housing New Zealand, its assets, and its tenants.
• The Mana Whenua Kaihauki Forum notes the discussions happening elsewhere about governance arrangements and other matters, including in the context of negotiations between Treaty partners.
4.5.4 Discussion
Feedback received on the framework was generally positive, with a clear message to move quickly from visions and values to practical actions.

4.5.5 Recommendations
30. Proceed with the framework as the basis for developing the water strategy, with minor amendments as indicated in other recommendations.
31. Ensure the water strategy takes central government processes into account.
5 Responses from key groups

This section provides analysis of submissions from some key demographic and stakeholder sectors, submissions relating to local issues and other issues raised.

5.1 Māori responses

Working in partnership with mana whenua is key to achieving the shared vision of Our Water Future. After working closely with the Mana Whenua Kaitiaki Forum in developing the discussion document, particular emphasis was placed on securing feedback from Māori and mana whenua.

Specific engagement events include Radio Waatea hosting three live-broadcast discussions, reaching audiences of over 12,000 via radio and Facebook. Six pre-recorded Te Hononga shows were broadcast, along with two interviews promoting the live discussions.

Community partners made effective use of their networks to call for submissions. This includes Te Kaha o Te Rangatahi, Te Hera o Manukau, Te Whanau Waipareira, Pāka Kare ki Tāmaki, and Hapai Te Haurua. A video call for submissions was made by rangatahi, and has received more than 7,900 views. More than 300 submissions were gathered using a simplified submission form. Overall 843 written pieces of feedback (including 558 questionnaires) were received from people who identified themselves as Māori. Feedback from these submitters has been presented throughout the report in relation to levels of support for each value and big issues.

A hui was held with the Mayor, councillors, and ten representatives from seven mana whenua entities. It was an opportunity to discuss the topics in person with mana whenua (and a full report on this is provided in Appendix 3).

Participants in the mana whenua hui were positive about the proposed framework for developing the water strategy, supporting the decision to focus on the values we attach to Auckland’s waters and emphasizing the importance of effective implementation that connects ‘top down’ vision with ‘bottom up’ action.

Discussion at the hui centred around the perspective that water is a taonga – we need to stop wasting it, and we should be able to gather food from rivers, estuaries and their margins. Participants in the hui expressed the view that this is a birthright and we need to increase the values we place on being able to relate to and live in harmony with nature’s environments.

Participants in the hui had a clear preference for a water strategy that drives holistic management of land and water, and accounts for the cumulative effects of human activities on the mauri of Auckland’s waters. They appreciated the need for the water strategy to manage objectives at different scales and supported the proposal to prioritise te
mauriora te wai, considering this would effectively resolve any possible conflicts between regional objectives and local or place-based objectives.

Discussion at the hui also emphasised the importance of collaboration between council departments and effective partnership between the council and mana whenua, from governance and decision-making to project design and delivery. Continued partnership is necessary to ensure:

- the vision advanced by the strategy is well understood and implemented faithfully
- mātauranga Māori effectively informs decision-making
- immediate actions are taken to address pressing issues (like cleaning up rivers and preventing sewage overflows) and balanced with planning in preparation for future issues (like climate change, water allocation and water supply).

Participants acknowledged the apparent openness of the council to developing a strategy that embodies an ethic of environmental guardianship and a genuine commitment to improving the health of Auckland’s waterbodies. They supported the apparent intent to report transparently on outcomes achieved to create greater accountability in council for the effectiveness of its decisions and actions.

5.1.1 **In person feedback**

The key points shared by mana whenua can be summarised as below:

- Mana whenua supported the framework and vision for the strategy. This includes recognising water as a taonga and the interdependency of mauri and mana.
- There should be increased transparency and mātauranga underpinning analysis (such as cultural monitoring) and response (such as the maramataka) to support a holistic sustainable approach.
- Ongoing and increased collaboration with mana whenua is required to define and develop the concepts and issues raised. This partnership will be particularly important when applying a te ao Māori lens in the implementation.
- Increased cross-organisational collaboration is required to achieve an integrated approach.
- Council should educate and increase awareness about water issues and encourage communities to assist each other and be more accountable.

5.2 **Pacific Islanders**

443 pieces of written feedback were received from people who identified themselves as Pacific Islander. Two specific fono were also held with Pacific Islander groups. The main feedback from this group was:

- This group strongly associated with all of the values, with the strongest association being the natural environment, then water’s contribution to identities and beliefs, recreational uses of water and water use
- The group had a strong response to all issues, mainly the pollution of waterways
• The group had a very strong response to safety and quality of drinking water being a key action.
• The group had a strong response to stopping selling water overseas to the highest bidders.
• The group recommended increased education of the community to stop pollution and increase the value of water.
• The group recommended that Auckland either move away from polluting industries, impose stricter regulations on them, and enforce fines. This included forestry and agriculture.
• Stop polluting waterways with 1080, chemical treatments and fluoride.
• Control and modify industry and high-density development to ensure the drainage of water does not impact on natural waterways and the ocean.

5.3 Young people

Significant engagement was undertaken with young people around Auckland including school students, young professionals, and the Youth Advisory Panel. Detailed findings from the engagement are included in Appendix 4.

Of particular note, feedback from young people highlighted:

• Understanding the inextricable relationship between people and water.
• A willingness to change what we do in order to meet our future challenges – 97 per cent of the 65 young water professionals supported reusing wastewater as drinking water.
• Strong ambitions for the future of Auckland – swimmable beaches, healthy kaitianga, secure and reliable drinking water supply.
• High value on ecosystems and the natural environment, and the need to clean up our waters – pollution and rubbish featured strongly in feedback from Murray’s Bay Intermediate School.
• Comfort with and support for the vision of te mauri o te wai, and recognition of the whakapapa relationship between mana whenua and wai.
• Recognition of the need for more community education and involvement.

5.4 Rural sector

Approximately 7 per cent of feedback received was directly related to the water issues of rural areas, including flooding, drinking water security, and water availability for farming. We also received written submissions from Horticulture New Zealand and Federated Farmers.

Rural industries supported the development of the water strategy, and also supported the proposed vision that the life supporting capacity of Auckland’s water is protected and enhanced.

Specific feedback from rural sectors included:
6 Summary of recommendations

The purpose of releasing Our Water Future – Tō Tātou Wai Aahu Ake nei was to raise public awareness of the significant water issues facing Auckland, and to generate feedback on the proposed framework for a water strategy.

The feedback from the engagement process suggests that the framework is generally fit for purpose, and that the priority for the public is to move quickly from words to implementation.

Staff have made 31 recommendations arising from submissions, for inclusion in the development of the water strategy. Only one amendment to the text of the framework is recommended (in the resilience value). This recognises public feedback that submitters found it hard to understand.

The remainder of the recommendations will ensure that the priorities and concerns of Aucklanders raised in public feedback are reflected in the drafting of the water strategy.

For clarity, the recommendations have been consolidated into five overarching themes:

1. to amend the resilience value
2. to adopt the framework
3. to take public priorities into consideration in drafting the water strategy
4. to strengthen specific issues as raised in submissions
5. to ensure the process of preparing and implementing the strategy addresses issues raised through public feedback.

These are outlined in more detail in Table 3 below.
Table 3 – Consolidated recommendations

<table>
<thead>
<tr>
<th>Consolidated recommendation</th>
<th>Addresses report recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adopt the framework as the basis for developing the water strategy.</td>
<td>1, 3, 4, 5, 8, 9, 12, 15, 18, 20, 22, 24, 26, 28, 29, 30</td>
</tr>
<tr>
<td>2. Make one amendment to the framework to clarify the meaning of the explanatory text of the resilience value, as follows. What we value: our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change we are prepared for extreme events such as flooding and drought and are able to recover quickly.</td>
<td>10</td>
</tr>
</tbody>
</table>
| 3. Ensure that the draft water strategy reflects the community priorities that were shared in the feedback on Our Water Future, including:  
  - recognising the importance of water for life, and taking good care of it  
  - the strong value placed on our natural environments and recreational opportunities  
  - the desire to clean up our receiving waters and prevent further degradation (especially from land-based sources, wastewater, stormwater, litter and plastics)  
  - the importance of safe and reliable drinking water  
  - increasing the capacity of our networks for future growth, including developing alternative water sources and increased storage  
  - the need to act on climate change and address flooding and sea level rise  
  - the kaitiaki role of mana whenua and the opportunity to bring a Māori world view alongside western science and decision-making processes  
  - an expectation that the council will move quickly from strategy to action. | Full text of report |
| 4. Ensure that the following issues raised in submissions are addressed in the draft strategy: | 2, 6, 7, 11, 13, 16, 19, 21 |

Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document
- rural issues, including the different water values held in rural and urban areas, future security of rural water needs and the impacts of rural development as well as urban growth
- the importance of water for cultivation, irrigation and food production
- the importance of water for businesses, industries and economic development
- the potential of rain tanks, water reuse and efficiency measures for meeting future water needs
- the role of all Aucklanders in protecting and enhancing Auckland's waters, and in building resilience
- issues for marine waters
- management of groundwater.

5. In the process of developing the water strategy, ensure:

- alignment with legislation, council plans and policies including the objectives of the Unitary Plan
- existing council group strategies and technical work are used to inform 'adapting to a changing water future'
- mana whenua are involved in an ongoing partnership to apply a Māori world view to development of the strategy and its implementation,
- a map of Auckland's water catchments is included
- stakeholders' roles and responsibilities are described.
## 7 Appendices

### Appendix 1 – Engagement events and activities

**Table A1 – Detailed engagement events and activities list**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Name</th>
<th>Location</th>
<th>Local Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday, 16</td>
<td>Lantern Festival</td>
<td>Auckland Domain</td>
<td>Regional</td>
</tr>
<tr>
<td>Sunday, 17</td>
<td>Waitakere Myers Park Medley – Local Board</td>
<td>Waitakere Local Board</td>
<td>Waitakere</td>
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<tr>
<td>Sunday, 17</td>
<td>Rodney Rautawhiti Park Celebration</td>
<td>Rodney</td>
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<tr>
<td>Tuesday, 18</td>
<td>Henderson-Massey Business Meeting</td>
<td>Henderson Civic Council Chambers</td>
<td>Henderson-Massey</td>
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<tr>
<td>Wednesday, 20</td>
<td>Waitakere Parnell Library Drop In</td>
<td>Parnell Library</td>
<td>Waitakere</td>
</tr>
<tr>
<td>Wednesday, 20</td>
<td>Parnell Library Drop In</td>
<td>Parnell Library</td>
<td>Waitakere</td>
</tr>
<tr>
<td>Thursday, 21</td>
<td>Otakai Transport Stakeholder Event</td>
<td>St Chads Church and Community Centre</td>
<td>Otakai</td>
</tr>
<tr>
<td>Thursday, 21</td>
<td>Auckland Conversations – Our Water Future</td>
<td>Maritime Room</td>
<td>Regional</td>
</tr>
<tr>
<td>Saturday, 23</td>
<td>Waitakere Parnell Farmers Market</td>
<td>Waitakere Local Board</td>
<td>Waitakere</td>
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<tr>
<td>Saturday, 23</td>
<td>Hibiscus and Bays Estuary Arts and Future</td>
<td>Hibiscus and Bays Estuary Arts Centre</td>
<td>Hibiscus and Bays</td>
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<td>Sunday, 24</td>
<td>Waitakere Ranges Irianga Markets</td>
<td>Waitakere War Memorial Hall</td>
<td>Waitakere Ranges</td>
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<td>Sunday, 24</td>
<td>Titirangi War Memorial Hall</td>
<td>Titirangi War Memorial Hall</td>
<td>Waitakere Ranges</td>
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<tr>
<td>Monday, 25</td>
<td>HCC Event</td>
<td>Albert St L14, Room 8</td>
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<td>Monday, 25</td>
<td>Waitakere Grey Lynn Library Drop In Session</td>
<td>Grey Lynn Library</td>
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<td>Tuesday, 26</td>
<td>Western Springs Wellbeing 127 Event</td>
<td>Western Springs Community Hall</td>
<td>Albert-Eden</td>
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<td>Wednesday, 27</td>
<td>Pakuranga Chinese Association Event</td>
<td>Te Tuhi Centre for the Art</td>
<td>Howick</td>
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<td>Wednesday, 27</td>
<td>Whau Local Board Business Meeting</td>
<td>Whau Local Board</td>
<td>Whau</td>
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<td>Wednesday, 27</td>
<td>Whau Local Board Business Meeting</td>
<td>Whau Local Board</td>
<td>Whau</td>
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<tr>
<td>Tuesday, 28</td>
<td>Waitakere Live Q&amp;A with members of Waitakere</td>
<td>Waitakere Local Board</td>
<td>Waitakere</td>
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<tr>
<td>Thursday, 28</td>
<td>Waitakere Ranges Local Board Meeting</td>
<td>Waitakere Ranges Local Board</td>
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<td>Friday, 1 March</td>
<td>Rural Advisory Panel</td>
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<tr>
<td>Saturday, 2 March</td>
<td>GDI Have Your Say with the local board - Civic</td>
<td>Great Barrier Local Board</td>
<td>Great Barrier</td>
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<tr>
<td>Saturday, 2 March</td>
<td>Upper Harbour Have Your Say Event</td>
<td>Albany Village Library</td>
<td>Upper Harbour</td>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Venue</th>
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<tbody>
<tr>
<td>Sunday, 3 March 2019</td>
<td>Takapuna Markets Have Your Say Stall</td>
<td>Takapuna Markets</td>
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<tr>
<td>Sunday, 3 March 2019</td>
<td>Waitamata Grey Lynn Farmers Market - Local Board Stall</td>
<td>Waitamata Local Board</td>
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<td>Sunday, 3 March 2019</td>
<td>Hibiscus and Bays Kite Day</td>
<td>Ridgeline Park</td>
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<td>Monday, 4 March 2019</td>
<td>Northcote Wellbeing NZ Event</td>
<td>Northcote West Memorial Hall</td>
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<tr>
<td>Monday, 4 March 2019</td>
<td>Auckland University Orientation Week 2019</td>
<td>Albert Park</td>
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<td>Monday, 4 March 2019</td>
<td>Waitamata Auckland Central City Library Drop In Session</td>
<td>Waitamata Local Board</td>
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<tr>
<td>Tuesday, 5 March 2019</td>
<td>Otaia-Papakotoe Service Provider Hui</td>
<td>To Puke o Tāua Community Centre, To Puke Main Hall</td>
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<tr>
<td>Tuesday, 5 March 2019</td>
<td>Pukenahoro Hearing Style Event</td>
<td>Franklin Local Board Chambers</td>
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<tr>
<td>Wednesday, 6 March 2019</td>
<td>Water Strategy - panel discussion</td>
<td>Hamilton Whiti Tahi Marae</td>
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<td>Wednesday, 6 March 2019</td>
<td>Waheke Roundtable Have Your Say Event</td>
<td>Waheke Local Board Office</td>
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<td>Wednesday, 6 March 2019</td>
<td>Waheke Roundtable Have Your Say Event 2</td>
<td>YMCA at Lymford Youth &amp; Leisure Centre</td>
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<td>Thursday, 7 March 2019</td>
<td>Māngere-Otahuhu Drop In Session</td>
<td>Criterion Square Otahuhu</td>
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<td>Friday, 8 March 2019</td>
<td>IPW3A event</td>
<td>Institute of Public Works, Engineers Australasia</td>
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<td>Saturday, 9 March 2019</td>
<td>Waheke Roundtable Have Your Say Event 3</td>
<td>Waheke Local Board Office</td>
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<td>Saturday, 9 March 2019</td>
<td>Ōrākei Environment Stakeholder Event</td>
<td>Auckland Sailing Club</td>
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<td>Saturday, 9 March 2019</td>
<td>Māngere-Otahuhu Drop In Session</td>
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<td>Saturday, 9 March 2019</td>
<td>Merewether Fun Run</td>
<td>Merewether Park</td>
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<td>Saturday, 9 March 2019</td>
<td>Kaipatiki Eco Fun Day</td>
<td>Marlborough Park</td>
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<tr>
<td>Saturday, 9 March 2019</td>
<td>I Love Takapuna Asian Food Festival</td>
<td>Huntly Green</td>
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<td>Saturday, 9 March 2019</td>
<td>GBI Have Your Say with the local board - FluRoi Store</td>
<td>Great Barrier Local Board</td>
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<td>Saturday, 9 March 2019</td>
<td>Kumeu Show</td>
<td>Kumeu Showground</td>
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<td>Sunday, 10 March 2019</td>
<td>Auckland Central City Library Drop In Session</td>
<td>Waitamata Local Board</td>
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<td>Sunday, 10 March 2019</td>
<td>Kumeu Show</td>
<td>Kumeu Showground</td>
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<td>Tuesday, 12 March 2019</td>
<td>Otara-Papakotoe Community Hui</td>
<td>Otara-Papakotoe Town Hall</td>
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<td>Wednesday, 13 March 2019</td>
<td>Mana Whenua Feedback Event</td>
<td>Te Atatu Peninsula Community Centre</td>
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<td>Wednesday, 13 March 2019</td>
<td>Annual Budget Regional Stakeholder Event</td>
<td>Reception Lounge</td>
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<td>Wednesday, 13 March 2019</td>
<td>Leys Institute (Ponsonby) Library Drop In Session</td>
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<td>Wednesday, 13 March 2019</td>
<td>Papakura Drop In Event</td>
<td>Sir Edmund Hillary Library</td>
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<tr>
<td>Wednesday, 13 March 2019</td>
<td>Developers Forum</td>
<td>Meritima Room</td>
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</tbody>
</table>

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For Information: Public feedback on the Our Water Future - Tō Tātou Wai Ahu Ake Nei discussion document Page 139
Summary of social media feedback

There was significant social media coverage of the discussion document, with some key issues surfacing. The questionnaire was shared amongst many networks, including Facebook and Radio Waatea. The key issues that surfaced from the social media feedback included:

- Support for the Discussion Document
- Cleaning up our Waterways
- The importance of water
- Water pollution
- Chemical pollutants (including 1080 water pollution)
- The problem with selling our water overseas
Water pollution

The issue of water pollution and cleaning up our waterways surfaced the most, with several issues and suggestions made, including:

- The issue of 1080 chemical spraying and other chemicals (pesticides and herbicides) polluting the waterways
- Litter pollution
- Sewage overflows, in particular, polluting into the harbours
- The recommendation to improve recycling of litter and food waste to prevent this from polluting waters (including banning of plastic packaging)
- It was suggested to increase community engagement in cleaning up waterways, for example once a week/month on a Sunday meet at or near the marae, and teams up to clean local waterways
- More rubbish bins, especially near beaches and in camping zones
- Better protection of drains

Selling of water overseas

The issue of selling water overseas, in particular for water bottling, was raised several times on the various forums. There was quite a lot of concern about this issue with commentors saying to “stop selling our water”.

Land management

There were suggestions regarding improved land management practices, including:

- Limiting the land development, in particular for agricultural use
- Improving farming practices
- Increased native planting

Resilience

There was a recommendation to future proof our water infrastructure for increased population to ensure resilience.
Appendix 2 – Māori community focussed engagement

Greater efforts were required to connect with Māori communities in Auckland to give effect to the significance of this water kaupapa to mataawak. The council Māori engagement team played an important part in working with eight key community partners to achieve a greater mix of regional and targeted sub regional engagement as well as engagement with Rangatahi.

This included completing three live panel discussion events in west, south and north Auckland with a mix of elected members, mana whenua and mataawak representatives as panellists. Weekly half an hour shows on Radio Wastea with a range of perspectives on the water strategy including: mana whenua (Tane Te Rangi), subject matter experts (Andrew Chin), Local board (Lotu Full, Angela Dalton), community subject matter experts (Troy Brockbank), Rangatahi perspectives (Pia Kahui-Macconnell, Te Kauri Perata, Freya Schaumkel and Danielle Newton).

Our partnerships focus on mataawaka and Māori communities organisations and networks in our high Māori population areas, west and south, and region-wide groups with an interest in either general participation, or in the specific topics we are engaging on at any one time. We partner with community groups because they have the knowledge, experience and reach into Māori communities in Auckland. Our community partners are also able to connect with Māori communities in a way that is a relevant and engaging.

They are a mix of Urban Māori Authorities, health organisations, marae, strategic collectives, rangatahi and kaupapa focused groups like Para Kore ki Tāmaki, zero waste. The rangatahi roopu that led the summit, Para kore ki Tāmaki supported specifically to generate their own activation around Auckland’s environmental future, including the Climate Action Plan and feeding into the water strategy.

A summary of our key community partners is below.

Te Ora o Manukau (166 survey responses)

Te Ora O Manukau is a network of community organisations that supports collaboration and strategic cooperation on issues affecting Māori in South Auckland. As a network, they have key insights into Māori communities based on their knowledge, reach and experience within a kaupapa Māori model.

Te Kaha o te Rangatahi (362 hard copy simplified form)

Te Kaha o te Rangatahi is a member of Te Ora o Manukau. They provide a range of services for rangatahi in South Auckland and are uniquely placed to engage and reach their on significant issues.

Te Whanau o Waipareira (74 simplified form online submissions)

Te Whanau o Waipareira is an urban Māori organisation based in west Auckland. They provide support for whanau across a number of areas including, health and education.
They have a strong following on social media and are able to develop and curate content for a Māori audience.

**Hapai Te Hauora (50 hard copy council form)**

Hāpai aims to increase opportunities for Māori communities to enjoy good health and to be sustained by healthy environments. They work at a national and regional level.

**Te Ngira (2 online simplified form responses)**

A website channel, supported by Hapai Te Hauora, to encourage community participation on various kaupapa. While its focus is on health and wellbeing, the website is also a channel to support participation in a variety of community issues.

**Para kore ki Tāmaki (13 online simplified form submissions)**

Rangatahi ārupu supported specifically to generate their own activation around Auckland’s environmental future, including Climate Action Plan and inputting into the water strategy. They were key to the development and delivery of the our ‘if these waters could talk’ video which reached approximately 40,000 people.

**Radio Waatea (4 online simplified form submissions) Potentially a lot more on the council form as they did encourage their audience to the council website and also on one FB post**

Radio Waatea is a community radio station, supportive of increasing Māori participation, with significant reach into urban Māori communities. It has a regional and nationwide focus and brings a Te Ao Māori perspective to a broad range of issues. We reached 5,143 online and more than 10,000 radio audience to the three Waatea facilitated live discussions and related interviews, and 11,000 views to the ‘if these waters could talk’ video through their network. Around 100 attendees across all three live events, with particularly strong audience / community engagement at Parakai event.

**Tino AKL (43 online simplified form submissions)**

While not a community partner, the TINO AKL Facebook page was a key channel for submissions and engagement. It is managed by the IMSB.

**UpSouth (156 responses to the UpSouth call up)**

UpSouth is an online platform, managed by The Southern Initiative to enable rangatahi in south Auckland to have a voice. While not a community partner, they were a vital channel to engage with rangatahi on this kaupapa.

**Facebook**

In total (across all partners), our Facebook campaign posts reached about 39,517 people (this includes 20,117 on the main Radio Waatea post that had the ‘if these waters could talk’ video), the majority of these people would be Māori. 125 comments and more than 970 post reactions.
Rangatahi

More than 100 participants at Rangatahi Climate Summit with significant discussion around wai.
Appendix 3 – Summary of feedback from Governing Body Mana Whenua consultation and engagement workshop (13 March 2019)
Our Water Future – Tō tātou wai ahu ake nei
Mana Whenua Early Engagement Summary Report

Summary of feedback from Governing Body Mana Whenua consultation and engagement workshop (13 March 2019)
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1. Introduction

Auckland Council is developing a water strategy (Our Water Future - Tō tātou wai ahu ake nei) to provide strategic direction and priorities to enable council to meet the challenges and opportunities for improved water management in all its forms. The Our Water Future discussion document (dated February 2019) was a first step in the strategy’s development and early engagement.

1.1. Approach to engagement

Working in partnership with mana whenua is key to achieving the shared vision of Our Water Future. Involving mana whenua in governance and decision-making roles has been identified as an ongoing part of this process, as well as making sure they are able to actively exercise kaikōkirianga in practical ways.

The Mana Whenua Kaitaki Forum were engaged in the development of the discussion document and a representative of the Mana Whenua Kaitaki Forum, Tane Te Rangi, was part of the Political Steering Group.

In the development of the Discussion Document Mana Whenua have said that te mauri o te wai should be at the centre of the strategy, with rivers, estuaries and harbours restored to a state of health. This feedback during the early development stage has been integrated throughout the document and into the following vision statement on where we would like to be by 2050:

“Te mauri o te wai o Tāmaki Makaurau The life supporting capacity of Auckland’s water is protected and enhanced.”

Feedback on the Our Water Future Discussion Document was sought from mana whenua entities, at a consultation and engagement workshop held on Wednesday, 13 March 2019 at 1.30pm – 5.30pm.

1.2. Purpose of this report

This report provides a summary of feedback from mana whenua entities which attended the workshop to provide feedback on Our Water Future.

This feedback will help to shape the development of the Water Strategy, and ongoing partnership approach to enable mana whenua entities to exercise their kaitiaki role over wai / water.
2. Methodology

This engagement feedback summary has been conducted via a desktop review and analysis of feedback provided at the workshop held on 13 March 2019. Feedback documents are a mix of:

- Notes taken by Auckland Council staff from mana whenua oral submissions / discussions held at the workshop (refer to Section 2.2: Feedback Sources)
- Presentations provided by mana whenua entities.

Figure 1 outlines the engagement summary methodology.

2.1. Feedback analysis themes

Feedback provided by mana whenua has been analysed in two ways. The first is a high-level summary of key feedback points made by each mana whenua entity that attended the workshop.

The second is an analysis of feedback themes as a whole, according to the Our Water Future feedback themes set out in the consultation feedback form:

- Question 1: Our values (section 4)
- Question 2: The big issues: what we need to work on (section 5)
- Question 3: Meeting our future water needs (section 6)
- Question 4: Adapting to a changing water future (section 7)
- Question 5: The framework for developing a water strategy (section 8)
- Question 6: Creating our water future together (section 9)
- Other issues raised (section 10).
Mana whenua entities also have the opportunity to complete the feedback form or respond to each question as part of early engagement.

Much of the workshop discussion and feedback received is wider in scope than the questions asked on the consultation form. Therefore, while the feedback questions provide a useful reference for analysing key issues and concerns related to Our Water Future, it is important to note:

- The key points and issues raised by mana whenua need to be read and understood as a whole
- Feedback does not necessarily cover every section of the Our Water Future discussion document and consultation feedback form.

2.2. Feedback sources

Mana whenua feedback has been compiled from the following information sources provided by Auckland Council:

**Table 1: Feedback source documents**

<table>
<thead>
<tr>
<th>Mana Whenua organisation</th>
<th>Document(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ngāti Tamaoho Settlement Trust</td>
<td>Notes from Governing Body Mana Whenua workshop, 13 March 2019</td>
</tr>
<tr>
<td>2. Te Ara Rangatū o Te Iwi o Ngaati Te Ata Waiohua</td>
<td>Notes from Governing Body Mana Whenua workshop, 13 March 2019</td>
</tr>
<tr>
<td>3. Ngāti Whātua Ōrākei</td>
<td>Notes from Governing Body Mana Whenua workshop, 13 March 2019</td>
</tr>
<tr>
<td>4. Ngāti Whātua o Kaipara</td>
<td>Notes from Governing Body Mana Whenua workshop, 13 March 2019  Presentation (&quot;2.50_Te Mauri o Te Wai Kaipara_120319.pdf&quot;)</td>
</tr>
<tr>
<td>5. Ngaati Whanaunga</td>
<td>Notes from Governing Body Mana Whenua workshop, 13 March 2019</td>
</tr>
<tr>
<td>6. Te Uri o Hau Settlement Trust</td>
<td>Notes from Governing Body Mana Whenua workshop, 13 March 2019  Presentation (&quot;3.30_Te Uri o Hau Settlement Trust&quot;)</td>
</tr>
<tr>
<td>Mana Whenua organisation</td>
<td>Document/s</td>
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<tr>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>7. Te Runanga o Ngati Whatua</td>
<td>• Notes from Governing Body Mana Whenua workshop, 13 March 2019</td>
</tr>
<tr>
<td></td>
<td>• Presentation (&quot;3.50 Te Runanga o Ngati Whatua&quot;)</td>
</tr>
</tbody>
</table>
3. Summary of feedback by mana whenua entity

This section presents a high-level summary of feedback given by each mana whenua entity. For details and further information, please refer to the original presentations provided with the full submissions or original engagement notes.

3.1. Ngāti Tamaoho Settlement Trust

Key points raised by Ngāti Tamaoho Settlement Trust include:

- Water is taonga – we need to stop wasting this precious resource
- Concern about future water supply, noting the importance of water allocation and making better use of rainfall (e.g. rain tanks)
- Advocacy for more accountability for environmental impacts, and more council people on the ground checking compliance (e.g. building projects)
- The need to consider water environmental (e.g. street trees, cropping) and land use (cumulative effects of infill housing, avoiding floodplains) issues holistically, as this all affects water quality
- The need to ensure budgets are adequate for desired outcomes, including for promoting green infrastructure and enabling appropriate maintenance for water quality infrastructure
- The importance of continuing collaboration with mana whenua as we work together towards better water outcomes.

3.2. Te Ara Rangatū o Te Iwi o Ngaati Te Ata Waiohua

Key points raised by Te Ara Rangatū o Te Iwi o Ngaati Te Ata Waiohua include:

- Acknowledgement of the importance of wai and how it influences who they are
- Acknowledgement of the relationship between connection to water and mental health, noting the detrimental impacts of a loss of connection to culture through historic waka confiscation
- Notes issues with how Manukau is currently being used as dumping ground which affects ka tatau and cultural significance to connect with the wai
- Notes local water focused programme with rangatahi as a way of building generational capacity to protect water

Page 7
• Te Ara Rangatū o Te Iwi o Ngāati Te Ata Waiohua wants to partner with Auckland Council in meaningful ways for onaanga o te wai
• A request for a financial contribution towards building the wharekai, a key kaumatua priority.

3.3. Ngāti Whātua Ōrākei

Key points raised by Ngāti Whātua Ōrākei include:

- Ngāti Whātua Ōrākei’s overall aim is to reach maximum water quality following a couple of centuries of damage
- Recognises the Water Strategy as the start of the conversation, and supports the overall themes, key issues and overall objectives to address water quality
- Advocacy for water management and responsibilities to be integrated across Auckland Council and Watercare
- Support for integrated catchment approaches involving different stakeholders
- Ngāti Whātua Ōrākei is ready to work together and engage in open dialogue with Auckland Council regarding fresh water, and notes the recent development of the Iwi management plan.

3.4. Ngāti Whātua o Kaipara

Key points raised by Ngāti Whātua o Kaipara include:

- A desire to see the māori of fresh water within Kaipara restored and protected in ways which enable Ngāti Whātua o Kaipara to provide for their social, economic, environmental and cultural wellbeing and the health of generations to come
- That the ability to drink water, gather kai, cultural harvest, swim and be sustained by clean healthy water is our birth right and those that will come after us
- Priorities include water take management, fresh water conservation, preventing the potential Dome Valley waste management site from proceeding, and water retention
- The need to consider environmental, water quality and land use issues holistically
- A desire for plentiful, clean water that’s used efficiently
- A desire to see water allocated, measured and managed fairly, with negative cumulative impacts recognised, and a balance between values and development.
3.5. Ngaati Whanaunga

Key points raised by Ngaati Whanaunga include:

- Water is life and a treasured taonga – it’s critical that we plan together to achieve sustainable outcomes and better water outcomes
- Support for Auckland Council’s approach to the Water Strategy including incorporating mātauranga Māori and a Māori world view, increasing opportunities for mana whenua to exercise kaitiakitanga, and the values- and rights-based approach
- Acknowledgement of a change in philosophy over recent years in the approach to how Auckland Council and CCO’s are improving their environmental outcomes
- Ngaati Whanaunga is willing to join current council decision-making opportunities regarding water / high level governance of the water strategy.

3.6. Te Uri o Hau Settlement Trust

Key points raised by Te Uri o Hau Settlement Trust include:

- Advocacy for building a resilient water supply now, and concern about water supply beyond 2050
- Support for the Water Strategy to be integrated across Council and Watercare
- Acknowledgement of the work Auckland Council has done to embed mana whenua outcomes and a Māori world view in the Water Strategy
- Disappointment about the potential Dome Valley waste management site
- Te Uri o Hau looks to be a key partner involved in the end to end process for developing the Water Strategy.

3.7. Te Rūnanga o Ngāti Whātua

Key points raised by Te Rūnanga o Ngāti Whātua include:

- Water is a taonga. It sustains us, providing a source of food and traditional materials. It holds special connections regarding our identity, knowledge, attachment to place, and custodial obligations as kaitiaki
- It’s imperative to restore river systems, estuaries and harbours of Tāmaki Makaurau to a state of health. The Auckland Water Strategy provides the opportunity to address the health of our waters across the region more consistently
- Support for Auckland’s Water Strategy putting te mauri o te wai at the centre – putting this into action requires quality partnerships with mana whenua
- Supports incorporating mātauranga Māori in the Water Strategy, noting that profound and urgent action is needed in order to truly apply a Māori world view.
- Cites the Integrated Kaipara Harbour Management Group and the Hikorangi Swamp as innovative approaches to be considered by the Water Strategy.
- Stronger governance and decision making roles are needed to increase both the opportunities for mana whenua to exercise kaitakitanga, as well as ensure ongoing involvement in delivering the strategy. There are still barriers to participation which need to be addressed.
4. Question 1: Our values

People value water for different reasons. We have identified five broad categories that we will use to evaluate our progress on water issues. Do these values match what you value about water?

a. Ecosystems: healthy water systems nourish the natural environment.
b. Water use: we can meet our everyday water needs safely, reliably and efficiently.
c. Recreation and amenity: we enjoy being in, on and near the water at beaches, lakes and streams.
d. Culture: water contributes to our identities and beliefs, as individuals and as part of communities.
e. Resilience: our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.

Please tell us why, and if there is anything else you value about water?

Mana whenua entities identified wai/water as taonga and life-sustaining, with highly significant cultural value and connections. Key themes included:

- Te mauri o te wai – the life sustaining capacity of water is a precious resource and birthright that supports clean drinking water, gathering kai, swimming and recreation
- Wai was seen as very important to mana whenua identity, in terms of both connections to local catchments and waterways, and historical connections to waka
- Wai enables people and communities to be resilient and provide for their social, economic, environmental and cultural wellbeing – as well as the health of generations to come
- Water use, land use, and the cultural and mental health of whanau are all connected
- Given the fundamental importance of wai, mana whenua entities urged Auckland Council to partner with mana whenua and plan together to achieve sustainable, improved water outcomes and restore water in Tāmaki Makaurau to a state of health.
5. Question 2: The big issues: what we need to work on

We have identified four issues that are at the heart of Auckland’s water future. How concerned are you about these issues?

a. Cleaning up our waters, dealing with the pollution of our beaches and waterways, e.g. sediment, nutrients and contaminants from rural and urban activities and roads, litter and faecal contamination.
b. Growth in the right places, thinking about the water and wastewater impacts of where and how we grow.
c. Meeting future water needs, identifying how we will provide clean drinking water to a growing population, with a range of options to develop including more efficient water use, rainwater collection and storage, water re-use, or other water sources.
d. Adapting to a changing water future, planning for changing water conditions, e.g. higher probabilities of droughts, flash flooding and coastal inundation, and making sure our communities and our infrastructure are resilient to the changes.

Please tell us why, and what you think we can do now to anticipate and adapt to the changes in our water future?

Feedback from mana whenua identified concern particularly around a) cleaning up contaminated waterways, b) supporting growth in the right places, and c) meeting future water needs in environmentally sustainable ways. Key themes included:

Cleaning up our waters

- A desire to clean up our waterways and restore river systems, estuaries and harbours of Tamaki Makaurau to a state of health. Representatives wanted council to address current issues (such as water quality issues in Manukau) and prevent future degradation of water quality.

Growth in the right places

- The need for promoting future growth in the appropriate locations, including minimising development in flood plains and returning this land to wetlands, and managing the cumulative effects of infill housing
- Disappointment and concern regarding the proposed Dome Valley waste management site, which was perceived to be in direct conflict with the Our Water Future discussion document, Te Mana o Te Wai national policy statement, and

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council waste management policy. Representatives were concerned about the impact on the Hoteo and Kalpara rivers, catchment water quality and marine life, should the waste management site proceed in this location.

Meeting future water needs

- Concerns about future water supply and meeting future water needs beyond 2050, given capacity constraints of Hunua, Waikuku, aquifers and the Waikato River
- A request for Auckland Council to take immediate action to build water supply resilience, given strategies take time to come into play
- A desire to see greater use and incentivising of water retention, such as installing water tanks
- Concerns there are issues around appropriate water take (e.g. consenting and monitoring of aquifers)
- Concerns that Watercare does not have a strong enough understanding or control over the current water situation (examples included the near over-allocation of Waikato River, and regulation of on-site greywater rain tanks).

Other issues

- The importance of working closely with mana whenua and Māori to address water quality, but that barriers to participation are still an issue. This is discussed further in Question 6. Creating our water future together
- A concern by Ngāti Whātua o Kalpara that the dispersal of human ashes in waterways is inappropriate and incompatible with collecting kaimoana
- Aquifer allocation (for water bottling), water compliance, and pollution from sedimentation and direct discharges to waterways were identified as further healthy water challenges.
6. Question 3: Meeting our future water needs

As we develop options for meeting our future drinking water needs, we want to understand which criteria you think are most important.

Which of the following criteria are most important to you? (Select your top two)

- Safety and quality of drinking water
- Reliable supply of drinking water
- Cost of infrastructure needed to provide drinking water
- Environmental impacts of the infrastructure for supplying drinking water
- Becoming less reliant on water sources outside the region by being more efficient and exploring other sources

Please tell us why these criteria matter to you, or if there are others you think are more important?

No specific responses were recorded about developing criteria for meeting our future water needs.
7. Question 4: Adapting to a changing water future

We expect that water-related hazards, like droughts, flash flooding, erosion and coastal inundation will be more frequent in future and will cost us more to recover from. The effects will be felt unequally across communities, based on where they live and their socio-economic status.

Which of the following should we prioritise as we adapt to this changing future? (Select your top two)

- Developing policy to define the extent of individual and council responsibilities for adaptation
- Helping communities to be more resilient to hazards/promoting community resilience
- Planning to withdraw from affected areas (moving off land affected by flooding and inundation)
- Preventing new building in future hazard zones
- Providing information about the locations and risk of future hazard

Please tell us why these criteria matter to you, or if there are others you think are more important?

Feedback from mana whenua raised a range of ways and ideas for how Auckland can adapt to a changing water future. These ideas do not relate only to resilience and water-related hazards, but offer a wider mana whenua perspective on restoring and enhancing water quality in Tamaki Makaurau. Key themes included:

Policy

- Water allocation needs to be considered, given that aquifers are fast becoming allocated
- Water take management is needed and Auckland Council needs to have accurate knowledge of water take issues (for example, through metering for water take and allocation)
- Careful consideration of permitted activities (e.g. cropping) and consent timeframes (35 years was considered too long) in considering impacts on water
- Targeted environmental rates are an opportunity, but we cannot separate out messages about water and need to take a more holistic approach to water and environmental issues. Look at a holistic approach to achieving multiple outcomes
through targeted rates (for example, pest reduction and fencing can reduce impacts on waterways).

- Support for integrated catchment approaches and a multi-stakeholder approach to values planning and catchment planning.
- Builders’ ability to build all year round (e.g. Long Bay development) contributes to wastewater issues. In the Flatbush development builders have been seen pumping dirty water into the stormwater system, waterways and rain gardens.
- Support for strengthened compliance (including compliance for builders) backed by a larger budget, with more council staff on the ground checking compliance and more accountability for impacts.
- A ‘whole of council’ approach is needed to tackle water issues (refer to Question 5: The framework for developing a water strategy).

Community resilience

- Making better use of rainfall through rain tanks. This should be encouraged at a political level to support better wastewater management, and limit water taken from key sources such as the Hunua and Waiuku aquifers.
- Opportunities for re-charging water to direct it back into aquifers to offset the drying out caused by over-development.
- Building generational capacity to protect water, such as through targeted programmes which council could support. One example given by Te Ara Rangatū o Te Iwi o Ngaati Te Ata Waikou is a local water focused programme focused on rangatahi.

Land use

- Address cumulative effects on water and soil related to growth, expansion and infill housing.
- Development should not be permitted in floodplains due to the risk of flooding. It is ineffective to continue draining wetlands and also detrimental to environmental conservation.
- Onsite waste needs to be considered for countryside living.
- In future urban zones, we should prepare for impacts in advance (for example, by having retention tanks every home).
Other

- Consider related environmental issues and solutions (including contamination, waste, fill, soil quality and loss of productive soils, pest management, and fencing to keep stock out of waterways) as part of the holistic solution to our water future.
- Freshwater conservation is important.
- Promote wetlands and green infrastructure which creates habitat for bees, insects and birds. Stormwater ponds aren’t as effective.
- Adequate maintenance budget for water quality infrastructure (e.g. cess pits, forebays) is very important to prevent contaminants from moving into wetlands.
- Ngāti Tamāhō Settlement Trust noted issues with English and deciduous street trees dropping leaves, blocking cesspits and other infrastructure, flooding streets, and adding to our nitrate problem through rotting leaves. They wanted to see a council policy that says no new deciduous trees are planted.
8. Question 5: The framework for developing a water strategy

We are proposing a framework for how we think and make decisions about water in Tāmaki Makauara / Auckland. The framework contains:

- A vision for what we want our water future to be
- Values that describe why water is important to us
- Big issues that are at the core of our water challenge
- Principles that will guide our actions as we move forward
- Processes that we need to work on, to ensure we make good decisions.

Do you have any feedback on the framework, or is there anything else you think should be included?

Mana whenua were positive about the proposed Water Strategy framework and the opportunity to address te mauī o te wai across Tāmaki Makauara. There was significant support for incorporating mātauranga Māori into the Water Strategy and monitoring approaches, and for continuing to partner with mana whenua throughout the strategy development and implementation. Key themes included:

Our Water Strategy framework and key themes:

- Support for putting te mauī o te wai at the heart of the strategy and centre of decision-making
- Acknowledgement that the Water Strategy discussion document is a good starting point for a conversation about water management, and support for the overall themes, objectives and key issues in the Water Strategy
- Support for the values approach - wai is a treasured taonga that needs to be managed appropriately
- Support for recognising negative cumulative impacts, and balancing values and development
- Support for working with the natural environment wherever possible
- Support for considering human impacts on water and for empowering Aucklanders to take responsibility for wai
- Support for water being allocated fairly, and looking to a rights-based approach to benefits
- A strong implementation approach is needed - the actions that follow from our words are a priority.
Mātauranga Māori

- Acknowledgement of Auckland Council’s efforts to incorporate mātauranga Māori and a Māori world view at the heart of the Water Strategy – this is important for putting te mauri o te wai at the centre of decision-making
- Profound and urgent action is needed in order to truly apply a Māori world view. Auckland Council will need to adopt a more holistic view and approach, rather than seeing water issues as disconnected or fragmented. This involves considering indicators of mauri across existence (physical) values, use (activity-based) values, and (unique to mauri) intrinsic (metaphysical) values
- Ongoing partnership and engagement with mana whenua is needed to ensure mātauranga Māori is properly embedded respectfully and appropriately communicated, and desired Water Strategy outcomes are achieved
- Mātauranga Māori must support decision-making and implementation. This will require:
  - A joint (mana whenua and council) understanding of priorities and decision-making criteria
  - Increased education of mauri amongst Auckland Council staff and Aucklanders
  - Council projects to be assessed against their contribution towards enhancing and projecting of te mauri o te wai
  - Reporting mechanisms that make results and progress towards the vision visible
  - Clear systems and processes in place to respond to results (including adequate funding for monitoring)
- Incorporating mātauranga Māori into monitoring practices will be vital to put te mauri o te wai at the centre of decision making, and achieving the Water Strategy vision
- Monitoring of real-time activity can provide a more holistic view of catchments, ensuring decision-makers have a more comprehensive and integrated understanding of the actions that harm or improve te mauri o te wai.

Collaboration with mana whenua

- Acknowledgement of Auckland Council’s efforts to date to collaborate with mana whenua entities in:
  - Developing the Water Strategy
  - Embedding mana whenua outcomes in the strategy
Increasing opportunities for mana whenua to exercise kaitiakitanga through the Water Strategy.

- A strong desire from mana whenua entities to continue and strengthen this partnership approach throughout all stages of the Water Strategy development and implementation. Putting te māraurū te wai at the centre of the Water Strategy requires quality partnerships with mana whenua – it’s more than just a regulatory process to consult on wai.

- Mana whenua entities requested clear, strong mana whenua governance arrangements and decision making roles to:
  - Increase opportunities for mana whenua to exercise kaitiakitanga
  - Ensure ongoing collaboration in placing te māraurū te wai at the centre of decision-making processes, and delivering the Water Strategy
  - Work together to achieve practical solutions

- Collaboration with mana whenua is further discussed in Question 6: Creating our water future together.

**Whole of Council** approach

- Support and advocacy for an integrated, whole of council approach (covering Watercare, Healthy Waters and all council units, and all water functions including stormwater, wastewater, sewage, and drinking water) to water strategy and management in Tāmaki Makaurau. A true whole of council approach was seen as critical to the success of the Water Strategy.

- A desire to see greater connections between land use and water management – currently the separation of these responsibilities causes water management issues.

Other

- A desire to also see mataawaka views represented in the Water Strategy
9. **Question 6: Creating our water future together**

Achieving a healthy, sustainable and affordable water future for Tamaki Makaurau will require energy and commitment from all of us. From the decisions we make in our own homes and communities, through to the regional investment choices that we will need to make, we all have the opportunity to make a better water future for our city.

What’s the most important thing you think we should do for our water future?

Creating our water future together through a genuine council-mana whenua partnership approach was seen as the single most important action Auckland Council can take to secure our water future. This was also a dominant theme in Question 5: The framework for developing a water strategy. Key themes included:

**Collaboration with mana whenua**

- Keep working with mana whenua early in the process to get a better outcome – this is essential to healthy partnership and collaboration. Mana whenua need genuine, ongoing opportunities to participate in decision-making opportunities regarding water, and in high level governance of the Water Strategy.

- The Kaipara Harbour Management Group and integrated catchment management approach was given as a key example of a mana whenua and council partnership based on effective engagement and a holistic, integrated approach. This model could be leveraged in the development of the Water Strategy, and built upon for the benefit of other catchments and harbours.

- Hikarangi Swamp was cited as another innovative approach.

- Mana whenua play a valuable role in providing input and design solutions in consents. Te Auaanga Oakley Creek is an example of achieving multiple outcomes including flooding, conservation and social employment outcomes.

- There are still challenges in enabling and empowering Māori to fully participate, which need to be considered when working together.

Feedback from mana whenua also offered a range of ways and ideas for Auckland Council to secure our water future, as discussed in Question 4: Adapting to a changing water future.
10. Other issues raised

Several other points were raised by mana whenua entities, which fell outside of the scope of questions 1-8. These included:

- An acknowledgement by Ngaati Whaungahanga of the change in philosophy to the approach taken by Auckland Council and CCO's to improving environmental outcomes through the process over the past few years.
- An acknowledgement by Ngāti Whātua o Kāpiti of the cultural values assessments work that has been happening through RIMU.
- A request by Te Ara Rangatū o Te Iwi o Ngaati Te Ata Waihua for a financial contribution towards building their wharekai, a key kaumatua priority.
Appendix 4 – Youth engagement summary

Significant engagement was undertaken with young people around Auckland including school students, young professionals and the youth advisory group.

Young Professionals Group

A workshop with the Auckland Young Water Professionals Group was held. The total number of participants at this event was 65. The workshop addressed the key issues and actions that should be taken as part of the issues.

The workshop commenced with “ice-breakers” on controversial water issues. The findings from this was:

- 97 per cent supported that we should be re-using wastewater as drinking water.
- There was a general support for the need for more green and grey infrastructure to address climate change issues.
- There was a 50/50 split on whether development in other areas of the catchment is appropriate to offset problems.
- There was a 50/50 split on whether we should retreat from climate change impacted areas or whether we should use hard engineering to address them.

The key visions and actions that arose for each issue were:

Cleaning up our waters:

- Facilitate behaviour change around water in Auckland
- All beaches to be swimmable by 2050 through engaging communities, education, collaboration, data driven policy and gap analysis
- Kai Moana (food basket) should be restored

Growth in the right places:

- Low impact development relevant to each area through innovation and collaboration
- Self-sufficient rural development
- Holistic development
- Decentralisation for those who pays for infrastructure
- Building “up” not out – protecting those areas that are untouched instead of developing there

Meeting future water needs:

- Re-using water
- Innovative technology
- Changing the RMA
- Analysing water recycling and desalination
- Improvement of infrastructure
Adapting to a changing water future:
- Increasing Auckland’s resilience by improving water infrastructure
- Developing long term solutions for natural hazards and innovation
- Build in the best places by development in the correct places

Intermediate school engagement:
Two workshops were run at Murrays Bay Intermediate School in the North Shore. The students were engaged with the water strategy and were engaged to brainstorm the key problems and solutions for each issue. Following the workshop, they submitted written survey responses to a survey adapted for the school. The results were:

N = 41, age under 15

Values

- Our communities, catchments and coastlines are resilient to natural hazards and impacts of climate change.
- We can meet our everyday water needs safely, reliably and efficiently.
- We enjoy being in, on and near the water at beaches, lakes and streams.
- Healthy water nourishes the natural environment.
- Water contributes to our identities and beliefs, as individuals and as part of our communities.

- Murrays Bay Intermediate students strongly associate with all of the values, with the strongest association being the natural environment, water needs and recreational uses of water.
- Of less value are the water contributing to identities and beliefs and resilience.
### The Auckland Plan

<table>
<thead>
<tr>
<th>Key challenges</th>
<th>Population growth</th>
<th>Environmental degradation</th>
<th>Shared prosperity</th>
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### Ta mau rō te wai: Putting water at the centre

**Vision**

- Te mau rō te wai o Tāmaki Makaurau – the life supporting capacity of Auckland’s water is protected and enhanced.

<table>
<thead>
<tr>
<th>Values</th>
<th>Issues we need to work on</th>
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<tbody>
<tr>
<td>Ecosystems: Healthy water systems nourish the natural environment.</td>
<td>Cleaning up our waters</td>
</tr>
<tr>
<td>Water Use: We can meet our everyday water needs, safely, reliably and efficiently.</td>
<td>Meeting future water needs</td>
</tr>
<tr>
<td>Culture: Water contributes to our identity and beliefs, as individuals and as part of communities.</td>
<td>Growth in the right places</td>
</tr>
<tr>
<td>Recreation and amenity: We enjoy being in, on and near the water.</td>
<td>Adapting to a changing water future</td>
</tr>
</tbody>
</table>

**Resilience**

- We are prepared for extreme events such as flooding and drought and are able to recover quickly.

**Processes we need to work on**

- Creating our water future together
- Setting priorities for investment
- Achieving net benefits for catchments

<table>
<thead>
<tr>
<th>Principles to guide our work</th>
<th>Process we need to work on</th>
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<tbody>
<tr>
<td>Recognise that water is a treasured taonga</td>
<td>Applying a Māori world view</td>
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<tr>
<td>Work with natural ecosystems</td>
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<tr>
<td>Deliver catchment scale thinking and action</td>
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<tr>
<td>Focus on achieving right-sized solutions with multiple benefits</td>
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<tr>
<td>Work together to plan and deliver better water outcomes</td>
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<td>Look to the future</td>
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For Information: Strategic Approach to Sediment report

Te take mō te pūrongo
Purpose of the report
1. To receive for information the Strategic Approach to Sediment report.

Whakarāpopototanga matua
Executive summary
2. The Strategic Approach to Sediment report (Agenda Item 18) was presented to the Environment & Community Committee at its 10 July 2019 meeting where the item was deferred to a later meeting date.
3. The Strategic Approach to Sediment programme was developed by staff during 2018 and endorsed by the Environment and Community Committee in December 2018 (ECC2018/169).
4. This report outlines progress of the programme to date and is attached as Attachment A for information of the Manukau Harbour Forum.

Ngā tūtohunga
Recommendation/s
That the Manukau Harbour Forum:
a) receive for information the progress update on the Strategic Approach to Sediment programme.

Ngā tāpirihanga
Attachments

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<td>10 July 2019 Environment &amp; Community Committee meeting Agenda Item 18: Strategic Approach to Sediment report</td>
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Ngā kaihaina
Signatories

<table>
<thead>
<tr>
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<tbody>
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</tr>
</tbody>
</table>
Strategic Approach to Sediment
File No.: CP2019/07474

Te take mō te pūrongo
Purpose of the report
1. To receive an update of progress and to endorse the proposed next steps of the strategic approach to sediment programme.

Whakarāpopototanga matua
Executive summary
2. The Strategic Approach to Sediment programme was developed by staff during 2018 and endorsed by the Environment and Community Committee in December 2018 (ECC2018/169). This was in recognition of the need to develop regional scale mechanisms to drive a reversal of the environmental decline caused by sediment runoff into freshwater and coastal receiving environments.

3. This report outlines progress of the programme to date. It has reached into council’s regulatory, operational and planning activities to identify the underlying factors affecting our environmental performance for sediment. In its first phase, the programme focused on sediment caused by Auckland’s significant growth. The key to long term success in improving the mauri of streams, rivers, lakes and coastal waters is identifying ‘leverage points’ for change and understanding that change will not be immediate, nor will it occur in a linear fashion.

4. Through a series of detailed, systemic analyses we have uncovered initial barriers to environmental improvements for sediment. Building on existing knowledge and experience, combined with council’s many initiatives already in place to address sediment issues, we are introducing appropriately scaled interventions to overcome these barriers. We are also working with wider stakeholders on opportunities to share responsibility and accountability for reducing sediment runoff into our waterways to meet mana whenua, wider community and central government expectations for clearer waters and thriving ecosystems.

5. The report also sets out the next implementation steps of the programme, which is to embed the system changes required.

6. It is also noted that, in addition to these implementation steps, staff will develop the scope of strategic solutions to address sediment from other sources (the current focus has been on land disturbing activities), over the course of 2019/20.

Ngā tū托hunga
Recommendation/s
That the Environment and Community Committee:

a) receive the progress update on the Strategic Approach to Sediment programme.

b) endorse the next implementation steps of the programme as summarised in this report and set out in Attachment A of the agenda report.
Horopaki Context

7. The Strategic Approach to Sediment programme endorsed in December 2018 is divided into six distinct work areas as outlined in Attachment 1. The aim is to achieve the following outcomes and benefits:
   - drive a reversal of the environmental decline caused by sediment runoff into freshwater and coastal receiving environments
   - recommend appropriate measures to address the prevention of sediment runoff in all of Auckland’s relevant strategies, policy instruments and interventions
   - provide a clear definition of what the council group needs to monitor and how that can be used to evaluate the effectiveness of policies and interventions
   - recommend optimal coordination of the full range of council group resources (staff and money) in minimising the impacts of erosion and sediment on Auckland’s freshwater and coastal receiving environments
   - encourage those who contribute to sediment problems to become part of the solutions.

8. Excess sedimentation of our waterways is a major environmental issue across Aotearoa/New Zealand. It is a complex issue to resolve as there are multiple sources of sediment, which are difficult to accurately separate and attribute to a single cause. Designing for long term change in part of a system requires intervention at multiple scales.

9. Through a detailed, systemic analysis of each part of the system, this programme has examined council’s regulatory, operational and planning processes to clearly identify these scales and appropriate opportunities to intervene.

10. The next stage is to work collaboratively to embed the changes required, firstly within council’s processes and then more broadly across wider stakeholder groups.

Tātaritanga me ngā tohutohu
Analysis and advice

A better understanding of what we know and what we need to know

11. The programme identified the need to address gaps in our knowledge and understanding of sediment and to assess how we could address those with data, research and intelligence. Also, to develop a clearer understanding of what council needs to monitor and how to link this information to an evaluation of policies and interventions.

12. Progress to date includes:
   - greater understanding and characterisation of sediment sources and sedimentation triggers. The Freshwater Management Tool under development will further inform our understanding and be able to simulate the effects of mitigation strategies.
   - development of the Integrated Sediment Monitoring Framework that, amongst others, identifies areas where further work is needed. Importantly, the Framework sets out the critical link between compliance monitoring and actual outcomes of land disturbing activities. This is particularly significant given the anticipated requirements of the amended National Policy Statement for Freshwater Management (NPS-FM) and new National Environmental Standards for Freshwater Management (NES-FM).
   - collaboration on several research programmes, for example:
     - to better understand the link between catchment processes, estuarine sedimentation and thresholds for different impacts
     - assessment of the economic costs and environmental benefits of scenarios to reduce catchment sediment loss.
initiatives already underway – for example a GEMS (Geomorphically Effective Management Solutions) toolbox – that, together with the results of this sediment programme, will help Auckland Council respond to central government expectations and requirements anticipated through its Essential Freshwater Package.

Circular economy and soil – a regenerative systems approach

13. Work was done to apply circular economic principles to the management of land for food production, and ways sediment runoff could be reduced.

14. The study highlighted a range of farming practices technologies and management approaches that can reduce the amount of sediment entering waterways. This includes, for example, remote monitoring of sediment runoff, regenerative farming practices and Mātauranga Māori approaches.

15. This work also connected several council and central government work programmes underway (listed in Attachment 1). Together, these provide many opportunities to include interventions and promote practices that will help reduce sediment flows to waterways.

Achieving shared outcomes in our strategic approach to growth

16. Both the Committee and community have raised concerns about sediment runoff from development. In response, the programme has focused on identifying points of influence and interventions to address this.

17. The Auckland Plan 2050 promotes a quality compact form. Better environmental outcomes are one of the potential benefits of this approach.

18. Regional strategies, plans and policies related to land development were examined for gaps and opportunities for reducing excess sediment. Potential opportunities include:

- the inclusion of increased and consistent technical feedback loops in strategic planning processes to ensure environmental constraints and opportunities are considered throughout strategy development processes
- incorporation of ‘shared outcomes’ that deliver an integrated perspective across all four wellbeings and provide direction to lower level documents
- robust consideration of ‘avoid’ at a strategic level, so that there is less reliance on later regulatory methods to mitigate environmental effects.

19. The analysis and recommendations of this work will be accounted for in work related to the Auckland Plan 2050 Development Strategy.

Improving compliance

20. The effectiveness of the Auckland Unitary Plan (operative in part) (Unitary Plan) provisions in minimising the impact of land-use activities on sensitive receiving environments will be fundamental to delivering on the Auckland Plan 2050.

21. A comparison of legacy planning provisions with current provisions for regional and district earthworks in the Unitary Plan identified:

- potential areas for improvements to the existing provisions
- potential amendments to operational procedures to improve compliance whilst using the existing provisions in the meantime.

22. One clear issue that has emerged is the separation of the regional and district land disturbance chapters in the Unitary Plan. The intent in the separation was that implementation would be clear and administratively efficient for both applicants and council. Evidence shows, however that the practical consequences of the separation, without clear links between the two chapters, provides opportunity for misinterpretation and confusion both within council and for those operating under the Unitary Plan.
23. The finding of this study will now be:
   • included within the Section 32 evidence assessment for the plan change requirements for NPS-FM implementation
   • used to address monitoring gaps in the context of the Integrated Sediment Monitoring Framework and incorporated within the Unitary Plan Monitoring Project
   • implemented as amendments to operational procedures (as related to current Unitary Plan provisions) prior to plan changes related to the NPS-FM.

Understanding and achieving best practice through the application of GD05


25. Sediment runoff from construction sites will only improve by developing a sense of shared responsibility and accountability between the industry and the regulator. To achieve this, the following actions are proposed:
   • use GD05 as a basis to provide streamlined erosion and sediment control planning guidance for the industry
   • advocacy to central government for national-level industry qualifications and accreditations across the full range of construction industry stakeholders
   • prepare case studies to assess the effectiveness of various devices under different conditions, including extreme site and weather conditions, as well as opportunities to use innovative techniques
   • hold a series of industry workshops to gain insights into how to achieve best practice, analyse where improvements can be made in industry practice, understand impediments and discuss potential incentives.

Achieving compliance on small sites

26. Around 13,500 small sites are being developed annually across the region, which result in around 600 hectares of land disturbing activity.

27. A step-change is required to improve sediment runoff from these sites to complement current, targeted enforcement action and education. The aim of this work is to put in place a robust end-to-end monitoring procedure for this problematic part of the construction industry.

28. Progress to date includes:
   • From August 2019, Building Inspectors will check for sediment controls as part of their inspection regimes at all stages of the inspection process up to the Post-line inspection. Results will be reported back to the Licensing and Regulatory Compliance teams for appropriate enforcement action to be taken.
   • The ‘Close the Gap’ initiative (running for the winter works season from May to August 2019) to establish cost-effective mechanisms to ensure sediment controls are in place on all small sites prior to first land disturbance activity.
   • Proposed ‘End of pipe’ monitoring for sediment on selected small site subdivisions within Howick, Upper Harbour and Hibiscus and Bays Local Board areas. These results, which are linked to subdivisions - where targeted initiatives compliance is being undertaken - will provide early indication of the need for increased enforcement action.
32. There are also planned initiatives to involve a broader range of building industry interests, innovative tools and field days, to facilitate further industry environmental training relevant to small site activities.

Working with industry, business and the wider community
33. In addition to the series of industry workshops and training events, sharing a coordinated regional sediment narrative will be done through council’s Watershed Story Maps and other appropriate media. Staff are also fostering strategic partnerships with organisations such as the Sustainable Business Network (and their work through GulfX) to engage communities and businesses in achieving better sediment outcomes.

Ngā whakaaweawe me ngā tirohanga a te rōpū Kaunihera
Council group impacts and views
34. Initial discussions have been started with Panuku about opportunities to:
   • include the importance of sediment control as part of wider environmental training within foundation level training modules that support Homestar ratings
   • develop Homestar credits for evidence of appropriate contractor education
   • include requirements for best practice erosion and sediment control in development agreements and request for proposal documentation.

Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe
Local impacts and local board views
35. Local boards, where major small site subdivisions are located, have expressed concerns about the impact of sediment from construction sites. Three local boards (Howick, Upper Harbour and Hibiscus and Bays) indicated that they would like to participate in the ‘Close the Gap’ initiative by funding ‘end of pipe’ monitoring for sediment. Subject to resolutions from the local boards, this work will go ahead from July 2019.

Tauākī whakaaweawe Māori
Māori impact statement
36. Reducing sedimentation and sediment runoff into waterways will contribute to the reversal of the environmental decline of, and enhance the mauri of, major waterbodies in Tāmaki Makaurau. In turn, this will enhance the ability of mana whenua to exercise kaitiakitanga over their respective rōhe.

37. The examination of strategic planning processes within Work Area 2 of this programme clearly supports the need to embed Te Ao Māori concepts such as kaitiakitanga into our thinking and decision-making. It supports a focus on the inter-relationships between the natural environment and people.

38. Certain activities under the Unitary Plan, including some earthworks, require applicants to undertake a Cultural Values Assessment (CVA) to provide information on effects on mana whenua values. Large scale earthworks (or smaller scale earthworks in sensitive areas) typically require a CVA to be provided. In 2018/19 RIMU undertook a review of the effectiveness of how council’s consenting departments are working with mana whenua. The report put forward 52 recommendations to improve existing systems, processes, guidance and training for both council staff and mana whenua involved in consenting processes. As a result, the CVA Review Project was established. This partnership between Auckland Council Regulatory Services and mana whenua includes a series of five co-design wānanga with attendance from mana whenua and council staff.

39. It is anticipated that the findings and recommendations of this review will be implemented, once agreed by the project steering group, starting early in 2020.
Ngā ritenga ā-pūtea
Financial implications
40. Investigations and actions to date have focused on achieving interventions through existing budgets. To the extent possible, this will continue to be the approach for phase 2 going forward. Several scoping projects to fill gaps identified in phase 1 will feed into Long-term Plan (LTP) 2021 processes.

Ngā raru tūpono me ngā whakamaurutanga
Risks and mitigations
41. The risks to council are:
   • Reputational: not delivering on the Auckland Plan 2050 Environment and Cultural Heritage Outcome Direction 3: Use Auckland’s growth and development to protect and enhance the natural environment or Focus area 3: Account fully for the past and future impacts of growth. Growth-related land use change is a key part of the sediment narrative.
   • Environmental: continued environmental degradation, and statutory obligations not met, for example to control the use of land for maintaining water quality and associated ecosystems under s30(1)(c) of the Resource Management Act, Unitary Plan and requirements under the NPS-FM.
   • Financial: from not realising savings by working collaboratively to achieve shared outcomes. Reduced economic opportunities for the region.
   • Social and Community: lack of buy-in from communities, mana whenua and industry partners if council is not seen to be progressing sediment improvements at a regional scale.

Ngā koringa ā-muri
Next steps
42. Next steps for the programme are outlined in Appendix 1 of Attachment 1, as follows:

<table>
<thead>
<tr>
<th>Work Area</th>
<th>Next Step / Intervention</th>
<th>Timing</th>
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<tbody>
<tr>
<td>1</td>
<td>Scope Freshwater Management Tool v2 to include scenarios for developing land</td>
<td>Oct 2019 onwards</td>
</tr>
<tr>
<td></td>
<td>Establish priorities and costs for further research recommendations for LTP 2021</td>
<td>Oct 2019 onwards</td>
</tr>
<tr>
<td>2</td>
<td>Embed findings and recommendations into work related to Auckland Plan 2050 and AUP(OP) plan changes for NPS-FM implementation</td>
<td>Ongoing</td>
</tr>
<tr>
<td>3</td>
<td>Complete the ‘Close the Gap’ initiative Use the findings to achieve better compliance and monitoring of small sites</td>
<td>May to August 2019 Sept 2019 onwards</td>
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<tr>
<td>4</td>
<td>Develop case studies to assess effectiveness of sediment control devices under different conditions</td>
<td>Sept 2019 to March 2020</td>
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<tr>
<td>5</td>
<td>Develop and encourage the use of consistent, transparent guidance, for example:</td>
<td>August 2019 Ongoing</td>
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<td></td>
<td>□ finalise draft Guidance Note – Earthworks</td>
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<td></td>
<td>□ develop supporting material for GD05.</td>
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**Work Area** | **Next Step / Intervention** | **Timing**
---|---|---
| Enhanced training for targeted council staff | July 2019 onwards |
| Advocate for national-level industry qualifications and accreditations | July – Dec 2019 |
| 6 | Run a series of industry workshops Community and mana whenua workshop in partnership with the Sustainable Business Network and NPS-FM delivery (as appropriate) | Sept 2019 onwards August 2019 onwards |

43. In addition, over the course of 2019/20, staff will develop the scope of strategic solutions to address sediment from other sources (the current focus has been on land disturbing activities), for example, through strategic approaches to planting and blue-green networks.

**Ngā tāpirihanga**

**Attachments**

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<td>Strategic Approach to Sediment in Auckland. Update on Work Programme Progress - July 2019</td>
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**Ngā kaihaina**

**Signatories**

<table>
<thead>
<tr>
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<th>Sarah Le Claire - Principal Analyst-Strategy</th>
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</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Jacques Victor – General Manager Auckland Plan Strategy and Research Koro Dickinson - Executive Officer - Operations Division</td>
</tr>
</tbody>
</table>
A. Background and context

1. The Strategic Approach to Sediment programme (the programme) was endorsed by the Environment and Community Committee in December 2018 (ENV/2018/169). Building on existing knowledge and experience, the aim of the programme is to undertake a systematic analysis of Auckland’s sediment issues to develop an implementation-focused, co-ordinated work programme across council to reduce sediment runoff from land into Auckland’s streams, rivers, lakes and coastal waters.

2. The programme aims to achieve the following outcomes and benefits:
   - drive a reversal of the environmental decline caused by sediment runoff into freshwater and coastal receiving environments
   - recommend appropriate measures to address the prevention of sediment runoff in all of Auckland’s relevant strategies, policy instruments and interventions
   - provide a clear definition of what the council group needs to monitor and how that can be used to evaluate the effectiveness of policies and interventions
   - recommend optimal co-ordination of the full range of council group resources (staff and money) to minimising the impacts of erosion and sediment on Auckland’s freshwater and coastal receiving environments
   - encourage those who contribute to sediment problems to become part of the solutions.

3. Excess sedimentation1 of our waterways is a major environmental issue across Aotearoa/New Zealand. It is a complex issue to resolve as there are many sources of sediment, each requiring multi-targeted interventions if we are to achieve long-term change.

4. Designing for long-term change in part of a system requires intervention at multiple scales (Biddulph et al. 2017). Identifying the key drivers for change requires detailed analysis of the systemic issues.

   There are many initiatives already investigating solutions to different sediment sources across council², for example, sediment from in-stream erosion is also identified as a significant source of sediment, which is being addressed in Auckland by Healthy Waters Waterways Planning team.

5. Both the Committee and community have raised concerns about sediment runoff from development. In response, the programme has focused on identifying points of influence and interventions to address this. The findings are reported on below.

6. In subsequent phases of the programme, further work will be needed to examine gaps and opportunities for strategic solutions to address sediment from other sources, for example in the urban environment through better design and implementation of green infrastructure, and in the rural environment through initiatives such as strategic planting, the development of farm environment plans, examination of operational practices in the horticultural industry and strategic approaches to blue-green networks.

7. Central government direction on many of these issues will be consulted on over the next six months through the Essential Freshwater Package, including the prospect of a sediment attribute in the National Objectives Framework (NOF) for the National Policy Statement for Freshwater Management (NPS-FM).

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1 Excess sedimentation is sediment amounts or fluxes that compromise ecosystem function beyond that which is acceptable with the National Objectives Framework (NOF) for the National Policy Statement for Freshwater Management (NPS-FM), cultural values, community values or all three (Biddulph et al, 2016)

2 AFSPR (August 2018) Auckland’s Sediment Story: Policies, Trends and Initiatives
B. Outcomes for Māori

8. Reducing sedimentation and sediment runoff into waterways will contribute to the reversal of the environmental decline of, and enhance the mauri of, major water bodies in Tāmaki Makaurau over the longer term. This will in turn enhance the ability of mana whenua to exercise kaitiakitanga over their respective rōhe.

9. The examination of strategic planning processes within Work Area 2 of this programme clearly supports the need to embed Te Ao Māori concepts such as kaitiakitanga into our thinking and decision-making. This supports a focus on the inter-relationships between the natural environment and people. Work Area 2 also identifies the requirement to consider and address environmental impacts within our strategic planning processes in order to protect and enhance the natural environment for our future generations.

10. In October 2018, the Mana Whenua Kaitiaki Forum stated that mana whenua recognise that protecting and enhancing te mauri o te wai is the primary goal of managing Auckland’s waterways. To achieve healthy waters, the Kaitiaki Forum seeks the integration of the way we manage land use activities, the design and building of roads and water infrastructure, and care for natural ecosystems. This view is consistent with the strategic approach to sediment presented in this report and reflected in the findings of Work Area 2 that emphasizes the need for a more holistic approach to strategic planning.

11. The Cultural Values Assessment Review Project, established as a partnership between Regulatory Services and mana whenua, includes a series of five co-design workshops with attendance from mana whenua and council staff to work through recommendations to improve existing systems, processes, guidance and training for both council staff and mana whenua involved in consenting processes.

12. To meet the cultural monitoring requirements of the Network Discharge Consent and the NPS-FM, Healthy Waters have developed the Wai Ora Monitoring Framework. This cultural landscape monitoring tool is an aspect of this and involves working in partnership with mana whenua to culturally evaluate relevant water bodies over time to help develop a framework to prioritise action. This has started with a pilot project at Oruarangi Creek.

C. Work Programme Progress

13. The approved programme is divided into six distinct, but related, work areas. Progress and outcomes of each work area is outlined below along with proposed next steps.

Work Area 1: Better Information

AIM: Identify the gaps in our knowledge and understanding and how we address those through use of data, research and intelligence.

14. When considering water quality and ecosystem health, sediment is a particularly complex contaminant to characterise. Sources of sediment are difficult to pinpoint as they can be many and influenced by multiple land (geology) and climatic characteristics as well as multiple sources of disturbance/activity, which increase the generation and transport of sediment. In addition, it is not just the load or concentration of sediment that is important, but a range of other properties such as grain size and particle shape and the duration of exposure. Within the marine environment, the effect of sediment is further complicated by determining where the sediment is transported to and deposited as well as the remobilisation of existing sediment.

15. Auckland Council is making significant progress in its understanding and characterisation of the sources of sediment and triggers of sedimentation in the region, as outlined below. This improved knowledge will assist council in ensuring that the effectiveness of existing policies is appropriately reviewed and updated to keep up with evolving environmental, economic and social conditions.

Freshwater Management Tool

16. Our understanding of the current state and assessments of the future state (based on a range of possible scenarios) for a range of pollutants across the region, including sediment, will be greatly enhanced by the Freshwater Management Tool (FWMT). This is an integrated contaminant load model and in-stream concentration model currently being built by Healthy Waters to help council meet their obligations...
the requirements of the NPS-FM. The FWMT simulates flow and contaminant loss from the land to waterways, throughout the entire region at 15-minute intervals, before distributing these to 3,000 km of streams. This enables highly resolved accounting throughout the region for water quality objectives.

17. The model also simulates the effects (and costs) of various mitigation strategies from stormwater devices through to good practice adoption and land use diversification, enabling optimal strategies to be defined for future water quality goals. Combined, the FWMT will assist in providing robust evidence to inform freshwater quality objectives, policies and rules in regional planning instruments, as well as helping to define the costs involved and strategies for council to achieve these objectives through the Long-term Plan 2021 and other processes.

18. The FWMT is being developed iteratively, configuring the model first for the whole region and across six major contaminants [nutrients (N, P), sediment, heavy metals (Cu, Zn), and faecal indicator bacteria (E. coli)]. Version 1 of the FWMT, which is due for completion in April 2020, has been developed to determine the episodic and long-term effects of erosion (bankside & overland) of a "developed" rather than "developing" parcel of land. The tool thereby determines what investment is needed in mitigation strategies for such "steady-state" or future changes from shifting pastoral to developed land cover, to create instream and downstream sediment outcomes that meet proposed objectives in the future AUP. This addresses what long-term investment is needed or the maximum extent of development in future for water quality outcomes to be supported. It does not current address the rate of development. Developing land has a greater sediment footprint than developed land, albeit for the short-term.

19. The FWMT allows us to strategically assess the effectiveness of methods to control sediment generated from different "developed" land uses, throughout the region. As part of the model development the costs and effectiveness of both structural devices and land management practices on long term sediment generation are being analysed. This will help council identify the most cost-effective methods to control sediment from "developed" land.

20. There is potential for the FWMT to be made to simulate the effects of "developing" land, with added reseeding and time (envisaged for 2030/31) as part of version 2. This would be extremely useful for determining the maximum rate, rather than extent of development to ensure short-term increased erosion risk during the construction phase of development does not exceed long-term targets for water quality. Scoping for the requirements for the modifications to the FWMT to enable this to happen will begin in the coming months and will closely align with the findings and recommendations of this work programme.

Next Steps
Within the scope of version 2 of the Freshwater Management Tool, investigate options and costs to include the capability to estimate sediment discharges from developing land at a catchment scale.

Gap Analysis and Recommendations for Further Research

21. Auckland Council is leading or collaborating on several research programmes which seek to further our understanding of sediment, for example:

i. Recent research into sediment loading to the Karaka Harbour has highlighted the importance of stream bank erosion as a key source of sediment being transported to the coast from the land. Work is currently underway by Healthy Water to develop a GEMS (Geomorphologically Effective Management Solutions) toolbox to improve how we manage stream bank erosion in our region and identify areas particularly prone to stream bank erosion processes where the GEMS toolbox can be applied to its best effect.

ii. The Taihape Harbour Sediment Mitigation Study, commissioned jointly by the Ministry for the Environment, Northland Regional Council and Auckland Council, was completed in January 2018. The study sought to assess the economic costs and environmental benefits of a range of scenarios for reducing catchment sediment loss. The modelling undertaken required several assumptions to be made about mitigation efficiencies and costs. Following the completion of that report, efforts have been made to obtain more refined cost estimates for particular mitigation scenarios.

Strategic Approach to Sediment: Update on Progress
The catchment erosional-economic model developed is now being used to simulate further land and riparian management scenarios, encompassing differences in baseline annual average sedimentation rates (1 mm/yr & 2 mm/yr), scope of riparian management (targeted planting by stream order and land cover) and scope of land management (targeted afforestation and wetland regeneration on highly erodible land). Outcomes from this will help better understand the relative importance of policy direction and mitigation options for land holders to adopt.

The Natural Environment Strategy unit has recently received a contracted report that provides further information on costs associated with planting, nursery production and riparian activities such as fencing. This will be of use for broader sub-catchment assessments of environmental remediation and estimated costs, and available for informing next steps, whether as a technical input, or as a generally available information source for a range of interests.

iii. As part of the development of a potential sediment attribute in the National Objectives Framework, MfE have a sediment work programme which includes impact testing of proposed sediment attributes and investigating the potential sediment load from earthworks. Auckland Council staff have provided technical input to these research programmes.

iv. NIWA’s ‘Managing Mud’ research programme concerns the sources, characteristics, dynamics and fate of fine sediment in Auckland’s rivers and estuaries, and will provide knowledge, methods, and tools to assist implementation of policies to reduce sedimentation and associated impacts. This research programme was presented to the Environment and Community Committee on 12th February 2019. RIMU are collaborating on this research with NIWA and Nga Tai ki Tamaki.

22. Given the complexity of the sediment issue there remain many research questions such as:
   - further understanding different modes of impact by sediments (including suspended sediment concentration and seabed mudiness), multiple stressors, cumulative effects, and thresholds for freshwater and marine receiving environments (estuaries)
   - further understanding of different pathways for sediment loss (overland and bankside), relationships with erosional rate and effects of management actions
   - further research into the relationships between annual sedimentation rate and the health/condition of estuaries
   - development of standardised methodology for fine scale monitoring
   - better linking estuarine sedimentation and its effects on catchment processes.

Next Steps
Establish priorities and costs for further research recommendations for LTP 2021 processes.

Work Area 2: Strategy and Policy

AIM: Examine the gaps and opportunities for improving the management of sediment in regional strategies, plans and policies across the council group, and where council can influence central government direction on sediment.

23. The intensity of Auckland’s current and projected urban growth increases the risk of excess sedimentation of Auckland’s freshwater and coastal receiving environments. Activities within this Work Area examined regional strategies, plans and policies for land development to identify the gaps and opportunities for reducing this risk across a broad range of interventions.

Sediment in strategic land development processes

24. Strategic land development processes provide early opportunities to avoid and/or reduce environmental degradation by incorporating principles and considerations that would minimise the risk of erosion and sediment control from the outset.

25. Through an assessment of a representative range of council strategic spatial planning documents and supporting information, which reflect the process undertaken to influence growth in both brownfield and greenfield areas, this work area sought to identify gaps and opportunities in strategic...
land planning and development processes for housing and transport to better include erosion and sediment control principles.

26. The analyses identified recurring gaps across the different processes and outputs and drew out opportunities to improve sediment outcomes, as well as broader environmental outcomes.

27. Key findings fall under four headings as set out below.

Structure planning

28. Structure planning is a design-led process, is a creative process that considers the place, the community (current and future) and the context to derive options that can be assessed against criteria (including environmental). The result is a framework to guide the development of redeveloped or new areas by defining the future development and land use patterns, areas of open space, the layout and nature of infrastructure (including transportation links), and other key features and constraints that influence how the effects of development are to be managed. Constraints and opportunities are identified for structure plan areas through the production of a series of technical reports, including environment, which are used to guide the development of the final structure plan. In relation to sediment impacts, the environment topic report provides valuable information such as current stream quality, soil topology and susceptibility to erosion and areas of specific concern due to current level of erosion/sediment load or other degradation.

29. Structure plans aim to manage the effects and demands of development of larger areas held in multiple ownership in an integrated, holistic and orderly way. There is recognised best practice on how to develop a structure plan. The process used will depend on the scale and complexity of the area, the issues to be managed, the anticipated level of stakeholder and public interest, and the purpose for which the structure plan is to be used. Potential opportunities to improve sediment and broader environmental outcomes within the structure planning process include:

- the inclusion of increased and consistent technical feedback loops in strategic planning processes to ensure environmental constraints and opportunities are provided for in the strategy development processes
- maintaining transparent, public access to the technical reports after publication of the final structure plan to ensure developers are aware of relevant environmental constraints and considerations within the area at the earliest stage.

Shared outcomes

30. The incorporation of specific sediment provisions may not be appropriate in high level strategic documents, however, these strategic documents should include ‘hooks’ in the form of shared outcomes that can provide direction to lower-level documents. Shared outcomes aim to provide an integrated perspective to improve outcomes across the four wellbeings (social, economic, cultural and environmental). For example, avoiding development on areas with steep topography achieves shared outcomes as follows:

- environmental outcomes are limited as the volume of earthworks required to develop the area and the associated impacts is minimised
- economic outcomes are achieved as potential development premiums are reduced
- cultural outcomes are achieved as natural land features are maintained
- social outcomes are achieved through maintaining the visual amenity associated with the natural landscape.

31. An initial conclusion is to incorporate ‘shared outcomes’ within high level strategic documents that deliver an integrated perspective across all four wellbeings and provide direction to lower level documents.

Environmental constraints

32. Adverse effects on the environment to a certain degree appear to be accepted as the starting point across most of the documents analysed. Rather than using these strategic processes and final documents to avoid effects on the environment, mitigation, primarily through AUP(OP) provisions, is often the accepted aim or outcome. Methods to avoid adverse environmental effects as a first
consideration, are often provided within the supporting documents, but seldom included or detailed within the final plans. This results in an over-reliance on later regulatory methods.

33. Opportunities to address this issue include robust consideration of ‘avoid’ at a strategic level, so that there is less reliance on later regulatory methods to mitigate environmental effects.

Environmental effects assessments

34. Where development scenarios are assessed as having the potential to negatively impact the environment, opportunities are explored to reduce or mitigate these adverse effects. These opportunities or methods are then integrated into the assessment to influence the overall analysis of environmental outcomes. By incorporating certain specified mitigation methods, for example the use of management plans, the environmental impacts of a proposal may be reduced to result in a potential overall neutral or positive environmental outcome.

35. This has a significant bearing on the preferred development outcome, however, the study identified examples where mechanisms for developing, implementing, enforcing and monitoring the proposed management plan is frequently not specifically outlined or followed through in implementation documents. This is an important gap that needs to be addressed to prevent specific negative environmental effects being assessed as reduced through mitigation at such an early stage in the land development process on the presumption of the future development of a mitigation plan for which there is no statutory requirement.

Next steps

The analysis and recommendations of this work will be taken into account in work related to the Auckland Plan 2050 Development Strategy.

Sedimentation: A comparison between Auckland’s legacy provisions and the current provisions under the Auckland Unitary Plan

36. The effectiveness of the AUP(OP) provisions in minimising the impact of land-use activities on sensitive receiving environments will be fundamental to delivering on the Auckland Plan 2050.

37. This work area undertook an analysis of current provisions under the AUP(OP) against the legacy provisions under the previous versions of the AUP and Auckland’s legacy district and regional plans, including how the current provisions evolved through the Independent Hearings Panel (IHP) process. The study focused on the chapters addressing land disturbance in relation to development.

38. The assessment identified potential areas for improvement to the existing provisions as well as potential amendments to operational procedures to improve compliance whilst using the existing provisions.

39. The report contributes to a larger assessment of approaches to managing sediment and sedimentation in the Auckland Region and findings will be taken forward in a number of ways.

- Findings relating to the existing provisions have been shared to be included within the s32 evidence assessment as part of the plan change requirements for NPS-FM implementation.

- Solutions to fill identified gaps in monitoring will be examined within the context of the Sediment Monitoring Framework that is outlined in Work Area 4.1, and incorporated within the AUP s35 Monitoring Project.

- Recommendations for amendments to operational procedures are being followed up as part of Work Area 3: Interventions and Work Area 5: Co-ordinating and Building Capacity, as outlined in the following sections. These focus on practical interventions that could be implemented to maximise the effectiveness and efficiency of the current AUP(OP) provisions prior to any plan changes proposed as part of the NPS-FM implementation process.

3 AUP-Provisions Review led by Healthy Waters

4 AUP Effectiveness s35(2)(b) Analysis led by Plans and Places
Summary of key findings

40. A summary of key areas of concern is provided below with next steps identified within each relevant work area.

Separation of land disturbance chapters

41. As recommended by the IHP, the land disturbance provisions were separated into regional and district chapters under the decisions and operative in part versions of the AUP. The intent in the separation was that implementation would be clear and administratively efficient for both applicants and council. However, evidence shows that the practical consequences of the separation, without clear links between the two chapters, provides opportunity for misinterpretation and confusion both within council and for those operating under the AUP(OP).

42. The result is individual assessment of the chapters based on the scale of land disturbance proposed. This means that if the scale of land disturbance proposed is provided for within the district provisions then the regional chapter and its provisions are not applied. This interpretation reflects the application of the legacy district and regional plans, which were distinguished from one another, and therefore the provisions under each plan were intended to be assessed and applied separately by the respective regional and district council. The AUP(OP), being a Unitary Plan, differs in that the provisions within the plan cover all regional and district functions in accordance with the RMA and the provisions are intended to be assessed and applied together. The key concerns associated with the misinterpretation of the separate chapters are discussed below.

Lack of erosion and sediment control consideration in district level provisions

43. Provisions addressing sediment and erosion control and effects were included in both legacy regional and district plans to ensure that these effects were assessed and addressed in resource consents. Consideration of erosion and sediment controls and effects under the existing AUP(OP) provisions is limited due to the lack of district provisions addressing these matters combined with the lack of guidance and/or reference within the district provisions chapter (E12) to the regional provisions and their applicability to all applications.

44. Discussions with staff assessing resource consent applications for the central isthmus area emphasized the practical consequences of this issue. Planners discussed an inability to impose basic conditions requiring erosion and sediment control to be implemented and maintained for the duration of the land disturbance activity for activities classed as restricted discretionary status under the district provisions. This is because matters of discretion, assessment criteria and other relevant provisions within the district chapter do not address erosion and sediment control and/or effects. In such situations the regional provisions have not been applied in addition to the district provisions as intended.

45. Whilst repeating the provisions in both the regional and district chapters may not be necessary to achieve improved outcomes, including reference between the district and regional chapters would assist with this area of concern. This issue will be addressed as part of the plan changes proposed for NPS PM implementation. In the meantime, opportunities for training and awareness are included within Work Areas 3.5 and 6.

Assessment of Cumulative Effects

46. Discussions with council planners assessing resource consent applications for the central isthmus area identified the difficulty in assessing the cumulative effects and the lack of guidance on how these effects are to be measured and assessed.

47. In accordance with the RMA, the meaning of effect includes any cumulative effect which arises over time or in combination with other effects. Therefore, regional and district provisions are required to address and consider the cumulative effects of an activity. Provisions are included within the AUP(OP) chapters, which require the cumulative effects of activities to be assessed, often in the form of objectives and policies. An issue identified with this approach, specifically with reference to cumulative effects of erosion and sediment, is the availability of an evidence base to effectively and accurately assess the cumulative effects. The impact of a land disturbance activity on water quality in

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5 Part 2.1 Separation of regional plan and district plan functions (pg 6) of Report to Auckland Council Hearing Topic [41] - Earthworks and Minerals prepared by the IHP.

6 Part 1, section 3 Meaning of effect
the context of the wider catchment, for example, is difficult to assess and consider without an understanding of all the activities occurring within the catchment that may also impact water quality. This limits the ability for cumulative effects to be included in an overall assessment of an activity’s effects.

48. Methods to address this issue will be included within the AUP Effectiveness Analysis and NPS-FM implementation.

Interpretation of Chapter E: Auckland Wide

49. As a unitary authority Auckland Council is responsible for administering both district and regional consents in accordance with the AUP(CP). Before amalgamation, district and regional consents were processed by the respective councils, providing a transparent distinction between regional and district functions under the RMA. Currently, processing planners operating under AUP(CP) assess both regional and district consent applications and, therefore, are required to understand both regional and district functions and provisions. The required regional functions of AUP(CP) are largely addressed by provisions within Chapter E: Auckland Wide which includes the management and protection of natural resources.

50. Discussions with staff who assess resource consent applications for the central isthmus area revealed that there may be a need for training to improve knowledge and understanding of how and when these provisions are to be applied. The provisions that address environmental effects are often complicated and require technical knowledge to comprehend. In theory, this technical knowledge is provided by the Specialist Input teams. In practice, three levels of potential issues were identified:
   i. this advice is not always sought
   ii. if sought, there may be insufficient time to either provide advice or return the application due to a lack of information within statutory timeframes
   iii. the advice provided may not be given appropriate priority when balanced against other considerations within a complex or bunched consent.

51. This can cause confusion and lead to misinterpretation and misapplication, which can result in a lack of consideration of environmental effects when assessing activities. This issue is explored further within Work Area 5: Co-ordinating and Building Capacity.

Amendments to the National Policy Statement (NPS) and proposed National Environmental Standards (NES) for Freshwater Management

52. Draft versions of these documents are anticipated in September 2019 as part of the government’s Essential Freshwater package. These documents are expected to have significant implications for the timing and extent of plan changes that relate to managing the adverse effects of sediment in the Auckland region. Auckland Council will have the opportunity to consider and submit on the proposed NPS amendments and new NES in the second half of 2019 before the documents are finalised in early-mid 2020.

Next Steps
The findings of this work area will be used to inform future training and guidance material identified within subsequent work areas within the programme.

Circular economy and land use – a regenerative approach to soil conservation

53. The aim of better sediment management is not only to achieve improvements in water quality and ecosystem enhancements, but also to conserve soil on land. This work area investigated opportunities to apply circular economic principles to land use and land use changes policies and operations to eliminate or reduce waste externalities, which are resulting in soil loss and adverse effects on fresh and marine waters.

54. The focus of the AUP(CP) is on managing land disturbance activities associated with urbanisation and the consequent erosion and sediment effects. While land disturbance associated with development/urbanisation is highly significant in Auckland given the level of activity being undertaken,
pastoral land is the most extensive type of land cover, making up 48% of the region, and much of this land is erosion prone. Both the AUP Water Quality Management Provisions Review and the AUP Monitoring Review identified that land management standards and rules on soil conservation are missing in the AUP(OP). Options to address this gap will be addressed as part of the NPS-FM plan change process.

55. Soil conservation is important because Auckland has a predominance of fine clay soils, and as most streams are soft-bottomed streams that are a natural source of sediment (where for the rest of Aotearoa/New Zealand approximately only 20% of the length of rivers comprise soft-bottomed streams). Soil conservation is also increasingly important because of the severe weather extremes from climate change resulting in high levels of sediment from eroding land and stream banks entering streams and the coastal environment.

56. Following an initial appraisal of literature and case studies, the focus of the work was refined to the management of land for food production, and the ways in which sediment runoff could be reduced during this process. To explore this in the context of Auckland, a workshop was held with council staff to scope how circular economy principles could be implemented to reduce waste generated from the production of food in the region.

57. The key findings from the work identified that there are many opportunities to improve the management of land being used to produce food to reduce waste products (such as nutrients, organic waste, etc). There are a range of farming practices, innovative technologies and management approaches that can be used to reduce the amount of sediment entering waterways. These include, but are limited to, the use of technology to remotely monitor sediment runoff, implementation of regenerative farming practices, ‘smart’ land use planning, increased knowledge sharing and implementation of Mātauranga Māori.

58. This work also highlighted and connected several work programmes underway across council that seek to better manage farming and food production activities, to use land in a more regenerative manner, and to investigate the potential for circular economic principles to be implemented. Together, these programmes provide many opportunities to include interventions and promote practices that will help to reduce sediment flows to waterways. These work programmes include:

* an initiative to improve practices and reduce erosion and sedimentation in farm land - in partnership with Horticulture NZ and the Pukekohe Growers Association, council staff from Healthy Waters and Targeted Initiatives ran a field day to educate growers in the Franklin area on methods to reduce runoff
* Farms and Food of the Future programme - initiated by Innovate Auckland to gain and share knowledge on sustainable farming practices
* draft Auckland Climate Action Framework, endorsed for public consultation by the Environment & Community Committee on 11 June 2019 - proposes actions to apply circular economic principles to land use and land use changes (Key Move 1, Action 6) and to establish a management approach to preserve and enhance healthy, viable soils (Key Move 1, Action 6)
* consideration of rural production and soils in identifying urban growth areas in Auckland - Transport and Infrastructure Strategy Unit, APSR
* Smart Planning for Land Use - Innovate Auckland
* Circular Economy/Ohanga āmiomio - Strategic Advice, APSR. Scoping work initiated on establishing a strategic approach to circular economy for Auckland and the benefits to delivery of Auckland Plan 2050 outcomes. This involves identifying shared outcomes and key levers from across council and with those of central government
* Circular economy/Ohanga āmiomio - Ministry for the Environment is currently leading the government department on circular economy and seeking a transition for Aotearoa/New Zealand, they are progressing work toward that aim including a circular economy sectoral and regional analysis for Aotearoa/New Zealand which is looking at threats and opportunities.

7 Auckland’s Sediment Story: Policies, Trends and Initiatives — Auckland Plan, Strategy and Research Department — August 2019
8 AUP Provisions Review led by Healthy Waters (currently in draft)
59. These initiatives support acceptance of the need to alter the way we conceptualise and manage current systems if we are to understand states, trends and routes to remediate pollution by excess sedimentation. The root of the problem is the socio-economic choices we have made in the past, and continue to make, in which the economy, humans and the environment are managed separately. Circular economic thinking provides a framework to evolve socio-economic pathways for desirable changes. Key to long term success will be the identification of ‘leverage points’ for change and an understanding that change will not be immediate, nor will it occur in a linear fashion (Strach, 2016).

Work Area 3: Interventions

AIM: Examine current interventions and investigate how key learnings from those can be supported or built upon to improve compliance.

Understanding and achieving best practice through the application of GD05

60. GD05: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region was updated in 2018. It embodies current best practice and knowledge on erosion and sediment control measures and forms the basis of compliance.

61. Conditions on consents are designed for certain weather events and sediment ponds are expected to retain up to 50% of the sediment (when chemically treated) when operating at their best although during extreme weather events discharge of some sediment will occur. Climate change, with more severe weather events at unpredictable times of the year, is a matter than needs to be considered in reviewing the effectiveness of the present erosion and sediment control provisions, and this is referred to within the most recently updated version of GD05.

62. Several factors come into play to ensure the effectiveness of following GD05 requirements:

- expertise of the applicant in writing Erosion and Sediment Control Plan to ensure that the approach is adequate for the values of the site
- knowledge, experience (and willingness) of the contractor to appropriately adapt the erosion and sediment controls to ensure that sediment is controlled effectively throughout the course of the build
- vigilance of the contractor in regularly maintaining and monitoring the mechanisms once installed
- timely monitoring and compliance by Auckland Council regulatory staff.

63. This work has highlighted a need for training and upskilling of Auckland’s construction industry to improve both consistency in the quality of Erosion and Sediment Control Plans submitted, as well as the quality of installation, adaptation and maintenance of controls on site. This is addressed further in Work Areas 5 and 6.

64. A future work stream within phase 2 of this programme will be to use case studies to assess the effectiveness of various devices under different conditions (Work Area 4). This will inform the effectiveness of GD05.

Achieving Compliance on Small Sites

65. Around 13,600 small sites are being developed annually across the region, which result in around 600 hectares of land disturbing activity.

66. A step-change is required to improve sediment runoff from these sites to complement current, targeted enforcement action and education. The aim of this work is to put in place a robust end-to-end monitoring procedure for this problematic part of the construction industry.

67. To assist with this Auckland Council Building Inspectors will now check for absence, presence, adequacy and effectiveness of appropriate sediment controls as part of their inspection regimes. This started with a requirement at the frame stage (IFG) earlier this year and will be formalised from August 2019 through inclusion of this requirement in the new Neptune work process at all stages of the inspection process up to the Post-line inspection (IPL). These results will be reported back to the Licensing and Regulatory Compliance teams for appropriate enforcement action.

68. Auckland Council’s 120 Building Inspector’s conduct around 170,000 inspections across the full range of construction sites each year and are often the only regulatory staff to visit small sites. This example
of collaboration is a major step forward in increasing the monitoring of small sites for appropriate sediment controls.

Table 1: Targeted Initiatives Small Sites Erosion and Sediment Control activity

<table>
<thead>
<tr>
<th>Location</th>
<th>Time Period</th>
<th>Enforcement Action Taken</th>
<th>Abatement Notice</th>
<th>Infringement Notice</th>
<th>Infringement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flatbush</td>
<td>Jan-July 2019</td>
<td>435</td>
<td>810</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td>Flatbush 2.0</td>
<td>May 2019</td>
<td>132</td>
<td>57</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pukekohe</td>
<td>June – Nov 2018</td>
<td>284</td>
<td>120</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Huapai/Kumeu</td>
<td>Oct 2018 – Jan 2019</td>
<td>514</td>
<td>54</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hobsonville</td>
<td>June 2018 – Oct 2018</td>
<td>488</td>
<td>159</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Takar juni</td>
<td>Oct – Nov 2018</td>
<td>56</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Greuse</td>
<td>Oct – Nov 2018</td>
<td>64</td>
<td>30</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Oct 2018 – May 2019</td>
<td>1652</td>
<td>708</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

59. Notwithstanding this progress, as most of these small sites fall under the category of ‘permitted activity’ there are further difficulties with both scale and timing in achieving compliance, for the following reasons:

i. By the time the first building inspection occurs, the largest area of earthworks (the building foundation) has already been opened and is about to be stabilised. Whilst erosion and sediment controls can be required at this stage to manage sediment runoff for the remainder of the build, the absence of erosion and sediment controls from the outset means that this is a potentially high-risk activity, and damage to the environment may have already occurred.

ii. There is no opportunity to develop a resource consent pre-start relationship because consents are often not required for small sites, as many are permitted activities in accordance with the AUP(OP). Where they are required, initiating this relationship relies on the consent holder arranging the meeting with council and this rarely occurs. 

iii. There is currently no mechanism for council to become aware of the project start up and stages, i.e. no fail-safe mechanism for finding out when a house lot is (a) first accessed by the construction machinery before installation of a stabilised construction entranceway, and/or (b) soil is first exposed by vegetation clearance or cutting of a pre-stabilised site.

‘Close the Gap’ initiative

70. The “Close the Gap” initiative, which is running for the winter works season from May to August 2019, is seeking to establish cost-effective mechanisms to ensure sediment controls are in place on all small sites prior to first land disturbance activity. The site visits are being directed by the recent issue of a Building Consent, regardless of any contact from the contractor / developer post the granting of a Building Consent or associated Land Use Consent.

71. Funded by Natural Environment Strategy and Healthy Waters, and project managed by Targeted Initiatives, this initiative is a demonstration of the collaborative approach endorsed by the programme.

72. Two full-time compliance officers, backed by a part-time administrator, are:

- seeking to provide evidence of the extent of non-compliance with the requirement to install appropriate erosion and sediment controls prior to first cut
- examining methods and lines of communication between different council departments to improve notification of first cut
- investigating the administrative implications of introducing a mandatory pre-start sediment control inspection, requiring the developer to notify council when they intend to break ground for all permitted activities
- assessing options for a self-certification process if the erosion and sediment control devices are installed by an approved ‘installer’

73. Further lines of investigation are likely to arise as the project evolves.
74. On visiting these sites at an early stage, all sites are issued with a letter depending on the stage that the site is at. Early results, shown in Figure 1, are indicating that the non-compliance at this stage of the building process is very high, with almost three quarters of the first phase of investigated sites either having no or inappropriate sediment controls in place. Only 13% of sites had adequate controls in place and these were sent a letter informing owners that their compliance was noted and appreciated. The remaining 14%, where works had not yet started, were also sent a letter advising them of their obligations under the AUP(CP) to meet the appropriate performance standards for erosion and sediment control. All close the gap' communications contain a website link to the council’s Small Sites Booklet, which provides guidance on how to manage small sites. To complement this programme, and in addition to compliance campaigns on Auckland’s subdivisions, so far this year Targeted Initiatives have also run:

- 12 Tool Box Talks with developers
- 2 Small Sites Field Days attended by approximately 150 builders / contractors

75. The following activities are planned for later this year:

- targeted training of all 120 Building Inspectors in preparation for their participation in notifying absence/presence/adequacy of appropriate erosion and sediment controls at all inspections up to and including the Post-line inspections (IPL)
- 30-40 Tool Box Talks with developers
- talks with the Master Builders’ Federation
- displays of ESC techniques relevant to small sites will be included at the Sediment Field Day in September
- exploration of innovative use of satellite imagery indicating changing land use to assist with targeted monitoring and enforcement
- developing options for industry environmental training requirements (see WA5 and WA6).

76. In addition, it is proposed to introduce ‘end of pipe’ monitoring for sediment on selected small site subdivisions within Howick, Upper Harbour and Hibiscus and Bays local board areas. Howick, Upper Harbour and Hibiscus and Bays Local Boards have indicated that they will fund this work. Subject to resolutions from the local boards, this work will go ahead from July 2019.
Conclusions

77. The recently released independent report on regional council compliance, monitoring and enforcement (CES/G, 2018) identified that monitoring compliance of permitted activities is problematic for virtually all councils across Aotearoa/New Zealand, especially in regions such as Auckland, where significant reliance is placed upon permitted activities being managed by way of standards. The scale and intensity of Auckland’s growth means that our regional response needs to be more innovative than merely employing more compliance staff.

78. The report also highlighted cost recovery mechanisms from non-compliant permitted activities as an issue for most councils that would benefit from clearer central government guidance. The ‘Close the Gap’ initiative will assist in providing robust data on mechanisms to address this for sediment control on small sites that may be useful for better management of other permitted activities where compliance issues have been identified.

79. Priority is being given to establishing how sustained improvements can be achieved by embedding recommendations within existing processes.

Next Steps

Use the findings of the ‘Close the Gap’ initiative to achieve better compliance and monitoring of small sites, with minimal increase of council’s enforcement burden.

Apply the key findings to the compliance, monitoring and enforcement of all permitted activities where compliance issues have been identified.

Work Area 4: Monitoring and Evaluation

AIM: Define what council needs to monitor and how that can be used to evaluate the effectiveness of policies and interventions.

Integrated Sediment Monitoring Framework (Mountains to Sea/Source to Sink)

80. Monitoring is a systematic process that involves the planned and repeated collection of data, its analysis, interpretation and reporting. Monitoring provides evidence to inform council of appropriate management actions, assess the effectiveness of those actions and identifies emerging issues.

81. For sediment, it is important that monitoring is integrated, from understanding the multiple sources of sediment, monitoring the activities which generate sediment discharge and the effectiveness of mitigation and intervention measures in eliminating or reducing that sediment generation, through to measuring the outcome in the receiving environments. Figure 2 conceptualises the points at which information on sediment can be gathered.

Receiving Environment Monitoring

82. For freshwater receiving environments (rivers and lakes) Auckland Council monitors the amount of sediment in the water (turbidity and suspended sediments) using monthly grabs at 36 streams covering a range of catchment types. However, this generally measures background levels of sediment in streams during baseflow rather than event base (storm) loads. To do this, we have continuous turbidity monitoring at several stream sites to reflect a more refined understanding of changes in sediment over smaller spatial scales. Auckland Council is also involved in a national programme working towards a methodology to measure the natural accretion of sedimentation to lake beds.

83. For the coastal receiving environment, we currently collect grain size information from around 90 sites across the region that allow us to track changes in mudiness. There are theoretical thresholds derived from experiments (conducted in our region near our monitoring sites) and using council data that allow us to infer likely changes to ecology based on the percentage of mud.

84. Historical sedimentation information derived by aging sediment cores taken from east coast harbours and estuaries shows that over the last 170 years or so sedimentation rates have increased from less than 1mm per year to an average of 5.1mm per year. Staff are now trialling methods of measuring annual sedimentation rates and developing methods to measure the aerial extent of mudiness, that is, how far a muddy footprint extends within a harbour or estuary.
86. While we have measures of sediment (as mud) in marine and freshwater environments and how this has changed over time, linking this to the source of sediment is more difficult. Within a catchment, there are multiple sources of sediment input, as well as sediment already in the system from previous land disturbance (e.g. legacy of original land clearance). In addition, with the marine environment, sediment can be extremely mobile and moved around by waves and currents. Linking outcomes in the marine environment to sediment sources requires further review of the freshwater monitoring network to ensure a wide variety of potential inputs to marine receiving environments are covered.

86. Additional growth pressure also means council needs to capture more monitoring data from urbanising catchments. To address this need, council currently has two sites located in developing catchments: firstly, a recently installed monitoring site in Drury South where the entire catchment land use will change, as well as localised monitoring in Waitak, where a part of a catchment is being developed. Staff are in the process of considering further locations for integrated monitoring.

87. Anticipated amendment proposals to the NPS-FM in September this year will likely include a proposed sediment attribute within the National Objectives Framework, which may prescribe turbidity and deposited fine sediment as variables that must be reported and therefore measured. In addition, Auckland Council needs to adopt the appropriate NEPS (National Environmental Monitoring Standards) methods for measuring sediment in fluvial environments. This will ensure all data across Auckland/New Zealand is collected using the same methods, techniques, quality control and laboratory analysis. We will review our monitoring programmes subsequent to this future direction from central government.

88. National-scale legislative change to stock exclusion and a requirement for farm environmental planning on rural land are also expected and may mean Auckland Council would need to monitor and report on changes to erosion arising from potential mitigation practices (e.g. stock exclusion, retirement, wetland regeneration, hill country erosion control). Erosion from rural land will be a focus in further phases of the Strategic Approach to Sediment programme.

**Land Use Change Monitoring**

89. Traditionally, Auckland Council has used a range of databases to measure changes in land cover including the Land Cover Database (LCD), AGRIBASE™, Statistics New Zealand Census and MPI Agricultural Production Survey. These collect data using different methods and at different temporal scales and dates and therefore, are not always comparable. Generally, they also measure land cover change at relatively coarse scales and over long time periods. Staff are currently trialing methods to characterize fine scale changes in catchments surrounding freshwater monitoring sites. The increasing availability of satellite imagery and ongoing development of image recognition technology will provide the opportunity to develop even finer spatial and temporal scale methods of monitoring change. This also links to opportunities to use satellite imagery for improved monitoring for compliance as mentioned in Work Area 3 above.

90. The development of the Freshwater Management Tool (see Work Area 1: Better Information) will also improve our understanding of land use change. The FWMT uses long term regional monitoring data to establish the relationships which inform the model and enable it to make predictions. The model will require further ongoing validation monitoring and will also inform priority areas for monitoring based on likelihood of sediment generation or current information gaps in our monitoring programme. It is anticipated that we will need to introduce more targeted (to specific land covers) monitoring in small catchments to help validate gaps in modelling outputs. This will form part of the scoping for version 2 of the FWMT referred to under Work Area 1.

**Regulatory Processes and Operations**

91. The critical link between measuring changes in land use and sediment delivery and effects in aquatic receiving environments is monitoring the compliance and outcome of land disturbing activities which generate sediment, be it permitted activity or restricted discretionary.

92. Three key reviews of the AUP(OP) provisions for managing sediment are currently underway as outlined in Work Area 2. The full results of the NPS-FM Water Provision Review and the S25 AUP Monitoring Programme will be reported to their respective Committees in accordance with the timescales of the wider programmes that they sit within. It is anticipated that they may identify...
deficiencies or gaps in compliance monitoring that need to be addressed in addition to those identified as part of this programme.

93. While these evaluations are being peer-reviewed for wider publication, early results have triggered several initiatives in monitoring small sites, where a direct link between monitoring and collection of information relating to the effectiveness of council activities is already clearly evident. For example, data gathered from Building Inspectors' inspections and the Closing the Gap initiative will provide better monitoring of small sites, particularly for permitted activities, as outlined in Work Area 3: Interventions.

94. Targeted 'end of pipe' water quality monitoring of sediment loads from three small sites developments is proposed to be funded by the Howick, Upper Harbour and Hibiscus and Bays Local Boards (confirmation is expected in July 2019). These results, which are linked to subdivisions where targeted initiatives are being undertaken, will provide early indication of the need for increased enforcement action. This monitoring data along with data on activity compliance can be used to refine scenario testing in the FWMT.

95. In addition, more concerted monitoring and evaluation is required to validate the effectiveness of sediment retention and mitigation devices under different conditions. This has been identified as required within the work programme endorsed in December 2019 but was delayed to align with work to establish the effectiveness of stormwater devices and form part of the scoping for Version 2 of the FWMT.

**Next Steps**

Develop case studies to assess the effectiveness of various devices under different conditions, including extreme site and weather conditions, as well as opportunities to use innovative techniques. This will help inform developers when more stringent measures are required to achieve effective control of discharges from sites.

**Work Area 5: Co-ordinating and Building Capacity**

AIM: Establish what skills and resources are needed for the council group to make informed decisions and to implement and enforce policies. Phase 1 will develop a clear understanding of options to deliver as much as possible within existing resources.

96. Keeping pace with consenting and monitoring activities subject to the AUP(OP) provisions is a challenge for both council and the construction industry.

97. This work area reviewed how functions relating to sediment are split across the council group, particularly in relation to managing construction earthworks and its impacts. Recommendations for next steps were combined with the findings of the AUP(OP) Review, outlined under Work Area 2.

**Needs identified**

1. **Improve consistency of interpretation and application of AUP(OP) Provisions**

98. Inconsistent interpretation of provisions between the different area service centres, specifically the provisions within the regional and district land disturbance charters, contributes to variability in assessment of consents across the region. Guidance on interpretation for resource consenting purposes is often provided by officers in Team Leaders or Principal positions in the differing area service centres within the regulatory services departments. To improve the consistency of interpretation of provisions, guidance on interpretation must be consistent across all area service centres.

99. Actions being carried out to implement this recommendation are set out below.

- Finalise the draft Guidance Note – Earthworks, for internal and external release as a matter of priority. The internal version is due to be released at the end of July 2019, with the external version to be available shortly after. This should be followed up with appropriate training across
all the service centres to ensure consistency in interpretation and general resource consenting for erosion and sediment controls across the region. This could also include staff from other departments such as those within the Chief Planning Office and Healthy Waters, to provide further information on the intended application of the AUP(OP) provisions, in particular, the regional provisions.

- Targeted training for different regulatory service teams such as compliance monitors, processing planners and development engineers. The content of the training may require altering to reflect the intended audience to ensure the information is targeted and relevant to specific functions of each group (see below).

II. Improve understanding and awareness of sedimentation impacts

100. Discussions with relevant staff have highlighted a need to improve consistency of technical understanding and knowledge around erosion and sediment control measures and the adverse environmental effects of sediment in order to advance:

- the standard of erosion and sediment control plans that are submitted as part of resource consent applications
- the consistency with which such plans are assessed by consenting planners
- the choice, installation and maintenance of controls implemented on site
- the assessment of erosion and sediment controls for compliance.

101. Managing erosion and sediment controls on site is complicated and requires a high level of technical competency to assess against the best practice methods provided in GD05 at both the resource consenting and compliance stage. As this is the method by which compliance is assessed in New Zealand, this puts considerable onus on the responsible compliance officer, especially when faced with inadequate practices on site.

102. Following the completion of GD05 and adoption into the AUP(OP) there is now a need to roll out a training and guidance programme. Engineering and Technical Services has developed a draft basic training module, which is due to be finalised in the coming months and rolled out within the context of a broader training and awareness scheme for a number of the Guidance Documents.

103. In the context of weighing up the need for a more formal certification process, a review is also underway of training and certification requirements in other jurisdictions such as Florida (USA) and Canada for ESC plan preparers and checkers.

III. Improve Staff and Knowledge Retention and Capacity

104. Keeping pace with consenting and monitoring activities subject to the AUP(OP) provisions is a challenge for council with consequent high demands on staff. The high staff turnover rate within council’s regulatory service departments is resulting in the loss of officers with valuable technical expertise and experience.

105. Options to retain staff and knowledge include:

- initiating further investigations into the reasons for the turnover rate to identify options for improving the retention
- investigating options and developing methods such as effective exit interviews to retain knowledge from experienced staff leaving council.

IV. Improve understanding of regional functions

106. Through the course of this work, it was identified that most consenting planners are trained and experienced in district, rather than regional planning. This gap provides an opportunity to improve the understanding of Auckland Council’s regional council functions, specifically associated with the interpretation and application of provisions that address effects on the natural environment.

107. Options to implement this recommendation include:
interventions proposed

internal regulatory practices and processes

I. Enhanced Training - Internal

106. As a unitary council, resource consent planners and compliance officers have different expertise and background knowledge. Some planners are more familiar with regional plan rules and others are trained in district plan rules. Similarly, compliance officers are area-based rather than subject-based. Although guidance, practice notes and trainings are provided, with over 40,000 consents processed per year it is not easy to avoid inconsistency. For example, some planners or compliance officers always seek advice from specialists when assessing environmental effects, even for permitted activities, others may just seek advice for activities that require consent and underestimate the cumulative effects of permitted activities.

109. As part of this programme, a thorough review has been conducted of the training methods and materials provided to internal regulatory staff around erosion and sediment control. Working with the Practice and Training Team, as well as recipients of the training, several enhancements have been identified to fine tune the training delivered to make it more specific to the role that each user group plays in the regulatory process. Table 2 outlines the benefits and impact of providing enhanced, user-specific training to each user group.

Table 2: Benefits and impact of enhanced, user-specific training

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<thead>
<tr>
<th>Intervention</th>
<th>Benefits</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Planning Information Advisors (PIA)</td>
<td>As PIA provide general planning guidance to customers this provides an opportunity to educate and advise customers on the required standards before they begin development, even if their activity is permitted. It also ensures that customers are directed to appropriate guidance before enforcement methods are implemented.</td>
<td>All developers specifically those in initial scoping stages (before first cut) and developers who may only require building consent due to the earth works being permitted under AUP(0P).</td>
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<tr>
<td>Plan Check Planners</td>
<td>Ensures that plan check planners are aware of and implementing the correct requirements for erosion and sediment control measures for permitted activities. This would ensure that erosion and sediment control measures were being considered at application stage.</td>
<td>Developments which require building consent but do not require resource consent for land disturbance due to being under the permitted threshold, however certain AUP(0P) standards still apply.</td>
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<tr>
<td>Intervention Target</td>
<td>Benefits</td>
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<td>Development Engineers</td>
<td>• Training will incorporate both requirements under GD05 as well as under the Unitary Plan. • Ensures that adequate information on erosion and sediment control is received with resource consent applications in accordance with the requirements of GD05 and the Unitary Plan. • Improves quality of erosion and sediment control information and plans conditioned with granted resource consents.</td>
<td>All development requiring a resource consent for small to medium scale land disturbance activities will be impacted. This captures medium scale earthworks that requires a distinct resource consent as the application is checked over by a development engineer. Also captures proposed earthworks which is within the permitted threshold yet requires resource or building consent for other activities which requires development engineer assessment.</td>
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<td>Resource Consent Planners</td>
<td>• Ensures consistency of awareness of council’s regional functions. • Opportunity to encourage a wider environmental perspective to be applied in order to consider cumulative effects. • Improves quality of resource consents including more informed and appropriate conditions of consent to minimise effects associated with erosion and sediment. • Allows planners to screen material provided regarding erosion and sediment control before requesting advice from the specialist teams and allows for applications to be returned if it is lacking information. • Training will increase the consistency of consent processing and ALP(OP) interpretation across the differing area service centres.</td>
<td>All development requiring a resource consent for land disturbance activities will be impacted however, specifically this captures medium to large scale development.</td>
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<td>Monitoring Officers</td>
<td>• Ensures that monitoring officers are aware of erosion and sediment control requirements so that they can adequately monitor resource consent conditions as well as be aware of any non-compliance on site which is not related to the resource consent.</td>
<td>All development requiring a resource consent which is monitored will be impacted.</td>
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<tr>
<td>Building Inspectors</td>
<td>• Ensures that building inspectors are aware of erosion and sediment control requirements when visiting a site to the level that they are able to identify whether the erosion and sediment control methods are compliant. This corresponds with the addition of erosion and sediment control measures to the inspection checklist.</td>
<td>All development requiring a building consent will be impacted and this specifically captures development on smaller sites where resource consent monitoring is not to be undertaken as proposed earthworks is below the permitted threshold in accordance with ALP(OP).</td>
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<tr>
<td>Basic and advanced GD05 Training</td>
<td>• The training will improve compliance with GD05 and could be utilised by various departments and in various roles. This training could also be linked with other internal and external training programmes where suitable.</td>
<td>All developers will be affected as council’s expectations on erosion and sediment control will rise due to better understanding and if the training is able to be used externally then developers will benefit from a better understanding of council’s expectation/best practice.</td>
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</table>
II. Develop and encourage the use of up-to-date consistent, transparent guidance

110. A stocktake of available Erosion and Sediment Control (ESC) specific guidance available to staff revealed that there is an opportunity to rationalise the guidance available and develop appropriately targeted guidance for staff at all stages in the process for regulating construction earthworks.

111. A parallel stocktake for guidance available externally also revealed that while there is a good level of guidance available to external stakeholders, some minor updates regarding contact details, regulatory framework and obligations, better cross referencing between documents and a discussion of further resources would enhance the usability and effectiveness of these resources.

112. Accessing the correct guidance on Auckland Council’s website can also be confusing as available ESC guidance is not held in the obvious locations, for example the best management practice documents are located in the Stormwater Section of the website rather than the Resource Consents or Building Site management pages. Improving accessibility of these resources would particularly benefit small scale land disturbance activities that do not require consent.

113. Options to implement this recommendation include:
   - update and improve accessibility and visibility of guidance documents both externally and internally
   - using guidance documents to direct developers’ attention to the wider environmental impacts associated with erosion and sediment as well as outlining the legislative requirements to install controls and the potential council penalties.

Next Steps

Finalise the draft Guidance Note – Earthworks, for internal and external release as a matter of priority. The internal version is due to be released at the end of July 2019, with the external version to be available shortly after.

Develop supporting material for GD05 introducing the document, addressing how it should be approached, breaking down the sections or providing additional media or further information.

External Practices and Processes

114. Two key issues arise in relation to industry practices that would contribute to improved sediment outcomes from the construction industry:
   - improved quality of applications for earthworks, in particular, Erosion and Sediment Control Plans (ESCP)
   - better practices on all levels of sites.

115. In theory, an Erosion and Sediment Control Plan (ESCP) and an Assessment of Environmental Effects (AEE) should be supplied with all applications for a resource consent, which proposes earthworks. In practice, these plans are often seen as an after-thought and poorly prepared. In many cases applicants defer to offering a condition rather than providing the necessary information upfront. When an ESCP is provided, it often doesn’t follow best practice (GD05). This raises the question of who pays for the time taken to upskill the applicant’s specialist.

116. There is also a natural tension between the applicant and council as applicants want to minimise costs associated with constructs such as erosion and sediment control devices. Applicants also often want to maximise the open area to be worked, but in order to minimise potential effects council wants to control extent of the catchment which is exposed, staging of works, timing and duration and term of consent. Another consequence of poorly prepared plans is that they have often not been matched to the specific site conditions, which means that the contractor employed to manage the earthworks starts with an ESCP that is not fit for purpose.

117. This appears to be less of an issue for large and medium to large sites, where a suitably qualified consultant is usually employed to develop the plan. This tension speaks to the need for enhanced
training in the preparation of ESCPs, however, with around 2000 small to medium sites for which district-level earthworks consents are issued each year this can be problematic.

118. On site practices have also been identified as problematic, either through inappropriate choice of sediment control devices, failure to adapt as the works evolve, or inadequate maintenance of devices.

119. Both issues speak to the need to achieve a more consistent level of skills in erosion and sediment control in Auckland’s construction industry.

Proposed Interventions

Enhanced Training – External

Current State

120. At present, building industry training providers in New Zealand do not require any compulsory training for Erosion and Sediment Control (ESC) or Environmental Management on construction sites. In order to qualify as a Licensed Building Practitioner (LBP) and carry out Restricted Building Work, building professionals must demonstrate a range of theoretical and practical competencies, however, ability to recognise and manage environmental issues, including erosion and sediment runoff, is not a competency required by all licence classes, and existing Unit Standards, that count towards LBP registration may or may not cover environmental management to a satisfactory level. Formalised ESC training focusing on the practices described in GDOS is offered by some environmental consultancies and can be accessed by the construction industry, through this may have limited appeal and uptake due to the lack of formally recognised accreditation for successful completion of associated coursework.

121. In terms of regulator training, in addition to the small site focused training offered by Targeted Initiatives (see Work Area 3), Auckland Council currently offers four GDOS-based ESC courses of half a day or less as well as an annual industry field day. These courses are internally developed and facilitated, and do not provide formal certification or accreditation to participants. Many other councils offer similar internal and external guidance documents and training schemes based on Auckland’s GDOS (and its predecessor – TP90), including Greater Wellington, Hawkes Bay, and Waikato Regional Councils, and Environment Canterbury.

122. Despite the unified uptake of guidance documentation, there is no consistent national approach to training, and there have been issues with low numbers of external construction industry members attending council-facilitated training courses, likely due to timing (held during working hours) and lack of accreditation or certification offered for successful completion of coursework. This is difficult to address, as gaining the certification required to become an accredited training provider of NZQA qualifications is a time and cost intensive process (Geertshuis, Feeley & Ridley, 2012).

123. This overall lack of consistency has long been recognised and there have been significant cross-sector efforts to design and implement standardised ESC and Environmental Management training targeting building professionals, ESC designers and practitioners, and regulators. This has been slowed by lack of political appetite, amalgamations of regulatory bodies, and the absence of educational frameworks. Work by Connexis and the legacy Auckland Councils progressed as far as developing and registering NZQA training content (Unit Standards 27201 and 27202) BECA Ltd &

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3 Since 2009, The New Zealand Government has required that building practitioners be licenced to carry out or supervise restricted building work (RBW). The LBP scheme includes seven licensing classes that are based on occupations that are crucial to a buildings performance, including Brick & Block laying, Carpentry, Design, External Plastering, Foundations, Roofing, Site (management). To become an LBP, a practitioner must demonstrate that they meet each of the competencies required by the licensing class. The LBP scheme promotes recognition, and supports professional skills and behaviour in the building industry, encourages competent building practitioners to carry out quality work, and to give consumers the information they require to make informed decisions when engaging building practitioners.

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Strategic Approach to Sediment: Work Programme

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Strategic Approach to Sediment

Page 279

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For Information: Strategic Approach to Sediment report

Page 205
Environmental Communications Ltd, 2016), but it does not appear that these unit standards have ever been incorporated into any industry qualifications as core components.

Implications

124. As such, there is currently no standardised, compulsory ESC or environmental management training required by ESC practitioners or regulators. Construction professionals, designers, builders and project managers, on small and residential construction sites do not have a consistent appreciation of the environmental effects of sediment and contaminants, or the importance of ESC and environmental management practices. Where they should be placed, and what best practices look like. While some environmental effects can be managed through regulation and enforcement, without appropriately trained on-site professionals managing environmental risks and selecting and installing ESC’s early on, contaminants including sediment, paint, and building debris can directly and indirectly discharge to receiving environments. While a single site may not generate large volumes of sediment or contaminants, the cumulative effects of multiple poorly managed sites can be significant at a catchment scale (Beca Ltd & Environmental Communications Ltd, 2016).

Opportunities

125. Offering training that provides participants the opportunity to attain qualifications and accreditation through achievement of unit standards may provide a strong incentive to the construction industry, particularly those in the early stages of their training or careers who are seeking to gain LBP certification (Geretschläger, Feery & Ridley, 2012).

126. The ESC, regulatory, and wider environmental management sectors in New Zealand are characterised by strong cross-sector partnerships, and opportunities currently exist to ensure that ESC designers, providers, and regulators receive consistent training and certification covering ESC design, installation, and maintenance, contaminant control, and construction waste minimisation. The time is right to revisit establishing ESC and environmental management as a compulsory competency across all LBP licence classes and developing (or adapting) and implementing a compulsory, nationally recognised unit standard that provides the required skills and knowledge. Professional and educational frameworks now exist. Public and political awareness of the environmental effects of unprecedented growth is high and several central government initiatives to improve the quality of marine and freshwater are currently in the pipeline. This is crucial to the success of a standardised, compulsory unit standard, as individual councils should not be responsible for coordinating and implementing such a programme, unified direction needs to come from central government.

Next Steps

Increase uptake of erosion and sediment control training for the construction industry through advocacy to central government for national-level industry qualifications and accreditations across the full range of construction industry stakeholders.

\[\text{In addition to the LBP scheme, MBIE's Government Regulatory Practice Initiative (G-Rip) has recently been established to build the capability and professionalism of regulatory staff in central and local government agencies and organisations across New Zealand. One of the ways in which they aim to achieve this is through NZQA recognised qualifications (to a diploma level), facilitated by Skills NZ. The level three and four qualifications have recently been incorporated into the Auckland Council’s Regulatory Compliance unit’s core training framework. While much of the content of the G-Rip qualification is general and transferable across the public sector, Skills NZ may be an appropriate framework for delivery and accreditation of recognised, consistent ESC Design and Practice Qualifications.}\]
Work Area 6: Communication and Engagement

All: Look at how and with what messages we engage council, mana whenua, partners and wider stakeholders.

127. One of the key outputs of this work area is to develop a shared and coordinated regional narrative for sediment, pulling together our latest understanding of sediment sources and the effectiveness of interventions. This will be an iterative process as myriad historic and new targeted, regional and national studies and research activities add valuable insight to this complex and challenging story. Opportunities to share this story are being developed through the Watershed Story Maps and other appropriate media.

128. To further this, staff are developing strategic partnerships with organisations such as Sustainable Business Network, which through their GulfX project, is taking a multi-pronged approach in its mission to restore the health of the Tīkapa Moana/Hauraki Gulf, including a focus on sediment through its Million Metres Streams Project.

Working with Mana Whenua

129. Certain activities under the AUP(OP) require applicants to provide a Cultural Values Assessment (CVA) to provide information on effects on mana whenua values. Large scale earthworks (or smaller scale earthworks but in sensitive areas) typically requires a CVA to be provided. The applicant can either engage with mana whenua directly prior to lodging their consent application to obtain this information or can use the council’s facilitation service during the consenting process.

130. In 2018-19 RIMU undertook a review of the effectiveness of how council’s consenting departments are working with mana whenua. The report put forward 52 recommendations to improve existing systems, processes, guidance and training for both council staff and mana whenua involved in consenting processes. As a result, the CVA Review Project was established. This partnership between Auckland Council Regulatory Services and mana whenua includes a series of five co-design workshops with attendance from mana whenua and council staff.

131. It is anticipated that the findings and recommendations of this review will be implemented, once agreed by the project steering group, starting early in 2020.

Next Steps

Next steps are outlined in Table 3.

Table 3: Proposed stakeholder interventions

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<thead>
<tr>
<th>Intervention</th>
<th>Proposed Intervention</th>
<th>Benefits</th>
<th>Anticipated Impact</th>
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<tbody>
<tr>
<td>Construction Industry</td>
<td>A series of workshops to encourage the construction industry to be part of the solution through voluntary compliance, innovation and identifying tools required to achieve this.</td>
<td>To emphasise the importance of erosion and sediment control measures, ensure that industry is aware of council’s requirements and that council provides the right tools to assist in achieving better outcomes. Additionally, to challenge best practice and encourage innovative solutions.</td>
<td>Targeting planners, project managers, engineers and other professionals involved in land development to understand opportunities and barriers from varying perspectives in order to improve the quality of information in resource consent applications received and raise awareness.</td>
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<tr>
<td>Intervention Target</td>
<td>Proposed Intervention</td>
<td>Benefits</td>
<td>Anticipated Impact</td>
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<tr>
<td>Community</td>
<td>Partner with Sustainable Business Network and GulfX to develop a series of community workshops around sediment.</td>
<td>The workshops would provide a community and mana whenua perspective on erosion and sediment control. This perspective can be applied to our practices and processes relating to erosion and sediment.</td>
<td>Incorporating a Te Ao Māori perspective will further emphasise the importance of protecting our waterways and wider environment and provide another perspective on the issues that communities may identify with.</td>
</tr>
<tr>
<td>Integrate cultural values from watershed story</td>
<td>Mana whenua and Healthy Waters</td>
<td>Developing the watershed stories has included a partnership with mana whenua to gain their perspective. This perspective can be woven into our practices and processes relating to erosion and sediment.</td>
<td>Incorporating a Te Ao Māori perspective will further emphasise the importance of protecting our waterways and wider environment and provide another perspective on the issues that communities may identify with.</td>
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</tbody>
</table>
References

Auckland Council (2018) GD05 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.


Feehery et al (2016) Erosion and sediment control on small construction sites: Co-creating a process for changing our practice in the Mahurangi. A report prepared for the Auckland Council in June 2016 by Beca Ltd (Beca) and Clare Feehery of Environmental Communications Ltd.


IHP (2016) Part 2.1 Separation of regional plan and district plan functions (pg 8) of Report to Auckland Council Hearing Topic 041 – Earthworks and Minerals prepared by the IHP.


# Appendix 1: Summary of Next Steps

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<tr>
<td>1</td>
<td>Scope PWMT v2 to include scenarios for developing land.</td>
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<td>Establish priorities and costs for further research recommendations for LTP 2021.</td>
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<td>3</td>
<td>Embed findings and recommendations into work related to Auckland Plan 2050 and AUP(UP) plan changes for NPS-FM implementation.</td>
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<td>4</td>
<td>Complete 'Close the Gap' initiative (Phase 1)</td>
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<td>5</td>
<td>Use finding to achieve better compliance and monitoring of small sites.</td>
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<td>6</td>
<td>Develop case studies to assess effectiveness of devices under different conditions.</td>
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<td>7</td>
<td>Enhanced Training – Internal.</td>
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<td>Finalise draft Guidance Note – Earthworks.</td>
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<td>9</td>
<td>Develop supporting material for GDOS.</td>
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<td>10</td>
<td>Advocate for national-level industry qualifications and accreditations.</td>
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<td>11</td>
<td>Industry workshops.</td>
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<td>12</td>
<td>Community and mana whenua workshop in partnership with SBIN and NPS-FM delivery (as appropriate).</td>
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<td>13</td>
<td>Develop scope of strategic solutions to address sediment from other sources.</td>
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For Information: Update on Coastal Compartment Management Plans

File No.: CP2019/15110

Te take mō te pūrongo
Purpose of the report
1. To receive for information the Update on Coastal Compartment Management Plans memo dated 27 June 2019.

Whakarāpopototanga matua
Executive summary
2. An Update on Coastal Compartment Management Plans was provided to the Environment and Community Committee (Agenda Item 22) at its 10 July 2019 meeting where the item was deferred to a later meeting date.
3. The memo, dated 27 June 2019, provided an update on the development of Coastal Compartment Management Plans and is attached as Attachment A for information of the Manukau Harbour Forum.

Ngā tūtohunga
Recommendation/s
That the Manukau Harbour Forum:
a) receive for information the progress update on the Coastal Compartment Management Plans.

Ngā tāpirihanga
Attachments
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<td>A0</td>
<td>10 July 2019 Environment &amp; Community Committee Item 22: Update on Coastal Compartment Management Plans memo (dated 27/06/2019)</td>
<td>213</td>
</tr>
</tbody>
</table>

Ngā kaihaina
Signatories

Authors: Brenda Railey - Democracy Advisor - Waitakere Ranges

Authorisers: Glenn Boyd - Relationship Manager Henderson-Massey, Waitakere Ranges, Whau
Memorandum

To: Environment and Community Committee and Local Board Members

Subject: Update on Coastal Compartment Management Plans

From: Natasha Carpenter – Practice Lead Coastal Management
Paul Klinac – Head of Specialist Delivery Unit
Sarah Sinclair – Chief Engineer

Purpose

1. To provide an update on the development of Coastal Compartment Management Plans.

Summary

- Auckland has the largest population density to coastline ratio in New Zealand. It is characterised by 3,200km of dynamic coastline, which is subject to several coastal hazards.

- In August 2017 a Coastal Management Framework was approved to provide a best practice, operational framework for coastal management in Auckland (resolution ENV/2017/116). This framework highlighted the need to better understand and address the ongoing impacts of climate change (sea level rise, increased storminess), human modification and future growth. Funding was made available via the Long-Term Plan to undertake further work to implement the framework.

- Coastal Compartment Management Plans (coastal plans) are now being developed across the council group to guide long-term planning and decision making in the coastal zone. These plans will build on the climate change risk assessments recently completed by Rimu as part of the development of the Auckland Climate Action Plan.

- Coastal plans will provide site-specific strategies for mitigating the risks of coastal hazards over at least the next 100 years using a range of management policies and options. The options employed are likely to change over time in response to ongoing sea level rise and increases in the risks from coastal hazards to our communities. This ‘adaptive planning’ approach is aligned with the recent ‘Coastal Hazards and Climate Change: Guidance for Local Government’ report from the Ministry for the Environment.

- Coastal plans are currently being developed in four initial areas which were selected based on factors such as sensitivity to coastal hazards and location of priority planned coastal investment by the council group. The areas are the Whangateau Estuary (including Omaha Beach), South Manukau Harbour, Whangaparaoa Peninsula, and Maraetai through to Matingahai. Coastal plans will be completed for the entire Auckland region on a rolling programme, until all 18 have been completed.

- Accurate baseline data is critical to the effectiveness of current planning and future coastal decision making. Work is being undertaken to update Auckland’s baseline data on coastal erosion, coastal inundation and tsunami hazard mapping. Targeted asset condition assessments for Auckland’s coastal structures have also been initiated.

- Mana whenua engagement and support is key to the development of coastal plans and the supporting decision-making process. Staff have met with mana whenua operational kaitiaki representatives to discuss how Māori values can best be incorporated into the development of the coastal plans. A meeting with the Mana Whenua Kaitiaki Governance Forum was also held on 31 May 2019. Mana whenua expressed support for the approach to coastal planning and advised staff on how to achieve an ongoing partnership with mana whenua.

- Stage one draft technical reports (collating all baseline coastal hazards, asset and risk information) for the first four coastal plans will be completed by January 2020.
This will be followed by staged community, stakeholder and mana whenua engagement to determine recommended coastal management options.

Staff will engage with the relevant local boards and mana whenua on the first four coastal plans before these are completed. The approval process for the final plans will be confirmed at a later date.

Context

2. Due to Auckland’s density to coastline ratio and the significant proportion of Auckland’s development that is concentrated towards the coast, Auckland faces a number of coastal management challenges. These challenges including coastal hazards such as erosion, inundation and potential tsunami risk, the changing coastline, and the expectations of the role of council and communities in managing these challenges. Impacts of any coastal hazards will be influenced by the future effects of climate change.

3. For effective long-term coastal management, the council must consider appropriate and cost-effective management of existing structures and ensure new structures meet the requirements for sustainable and holistic future management.

4. Coastal plans will provide a long-term (100+ years) planning tool for managing our coastline at a site-specific level. Coastal plans take a comprehensive systems-based approach which follows the guidance presented in the Ministry for the Environment's updated Coastal Hazards and Climate Change: Guidance for Local Government (2017).

5. Coastal plans will use updated research and data to make a site-specific assessment of coastal risk. A series of possible appropriate management options (such as doing nothing, holding the line, or managed retreat) will be developed. Options for management will be assessed with consideration given to the economic cost and impacts to amenity, environmental and cultural values through a multi-criteria analysis. This will be supported by iwi, local board, stakeholder and community engagement to determine key values for the site.

6. The coastal plans, upon completion, will provide site-specific coastal management strategies. The strategies will outline the agreed management response for each site over time and associated funding implications. This will support the identification of any required changes to council policies to support the implementation of each management response.

Discussion

7. New guidance on coastal hazards was released by the Ministry for the Environment in December 2017. This provides a ten-step process for assessing and mitigating coastal hazards with community engagement at the centre of the process. The council’s coastal plan process adheres to the guidelines and will apply positive lessons learned from implementation of the Hawkes Bay and Wellington City Council coastal strategies, which were the first two areas in New Zealand to produce strategies based on this guidance.

8. Due to the scale of the Auckland coast it was not considered prudent to develop coastal plans for the entire 3,200km of coastline in unison. As a result, the coast has been divided into 12 coastal cells, as shown in Attachment A. This has considered the geomorphology and natural coastal sediment transport boundaries of the Auckland coast. The preferred approach is to undertake a rolling programme of coastal plans, beginning with four pilot sites (phase one) before reviewing the methodology and continuing to apply it to the remaining coastal cells.

Prioritisation of coastal plans

9. The first four coastal plan sites of the programme were selected based on the following criteria:

- one of the 26 coastal management ‘hotspot’ areas, as presented in Auckland Council’s Coastal Management Framework
areas that have been repeatedly affected and impacted during recent and historical coastal storm events, including the most recent 2018 storm

areas where funding has already been allocated to the coastal work programme

areas where other investment workstreams and related initiatives are already in progress

availability of quality data (such as coastal asset conditions assessments) and availability of improved hazard data.

10. The four coastal plan sites selected for phase one are: Whangateau Estuary and Omaha beach (Rodney); South Manukau Harbour (Franklin); Whangaparaoa Peninsula (Hibiscus and Bays) and Beachlands through to Matangahari (Franklin) as outlined in Figure 1 below.

Figure 1: Initial sites for Coastal Compartment Management Plans

11. Technical (stage one) reports providing coastal hazard, asset and risk information will be completed for the first four coastal plans, while draft plans will be completed by January 2020. They will be presented to council controlled organisations, ward councillors and relevant local boards, mana whenua and the community for feedback and development of the final coastal plans as further described below.

12. The remaining coastline will be prioritised in a rolling coastal plan programme. The locations of the next phase of coastal plans will be defined based on the same selection criteria used to determine the first four cells. The last phase of the stage one technical reports (to inform consultation) will be completed by December 2020.

Contents of coastal plans

13. Complete coastal plans will contain the following information:

- an outline of the coastal processes operating within the wider coastal cell and site-specific units
• description of likely hazard risk to each sub-unit for the present day and future time
  frames with consideration of climate change impacts out to a 100-year horizon
• an inventory of assets owned by the council and wider council family and, at a high
  level, private property that may be at risk under the climate change scenarios. This will
  not only include built assets, but public access and open space amenity values provided
  by beaches, reserves and parks
• the condition of current council coastal defence assets, approximation of design life and
  performance given expected changes in coastal hazards due to climate change
• environmental, cultural and natural heritage, landscape and natural character values
  defined in combination with community engagement and consultation with local iwi
• a range of coastal management options for adaptively managing the coastline over at
  least the next 100 years, including rough order costs.

Baseline data assessment
14. In order to develop robust coastal plans, it is necessary that the council’s baseline coastal asset
  data is accurate and defensible. Existing datasets were reviewed over a six-month period
  beginning October 2016, and a range of required improvements were identified and initiated.
  Resultant projects are underway as further outlined below.

Regional erosion study
15. Erosion is defined as permanent loss of cliffed areas or long-term regression of natural beach
  systems. Erosion can also occur in front of coastal defences, carrying the potential to undermine
  structures, increasing maintenance costs or the risk of failure. Climate change is predicted to
  increase the current rates of erosion, mainly as a result of sea level rise.

16. This study will provide site-specific data for the coastal plan development process, in particular the
  understanding of how erosion under the ‘do nothing’ scenario (with no or limited coastal defences)
  will change our coastline over the next 100 years, including anticipated climate change effects.
  The study is due for completion in December 2019.

Coastal inundation data update
17. Coastal inundation extents for the region have been mapped for present day and future sea level
  rise scenarios by NIWA in two studies completed in 2013 and 2016. New LiDAR data was flown in
  2016 and the NIWA coastal inundation layers are currently being remapped to this new dataset,
  for completion by November 2019.

18. The study will importantly also map inundation levels for Aotearoa Great Barrier Island and Hauturu,
  Little Barrier Island, which were excluded from previous inundation studies owing to insufficient
  data. Extreme storm and climate change water levels for the islands have been commissioned
  from NIWA and will enable consistent current and future inundation mapping of the entire
  Auckland region.

Coastal asset data
19. The council’s current coastal asset data has been reviewed, with some inconsistencies identified
  at a site-specific level. This is the result of a combination of factors including recent storm activity
  which has impacted the condition of existing structures, some of which now require increased
  frequency of inspections and resultant maintenance.

20. A comprehensive coastal asset inspection manual has been developed to ensure consistency in
    coastal structure condition assessments and reporting across the council. To support this an app
    has been developed for completion of efficient on-site condition assessments.

21. Targeted coastal asset condition assessments are now underway, commencing in the four initial
    coastal plan areas. These also include a stocktake of private coastal defences. Although not the
responsibility of the council, poorly designed private coastal defences can exacerbate erosion issues on adjacent sections of coast.

22. Asset information will help inform the coastal plan long term management strategy and likely requirements for upgrading, replacing or removing coastal structures where options exist to retreat or naturalise the coastal edge.

Tsunami risk

23. Auckland Emergency Management and Engineering and Technical Services are currently reviewing and refining the tsunami risk zones based on the latest research and modelling.

24. As a high impact, low probability event, the construction of coastal defences is unlikely to mitigate against tsunami risk. However, this data provides important information for evacuation planning, warning systems and future land use planning which will be presented in the coastal plans.

Process for developing coastal plans

25. The process of developing a coastal plan at each site will be carried out in two stages as outlined below.

Stage one technical report

26. The first stage will comprise a technical report on the coastal hazards predicted to affect each site and how they will be affected by climate change over the next 100 years. This will form a site-specific risk assessment (hazard exposure and vulnerability) over different time periods for both private and public infrastructure.

27. Based on the site’s risk, a range of mitigation options will be presented, ranging from managed retreat of infrastructure, through to hard and soft coastal defence solutions.

28. These responses will likely have to change over time to accommodate the increasing hazard risk as the climate changes, consequently responses will be grouped into adaptation pathways that may cover a series of responses over a 100-year timeframe (as directed by the Ministry for the Environment) to ensure prudent and timely decision-making.

29. Stage one will assist in development of detailed coastal asset management plans including ongoing asset maintenance and renewal, and hence in securing funding for future coastal asset management.

Consultation

30. The suite of management options from stage one technical reports will then form the basis for consultation with asset owners, communities, mana whenua, ward councillors and local boards. The aim of the consultation will be to inform local communities about risk (working with other parts of Council to ensure we achieve broad Council objectives in relation to resilience planning), then define and agree a recommended adaptation pathway for each site.

31. Consultation will be combined with an evaluation of economic, environmental, cultural and social impacts using a multi-criteria analysis tool. This was developed in draft for the Coastal Management Framework and will be refined for each coastal plan to recommend preferred coastal management options.

Stage two

32. Stage two will confirm the preferred management approach and address the timing and feasibility of its implementation. This will include funding requirements and an assessment of the necessary policy and planning regime required to support the recommended proposal.

33. The project team will engage and collaborate with the relevant local boards and ward councilors to ensure that their views and preferences are taken into account in the development of each coastal plan.
34. Each completed plan will guide the future coastal management response over the next 100 years for each site considering recommendations for the adaptive management of coastal assets.

**Council group impacts and views**

35. Mitigating coastal hazards will become increasingly expensive. It will not be affordable or feasible to defend everywhere and the commissioning of coastal plans will result in significant decisions that need to be made by council. The coastal plans are intended to provide the evidence base and decision matrix to support appropriate decision making.

36. A collaborative approach is being used across the council group to prepare coastal plans. Staff are working closely with all parties, including Auckland Transport, Watercare, Community Facilities, Parks Sport and Recreation, the Chief Sustainability Office and Healthy Waters to ensure that site-specific coastal hazards including climate change are coherently and strategically managed.

**Local impacts and local board views**

37. Coastal management is a complex subject with strong local interest. Workshops will be held with the relevant local boards during the development of the coastal plan, to capture their views and preferences. An options assessment panel, which will include two local board members, will provide feedback on the options identified and the preferred management approach for each site.

38. The draft coastal plan will be considered by the local board, prior to being considered for approval by a committee of the governing body.

39. A presentation was given to the Local Board Chairs Forum in February 2019 on the coastal plan process. The forum was supportive of the proposed approach.

**Financial implications**

40. Improved knowledge (baseline data), and understanding with respect to climate change impacts, will likely result in an increased funding requirement for management of coastal assets.

41. Completed coastal plans will help guide the expenditure of the coastal management and response to climate change budget which was approved in the 2018-2028 Long-Term Plan (resolution GB/2018/108). The plans will therefore also inform future Long-term Plan considerations, funding requirements and how these could be apportioned over time.

42. Mechanisms for co-funding coastal management by Auckland Council and major asset owners will be explored as part of the consultation work.

**Risks and mitigations**

43. High public interest has the potential to slow the coastal plan delivery process. This will be mitigated through frequent public engagement events to encourage discussion and empower communities in the process including the development of policies and appropriate management responses.

44. Opposition to proposed policies and options will be mitigated through education regarding coastal hazards and the role of coast protection structures. Taking a systems-based approach will enable an appreciation and holistic treatment of each coastal plan area.

**Next steps**

45. To promote public understanding of coastal hazards and climate change, a communications plan has been developed to raise awareness of coastal management issues. Communication activities will commence in January 2020, with a regional update on the Coastal Management Framework and subsequent coastal plan process prior to local scale engagement activities.
46. The next steps for development of the first batch of coastal plans are outlined in Table 1 below.

**Table 1. Next steps for first phase of coastal plans**

<table>
<thead>
<tr>
<th>Action</th>
<th>Timeframe</th>
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<tbody>
<tr>
<td>Baseline data for coastal plans complete.</td>
<td>December 2019</td>
</tr>
<tr>
<td>Draft stage one technical reports for first four coastal plans.</td>
<td>January 2020</td>
</tr>
<tr>
<td>Local board, community, stakeholder and mana whenua communications and engagement.</td>
<td>June 2019 to April 2020</td>
</tr>
<tr>
<td>Draft coastal plans presented to local boards for review.</td>
<td>May 2020</td>
</tr>
<tr>
<td>Final coastal plans approved.</td>
<td>June 2020</td>
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46. The remaining coastal plans will start being developed collaboratively across the council group. They will be developed in phases of four on a 4-month rolling basis, with all stage one technical reports for the Auckland region completed by December 2020.

**Attachments**

A. Map of the 12 coastal cells in the Auckland region.
Attachment A: Map of the 12 coastal cells in the Auckland region

Refer to next page for key
### Key

<table>
<thead>
<tr>
<th>Coastal Cell</th>
<th>Geographical boundaries</th>
<th>Local boards included</th>
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<tbody>
<tr>
<td>A</td>
<td>Mangawhai – Leigh</td>
<td>Rodney</td>
</tr>
<tr>
<td>B</td>
<td>Leigh to Whangaparaoa (including Kawau Island)</td>
<td>Rodney/Hibiscus &amp; Bays</td>
</tr>
<tr>
<td>C</td>
<td>Whangaparaoa – North Head</td>
<td>Hibiscus &amp; Bays/Devonport-Takapuna</td>
</tr>
<tr>
<td>E</td>
<td>Mission Bay to Musick Point</td>
<td>Orakei-Maungakiekie-Tamaki/Howick/Mangere-Otahuhu/Otara-Papatoetoetoe</td>
</tr>
<tr>
<td>F</td>
<td>Musick Point – Matingarahi</td>
<td>Howick/Franklin</td>
</tr>
<tr>
<td>G</td>
<td>Karitahi to Awhitu</td>
<td>Franklin</td>
</tr>
<tr>
<td>H</td>
<td>Manukau Harbour (Awhitu to Whatipu)</td>
<td>Franklin/Papakura/Manurewa/Otara-Papatoetoetoe/Mangere-Otahuhu/Maungakiekie-Tamaki/Puketapapa/Whau/Waitakere Ranges</td>
</tr>
<tr>
<td>I</td>
<td>Whatipu to South Head</td>
<td>Waitakere Ranges/Rodney</td>
</tr>
<tr>
<td>J</td>
<td>Kaipara Harbour (South Head to Tapora)</td>
<td>Rodney</td>
</tr>
<tr>
<td>K</td>
<td>Aotea Great Barrier</td>
<td>Aotea Great Barrier</td>
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<tr>
<td>L</td>
<td>Waiheke</td>
<td>Waiheke</td>
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Confirmation of workshop records

File No.: CP2019/15045

Te take mō te pūrongo / Purpose of the report
1. To note the workshop record held by the Manukau Harbour Forum.

Whakarāpopototanga matua / Executive summary
2. Briefings provided at the workshop held on 21 June 2019 are as follows:
   1.0 Star Compass
   2.0 Watercare
   3.0 Young Leaders Wānanga
   4.0 MHF Symposium & MHF Management and governance support review

Ngā tūtohunga / Recommendation/s
That the Manukau Harbour Forum:
   a) note the workshop record for the workshop held on Friday 21 June 2019.

Ngā tāpirihanga / Attachments

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<th>Title</th>
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<tr>
<td>A0</td>
<td>Manukau Harbour Forum workshop record - 21 June 2019</td>
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Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Authors</th>
<th>Brenda Railey - Democracy Advisor - Waitakere Ranges</th>
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<tbody>
<tr>
<td>Authorisers</td>
<td>Glenn Boyd - Relationship Manager Henderson-Massey, Waitakere Ranges, Whau</td>
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Manukau Harbour Forum
Workshop Notes

Date: Friday 21 June 2019
Time: 9.30am-1pm
Venue: Mangere-Otahuhu Local board office, Shop 17, 93 Bader Drive, Mangere Town Centre

Attending:
Chairperson Saffron Toms Waitakere Ranges Local Board
Deputy Chair David Holm Puketapapa Local Board
Members Alan Cole Franklin Local Board
          Joseph Allan Manurewa Local Board
          Dawn Trenberth Otara-Papatoetoe Local Board (from 10am)

Apologies
Carol Elliott, JP Mangere-Otahuhu Local Board
Tracy Mulholland Whau Local Board
Chris Makoare Maungakiekie-Tamaki Local Board
Bernie Diver Papakura Local Board
Bill McEntee Papakura Local Board
Angela Cunningham-Manino Manurewa Local Board
Cllr Josephine Bartley Governing Body

Staff Attendance Glenn Boyd (Relationship Manager), Miriana Knox (Relationship Advisor, I&ES),
Brenda Railey (Democracy Advisor)

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<tr>
<th>Time</th>
<th>Items</th>
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<tbody>
<tr>
<td>9.45am</td>
<td>Presenters: Mason Ngawhika and Anaru Ah Kew (9.30am-10.15am)</td>
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<tr>
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<td><strong>1.0 Star Compass</strong></td>
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<td>To provide information for the Manukau Harbour Forum re the project – benefits for community, environment and connectivity. And seeking forum members feedback, gauge if/how they may want to be involved in the project going forward.</td>
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<td>Notes:</td>
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<td>• Auckland Transport Puhinui Reserve project outlined by Joseph Allan as part of restoration of Puhinui. Designed as a local park, Colin Dale park (motor sport initiative). Puhinui station development with bus station.</td>
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<td></td>
<td>• Outlined aspiration for Manurewa Marae – Finlayson Reserve was identified as connectivity for community with harbour. Built jetty project connecting community to Manukau Harbour for e.g. waka ama.</td>
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<td></td>
<td>• Celestial Star Compass South Auckland initiative – building groundswell, growing awareness, disrupting mindsets prototype and activating and building a case for change. Preference for Ambury Park site.</td>
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<tr>
<td></td>
<td>• Connectivity to water and mountain/green space important for Māori. Releasing negativity on outgoing tide and gathering energy on the incoming tide.</td>
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10.00am  **2.0 Watercare**  
Presenters: Brent Evans and Olivia Philpott (10.25am-11.00am)  
Central Inceptor Western Springs to Mangere West Treatment plant site (50 km long) Up and running by 2025. Ghela Abergeldie JV appointed contractors  
Noted:  
- Work starts at Mangere Pump Station site and May Road site work starts in August 2019.  
- Building north inception – north west waste water to Rosedale Plan (capacity for continual growth) important part of Central Inceptor. Waste water can be diverted to Rosedale. Mangere West Treatment plan waste water needs to meet Resource consent volumes.  
**Actions:**  
- MHF site visit to May Rd and Mangere Pump Station sites.

**3.0 Young Leaders Wānanga**  
Presenter: Bridget Glasgow (11.10am-11.36am)  
To present an update on the young leaders wananga held over the Easter school holidays. And, forum members were provided an opportunity to be updated on programme delivery and to give direction with regards to future delivery.  
Noted:  
- Important for young people to be on water. Engage with students, supporting their projects, developing programme with mana whenua, working with partners.  
- Working on improving habitat of nesting sites in Manukau, Matariki tree planting, clean up with Airport rescue in December 2019 and working together to support student projects.  
**2019 action projects:**  
- Education South Auckland Youth Environment – working with south side Polynesian communities on educational initiatives to encourage and enable sustainable communities.  
- Supporting the establishment of Eniro-Groups in schools to undertake sustainability actions e.g. in Zayed College for Girls.  
- Partnering second schools in Papatoetoe with Auckland Zoo and youth leaders to support student-led restoration of local waterways.  
- 2 more  
**Next steps:**  
A series of workshops proposed:  
- Action day focussing on ‘life on land’ Matariki tree planting  
- Climate Action workshop 9 July 2019  
- Conscious consumer workshop September 2019 (holidays)  
**Actions:**  
- Propose a harbour visit e.g. sandbanks. Resource: Waitakere Ranges Local Board the big blue report, survey on petrels in Waitakere Ranges. To contact groups.  
- Watercare study on birds in Manukau (D Holm).  
<table>
<thead>
<tr>
<th>Watercare-Coastal-Walkway-receive</th>
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4. MHF Symposium & MHF Management and governance support review  
Presenter: Glenn Boyd (11.30am-12.00pm)  
To provide members with an update on current status of both projects. And, Forum members are informed, have an opportunity to provide any timely insights and have overall confidence in process.
- MHF Symposium – 3 August (impact of organisational support on date/time). Venue MIT 9.30am-3pm. Purpose, objectives and measurements outlined.
- KPIs: success - get the organisation to be more cognisant of the Manukau Harbour issues.