AGENDA

WHAKATĀNE District Council
Kia Whakatāne au i ahau

Infrastructure and Planning Committee

Te Komiti Whakarite Mahere

Thursday, 11 April 2024

Rāpare, 11 Paengawhāwhā 2023

Totara Room, Whakatāne District Council
14 Commerce Street, Whakatāne
9:00 am

Chief Executive: Steph O'Sullivan
Publication Date: 5 April 2024

Live Streaming the Meeting - *Ka whakapāho mataora te hui*

PLEASE NOTE
The **public section** of this meeting will be Live Streamed via YouTube in real time. The live stream link will be available via Council's website.
All care will be taken to maintain your privacy however, as a visitor in the public gallery, your presence may be recorded. By remaining in the public gallery, it is understood your consent is given if your presence is inadvertently broadcast.
The opinions or statements expressed during a meeting by individuals are their own, and they do not necessarily reflect the views of the Whakatāne District Council. Council thus disclaims any liability with regard to said opinions or statements.

A Membership - *Mematanga*

Mayor Dr V Luca

Councillor J W Pullar - Chairperson

Councillor A V Iles - Deputy Chairperson

Deputy Mayor L N Immink

Councillor T Boynton

Councillor G L Dennis

Councillor W B James

Councillor J C Jukes

Councillor T O'Brien

Councillor N Rangiaho

Councillor N S Tánczos

B Delegations to the Infrastructure and Planning Committee - *Tuku Mahi ki te Komiti*

To monitor and advise on the implementation of Council's Infrastructure Strategy, capital works programme, operational service delivery, and related policy and bylaws.

a. Monitor the operational performance of Council's activities and services against approved levels of service.
b. To monitor the progress of projects in Council's capital works programme and have input into and make decisions on the development of proposals, options and costs of projects.
c. Approval of tenders and contracts that exceed the level of staff delegations.
d. Consider and approve changes to service delivery arrangements arising from the service delivery reviews required under section 17A LGA 2002 that are referred to the Committee by the Chief Executive.
e. Monitor the development and implementation of associated Central Government Reform programmes including the transition programme for Three Waters reform.
f. Develop and review associated bylaws (Note: the Council cannot delegate to a Committee to "make" (adopt) a bylaw).
g. Develop, review and approve strategies, policies and plans on matters related to the activities of this Committee (Note: The Council cannot delegate to a Committee the adoption of the policies associated with the Long-term Plan)
h. Approve Council submissions to Central Government, Councils and other organisations including submissions to any plan changes or policy statements on matters related to the activities of this Committee
i. To monitor the progress of projects in Council's capital works programme and have input into and make decisions on the development of proposals, options and costs of projects

TABLE OF CONTENTS

1 Apologies - *Te hunga kāore i tae*

No apologies have been received at the time of compiling the agenda.

2 Acknowledgements / Tributes - *Ngā Mihimihi*

An opportunity for members to recognise achievements, to notify of events, or to pay tribute to an occasion of importance.

3 Conflicts of Interest - *Ngākau kōnatunatu*

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

The Elected Member Register of Interest is available on the Whakatāne District Council website. If you wish to view the information, please click this Register link.

4 Public Participation- *Wānanga Tūmatanui*

4.1 Public Forum - *Wānanga Tūmatanui*

The Committee has set aside 30 minutes for members of the public to speak in the public forum at the commencement of each meeting. Each speaker during the forum may speak for five minutes. Permission of the Chairperson is required for any person wishing to speak during the public forum.

With the permission of the Chairperson, Elected members may ask questions of speakers. Questions are to be confined to obtaining information or clarification on matters raised by a speaker.

- Caterina Murphy - Withy Road

4.2 Deputations - *Nga Whakapuaki Whaitake*

A deputation enables a person, group or organisation to make a presentation to Committee on a matter or matters covered by their terms of reference. Deputations should be approved by the Chairperson, or an official with delegated authority, five working days before the meeting. Deputations may be heard at the commencement of the meeting or at the time that the relevant agenda item is being considered. No more than two speakers can speak on behalf of an organisation's deputation. Speakers can speak for up to 5 minutes, or with the permission of the Chairperson, a longer timeframe may be allocated.

With the permission of the Chairperson, Elected members may ask questions of speakers. Questions are to be confined to obtaining information or clarification on matters raised by the deputation.

- Paving the Way - Matthew Birchall

5 Confirmation of Minutes - *Te whakaaetanga o ngā meneti o te hui*

The minutes from the Infrastructure and Planning Committee meeting held Thursday, 15 February 2024 can be viewed via the Council website.

Click on the link below in order to view the 'unconfirmed minutes'.

- Unconfirmed Minutes | Infrastructure and Planning Standing Committee | 15 February 2024

6 Reports - *Ngā Pūrongo*

6.1 Blueberry Curves Safety Interventions Assessment

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April 2024**
Author:	**J Metcalfe / Team Leader Transport Strategy and Assets**
	A Reynolds / Manager Transportation
Authoriser:	**B Gray / GM Infrastructure**
Reference:	**A2640977**

1. Reason for the report - *Te Take mō tēnei rīpoata*

To obtain input from the Infrastructure and Planning Committee on the options presented for the Blueberry Curves Safety Improvements Project. Due to significant increases in construction costs from the initial project estimate, further options have been assessed against financial constraints for implementation of safety works for the Blueberry curves on Thornton Road.

2. Recommendations - *Tohutohu akiaki*

1. THAT the Blueberry Curves Safety Interventions Assessment report be received; and
2. THAT the Infrastructure and Planning Committee approve Option 3 – Reduce speed limit on Thornton Road (SH30 to Rangitāiki River Bridge) and associated minor improvements.

3. Background - *He tirohanga whakamuri*

In 2013 the Whakatane Coastal Arterial Route Study identified 'Blueberry Curves' as having a high crash rate, warranting further investigation and potential investment in safety infrastructure. This is the section of curves along Thornton Road, including and west of the Powdrell Road intersection.

During the development of the 2021 Long Term Plan, safety improvements to this section of road were also identified in the National Pipeline Tool, used to identity and assess the initial feasibility of safety projects in relation to the Road to Zero Strategy and Programme. The project was included in the 2021 LTP with pre-implementation (planning and design) included in 23/24 and implementation included in 2024/25.

As part of pre-implementation, an evaluation undertaken by WSP in 2022 confirmed the need for investment using Waka Kotahi's Simplified Safety Intervention Procedures. This indicated that an estimated $3.8M investment could reduce deaths and serious injuries (DSIs) by 0.72/year. The assessment identified the following safety interventions for delivery:

- Wide centreline.
- Roadside Safety Barrier at High-Risk Locations.
- Shoulder Widening at High-Risk Curves.
- Curve easing to provide consistency of alignment.

In 2023, a detailed design for the site was completed and an update to the cost estimates provided. This indicated that due to high-inflation and unforeseen costs associated with guardrail and wider than expected vehicle entranceways (to accommodate large vehicle turning movements) the estimated cost to deliver the project had now increased to $6.3M, with potential for tendered works to be higher still given the high rate of construction cost inflation.

Given the significant increase in cost, a growing DSI trend on a number of our other high risk roads, the project has been re-evaluated and alternative options considered that can deliver significant improvements in safety without the substantial infrastructure cost associated with the current project design.

This report explores the alternative investment opportunities compared to the current proposal for improvements through Blueberry Curves.

3.1. Site Description

Thornton Road, also referred to as the "Pacific Coast Highway" tourism route, is an arterial road that has an AADT of 6,000vpd. It provides the main throughfare between the Eastern Bay of Plenty and Tauranga.

The alignment of the road is generally flat and straight, resulting in a high-speed environment either side of the blueberry section. The alignment through the curves follows the alignment of the Orini canal, which has resulted in a number of out of context curves.

Roadside hazards exist throughout the length with trees, fences, and large lengths of the canal being unprotected from road run off crashes. Commercial driveways and private accesses throughout the project length also add to the safety hazards on this section of Thornton Road.

3.2. Previous interventions

In 2013, a minor works safety improvement package was investigated and delivered. This included installation of electronic warning signs, double yellow centre line marking with raised pavement markers, shoulder hatching and a rationalisation of curve advisory signs.

6.1 Blueberry Curves Safety Interventions Assessment(Cont.)

In 2015 a right-turn bay was added at Blueberry Corners entrance as well as a high-friction reseal on part of the site to improve skid resistance and reduce the occurrence of loss of control accidents. The high-friction reseal was applied to Section 1 shown in the figure and table below.

Section	Date	Reseal Type
1	20/02/2020	Two Coat SCRIM Seal, HIGH PVR
2	14/03/2019	Void Fill Seal
3	18/11/2015	Two Coat
4	03/02/2011	Two Coat

4. Issue/subject - *Kaupapa*

4.1. Crash History

The graph below indicates the number of injuries occurring at the site between 2003 and 2023. The graph indicates that the number and severity of accidents doesn't show any clear trend. This is despite traffic volumes having increased by 65% between 2010 and 2023.

6.1 Blueberry Curves Safety Interventions Assessment(Cont.)

A closer look at the crash causes provides some insight into what has changed at the site since the previous interventions were installed. The table below shows the rate of wet and dry condition accidents pre and post the high-friction reseal. The table indicates that since the reseal there has been a 50% drop in wet weather crashes despite the overall number of crashes having only reduced by 10%. The drop in wet weather conditions is most likely a result of the increased skid resistance associated with the reseal completed in 2015 (with lose of friction crashes typically higher in wet conditions). This indicates that the reseal has been effective but the increasing traffic volumes mean the total number of crashes over the period hasn't seen a significant reduction. The reduction in crashes may also be partially influenced by the installation of the electronic signage which would typically see a 30% reduction in crash rates.

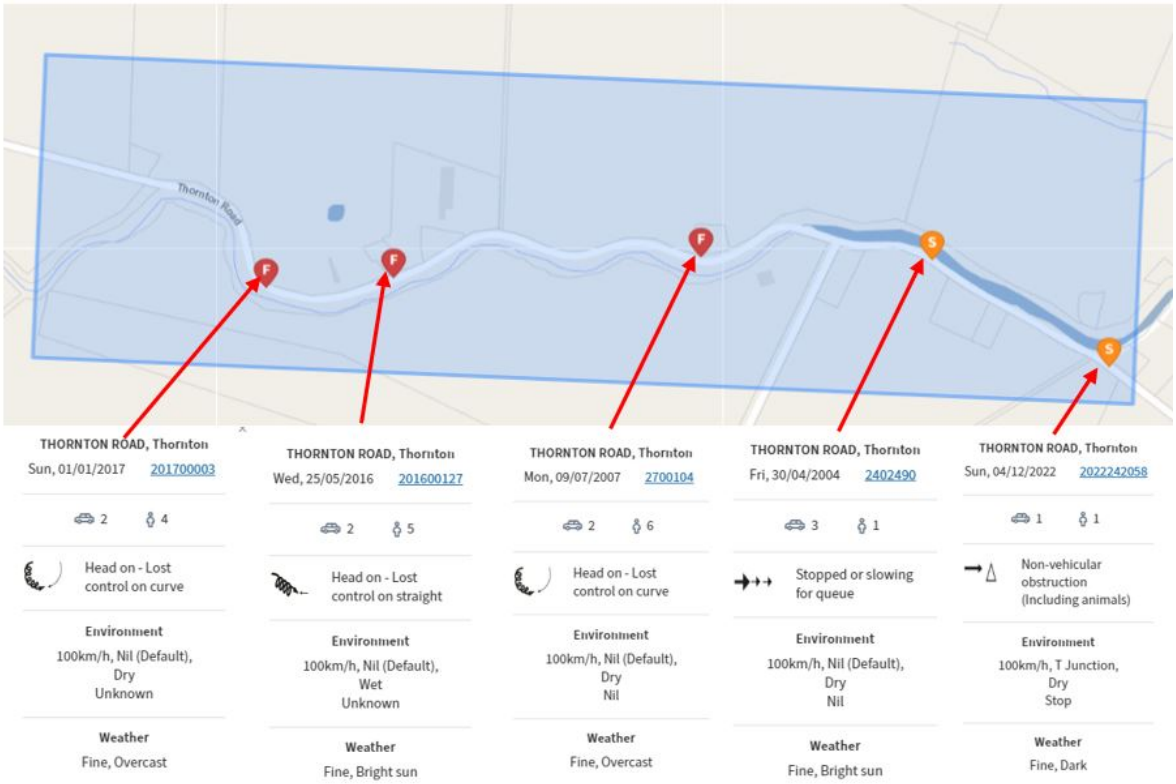
	2007-2015	2015-2023	Change
Wet	16	8	-8
Dry	15	20	5
Total	31	28	-3

Further assessment of the crash causes, support the effectiveness of the skid resistance treatment with a >50% decrease in accidents involving "loss of control when turning", "Driver over-reaction", "speed entering corners, "Heavy rain", and "Slippery due to rain" related crashes. Each of these causes is in some part related to the ability of a vehicle to maintain a firm grip on the road surface. Despite the significant reduction in these crash types, "entering corners too fast" and "loss of control when turning" accidents are still the largest cause of accidents on this section of road and an indication that further intervention may be required.

	2007-2015	2015-2023	Change
alcohol test above limit	1	5	4
lost control when turning	16	8	-8
speed entering corner/curve	16	6	-10
cutting corner on bend	0	1	1
sudden illness	0	1	1
failed to give way entering roadway from driveway	0	2	2
misjudged own vehicle	0	1	1
loose material on seal	0	1	1
driver over-reacted	8	0	-8
other fatigue	2	2	no change
inappropriate speed for road conditions	0	4	4
new driver/under instruction	0	4	4
other lost control	1	2	1
slippery road due to rain	6	2	-4
heavy rain	7	2	-5
too far left	4	2	-2
attention diverted	2	2	no change
alcohol suspected	1	1	no change
farm animal straying	1	3	2
overtaking at a junction	0	1	1
lost control under braking	3	1	-2
speed on straight	0	1	1

Other notable crash causes include “new/inexperienced drivers” and “inappropriate speeds for the conditions”. These causes can, amongst other things, be associated with out of context curves where drivers can be taken by surprise by the sudden sharpness of a bend; particularly so for drivers with less experience and a poor understanding of how their vehicle will behave. This impact is likely compounded by corners where the required turn radius sharpens unexpectedly mid-way through a bend. This unforgiving geometry was highlighted as a key safety issue in a 2022 safety audit completed by WSP.

4.2. Fatal and Serious Crash Deep Dive



All the fatal crashes in the treatment site relate to lose of control accidents either on curves or straights. The one loss of control, fatal crash on the straight may have been impacted by the proximity to the curves as it is not uncommon for drivers to over correct and lose control past a curve. This is also confirmed by the crash report. The fatal crashes occurred in 2007, 2016, and 2017. Since then there have been no fatal accidents at the site.

Of the two serious accidents, one involved cattle running across the road in front of the vehicle, and the other involved a rear end accident with the following driver being blinded by sun strike and the leading driver stopping in an unusual/unexpected place on the road. These accidents occurred in 2022 and 2004. Neither of the serious injury accidents are likely to be impacted by road improvements.

While there have hasn’t been a fatal crash since 2017, and arguably no serious crashes relating to road geometry, this does not mean that there is not a significant risk of future DSIs occurring on the road. The nature of fatal and serious crashes is that these are rare occurrences when compared with the number of vehicles passing each day. As the number of vehicles increases so does the chance of a fatal crash but evidence of this may not appear for many years.

4.3. Impact of Traffic Volumes

With a 65% increase in traffic volumes on Thornton Road since 2010 there is a significantly higher risk of fatal and serious crashes occurring then there was 10 years ago.

As traffic volumes increase so does the risk of crashes as there are more opportunities for drivers to make a mistake. This is also compounded by the fact that as traffic volumes increase there is a higher probability that an out-of-control vehicle will crash into an oncoming rather than simply running off the road. This means that over time both the frequency and the severity of crashes on this section of road are likely to increase.

4.4. Other High-Risk Roads in the Whakatāne District

Through the pre-implementation phase of this project it was found that the DSIs through Blueberry Curves had reduced in the recent 5year period. As noted in section 4.3 above, although the crash history here has reduced in recent years, it does not mean the problem has necessarily been eliminated. However, over this same time period we have seen a number of other roads in the Whakatāne District with increasing DSI trends, and therefore given the situation with this project, it gives another reason to pause and re-evaluate to ensure the investment in road safety is being directed in the optimal manner.

The below shows our other high risk rural roads DSI trends, as well as Thornton Road.

	Deaths and Serious injuries					
	2019-current		2014-2019		2009-2014	
	Deaths	Serious	Deaths	Serious	Deaths	Serious
Te Teko Road	2	1	1	3	0	0
Taneatua Road – Whakatāne to SH2	6	2	1	1	0	0
Thornton Road - SH30 to Rangitaiki River*	0	2	2	3	2	4
Galataea Road - Waiohau to SH30	1	3	0	4	2	4
Ōhope Road - Otarawairere Rd to West End Rd	0	5	0	2	0	0
Gorge Road	0	2	0	0	0	0
Proportion of District	50%	13%	22%	22%	19%	11%
Local Road Total	18	115	18	60	21	71

Safety assessments undertaken for the other high-risk roads in our district identified a range of potential safety intervention investments summarised below:

- Te Teko Road: Speed Management through to widening and barriers, $10K to $1.6M.
- Tāneatua Road: Speed Management through to widening, barriers and targeted curve improvements, $10K to $1.9M.
- Galatea Road: Speed Management through to widening, barriers and targeted curve improvements, $10K to $1.9M.
- Ōhope Road: Speed Management through to reallocation of road space, barriers (including centreline), with intersection improvements including roundabouts at West End and Ōtarawairere, $10K to $5.9M.

The cost of undertaking all these safety interventions becomes unaffordable and is a high risk, high cost exercise of 'whack-a-mole'.

Through the development of the 2024-34 Transport Activity Management Plan, it was made clear that Road Safety is a key problem on our network, warranting appropriate investment. But that this problem and investment needs to also be balanced against our other three key problem areas (Growth, Asset Deterioration and Resilience) with the overarching objective of maintaining affordability being front of mind.

The options assessment and decisions of this report, relate solely to the Thornton Road, Blueberry Curves project, however this information about our other high risk rural roads is provided for context for informed decision making.

Note similar speed reductions are proposed on the other high-risk roads included in the above table. These are covered in more detail in a separate report to Infrastructure and Planning Committee – District Speed Management Plan (also presented to 11 April 2024 meeting).

5. Options analysis - *Ngā Kōwhiringa*

The table below provides a summary of the anticipated benefits and costs associated with each of the options.

	Cost	Reduction in Injury Crashes (per annum)	Cost per annual injury reduction	Injury Socialised Cost Savings (30-year, 4%RoR)
Option 1 – Full delivery	$7M	**0.91**	**$7,692,308**	**$9,654,535**
Option 2 –Approach Corner Easing	$0.7-1M	**0.25**	**$3,423,611**	**$2,634,053**
Option 3 – Speed Reduction	$200K	**0.36**	**$558,767**	**$2,853,557**
Option 4 – Opt2&3 combined	$0.9-1.2M	**0.43**	**$2,416,667**	**$3,073,062**

5.1. Option 1 - Proceed with the previously proposed full safety intervention.

Cost approximately $7M.

Noting that the implementation of this option would be from 2027 onwards.

5.1.1. Advantages

- Will have the most significant reduction in deaths and serious injuries.
- If completed it is unlikely any further safety work will be required at this site in the foreseeable future.

5.1.2. Disadvantages

- High cost of delivery.

- Can not be delivered within existing budgets and therefore delayed until at least 2027.
- Not the most cost-effective use of funds, with other high-risk roads in the district able to benefit substantially if investment is spread across other sites.

5.2. Option 2 - Reduce the scope of the project to address the issues with the entrance curves.

Upon detailed analysis of the project scope, current road environment and crash history, the most severe curves are those on each approach to this series of curves. This option is to reduce the scope of the project to only target the approach curves and leave as existing the curved section in the middle. The option can be delivered at a considerable reduction in cost as these sections are not constrained by the Orini Canal, can be widened without reshaping the camber of the road, and do not require replacement of the Orini Canal culvert.

Cost between $700-1M.

Noting that the implementation of this option would be from 2027 onwards.

5.2.1. Advantages

- Relatively low cost of delivery.
- Provides an improvement in safety.
- Doesn't preclude further work taking place at a later date.

5.2.2. Disadvantages

- Can not be delivered within existing budgets and therefore delayed until at least 2027.
- As traffic is growing rapidly at this site, further safety works may be required into the future.

5.3. Option 3 – Reduce speed limit at this location and associated improvements.

Cost approximately $200k including a reduced speed limit of 80kph between SH30 and West Bank Road. The average speed for this section is 83kph and 90% of people travel at or below 90kph. The impact on travel time for users would be between 0 and 54 seconds, with half of drivers experiencing less than a 5 second delay.

<u>Recommended Option</u>

Includes replacing existing LED signage and other minor speed management investment.

5.3.1. Advantages

- Lowest cost option overall.
- Provides a reasonable level of safety improvements.
- Provides the lowest cost per annual injury reduction (highest return on investment).
- Included within proposed Speed Management Plan and can be delivered rapidly (2024-27 period).
- Provides the ability to undertake a staged approach, reassessing the feasibility and validity of progressing further safety improvement investments at a later date (evaluated as part of the 2027 LTP development).

5.3.2. Disadvantages

- Lower speed limit cannot be delivered without inclusion in, and adoption of, our speed management plan.
- There is a cost associated with reduced travel times on this key arterial.
- As traffic is growing rapidly at this site, further safety works may be required into the future.

5.4. Option 4 – Deliver Option 2 and Option 3 – Reduced Speeds and Approach Corner Easing

Cost between $900k to $1.2M.

5.4.1. Advantages

- Relatively low-cost option, second lowest cost per annual injury reduction.
- Provides a significant improvement in safety, combining the benefits of options two and three.

5.4.2. Disadvantages

- As traffic is growing rapidly at this site, further safety works may be required into the future.
- Lower speed limit cannot be delivered without inclusion in and adoption of a speed management plan.
- The approach corner easing portion of work cannot be delivered within existing budgets and therefore would be delayed until at least 2027.
- There is a cost associated with reduced travel times on this key arterial.

5.5. Note for all options

Skid resistance is a key contributor to loss of control (LOC) crashes. It must be regularly monitored and resealed to maintain high-skid resistance through the site. This section of road is due for resurfacing as part of the surface renewal programme. Agreement on the preferred option will provide clarity so resurfacing can be progressed at the optimal time, without the risk of poor skid resistance increasing and contributing to increased LOC crashes.

6. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

6.1. Assessment of Significance

The decisions and matters of this report are assessed to be of moderate significance, in accordance with the Council's Significance and Engagement Policy.

The decisions relate to matters of community interest, impacts on wellbeing, and potential rating and financial impacts.

6.2. Engagement and community views

Engagement on this matter is not being undertaken in accordance with Section 4.2 of the Council's Significance and Engagement Policy. This states that the Council will not consult when there is already a sound understanding of the views and preferences of the persons likely to be affected or interested in the matter.

Significant public feedback has been received in relation to speed management (at a district wide level).

The recommended option three is in line with the current draft LTP currently out for public consultation.

If any of the alternative options (one, two and four) are selected, and are delayed to 2027 as proposed, they will be included in the 2027 LTP and will be covered by that public consultation.

Any resolution to undertake options one, two or four prior to 2027 will have a rating and financial impact outside of the draft LTP and will not have received public feedback on that.

7. Considerations - *Whai Whakaaro*

7.1. Financial/budget considerations

There are no budget considerations associated with the recommendations of this report.

7.2. Strategic alignment

The recommendation included in this report is consistent with Council's Transport Activity Management Plan, Draft 2024 LTP and Strategic Priorities.

No inconsistencies with any of the Council's policies or plans have been identified in relation to this report.

7.3. Climate change assessment

Based on this climate change assessment, the decisions and matters of this report are assessed to have low climate change implications and considerations, in accordance with the Council's Climate Change Principles.

7.4. Risks

There are no known risks associated with the matters of this report, other than the disadvantages covered under each option analysis.

8. Next steps - *Ahu whakamua*

If the recommended Option three is approved, then it needs to also be approved in the District Speed Management Plan to be able to take effect.

9. Conclusion - *Kupu whakamutunga*

Safety is a key problem on our transport network and warrants appropriate investment. Investing in infrastructure to provide a safer road environment requires careful consideration of where and how to invest, to optimise benefit realisation in an equitable manner.

6.1 Blueberry Curves Safety Interventions Assessment(Cont.)

The information presented in this report provides a thorough re-evaluation of a previously identified safety project and includes consideration against other high-risk roads on our network, as part of the context to inform option selection.

The recommended option three to reduce speed limits and undertake associated improvements at a cost of $200,000 is the lowest cost option, whilst also providing the lowest cost per injury reduction (highest return on investment). Although it doesn't provide the highest overall injury reduction, in the context of managing affordability and comparing to the similar safety issues on our other high-risk roads, this recommended option provides a calculated, reasonable approach to addressing the safety risk, whilst providing opportunity to further invest in the future.

6.2 Whakatāne Speed Management Plan Adoption

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April, 2024**
Author:	**J Metcalfe / Team Leader Transport Strategy and Assets**
Authoriser:	**B Grey / General Manager Infrastructure**
Reference:	**A2575234**

1. Reason for the report - *Te Take mō tēnei rīpoata*

The purpose of this report is to seek adoption of a District Speed Management Plan (the Plan) that will confirm the approach for how and when speed limits are set in the district over the 10-year period covered by the Plan. The Plan has been developed in response to community feedback, guidance from Waka Kotahi and in line the Land Transport Rule: Setting of Speed Limits 2022 and provisional indications from Central Government about future amendments to legislation.

2. Recommendation/s - *Tohutohu akiaki*

1. THAT the Infrastructure and Planning Committee receives the "District Speed Management Plan Adoption" report; and
2. THAT the Infrastructure and Planning Committee recommends option one to the Whakatāne District Council which is to adopt the "Whakatāne Speed Management Plan"; and
3. THAT the Infrastructure and Planning Committee notes that the Speed Management Plan does not incorporate blanket changes to speed limits in rural or urban areas; and
4. THAT the Infrastructure and Planning Committee notes the Speed Management Plan meets current legislative requirements as well as being consistent with direction provided by the incoming National Government.

3. Background - *He tirohanga whakamuri*

The purpose of the Speed Management Plan (the Plan) is to outline how Whakatane District Council will implement changes in the road environment to improve safety for road users. The Plan must adhere to legislation set down by central government though the *"Road Land Transport Rule: Setting of Speed Limits 2022"* and associated guidance provided by Waka Kotahi the New Zealand Transport Agency (Waka Kotahi) in their Speed Management Guide. Ultimately though, the plan outlines the changes required so that our community can travel safely and confidently with minimal risk to their lives and wellbeing.

Recent amendments to the Land Transport Rule: Setting of Speed Limits 2022 (the Rule) mean that while a Speed Management Plan is no longer required in law, a Plan may still be adopted by Councils to allow adjustments to speed limits. Without adoption of the Plan no speed limit changes can be made without undertaking a further consultative procedure with the community.

3.1. What is Speed Management?

Speed management is about using a range of techniques to reduce the harm experienced on our roads, it's not just about setting speed limits. It includes installing infrastructure that restricts or encourages appropriate speeds, upgrading existing roads so they are appropriate for their speed limit and identifying areas of enforcement to ensure that people keep to the limits as well as setting speed limits that are safe and appropriate. It's about applying a safe systems approach to the road network where all elements play their role and where people can travel without the fear of death or life changing injuries.

Some elements of Speed Management are outside of a Council's ability to control, such as enforcement and car safety, which fall to central government. There is however room within the Plan to make recommendations to other organisations around how and where these measures can be implemented to best affect.

Figure 1 - The four speed Management principles

3.2. Work to Date

In April 2022, staff workshopped with Council the process, principles and focus areas for the Plan. This resulted in a two-stage process for speed management with consultation and implementation of Rural School speed limit changes preceding ahead of development of the District Speed Management Plan. Rural School speed limits were consulted in 2022 and implemented in 2023 to address significant safety concerns where there was very strong community support for these lower speed limits.

In June 2023 a Draft District Speed Management Plan was approved for public consultation through the Infrastructure and Planning Committee with consultation taking place through July 2023. There was considerable response to the Draft Plan from the community. Workshops with Council held in August and early-December 2023 have incorporated public feedback within the Plan. Further work has also been undertaken to refine The Plan to incorporate the changes to legislation signalled by the new Government.

4. Issue/subject - *Kaupapa*

4.1. Legislation and Guidance

The Rule sets out specific requirements on Councils and other Road Controlling Authorities on the development of a Speed Management Plan. The key points of the Rule with regard to this speed management plan are:

- The rule stipulates that Speed Management Plans must give consideration to guidance provided by Waka Kotahi; and
- Requires review of the Plan every 3-years.

Waka Kotahi's Speed Management Guide sets out guidance for speed limits across the rohe, however, the incoming government has indicated that blanket reductions in speed limits will no longer be required and may be reversed where it is safe to do so. This has required a much more targeted approach be taken within the Plan. This allows the Plan to be consistent with current legislation, guidance provided by government and the specific needs of our district.

The previous time frame for completing the Plan has also been revoked from legislation so there is no set deadline for adoption. However, without a Plan, it is not possible for Council to change permanent speed limits on any of our roads without further consultation making it an important document even for minor adjustments to speeds on the network.

5. Options analysis - *Ngā Kōwhiringa*

Staff have considered the direction given by central government, legislative requirements and the significant feedback received through the public consultation. This has informed the update to the plan to reflect the communities' views. The key areas that have been updated since consultation include:

- Removing reference to blanket speed limits for rural and urban speed limits.
- Making selective changes to speed limits where these are inconsistent with other roads in the district.
- Lowering speed limits on some of the districts high-risk roads.
- Retaining the ability to review speed limits at appropriate times where impacted by speed limit changes made on roads controlled by Waka Kotahi or other Councils.
- Enabling speed limit changes at Marae as-and-when requested by marae and through a separate, ongoing engagement process.

5.1. Option One – Adopt the Speed Management Plas as attached in Appendix One.

5.1.1. Advantages

- Enables staff to move forward with development of the implementation plan.
- Provides certainty for public on Council's approach to speed management.
- Contributes to improved safety on our identified high risk roads and those currently with inconsistent speed limits.

5.1.2. Disadvantages

- There is some uncertainty around future central government policy with regard to the setting of speed limits. This may require an out of cycle update to the speed management plan if there are inconsistencies in the Plan.

5.2. Option Two – Adopt the Speed Management Plan as attached in Appendix One with amendments to Tables 1 and/or 2.

5.2.1. Advantages

- Enables staff to move forward with development of an implementation plan.
- Provides certainty for public on Council's approach to speed management.
- Contributes to improved safety on some of our identified high risk roads and roads currently with inconsistent speed limits.

5.2.2. Disadvantages

- There is some uncertainty around future central government policy with regard to the setting of speed limits. This may require an out of cycle update to the speed management plan if there are inconsistencies in the Plan.

5.3. Option Three – Delay adoption of the speed Management Plan

5.3.1. Advantages

- Will allow for alignment with anticipated changes in government policy or guidance.

5.3.2. Disadvantages

- No speed limit changes are able to be made across the district until a plan is approved and there is no clear indication of when central government will provide further policy updates.
- New central government direction that may require legislative changes can take several years to implement.
- We currently have a number of roads that would benefit from speed limit changes, that are generally supported by the community, that will have to remain unchanged for an undefined length of time, increasing the safety risk to road users travelling along these roads.

5.4. Potential amendments

A number of amendments may be made to the Plan to reflect the view of the Committee with regard to specific speed limit changes that would take place ahead of any further planned reviews. These apply the following categories:

- Speed reductions on high-risk roads
- Changes in speed limits in response to Waka Kotahi and adjacent Councils (RCAs) speed limit changes
- Inclusion of urban schools and town centres
- Other exceptions

5.4.1. Speed Reductions on High-Risk Rural Roads

The attached Plan identifies high-risk roads as per Table 1 below. These roads accounted for half of all deaths on our local road network since 2019. Any speed reductions applied to these roads will contribute to a reduction in deaths and serious injuries without the significant impact on journey times that would occur from blanket speed reductions.

Table 1 - High-risk roads identified for speed limit reductions in 2024-27.

			Deaths and Serious injuries					
			2019-current		2014-2019		2009-2014	
	Current Speed	Proposed Speed	Deaths	Serious	Deaths	Serious	Deaths	Serious
Te Teko Road	100	80	2	1	1	3	0	0
Taneatua Road – Whakatāne to SH2	100	80	6	2	1	1	0	0
Thornton Road - SH30 to Rangitaiki River*	100	80	0	2	2	3	2	4
Galataea Road - Waiohau to SH30	100	80	1	3	0	4	2	4
Ōhope Road - Otarawairere Rd to West End Rd	80/ 60 (temp)	60	0	5	0	2	0	0
Gorge Road	60	50	0	2	0	0	0	0
Proportion of District			50%	13%	22%	22%	19%	11%
Local Road Total			18	115	18	60	21	71

The Plan as attached in Appendix One currently includes speed reductions on roads identified in Table 1 however this can be amended prior to adoption by Council in accordance with Option 2.

5.4.2. Changes in speed limits in response to changes made by other road controlling authorities

Since public consultation on the Draft Plan, Waka Kotahi has reduced speed limits on SH30 resulting in traffic diverting to local roads to avoid the lower speed limits. In some instances, this has resulted in local road traffic volumes increasing by more than 50% as can be seen in Figure 2 below. For residents on these roads this represents a significant increase in safety risk as well as impacting on their quality of life.

Figure 2- Change in local road traffic volumes following SH30 speed limit changes

The Plan includes the review of speed limits in this area in 2027. This will allow the review to be informed by more monitoring data to assess the long-term change in traffic volumes, and to allow time for the new Government to provide more clarity around their plans signalled to "remove blanket speed reductions where safe to do so". If the SH30 speed limit is reversed, it negates the need to reduce the adjoining local road speed limits in this situation.

5.4.3. Other speed limit exceptions

A handful of roads are currently inconsistent with the rest of the network when compared with adjacent land use and roads with a similar function. The Plan proposes to adjust speed limits on these roads in the 2024-27 period, to improve speed limit legibility on the network and/or address other identified issues. Details of these changes are included in Table 3 below.

The Committee may choose to amend the Plan by removing or adding to this list of roads in accordance with Option 2.

Table 2- Other changes to speed limits to be implemented outside of the broader timings identified within the Plan.

6.2 Whakatāne Speed Management Plan Adoption(Cont.)

	Current Speed limit (kph)	Proposed Speed Limit (kph)	Implementation timeframe	Reason for change
Valley Road	**70**	**50**	**2024-25**	To be consistent with other urban arterial roads in Whakatāne, reflects high traffic landuse (commercial business, churches) and residential function with high number of turning movements. Also requested by some residents.
Keepa Road	**80**	**60**	**2024-25**	To be appropriate for existing residential and commercial land use and planned growth in traffic volumes. Consistent with adjoining SH30 speed limit.
Gorge Road*	**60**	**50**	**2024-25**	To be consistent with other urban arterial roads in Whakatāne.
Galatea Rd - Waiohau Village	**80**	**60**	**2024-25**	To be consistent with other rural villages (Te Teko, Awakeri, Thornton, etc)
Galatea Rd – Matahina Dam and approach	**100**	**60**	**2024-25**	Manawa Energy has requested a lower speed limit to protect in ground assets and improve safety for workers on the site. The narrow dam and collision danger also warrants the reduced speed limit. Approaches are steep, and winding and more suited to lower speeds.
Shaw Road	**100**	**50**	**2024-25**	Requires updating since subdivision to reflect urbanised environment.
Wainui Road - Oyster Farm	**100**	**60**	**2024-25**	Extension of speed limit to beyond Tauwhare Pa reserve and Tīo Ōhiwa (Oyster farm), to improve safety for frequent turning vehicles and provide better accessibility.
Ōhope Road*	**80 (60 Temp)**	**60**	**2024-25**	A temporary speed limit (TSL) has been in place for 12-months at the request of police due to a high rate of crashes on this section of road during the 2023 summer holiday period. Improvements seen with TSL; this change is to make this permanent.
West End Ōhope	**50**	**30**	**2024-25**	While not a town centre, the high movement of pedestrians and cyclists along West End Road warrants a similar treatment to both improve safety and the amenity of the area.
Aerodrome Road – adjacent to airport only	**50**	**30**	**2024-25**	Airport road with conditions similar to town centre carpark.
Main Road Murupara	**80**	**60**	**2024-25**	Main Road is partially residential and has a number of pedestrian movements that warrant a speed limit consistent with the semi-urban environment.
Te Teko Road – Te Teko	**100**	**50**	**2024-25**	Shifting of 50kph urban speed limit change 300m north, beyond Okaahu Road, due to presence of houses and marae.
Reid Road, Ruatāhuna	**100**	**70**	**2024-25**	Legalising existing speed boundary. Signs previously moved 500m south to improve speed compliance.
East Bank Road – adjacent dairy factory	**100**	**50**	**2024-25**	Relocation of 50/100kph transition 400m north due to new development and additional entrances within current 100kph area.
*Also addressed under high-risk roads				

5.4.4. Urban Schools and Town Centres

The 2023 Amendment has removed the mandated requirement to include these speed changes. However, the public consultation showed general support for these speed reductions. These reductions provide a significant increase to vulnerable road users, with minimal negative impacts to travel time.

5.5. Analysis

Each of the proposed options is consistent with both the Setting of Speed Limits Rule 2022, guidance released by Waka Kotahi and proposed changes signalled by central government. Public acceptability is a key consideration in the success of a Speed Management Plan. There is little point in changing speed limits where there is strong public opposition as this will result in poor compliance, and over time, may result in changes becoming socially (and politically) unacceptable, ultimately being reversed. The proposed plan balances the feedback provided by the community to provide a Plan that will protect our most vulnerable road users while not unduly delaying travel.

6. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

6.1. Assessment of Significance

The Significance and Engagement Policy has been considered and the degree of significance for this project is considered to be "High".

Level of Community interest – High, High levels of community interest and likely to be polarised views on the Plan.

Level of Impact – High, Likely to have a significant impact on the future wellbeing of the district. Plan provides the opportunity for a number of lives to be saved as a result of this Plan.

Levels of Service – High, Will have a significant degree of change to the level of service experienced on our roads.

6.2. Engagement and community views

The Draft Plan has been publicly consulted and the views of the public are well understood because of this process. The current version of the Plan proposed for adoption has been altered to reflect the feedback provided through public consultation.

The Draft Plan has also received a letter of support from the Eastern Bay of Plenty Road Safety Operational Group who are representatives from ACC, NZ Police, Waka Kotahi NZ Transport Agency, and sub regions for the four Council in the Eastern Bay of Plenty. A copy of this letter is attached to the report as appendix two.

7. Considerations - *Whai Whakaaro*

7.1. Financial/budget considerations

The costs associated with implementation of the Speed Management Plan have been included within the development of the 2024 Long Term Plan.

7.2. Strategic alignment

There is alignment for the project through the 2021LTP Strategic Priority "Improving the safety, security and resilience of our infrastructure" and the 2024 LTP Strategic Priority "Enhancing the safety, wellbeing, and vibrancy of communities".

7.3. Climate change assessment

Land transport emissions make up 17% of the districts total carbon emissionsf1 and grew at a rate of 19% over the 2015-21 period.

The lowering of speed limits will result in a net reduction in carbon emissions from transport in two ways. Firstly, travelling at lower speeds requires less energy and reduces emission of carbon as a result. Studies undertaken by Waka Kotahi have indicated that the reduction in emissions from freight vehicles reducing their speed from 100kph to 80kph is approximately 15% on longer routes. Secondly, lower speed limits in urban environments will reduce the perceived risk of walking and cycling and reduce the travel time difference between walking and cycling. This increases the number of people choosing to walk and cycle instead of driving. It is hard to quantify the scale of this change.

Overall, the decisions and matters of this report are assessed to have a moderate and positive impact on reducing climate change emissions, in accordance with the Council's Climate Change Principles.

7.4. Risks

There are no known risks associated with the matters of this report, other than the pro's and con's covered under the options analysis section 5.

8. Next steps - *Ahu whakamua*

- Submit the plan to Council for formal adoption at the 02 May Ordinary Council Meeting.
- Submit the plan to Waka Kotahi for certification
- Implement proposed speed limit changes in line with the Plan.
- Plan for a 3-yearly review of the plan in 2027

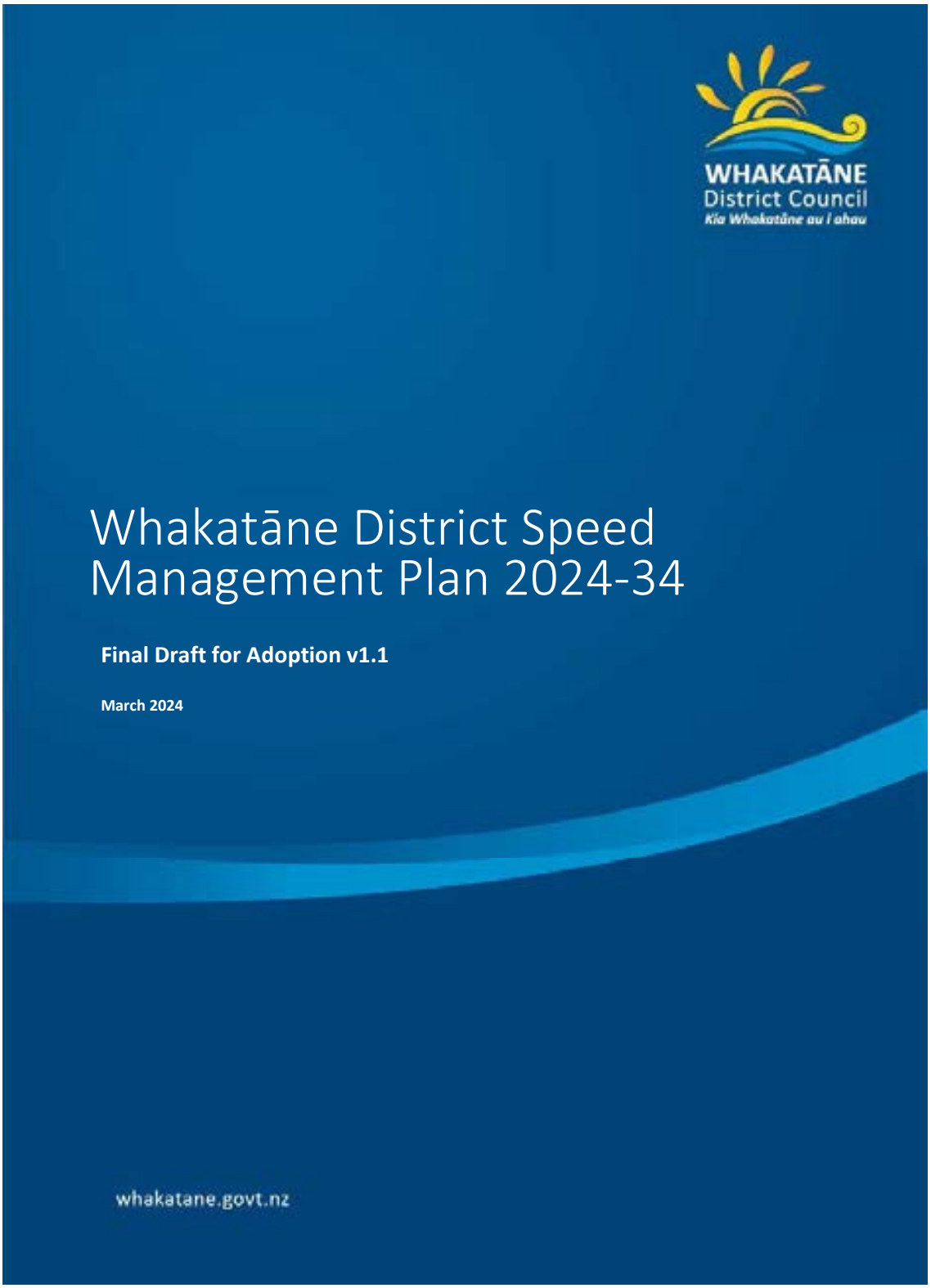
Attached to this report:

Appendix 1: Whakatāne District Council Speed Management Plan for Adoption

Appendix 2: Eastern Bay Road Safety Operational Group letter of support for WDC SMP

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



Speed Management Plan

Table of Contents

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

Speed Management Plan

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

1 Purpose of the Plan

The purpose of the Speed Management Plan (the Plan) is to outline how Whakatane District Council will implement changes in the road environment to improve safety for road users. The Plan must adhere to legislation set down by central government though the *"Road Land Transport Rule: Setting of Speed Limits 2022"* and associated guidance provided by Waka Kotahi the New Zealand Transport Agency (Waka Kotahi) in their Speed Management Guide. Ultimately though, the plan outlines the changes required so that our community can travel safely and confidently with minimal risk to their lives and wellbeing.

Recent amendments to the Land Transport Rule: Setting of Speed Limits 2022 (the Rule) mean that while a Speed Management Plan is no longer required in law, a Plan may still be adopted by Councils to allow adjustments to speed limits. Without adoption of the Plan no speed limit changes can be made without undertaking a further consultative procedure with the community.

2 What is Speed Management

Speed management is about using a range of techniques to reduce the harm experienced on our roads, it's not just about setting speed limits. It includes installing infrastructure that restricts or encourages appropriate speeds, upgrading existing roads so they are appropriate for their speed limit and identifying areas of enforcement to ensure that people keep to the limits as well as setting speed limits that are safe and appropriate. It's about applying a safe systems approach to the road network where all elements play their role and where people can travel without the fear of death or life changing injuries.

Some elements of Speed Management are outside of a Council's ability to control, such as enforcement and car safety, which fall to central government. There is however room within the Plan to make recommendations to other organisations around how and where these measures can be implemented to best affect.

Figure 1 - Four principles of speed management

3 The Impacts of Speed

3.1 Vulnerable road users

Under a Safe Systems approach speed limits are set so that if there is an accident, then the consequence of that accident shouldn't result in death or life changing injuries. It acknowledges that we're not all perfect drivers, all of the time, but that when we do make a mistake on our roads those involved should be able to make it home to their families.

3.2 Pedestrians and Cyclists

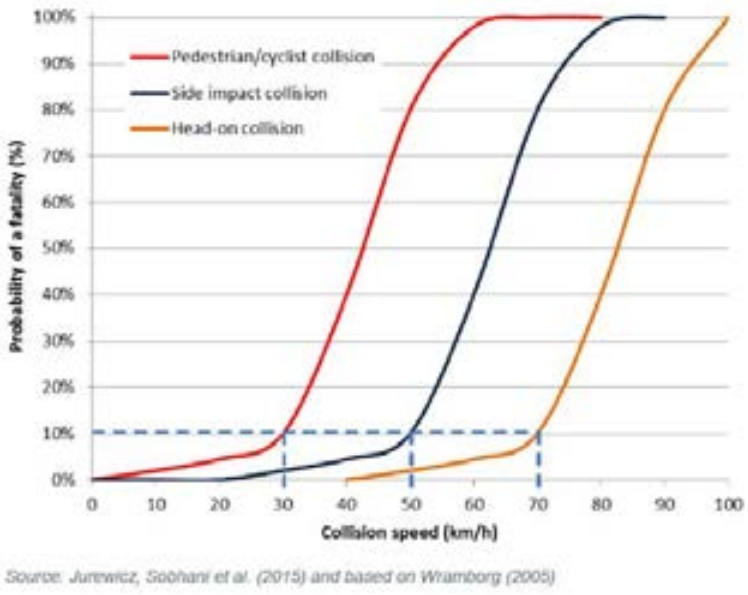
Safer speed limits within town centres, around schools and for other high pedestrian and cyclist generating areas will help to support more liveable and thriving communities by improving safety and accessibility and encouraging more active modes of transport ie walking, cycling, and scooting.

Pedestrian crashes can occur anywhere on the roading network, however there are opportunities to improve safety and accessibility, in particular around schools. Current speed limits within town centres and outside many schools do not make walking and cycling an appealing mode of transport and therefore increase the reliance on vehicles. Increased rates of children walking and cycling to school will reduce congestion at school gates, lowering the risk of crashes and stress to other road users.

Active transport also has a host of other benefits, including health promoting better health and wellbeing, while also freeing up car parks for those who need to drive.

Pedestrians and cyclists are particularly vulnerable to crashes involving vehicles. A crash with an impact speed of 50kph is 80% more likely to result in death or serious injury than one with an impact speed of 30kph.

Figure 2 shows how impact speed during a crash can affect the chance of a pedestrian, cyclist or vehicle occupant being killed. Crashes involving pedestrian and cyclists have 90% chance of being fatal when speed is 50kph but this risk drops to just 10% when the speed is 30kph. Implementing speed limits of 30kph means that, should a crash occur, the chances of surviving is almost 10 times as likely compared with a crash at 50kph. Reduced speeds also mean there is significantly more reaction time available to drivers and shorter stopping distance meaning that the chance of a crash occurring in the first place is also significantly lower.



Source: Jurewicz, Sobhani et al. (2015) and based on Wramborg (2005)

Figure 2 - Impact of speed on crash survuivability

3.3 Social and economic costs

In 2022, 375 people were killed and almost 2,500 seriously injured on New Zealand roads. Each death and serious injury has a devastating and wide-reaching impact on our communities. This has a social cost to New Zealand of $84 million per week, or nearly $4.7 billion a year. Social cost includes the cost on individuals, our health system, disruption on our road network, and the devastation that deaths and serious injuries have on communities.

Over 50% of major trauma injuries treated in our hospitals are from road crashes. If we can reduce the number of these injuries then our health care system will be able to provide better care in other areas. It saves deaths on our roads and means more people will be treated for other life-threatening illnesses or accidents.

3.4 Whakatane District Roads can be Dangerous

Waka Kotahi's Communities at risk register identifies Districts where different crash types, or those involved in crashes, are overrepresented across the country. For Whakatane District it makes for very sombre reading. Out of the 70 districts on the register Whakatane District ranked:

- 2nd for pedestrians involved in an accident.
- 2nd for distracted drivers involved in accidents.
- 14th for risk of dying or sustaining a life changing injury on our roads.
- 23rd for risk to our young people (16-24years).
- 10th for accidents where people were going too fast for the conditions.
- 12th for loss of control or head on accidents in rural areas.

And while many of the above crash statistics don't solely relate to the speed being travelled, reducing the speed for these would have reduced the chance of injury or death as well as providing drivers more opportunity to correct their errors and avoiding a crash occurring altogether.

The problem appears to be getting worse with the number of Death and Serious Injuries on the Whakatane Network doubling over the previous five-year period from 12 in 2017/18 to 26 in 2021/22 even though there has been a decreasing trend nationally.

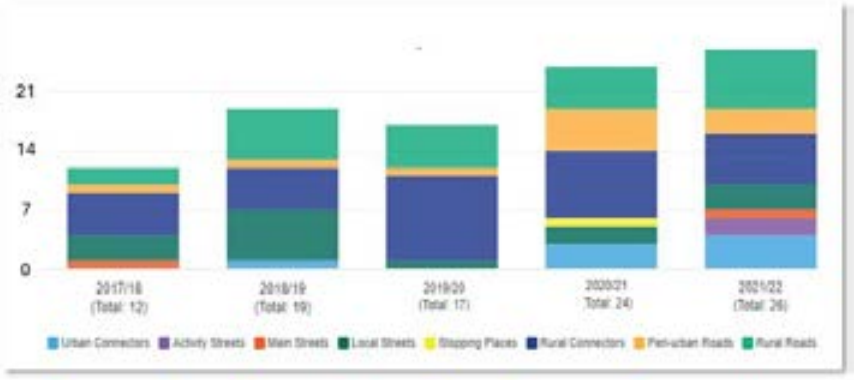


Figure 3- Deaths and serious injuries on the Whakatane District local road network

4 Background

4.1 Whakatane Districts Long Term plan

The project aligns with Council's community objective "Strong, connected, interdependent, diverse communities". It aligns with the strategic priorities for:

- Preparing for population growth and housing demand – safer roads are required in some areas to allow for future housing development and the speed management plan will address these issues
- Improving the safety, security and resilience of infrastructure – the reduction in speeds will directly improve the safety of our roading infrastructure
- Enhancing the environmental outcomes of our activities – the proposed reduction in speed limits will reduce carbon emission from transport through reduced fuel consumption

The project is aligned the central government policy through the Ministry of Transport outcomes framework with regard to outcome "Healthy and Safe People" and aligned to funding priorities through the safety priority within Government Policy Statement on Land Transport.

4.2 Setting of Speed Limit Rule

The Land Transport Rule: Setting of Speed Limits 2022 (the Rule) establishes an integrated speed management planning process that considers how safety infrastructure, safety cameras and speed limits can be combined effectively to help achieve a safe transport system.

The stated objective of the Rule is to contribute to road safety by:

- providing for a whole of network approach where speed management is considered alongside investment in safety infrastructure; and
- empowering road controlling authorities to set speed limits for roads under their control; and
- setting out requirements road controlling authorities must comply with when setting speed limits.

Direction from Central Government is that any changes to speed limits and/or safety interventions will require a cost benefit analysis and this will also likely be included in the objectives in the future.

The key points of the Rule with regard to this speed management plan are:

- The rule stipulates that Speed Management Plans must give consideration to guidance provided by Waka Kotahi;

A full copy of the Rule including the 2023 amendment can be found at the link below:

https://www.nzta.govt.nz/resources/rules/setting-of-speed-limits-2022/

4.3 Waka Kotahi Speed Management Guidance

Councils and other Road Controlling Authorities must have regard to the guidance provided by Waka Kotahi. The latest guidance issued by Waka Kotahi can be found at the link below:

https://www.nzta.govt.nz/safety/partners/speed-and-infrastructure/safe-and-appropriate-speed-limits/speed-management-guide/

Since adopting the above guidance there has been new direction provided by government that will see a move away from blanket changes to rural and urban speeds. **As a result the Plan does not consider making any wide spread speed limit changes outside of schools and town centres.** These will be considered as part of the next scheduled review of the plan.

4.4 Funding

The costs of implementing road safety initiatives including speed management is a shared between Whakatane District Council and Waka Kotahi. The changes to speed limits and other investments have been included as part of the draft 2024 Long Term Plan, and will also be subject to co-funding from the National Land Transport Fund.

5 Consultation

5.1 Public Consultation

There was a very strong response from the public to the Plan. The following is a summary of formal responses received however there was significant debate through letters to the editor and social media channels that was not always able to be captured:

- Attendance and discussion on Speed Management plan at each of the four active community boards.
- 684 submissions to Korero Mai or by paper feedback form.
- Additional written submissions from FENZ, Toi Te Ora, and Manawa Energy.
- Plenty of commentary on social media and letters to the editor.
- Petition delivered to Council with 687 digitally signed participants. No evidence was provided as to what the petition was asking of people however the headline “Speed up Whakatane” was included.

This consultation provided clear direction from the public that blanket speed limits were not supported by the vast majority. On the contrary school speed limits were strongly supported whilst targeted speed limit reductions were requested for some roads and streets where there were known safety issues.

Lack of enforcement and driver training were perceived by many respondents as being more critical components in delivering better safety outcomes for the community.

5.2 School and Kura Consultation

Each school in the district was asked to provide a preferred option for speeds at the school gate and to discuss other road safety issue that might be addressed through infrastructure investment or other means. Each of the 33 schools and kura provided a response with the speeds adopted in the plan reflecting the school’s preference for speed limits where enabled through legislation.

Our rural schools and kura have seen new speed limits implemented in 2023 while urban school speed limits will be implemented in 2025-26.

5.3 Consultation with Maori

Each of the district’s iwi were invited to provide feedback on the draft Plan and to provide an indication as to how further conversations could best be undertaken with individual marae and hapu. As a result, the Plan provides for a flexible approach to be taken to accommodate marae

within the district with speed limits to be adjusted when requested by marae committees and in consultation with Iwi partners. Council will actively engage with marae and work to accommodate this approach.

6 Our Speed Management Principles

A set of principles have been developed to guide the development of the Speed Management Plan. These are:

- *Consultation has indicated that the community is not ready for blanket changes to be made to speed limits across the rohe.*
- *Council will take a targeted approach to reducing speed limits where there is evidence to support the change and where there is support from the community.*
- *Further reviews of the plan in 2027 and 2030 will provide opportunity to align speed limits in the district with Waka Kotahi Guidance in a staged manner that will build public support over time.*
- *The speed limits at rural school gates have been determined by schools in line with the Setting of Speed Limit Rule and Waka Kotahi Guidance*
- *All urban schools will have speed limits of 30km/h at and around the school gates*
- *New local streets will be constructed for a 30km/h speed environment with appropriate physical features to reduce speeds.*
- *Speed limit changes by other RCA will be assessed to determine the impact on our roads and where this produces significant safety risks, adjustments to speed limits may be put in place.*
- *Investment in speed infrastructure will continue in areas where there is significant active transport travel, around schools, marae, town centres and on strategic active transport corridors.*

7 The Plan

The Speed Management Plan covers the following areas for Council:

- **New speed limits** – New speed limits that are being proposed through the Plan and how Council intends to meet its legislative requirements for setting speed limits across the life of the 10-year plan
- **Infrastructure** – Where Council will invest in speed management infrastructure to support speed limits or to reduce harm, particularly for active transport users
- **Education and Promotion** – An outline of activities Council will undertake in education and promotion of the Safe System approach, Speed Management, and road safety.
- **Enforcement** – while Council has no control over enforcement, the Plan does allow for Council to provide suggestions for areas of enforcement that will support the implementation of new speed limits or existing speed limits.

7.1 Speed limits

Speed limits to be set within the speed management plan are included as Appendix Two.

An online map of the proposed speed limit changes also available at the following link:

https://www.google.com/maps/d/edit?mid=1qZff227qcsOyZBc2bGK_MsPOB2u13as&ll=-37.96301458346481%2C176.76000429291577&z=15

7.1.1 Timing of speed limit changes

Speed limits will be implemented as per the table below where possible but will be adapted in response to community consultation:

Focus area	Timing	
	Review	**Implement**
Rural Schools	2022	2023/24 (completed)
Marae and cemetery (as requested)	As requested	As requested
Urban Schools	2023	2025-26
Town Centres	2023	2025-26
Speed limit updates for consistency with similar roads or changes in land use identified in Table 1	2023	2025-26
High-Risk roads as identified in Table 2	2023	2025-26
Roads impacted by state highway Speed Review (ie SH30 speed review)	2027	As required
Other Urban Roads	2027 and 2030	As required
Other Rural Roads	2027 and 2030	As required

Figure 4 - Speed Management Plan Focus areas and indicative timing

7.1.2 Rural School Speed Limits

In 2022 Council consulted with all rural schools to determine an appropriate speed limit at school gates consistent with Waka Kotahi guidance. Implementation occurred in 2023 and details of the new speed limits are included in Appendix One

7.1.3 Urban School Speed Limits

Under the Setting of Speed Limits Rule amendment, schools are now longer required to have a reduced speed limit. But under the Waka Kotahi Guidance the recommended speed limits are 30kph due to the high presence of vulnerable road users. The speed limit included in The Plan have been applied at a minimum of 100m from the school gates and generally cover the busiest travel areas for students.

The Speed Management Plan will see these changes implemented in 2025-26 with further details about the affected streets provided in Appendix Two

7.1.4 Marae Speed Limits

Speed limits at Marae will initially be set to be consistent with the surrounding road network. Council will undertake an engagement campaign through the 2024-27 period to identify and work with marae, hapu and associated Iwi, to identify where a lower speed limit is desirable. With 68 marae in the district, and an ever evolving landscape, this will be an ongoing process as the needs of marae will change over time, particularly for those developing, or with aspirations to develop, papakāinga housing.

Adoption of this Plan provides Council officers with the ability to make speed limit changes in the vicinity of marae without further approvals required through Council.

7.1.5 Town Centres and Recreation Areas

Town centres and recreation areas typically have many pedestrians crossing the road and high volumes of traffic. The conflict between these user groups can create a dangerous situation when vehicles are travelling too fast for the conditions and hence slower, safer speeds are warranted.

The majority of the time congestion and parking movements naturally keep traffic speeds slow but there are also occasion when drivers will be rushing or not paying attention creating a hazardous mix of speed and unprotected, and unexpecting pedestrians.

Implementing a 30kph speed limit in these areas will remind drivers to take care as well as allowing for enforcement when vehicle drivers do not drive to the conditions. Most drivers are unlikely to be impacted by the lower speed limits as they would typically be driving slowly regardless of the posted speed limits.

The Speed Management Plan will see these changes implemented 2025-26 with further details about the affected streets provided in Appendix Two.

7.1.6 New Speed Limits for Consistency

Several roads have seen a significant change in traffic conditions or land use within district and have speed limits that are no longer consistent with similar roads. Table 1 below identifies these roads, the old and new speed limits, and the rationale for the change.

Table 1 - Roads with new speed limits for consistency across the district

	Current Speed limit (kph)	Proposed Speed Limit (kph)	Implementation timeframe	Reason for change
Valley Road – Gorge Rd to Arawa Rd	**70**	**50**	**2025-26**	Reduced to be consistent with other arterial roads in Whakatāne, reflects high traffic land use (commercial business, churches) and residential function.
Keepa Road	**80**	**60**	**2025-26**	Reduced to be appropriate for existing residential and commercial land use and planned growth in traffic volumes. Consistent with adjoining SH30 speed limit.
Gorge Road*	**60**	**50**	**2025-26**	Reduced to be consistent with other arterial roads in Whakatāne.
Galatea Rd - Waiohau	**80**	**60**	**2025-26**	Reduced to be consistent with other rural villages (Te Teko, Awakeri, Thornton, etc)
Galatea Rd – Matahina Dam and approach	**100**	**60**	**2025-26**	Manawa Energy has also requested a lower speed limit to protect in ground assets and improve safety for workers on the site. The narrow dam and collision danger also warrants the reduced speed limit. Approaches are steep, and winding and more suited to lower speeds.
Shaw Road Subdivision	**100**	**50**	**2025-26**	Requires updating since sub-division. Speed reflects current speed environment for urban streets
Wainui Road - Oyster Farm	**100**	**60**	**2025-26**	Extension of 60kph speed limit to beyond Tauwhare Pa reserve and Oyster farm (Tīo Ōhiwa), to improve safety for turning vehicles and provide better access.
Ōhope Road*	**80 (60 Temp)**	**60**	**2025-26**	Police request + Trial of temporary speed + high-risk road
West End Ōhope	**50**	**30**	**2025-26**	While not a town centre the high movement of pedestrians and cyclists along West End Road warrants a similar treatment to both improve safety and the amenity of the area.
Aerodrome Road – adjacent to airport only	**50**	**30**	**2025-26**	Airport road with conditions similar to town centre carpark
Main Road Murupara	**80**	**60**	**2025-26**	Main Road is partially residential and has a number of pedestrian movements that warrant a speed limit consistent with the semi-urban environment.
Te Teko Road – Te Teko	**100**	**50**	**2025-26**	Shifting of 50kph urban speed limit change 300m north, beyond Okaahu Road, due to presence of houses and marae.
Reid Road Ruatoki	**100**	**70**	**2025-26**	Legalising existing speed boundary. Signs previously moved 500m south to improve speed compliance.

	Current Speed limit (kph)	Proposed Speed Limit (kph)	Implementation timeframe	Reason for change
East Bank Road – adjacent dairy factory	**100**	**50**	**2025-26**	Relocation of 50/100kph transition 400m north due to new development and additional entrances within current 100kph area.
*Also addressed under high-risk rural roads				

7.1.7 High-risk Rural Roads

High-risk roads have been identified across the district based on crash data over the last five years and through observations from the community and road safety professionals working in the district. These roads while accounting for a small percentage of road length account for 50% of all local road deaths on the network over the last 5-years.

There is significantly more public support for the adoption of targeted speed reductions, rather than a blanketed approach, while the targeted approach will also allow for a significant reduction in harm on the road network. Over time this may demonstrate the benefits of lower speeds and make further targeted changes more palatable, ultimately leading to a sustainable improvement in the district's road toll.

High-risk roads identified for lower speed limits are included in Table 2 below.

Table 2- High-Risk Roads identified for speed reductions

			Deaths and Serious injuries					
			2019-current		2014-2019		2009-2014	
	Current Speed	Proposed Speed	Deaths	Serious	Deaths	Serious	Deaths	Serious
Te Teko Road	100	80	2	1	1	3	0	0
Taneatua Road - Whakatāne to SH2	100	80	6	2	1	1	0	0
Thornton Road - SH30 to Rangitaiki River*	100	80	0	2	2	3	2	4
Galatana Road - Waiohau to SH30	100	80	1	3	0	4	2	4
Ohope Road - Otarawairere Rd to West End Rd	80/ 60 (temp)	60	0	5	0	2	0	0
Gorge Road	60	50	0	2	0	0	0	0
Proportion of District			50%	13%	33%	23%	19%	11%
Local Road Total			18	115	18	60	21	71

7.1.8 Urban Speed limits

Consultation on the Plan indicated that there was limited public support for the blanket lowering of speed limits in urban areas. Further work is required within the community before significant changes in this area made. A further review of urban speed limits will occur in 2027 and 2030 by which time there may be changes in the publics willingness to accept lower speeds either as they

experience changes in speed reductions in other towns or through the 30kph speed limits being put in place for urban school areas.

7.1.9 Rural Road Speed Limits

As with Urban Speed Limits, consultation on the Plan indicated that there was limited public support for the blanket lowering of speed limits in rural areas. Further work is required within the community before significant changes in this area made. A further review of rural speed limits will occur in 2027 and 2030 by which time there may be changes in the publics willingness to accept lower speeds either as they experience changes in speed reductions in other towns or through on some of the districts high-risk roads.

7.2 Speed Infrastructure

Safety infrastructure improvements have been identified for delivery through the Plan development and are included Appendix Three. Following the adoption of the Plan a programme will be developed with delivery timeframes based on the focus areas and Long Term Plan budget availability.

7.3 Education and promotion

Additional funding from the speed management plan budget will be set aside across the 10-year plan for education and promotion of speed management. Where possible this work will be coordinated through the Regional Speed Management Plan currently being developed by Bay of Plenty Regional Council.

Programmes will be developed on a 3-year cycle as part of Council's Long Term Plan, with input from key stakeholders with each programme focusing on particular areas such as:

- School speed limits
- Marae speed limits
- Enforcement

7.4 Speed Enforcement

While Council does not have the ability to enforce speed limits, or install speed cameras, the Plan does provide an opportunity to identify where enforcement would be supported by Council and the Community. This information can then be used by Police and Waka Kotahi to determine the best location for speed cameras or where a greater police presence maybe required.

Table 3 - Areas identified for increased speed enforcement

Locations currently identified as requiring additional speed enforcement		
Where	**What**	**Why**
All school areas	Mobile speed cameras Police enforcement	The change in speed limits will take a concerted police effort for these to be effective. High public acceptability of speed reductions
King Street, Whakatane	Fixed Camera	Very high number of children and existing speed issues
Arawa Street, Matata	Fixed Camera	High movement of vehicles through the township and existing speed issues.
State Highway 30, Te Teko	Fixed Camera	High movement of vehicles through the township and existing speed issues.
State Highway 30 – Awakeri to Thornton Road	Police Enforcement Point-2-point Average speed camera	High-Risk road with speed identified as crash cause in many areas. Recently reduced speed limits
State Highway 2 – Edgecumbe, Matata, Tāneatua townships	Fixed Camera Police enforcement	High amount of pedestrian activity and existing speed concerns identified by residents and police
Wainui Road	Police Enforcement Point-2-point Average speed camera	Large number of drivers, not identified as a high-risk road due to recent safety improvements but excess speed may still be prevalent
All other State Highways	Police Enforcement Mobile Speed Cameras	To enforce existing and speed limits proposed by Waka Kotahi

8 Developing the Plan

The below figure sets out the process for development of the plan and actions outstanding at the time of publishing.

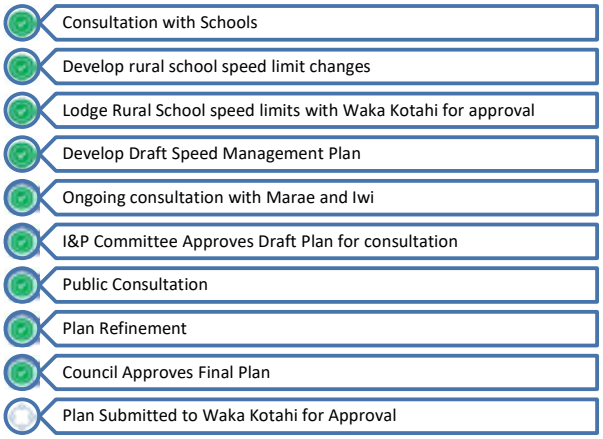
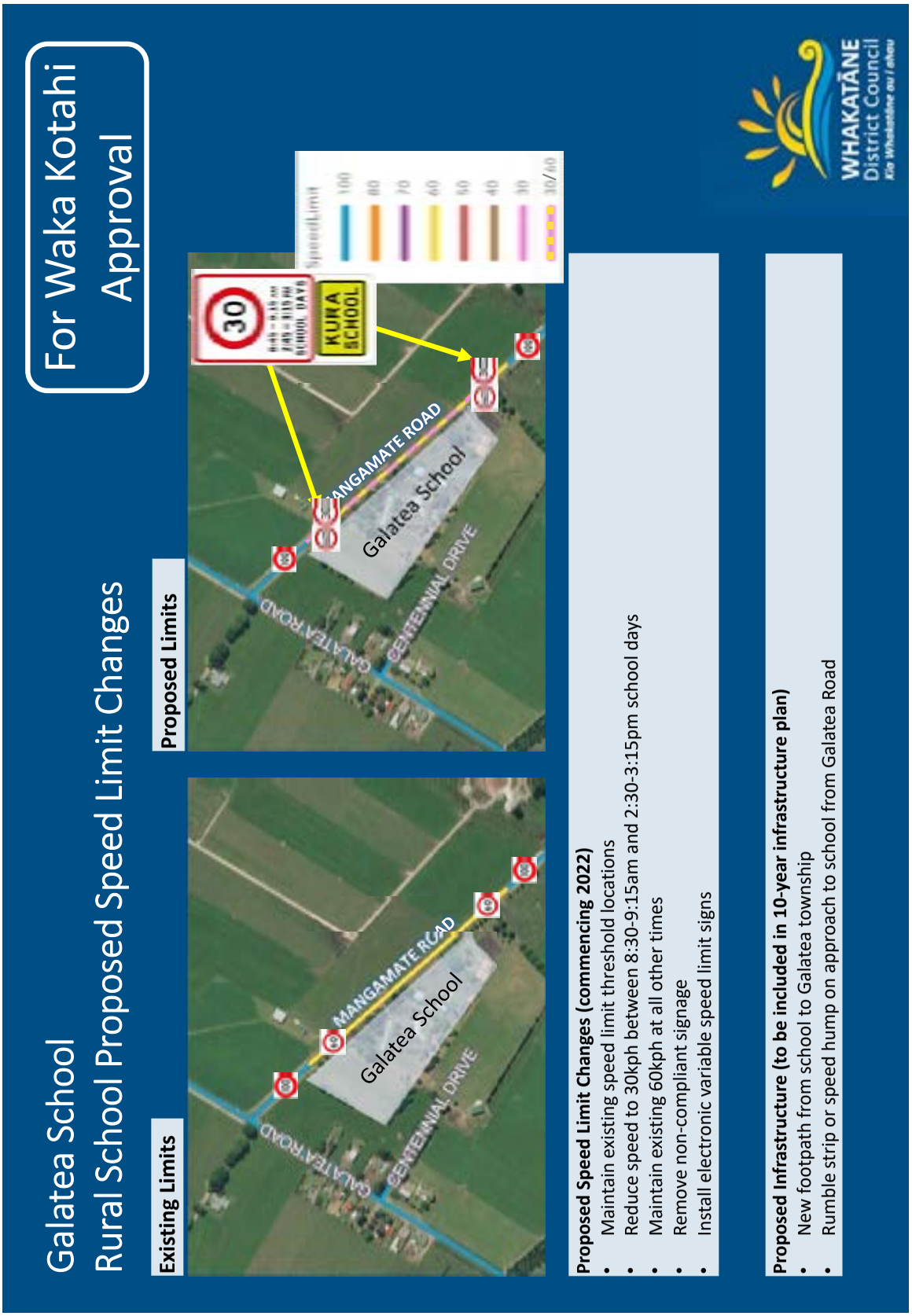


Figure 5 - Speed Management Plan development process

Appendix One – Rural School Speed Limits

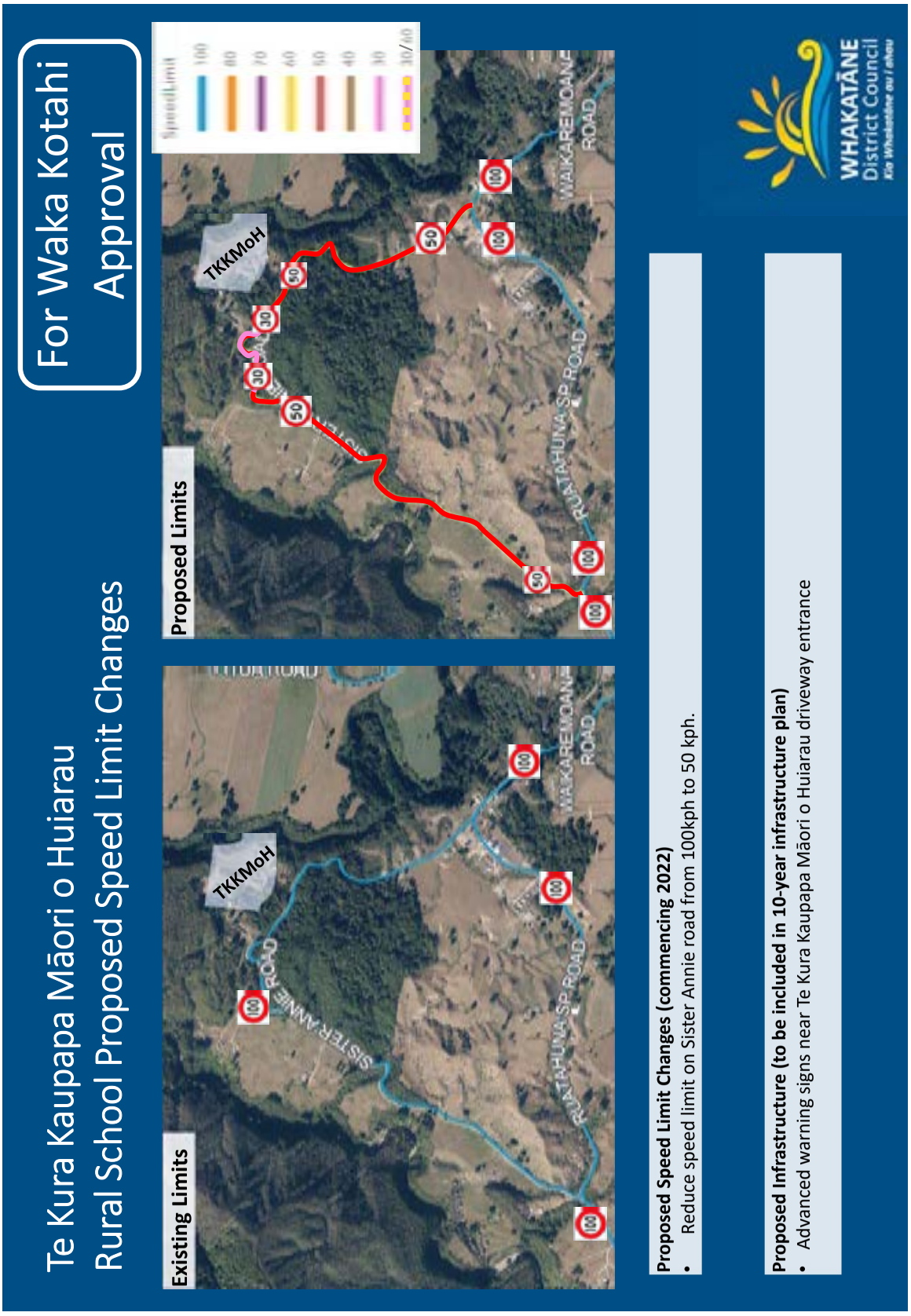
6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

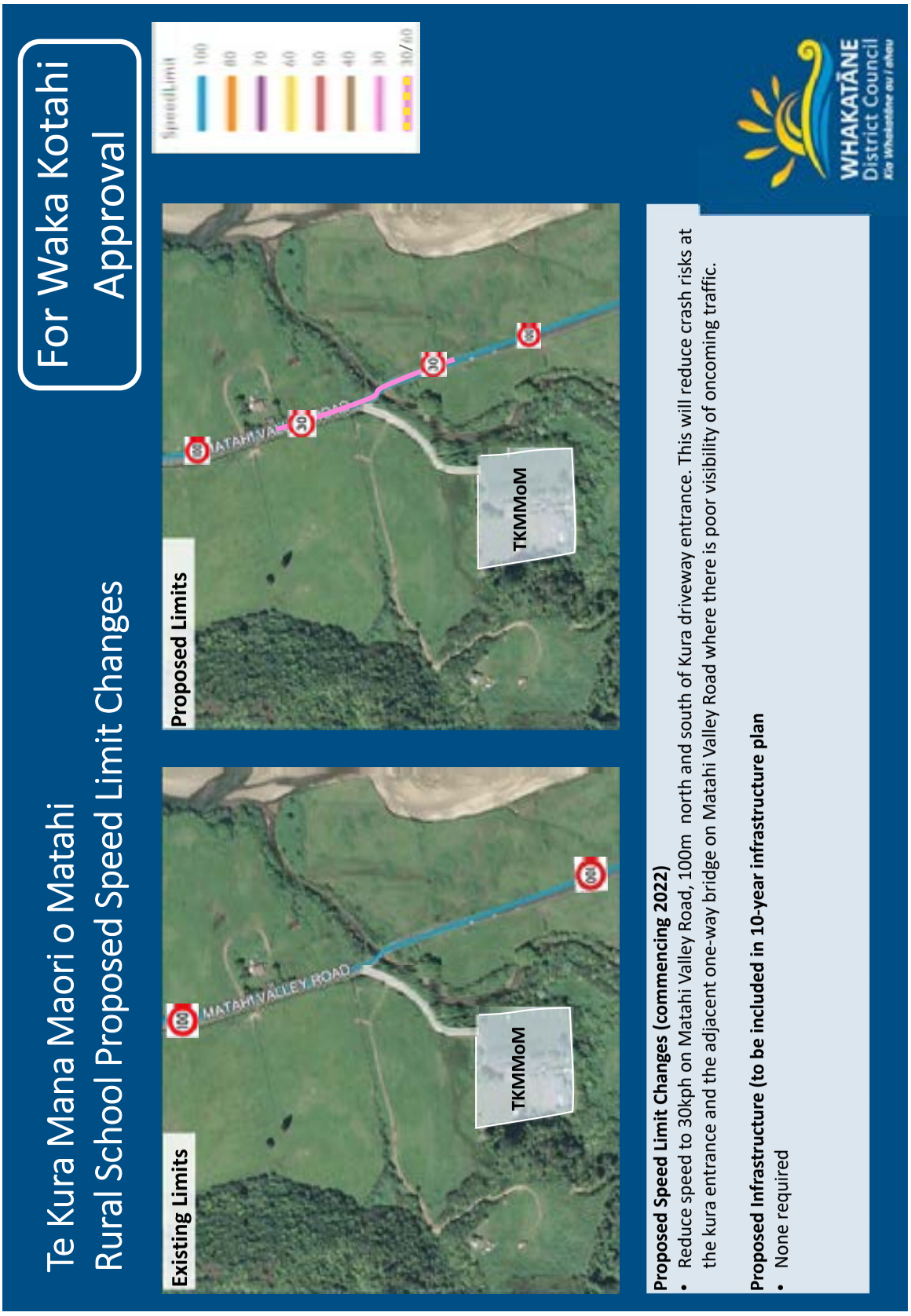


6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

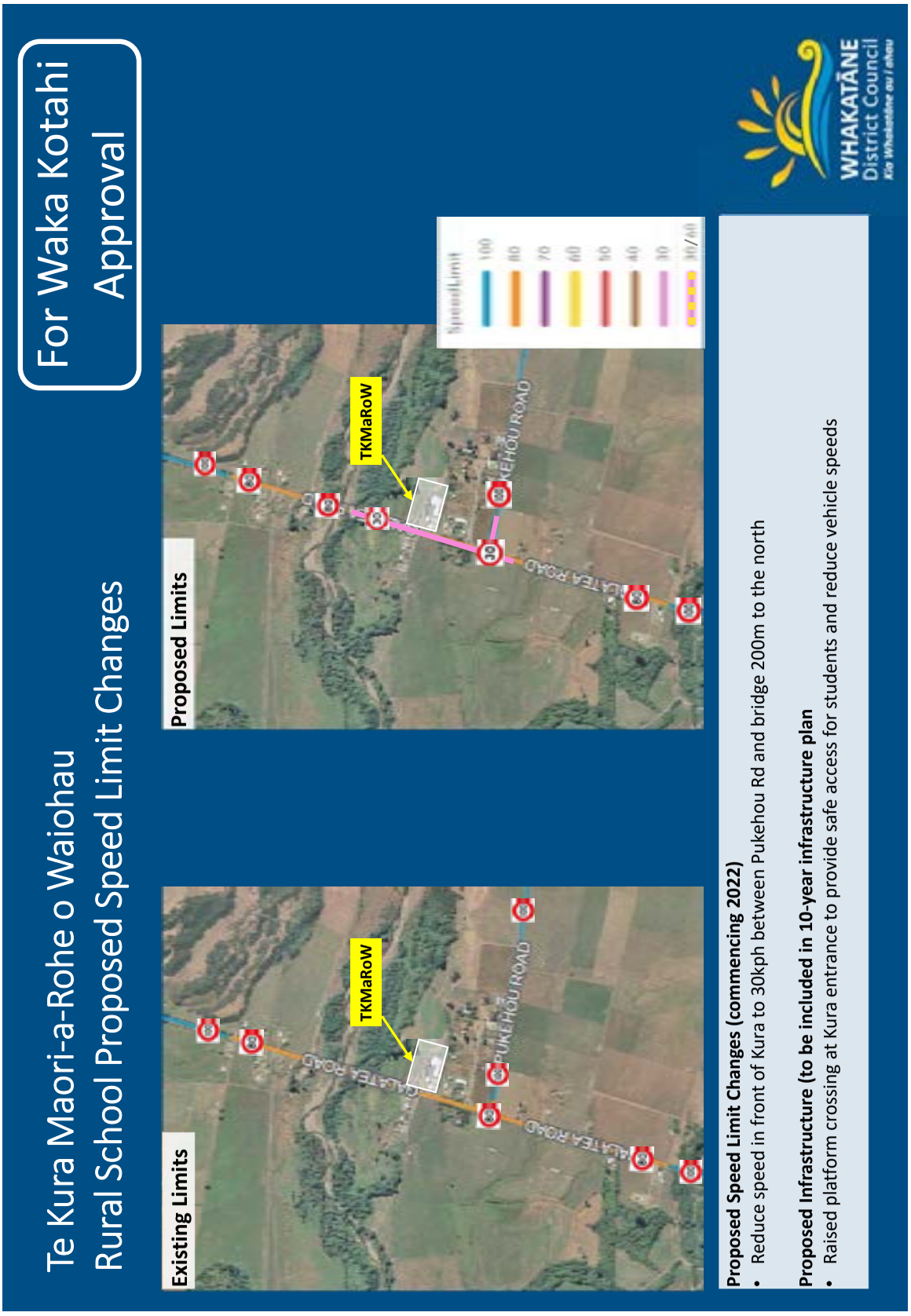
6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



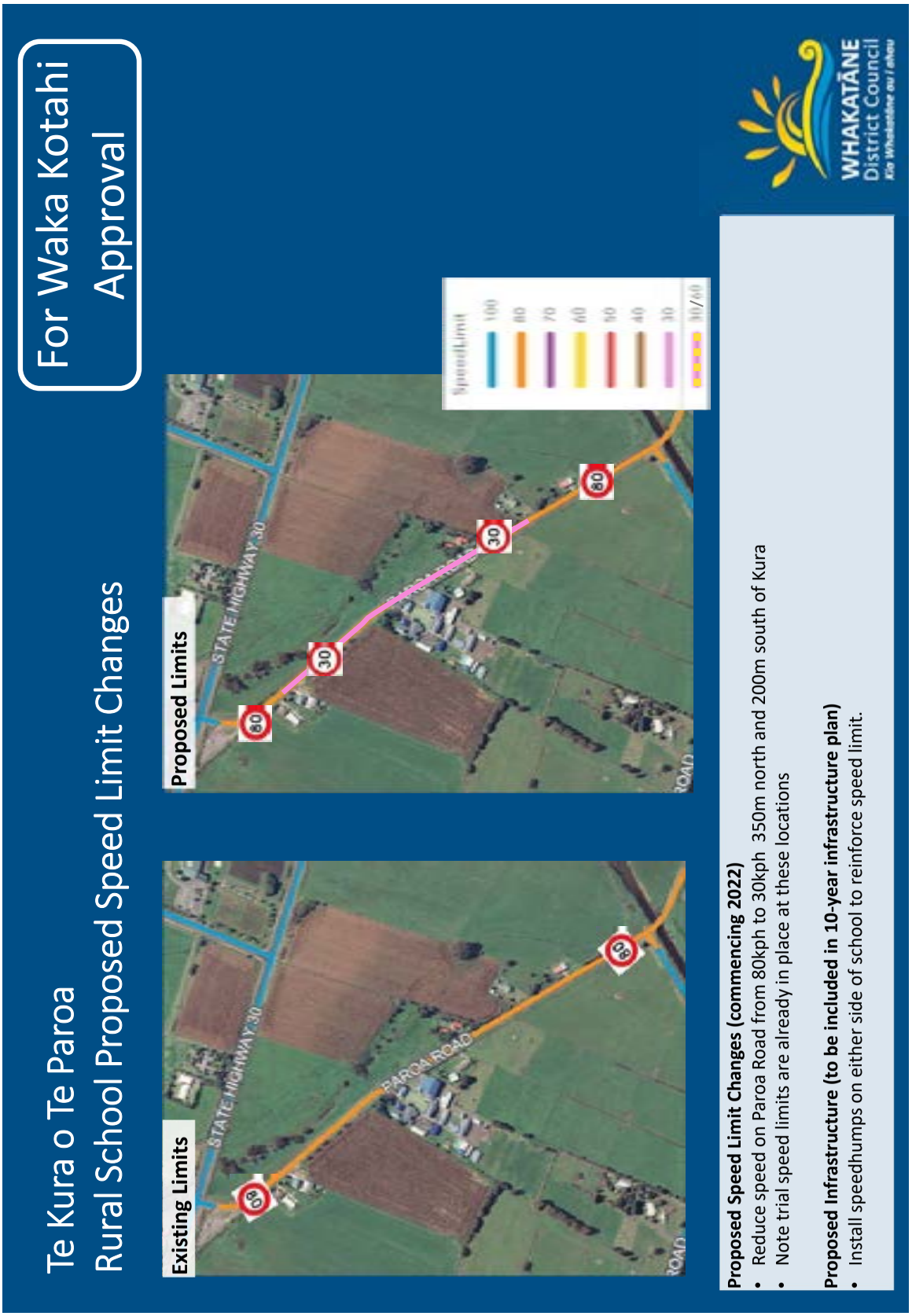
6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



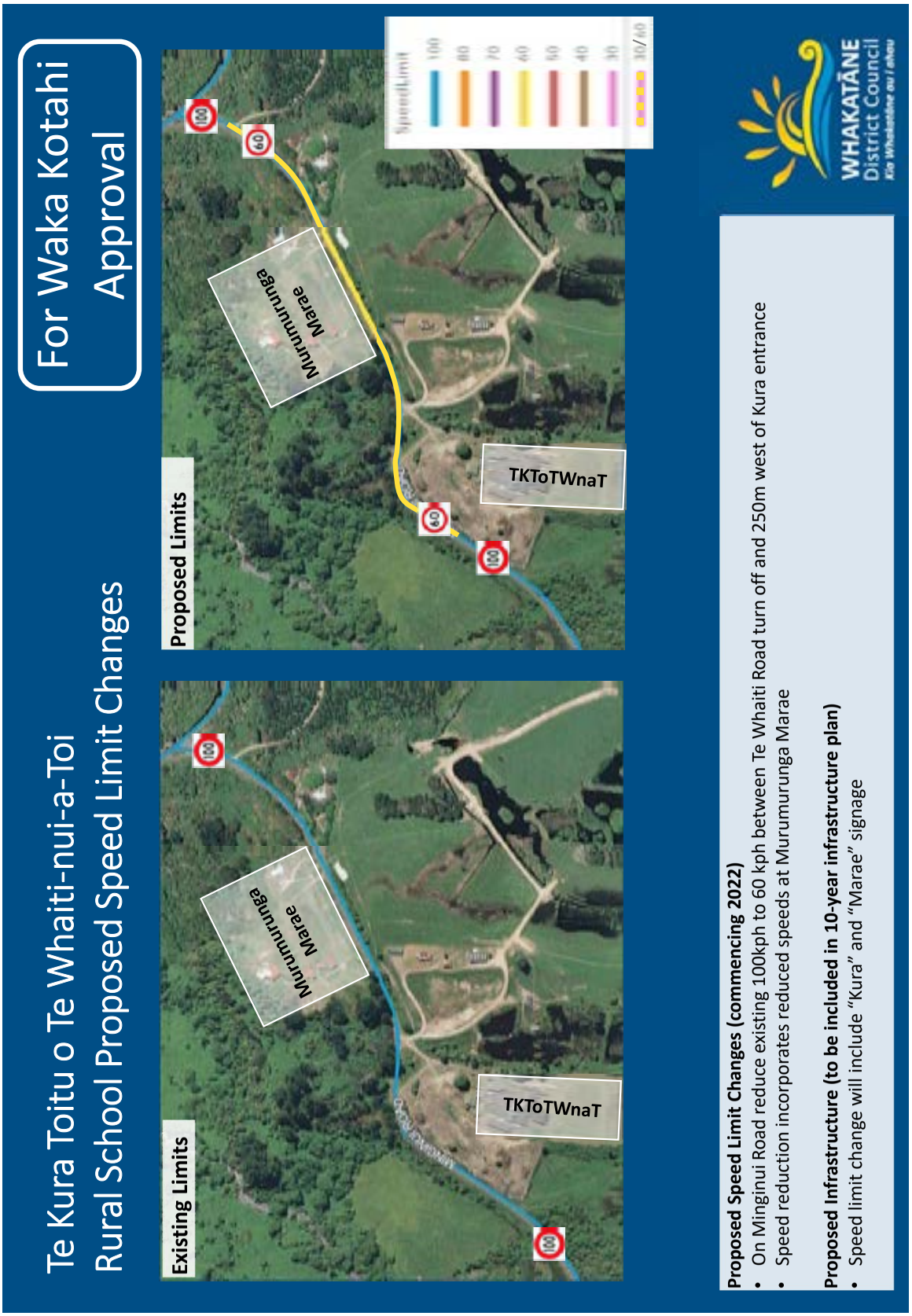
6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



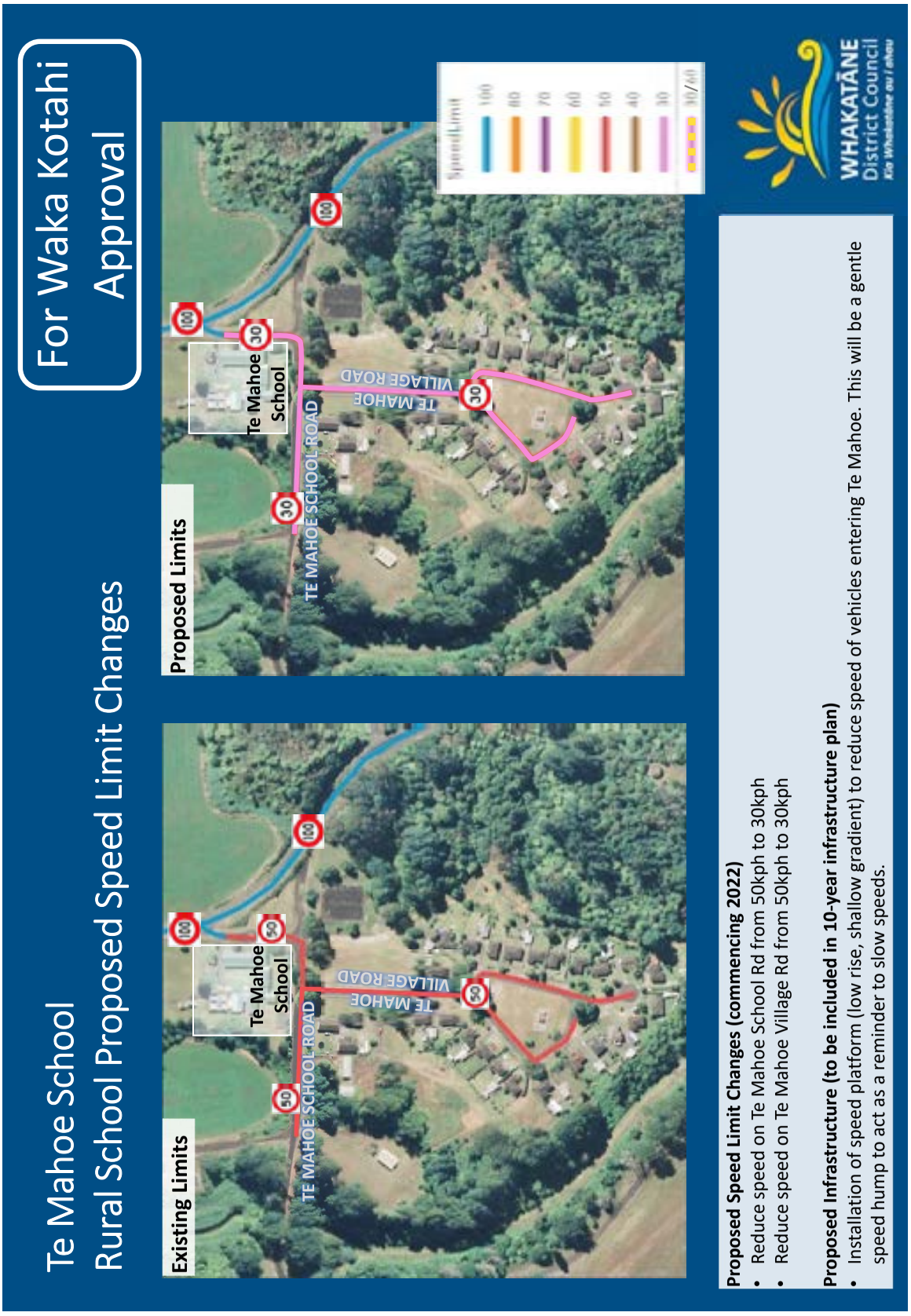
6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



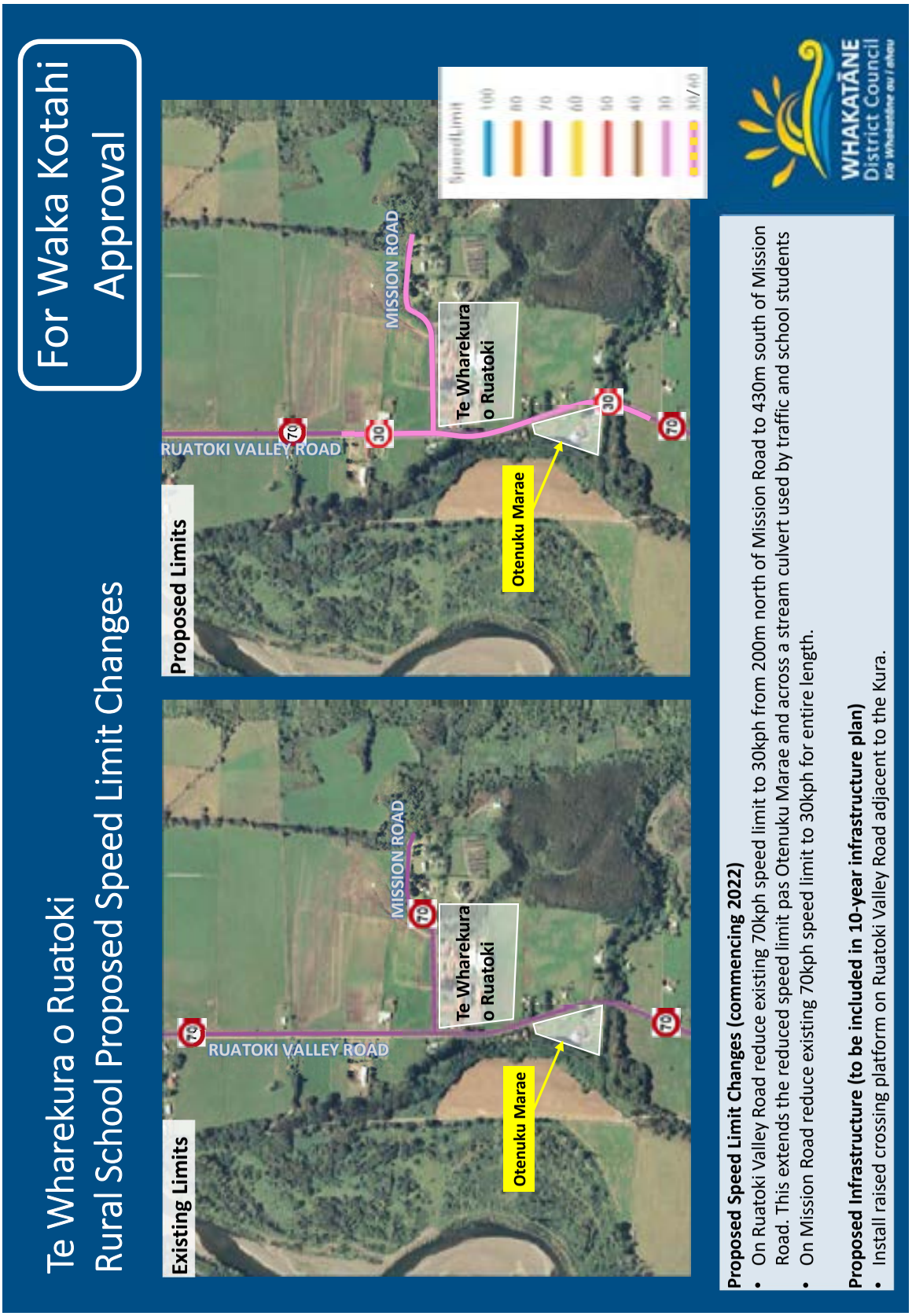
6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

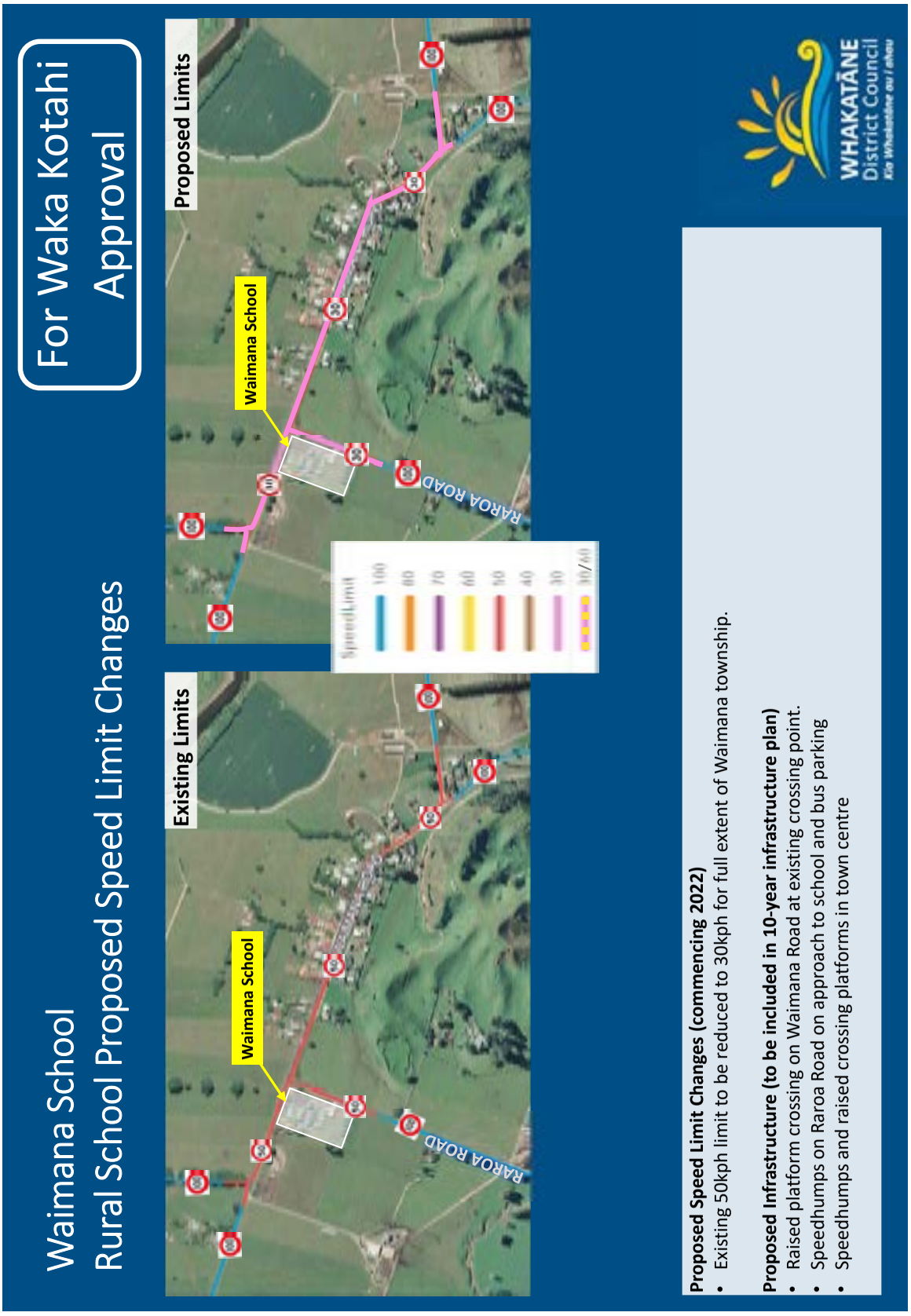


6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)



Appendix Two – 2025-26 Speed Limit Changes

Road Name	Proposed Speed	From	To	Why
ALEXANDER AVE	30	King Street	39 Alexander Avenue RP377	school
APANUI AVE	30	All		School
ARAWA RD, WHAKATANE	30/50	Churchill Street	Lord Cobham Ave	School
ARMSTRONG AVE	30	All		School
BOON ST	30	121 College Road	SH2	Town centre
BOON ST SERVICE LANE	30	All		Town centre
BRACKEN ST	30	Mcalister Street	Kakahoroa Drive	Town centre
BRIDGE ST	30	King Street	Walter Park	School
BUDDLE ST	30	All		Town centre
CANNING PL	30	All		Town centre
CLIFTON RD	30	All		Town centre
COLLEGE RD	30	SH30	124 College Road (RP1286)	School + Town centre
COLLEGE RD SERV LN	30	All		Town Centre
COMMERCE ST	30	Shapley Place	The Strand	Town Centre
CRETE ST	30	All		School
DIVISION ST	30	All		School
EAST BANK RD	50	SH30	800m north of SH30	new development
EDGECUMBE SQUASH CLUB SERVICE LN	30	All		Town Centre
FACTORY RD	30	Approach to Waimana Road		School
FAIRFIELD LN	30	All		School
FISHERMANS DR	30	Approach to Oceanview Road		School
FRANCIS ST	30	All		Recreation Reserve
FRASER ST	30	All		School
GALATEA RD	80	SH30	Waiohau	High Risk Road
GALATEA RD	60	Waiohau (RP24398)	20m south of Papanui Road	Rural Village
GEORGE ST	30	All		Town Centre
GORGE RD	50	All		High-Risk Road/Urban Arterial
GOULSTONE RD	30	King Street	Douglas Street	School
HAIG ST	30	All		Town centre
HALBERG CRES	30	All		School
HARVEY ST	30	All		Recreational Reserve
HEALE ST	30	All		School
HENDERSON ST	30	Armstrong Street	James Street School	School
HINEMOA ST	30/50	Victoria Avenue	Fraser Street	School
ISLAND VIEW HTS	30	All		School
JAMES ST	30	Horrocks Ave	King Street	School/Town centre
JAMES ST SERV LN	30	All		Town centre
KAHIKATEA ST	30	Miro Drive	Konini Street	School
KAKAHAROA DR SERV LN	30	All		Town Centre
KAKAHOROA DR	30	All		Town centre
KAKĀRIKI Drive	50	All		Inconsistent speed
KĀREAREA Drive	50	All		Inconsistent speed
KEEPA RD	60	All		Urban Arterial
KING ST	30	Landing Road	Churchill Street	School
KORIMAKO Place	50	All		Inconsistent speed
KOROMIKO ST	30	All		Inconsistent speed
KŌTARE Drive	50	All		Inconsistent speed
LOUVAIN ST	30	All		School
LOVELOCK ST	30	All		Town Centre
LOVELOCK ST SERV LN	30	All		Town Centre

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

Road Name	Proposed Speed	From	To	Why
MAIN RD	60	Rangitaiki Bridge	Ngāti Manawa Road	Inconsistent Speed
MAIR ST (Matata)	30	All		School
MANUKA LN	30	All		
MATAATUA ST	30	All		Recreation Area
MATATA CAUSEWAY	30	All		Recreation Area
MATIRERAU ST	30	All		Recreation Area
MCALISTER ST	30	Commerce Street	Apanui Ave	School
MEADOW VALE	30	All		School
MERRITT ST	30	All		Town Centre
MIRO DR	30	All		School
MISSION RD	30	All		School
MURIWAI DR	30	All		Recreation Area
MURIWAI TCE	30	All		Recreation Area
NESBITT ST	30	All		School
OCEAN VIEW RD	30	Fishermans Drive	Landscape Road	School
OHOPE RD	60	Otarawairere Road	West End Road	High Risk Road
OLYMPIC DR	30	Approach to King Street		School
OREGON DR	30	Service Lane	Pine Drive	Town Centre
OREGON DR SERV LN	30	All		Town Centre/School
PANORAMA PL	30	All		School
PAPANUI RD	60	All		Inconsistent Speed
PETER SNELL ST	30	All		School
PINE DR	30	Main Road	123 Pine Drive (RP941)	Town Centre/School
PINE DR SERV LN	30	All		Town Centre
POHUTUKAWA AVE	30/50	136 Pohutakawa Ave	Plantation Reserve	School
POLLEN ST	30	All		School
POUNAMA PL	30	All		School
PUKEHOU RD	60	All		Inconsistent Speed
QUAY ST	30	All		Town Centre
REID RD	100	Awahou Road	RP8230	Inconsistent Speed
REWA CRES	30	All		School
RICHARDSON ST	30	All		Town Centre
RICHARDSON ST SERV LN	30	All		Town Centre
RIMU RD	30	Approah to Pine Drive		School
ROTOTAHA RD	60	All		Inconsistent Speed
RUSSELL ST	30	Approach to Mcalister Street		School
SALONIKA ST	30	Valley Road	RP359	School
SHAPLEY PL	30	All		Town Centre
SHAW RD	50	All		Inconsistent speed
SHORT ST	30	All		Town Centre
SIMPKINS ST	30	Approach to Mcalister Street		School
SOUTARS AVE	30	All		School
ST JOHN ST	30	All		School
STEWART ST	30	Approach to King Street		Town Centre
Takahē Close	50	All		Inconsistent speed
TANEATUA RD	80	SH30	RP6190	High-Risk Road
TANEATUA RD	50	RP6190	Te Tahi Street	Urban Arterial, inconsistent speed
TASSEL DR	30	All		Airport, inconsistent Speed
TAWHIA RD	60	All		Inconsistent Speed
TE TEKO RD	80	Okaahu Road	Otakiri Road	High-Risk Road
TE TEKO RD	50	RP6340	Okaahu Road	Marae
TE TEKO RD	30	SH30	RP6340	School
THE STRAND	30	All		Town Centre

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

Road Name	Proposed Speed	From	To	Why
THORNTON RD	80	All		High-Risk Road
TOROA ST	30	All		Recreation area
VALLEY RD	50	Te Tahi Street	Commerce Street	Urban Arterial, inconsistent speed
VICTORIA AVE	30	Approach to King Street		Town Centre
VICTORIA AVE SERV LN	30	All		Town Centre
VILLIS GLD	30	All		Recreation area
WAINUI RD	60	Harbour Road	RP1318	High Risk Road
WAIRAKA RD	30	All		Recreation area
WAIRERE ST	30	All		Recreation area
WEPIHA ST	30	All		Recreation area
WEST END RD	30	All		Recreation area
WILSON ST	30	All		Recreation area

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits - Matata

2025-26 New Speed Limits – Thornton Road and Aerodrome Road

23

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits – Coastlands (Piripai), Shaw Road and Keepa Road

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits – Whakatāne Township

25

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits – Edgecumbe

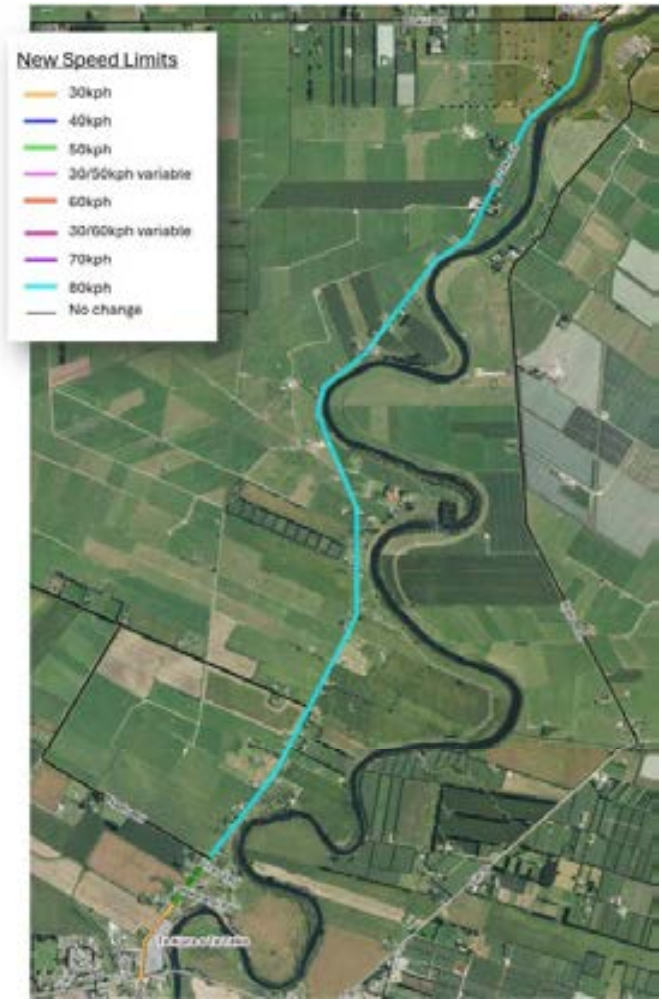
26

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits – Te Teko and Te Teko Road

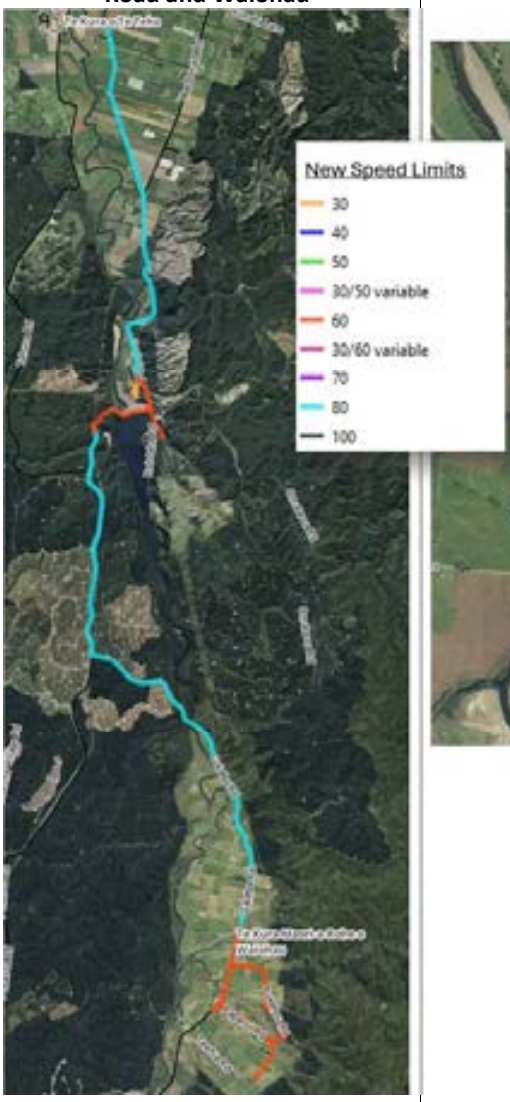


27

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits – Galatea Road and Waiohau	2025-26 New Speed Limits – Ruatoki
	

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

WHAKATĀNE District Council

Speed Management Plan

2025-26 New Speed Limits – Murupara

WHAKATĀNE District Council

Speed Management Plan

Appendix Three - Speed Infrastructure

School Safety Infrastructure		
Where	**What**	**Why**
Paroa Road @ Paroa School	Speed control infrastructure	School request
James Street @ Whakatane Intermediate and James Street School	Speed control infrastructure, Raised Platform	School Request
Pohutakawa Ave @ Ohope school	Raised crossing platform	School Request Meet guidance for urban connector road to maintain a 50kph speed limit
Pohutakawa Ave @ Ohope 4-Square	Raised crossing platform	School Request Meet guidance for urban connector road to maintain a 50kph speed limit
Pohutakawa Ave, Ohope Road to Maraetotora	Off-Road cycle path (dunes boardwalk)	Meet minimum requirements for 50kph on an Urban Connector Road
Pohutakawa Ave, Maraetotora to Harbour Road	Off-Road cycle path (dunes boardwalk)	Meet minimum requirements for 50kph on an Urban Connector Road
Hinemoa Street, existing pedestrian crossing	Raised Crossing Platform	Meet guidance for urban connector road to maintain a 50kph speed limit Schools request
Arawa Street, Whakatane Trident High School	Raised Crossing Platform and/or Speed humps	Meet guidance for urban connector road to maintain a 50kph speed limit and at schools request
Goulstone Road, adjacent Whakatane High School	Pedestrian/curtesy crossing	Schools request Encourage compliance of slower speed limit Provide safe crossing point for students
Galatea School	Footpath to township	Schools request Safe space for walkers, reduced reliance on cars
McAlister Street	Raised Platforms or Speed humps	School Request Encourage compliance of slower speed limit Provide safe crossing points
Galatea School	Rumble Strips from 100kph end	Schools request Encourage speed compliance
King Street, Stewart Street to Bridge Street	Speed control infrastructure	School Request Encourage compliance of slower speed limit
Galatea Road, Waohau @ Te Kura Maori-A-Rohe O Waiohau	Raised Crossing Platform and Kea Crossing	School Request Provide safe crossing area for students and Marae users, encourage speed compliance
Wilson Street, Matata	Safe Crossing point for students	School Request Provide safe crossing point for students
Arawa Street, Whakatane	Speed control infrastructure on Valley Road approach and raised platform in front of school office	School Request Provide safe crossing point for students
Otakiri Rd @ Otakiri School	Speed control infrastructure or Platforms on approach to school gates	School Request Provide safe crossing point for students Encourage speed compliance

6.2.1 Appendix 1: Whakatāne District Council Speed Management Plan for Adoption(Cont.)

Arterial Road Infrastructure		
Where	**What**	**Why**
Pohutakawa Ave, Ōhope	Off-Road Cycle Path provided	Meet guidance for 50kph on an Urban Connector Road
Harbour Road and Pohutakawa Ave, various	Raised Crossing Platforms in high-use areas	Meet guidance for 50kph on an Urban Connector Road
Landing Road, various	2 Raised crossing platforms	Meet guidance for Urban Connector Road to maintain a 50kph speed limit
Domain Road, various	2 Raised Crossing Platforms	Meet guidance for urban connector road to maintain a 50kph speed limit
Hinemoa Street, near Landing Rd Roundabout	Raised Crossing Platforms	Meet guidance for urban connector road to maintain a 50kph speed limit
Ōhope Road	Guardrail, physical separation of pedestrians from cars	Identified as a high-risk road. Meet Guidance for Rural Connector road to allow speeds between 60 and 80kph
Gorge Road	Guardrail, physical separation of pedestrians from cars	Meet guidance for Urban Connector road to maintain a 60kph speed limit Identified as a high risk road
Landing Road, TBC	Raised crossing platforms	Meet guidance for Urban Connector Road to maintain a 50kph speed limit
Domain Road, near McAlister Street	Upgrade existing pedestrian crossing to raised platform	Meet guidance for urban connector road to maintain a 50kph speed limit
Arawa/Bridge Roundabout	Redesign to incorporate safe crossing facilities for school and other users	Meet Guidance Urban connector road to maintain a 50kph speed limit School Request
Arawa Street, Whakatane	1-2 Raised Crossing Platforms	Meet Guidance Urban connector road to maintain a 50kph speed limit
Arawa Street, Matata	3 Speed Platforms (complete)	Meet Guidance Urban connector road to maintain a 50kph speed limit
Awatapu-Arawa St Stopbank path	Off-road path	Meet Guidance Urban connector road to maintain a 50kph speed limit

Rural Road Infrastructure		
Where	**What**	**Why**
Thornton Road	To be confirmed	Identified as a high-risk road
Taneatua Road	To be confirmed	Identified as a high-risk road
Various unsealed roads*	Extend seals and shoulder widening	Allow for speeds to be maintained at 80kph.
Te Teko Road	To be confirmed	Identified as high-risk road
Taneatua Road	To be confirmed	Identified as high-risk road
Gorge Road	To be confirmed	Identified as high-risk road
Ōhope Road	To be confirmed	Identified as high-risk road

***Improvements to be delivered as part of existing Seal Extension Policy**

Small Towns Infrastructure		
Where	**Where**	**Where**
Taneatua Speed Management	Speed control infrastructure and crossing platforms. Locations to be confirmed	To encourage speed compliance
Matata Speed Management	Speed control infrastructure and crossing platforms. Locations to be confirmed	To encourage speed compliance
Murupara Speed Management	Speed control infrastructure and crossing platforms. Locations to be confirmed	To encourage speed compliance

6.2.2 Appendix 2: Eastern Bay Road Safety Operational Group letter of support

6.2.2 Appendix 2: Eastern Bay Road Safety Operational Group letter of support(Cont.)

Mayor Victor Luca
Whakatane District Council
Civic Centre
14 Commerce Streete
Whakatane 3120

Dear Mayor Luca

RE: Whakatāne District Speed Management Plan

The Eastern Bay of Plenty Road Safety Operations Group (the Group) supports in principle the national Waka Kotahi Safe System approach to road safety, which includes ensuring safe and appropriate speeds as recommended by the National Road Safety Strategy. This approach supports the 2021-24 Eastern Bay Road Safety Plan which identifies speed as a high-risk factor for the Eastern Bay of Plenty.

The Eastern Bay of Plenty Road Safety operations group (The Group) purpose is to:

> *"To provide strategic direction, oversight and leadership to ensure Eastern Bay roads are increasingly free of death and serious injury and to give effect to the national "Road to Zero 20-30" strategy.*

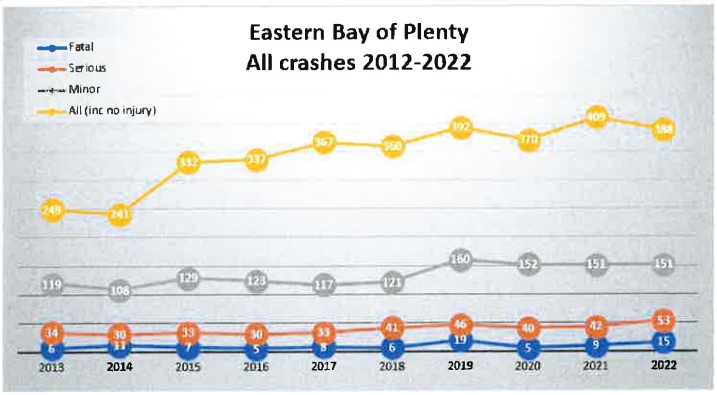
It brings together representatives from ACC, NZ Police, Waka Kotahi, and the sub-regions four Councils: Bay of Plenty Regional Council, Whakatāne District Council, Ōpotiki District Council, and Kawerau District Council.

The Group understands that Whakatane District Council will be considering the adoption of the Whakatāne District Speed Management Plan and would like to express the Committees support for the well-considered use of speed limits to reduce the harm and trauma on our roads. The Eastern Bay of Plenty Road Safety Action Plan 2024-24 identifies the following outcomes for the period:

- *People will increasingly understand what travelling at safer speeds means*
- *Speed limits will better reflect the use, function, and safety of the network*
- *Travel speeds will support both safety and economic productivity*

For the 2021/22 financial year we received our highest DSI total across the Eastern Bay in the last 10 years, despite a comparative national trend downwards, and significant local and national investment in road safety infrastructure across the area.

6.2.2 Appendix 2: Eastern Bay Road Safety Operational Group letter of support(Cont.)



Speed (driving too fast) is listed as one of the most common factors for all DSI crashes in the Eastern Bay cluster. From 2019 to 2023, speed was a contributing factor in more than a quarter of all DSI crashes across our region:

- **19 percent** of crashes in the Whakatane District
- **24.6 percent** of crashes in Ōpōtiki District
- **33 percent** in Kawerau District

This compares to a national average of **15.43 percent** (CAS, 2023). This highlights that speed or not driving to the conditions is a major crash factor in the Eastern Bay. The high proportion of speed-related crashes illustrates the importance of drivers needing speed management guidance on how to drive to the conditions on open and rural roads. Forty percent of the speeding drivers in DSI crashes across the Eastern Bay were under the age of 30 with a lack of experience no doubt a contributing factor to their choice in speed. Of these, 27.37 percent were 15–24-years-old, and 13.3 percent aged 25-29.

We understand that there are multiple factors that ultimately lead to crashes, and many reasons why people continue to choose to drive under the influence, not wear seatbelts/helmets, ride dirt bikes on the roads or drive fatigued, and the root causes of these should continue to be investigated and improved upon in the longer term. The fact remains however that right now Speed Management, particularly when coupled with appropriate enforcement, is one of few tools available that can reduce the trauma communities experience on our roads in the short term.

In particular the group supports and recommends:

- The use of speed management on high-risk roads to reduce road trauma in areas where safety infrastructure is either not affordable or not able to be delivered within a reasonable time frame;
- The reduction of speed limits at school gates in line with direction provided through the Setting of Speed Limits Rule 2022;
- Reduced speed limits in our town centres or where there are high numbers of pedestrian and other active transport users such as around parks and reserves;
- Fully supports the role out of road safety cameras across the district and sub-region;

6.2.2 Appendix 2: Eastern Bay Road Safety Operational Group letter of support(Cont.)

- Continued monitoring of the road network and the proactive use of speed management to address known or emerging safety issues in conjunction with NZ Police; and
- A reduction of speed limits on residential streets to 40kph to protect our most vulnerable road users the elderly and young people while supporting more uptake of active transport within the community.

The Group also recognises that without appropriate enforcement the benefits of reduced speed limits will not be fully realised as many will continue speed and bring harm to our communities. The Group has recently written to MPs requesting additional resources for Police enforcement and will continue to advocate for improvements in this area until the sub-region is resourced at an appropriate level.

We appreciate that reducing speed limits is not always an easy decision and is not always an appropriate response but it can be an effective tool to reduce harm in our community when used in appropriately and in coordination with other interventions.

Yours Sincerely,

Chairperson,
Eastern Bay of Plenty Road Safety Operations Group

6.3 Proposed Submission on the Fast-Track Approvals Bill

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April 2024**
Author:	**N Woodley / Manager Policy, Planning, and Consents Compliance**
Authoriser:	**D Bewley / GM Development and Environment Services**
Reference:	**A2644526**

1. Reason for the report - *Te Take mō tēnei rīpoata*

This report updates and informs the Infrastructure and Planning Committee on Council's planned submission on the proposed Fast-Track Approvals Bill to the Environment Committee. The report seeks delegated authority for the Mayor and Chief Executive to finalise and approve Council's submission. The submission period closes, Friday 19 April 2024.

2. Recommendations - Tohutohu akiaki

1. THAT the Infrastructure and Planning Committee receives the Proposed Submission on the Fast-Track Approvals Bill report; and
2. THAT The Infrastructure and Planning Committee **delegate authority** to the Mayor and Chief-Executive to finalise and approve Council's submission on the Fast-Track Approvals Bill.

3. Background - *He tirohanga whakamuri*

The newly formed National-led government has committed to a phased approach in reforming New Zealand's resource management system. Phase one, completed in December 2023, involved the repeal of the National Built Environment Act ("**NBA**") and the Spatial Planning Act ("**SPA"**), both established under the previous government. Phase two aims to introduce a fast-track consenting regime, enact targeted legislative amendments to the Resource Management Act 1991 (RMA) in 2024, and develop or modify national directives under the RMA.

As part of phase two, the Fast Track Approval Bill ("**the Bill**") introduced under urgency to the House on March 7, 2024. This Bill proposes a 'one-stop-shop' for approvals required under various legislations, serving as a stand-alone Act and replacing the COVID-19 Recovery (Fast-track Consenting) Act 2020. The Bill's objective is to "*provide a fast-track decision-making process that facilitates the delivery of infrastructure and development projects with significant regional or national benefits.*" A diverse range of projects, including infrastructure, housing, mining, aquaculture, and others, will be eligible for the fast-track process if they meet the criteria outlined in the Bill.

Broadly, the process will consist of three steps:

1. A project is accepted for the fast-track process (either from listed or referred projects);

2. Independent and expert consenting panels make recommendations (grant/decline/conditions); and
3. Ministers make final decision.

Appeals to the High Court can only be made on points of law (for those with standing).

The period for submissions on the Bill closes 19 April 2024.

4. Issue/subject – *Kaupapa*

A Council Briefing took place on Thursday, 4 April 2024 to gather feedback from Elected Members for inclusion in the submission. Due to the tight timeframes, delegation is sought for the Mayor and Chief Executive to approve the submission which will extend the timeframe for preparation of robust and well-informed recommendations.

Following the briefing, the submission will address the following key themes.

4.1. Key submission points

Council is not opposed to fast track in principle but there are concerns with the Bill as follows:

Priority of Speed and Reduction of Environmental Safeguards:

- The process prioritises speed over environmental safeguards and allows activities such as those prohibited under the Resource Management Act 1991 ("**RMA**") to be fast-tracked for approval.
- Approvals can be granted even if projects are inconsistent with legislation protecting the environment.
- Various project types will qualify for a process that weakens environmental protections, with unclear criteria for inclusion.
- A fast, non-statutory process will add eligible projects to Schedule 2, bypassing proper submission opportunities and select committee procedures.

Development-Focused Approach:

- The Bill's primary objective of delivering infrastructure and development projects takes precedence over other legislation.
- Discretionary considerations for project approvals operate within a framework favouring development objectives, which will inherently prioritise development over environmental protection.
- Decision-making authority lies with the Ministers responsible for development, potentially leading to a greater emphasis on development objectives rather than environmental protection.

Short Timeframes and Limited Public Participation:

- Decision-makers are not required to seek public comment or hold hearings.
- During the referral stage, Ministers must seek comments from relevant parties, including local authorities, Treaty settlement entities, and Māori groups, with a strict 10-working-day response window.

- Tight timeframes hinder thorough evaluations by the Council and other stakeholders, compromising their ability to identify potential issues.
- Short timeframes for panel deliberations (25 – 50 working days) and limited public participation opportunities undermine meaningful engagement with affected parties and robust consideration of environmental effects and outcomes.

Tangata Whenua Engagement and Treaty Principles:

- Local iwi and hapu rely on legislative provisions to protect their interests, such as sections 6(e), 7(a), and 8 of the RMA, section 4 of the Conservation Act, section 12 of the EEZ Act, and Te Mana o te Wai in the National Policy Statement for Freshwater Management.
- Bypassing or diluting these provisions affects a key avenue for iwi/hapu to ensure proper assessment of the environmental and cultural effects of large-scale projects in their rohe.
- The development of the Bill raises concerns about potential breaches of Te Tiriti principles, including:
- Limited engagement timeframe and complexity of proposed policy changes hindering meaningful feedback.
- Lack of meaningful engagement with Māori on the Bill, potentially breaching Treaty principles of good faith.
- Listing projects without engaging affected iwi and hapū may breach Crown obligations to protect Māori rights and interests, including Treaty settlements and other agreements.
- The requirement for only one iwi member on the expert panel may not be sufficient when multiple iwi and hapū are concerned.

5. Options analysis – *Ngā Kōwhiringa*

There are two options:

Option 1 (Preferred Option): Council makes a submission on the Bill, subject to any final changes agreed upon by the Mayor and Chief Executive; or

Option 2: Council does not make a submission on the Bill.

It is recommended that the Committee approve Option 1, the matters contained in the Bill have the potential to affect the Whakatāne District, its communities, and our Council organisation.

6. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

6.1. Assessment of Significance

The content and decisions relating to this report are assessed to be of low significance in accordance with Council's Significance and Engagement Policy.

6.2. Engagement and community views

No community engagement is required relating to the matters of this report. Of note, consultation on the Fast-Track Approvals Bill is open to the public and anyone can make a submission.

7. Considerations - *Whai Whakaaro*

7.1. Financial/budget considerations

The recommendations of this report do not have any financial implications.

7.2. Strategic alignment

We have assessed the Bill against the five strategic priorities of Council to help inform the nature and content of our submission. The Bill aligns with only one of our five strategic priorities - Facilitating economic regeneration and responding to development pressures. Aspects of the Bill do not appear to align with our other strategic priorities (Strengthening our relationships with iwi/hapū/whānau; Building climate change and natural hazard resilience including our infrastructure; Shaping a green District; and Enhancing safety, wellbeing, and vibrancy of communities), highlighting the importance of Council making a submission.

7.3. Climate Change Assessment

This report and submission have minor climate change implications. Climate change impacts have been considered as part of the submission.

7.4. Risks

There are no known risks associated with this report or submission.

8. Next steps - *Ahu whakamua*

- Final Draft of the submission will be taken to the Mayor and Chief Executive no later than 17 April 2024.
- Submission and Mayor’s cover letter will be submitted to the Environment Committee on 19 April 2024.

6.4 2022 & 2023 Storm Damage Update

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April 2024**
Author:	**A Reynolds / Manager Transportation**
Authoriser:	**B Gray / GM Infrastructure**
Reference:	**A2641658**

1. Reason for the report - *Te Take mō tēnei rīpoata*

To provide an update to the Infrastructure and Planning Committee, about Council's response to various Storm Events through 2022 and 2023, and to seek retrospective approval for the unbudgeted expenditure related to the storm response.

2. Recommendations - *Tohutohu akiaki*

1. THAT the 2022 & 2023 Storm Damage Update report be received; and
2. THAT the Infrastructure and Planning Committee recommend the Whakatāne District Council to retrospectively approve the unbudgeted expenditure $1,429,432.00 with the local share related to this unbudgeted expenditure being $450,047.00 funded from the Roading Storm Reserves.

3. Background - *He tirohanga whakamuri*

The Whakatāne District Council's Roading network suffered damage from various storm events through June to August 2022, October to Nov 2022 and May 2023.

These storm events resulted in extensive initial response (clearing of slips, trees and response to flooding etc) as well as a number of permanent reinstatement sites (further extensive works to reinstate the road to its level of service prior to the storm event). The permanent reinstatements works involved the following sites for the following storms:

3.1. June to August 2022

- Stanley Road underslip Route Position (RP) 1.89km
- Stanley Road underslip RP6.12km
- Galatea Road underslip RP5.86km
- Herepuru Road underslip RP3.2km

3.2. October to November 2022

- Herepuru Road underslip RP2.99km

3.3. May 2023

- Braemar Road culvert replacement and underslip RP1.6km

Note the May 2023 storm event attributed to the closure of Manawahe Road through the flooded section around RP18km. The initial response to this flooding, including the temporary pumping of floodwaters to reopen the road, formed part of the May 2023 storm initial response. However further investigation of the flooding found that a long-term solution is not covered under the 'Permanent Reinstatement' associated with the storm event, as the initial pumping, reinstated the road to its existing level of service prior to the storm. Any further improvements to the road's resilience against future flood events, is covered under a resilience activity. A separate report covering next steps for the Manawahe Road Flood Site, is also provided to the Infrastructure and Planning Committee as part of the 11 April 2024 Agenda.

3.4. Permanent Reinstatement Progress

All initial response and permanent reinstatement sites from the various 2022 & 2023 storm events are now complete, with the exception of Stanley Road RP6.12 and Braemar Road, which are currently under construction due for completion before the end of this financial year.

4. Issue/subject - *Kaupapa*

As with the majority of Council's Roading expenditure, Waka Kotahi co-fund expenditure related to storm response. Council's local share comes from the Roading Storm Reserves fund, which builds annually and is utilised when storm event costs are incurred. The Waka Kotahi share is additional to the existing approved National Land Transport Fund budgeted amounts. It is funded at the normal Funding Assistance Rate (FAR), currently 63%, for the first 10% of the annual Maintenance, Operations and Renewals (MOR) budget, and at an enhanced FAR of normal +20% (currently 83%) for costs above that within each financial year.

The requirements to obtain Waka Kotahi funding, includes an application to be made for each storm event within 6weeks of the event occurring. As the detailed costs of many storm events are not known at that point in time, estimates for response costs are included in the application.

During the execution of the storm response, a number of unforeseen circumstances were encountered, resulting in higher than estimated costs. Most of this related to extremely high groundwater conditions and the occurrences of underground springs, resulting in extensive increases to the geotechnical input and requirements of the designs.

Now that the majority of works are nearing completion a wash up of storm related costs has been compiled and a resolution sought from the Council to approve the unbudgeted expenditure.

This is set out in the table overleaf. The 2022/23 costs have been included for completeness relating to the total storm event costs. The unbudgeted expenditure requiring approval ($1,429,432) and the local share related to the unbudgeted expenditure ($450,047) are highlighted yellow in the table.

6.4 2022 & 2023 Storm Damage Update(Cont.)

Storm Activity Name	22/23 Costs	FAR 22/23	23/24 Costs	FAR 23/24	WDC approved budget 23/24	Unbudgeted Expenditure Requires Approval	Waka Kotahi Share	Local Share
Jun-Aug 22 Initial Response	436,219	63%						
Jun-Aug 22 Permanent Reinstatement	560,794	63%	1,153,000	63%	630,284	522,716	329,311	193,405
Jun-Aug 22 Special Purpose Roads	83,700	100%						
Oct-Nov 22 Initial Response	554,289	63%						
Oct-Nov 22 Special Purpose Roads	60,706	100%						
Oct-Nov 22 Permanent Reinstatement (normal FAR)	208,575	63%	23,000	63%	-	23,000	14,490	8,510
Oct-Nov 22 Permanent Reinstatement (enhanced FAR)	387,508	83%						
May 23 Initial Response	949,260	83%	433,716	63%	-	433,716	273,241	160,475
May Permanent Reinstatement (normal FAR)	-		55,784	63%		55,784	35,144	20,640
May Permanent Reinstatement (enhanced FAR)			394,216	83%		394,216	327,199	67,017
Total	**3,241,051**		**2,059,716**			**1,429,432**	**979,385**	**450,047**

5. Options analysis - *Ngā Kōwhiringa*

No options have been identified relating to the matters of this report.

6. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

6.1. Assessment of Significance

The decisions and matters of this report are assessed to be of low significance, in accordance with the Council's Significance and Engagement Policy.

6.2. Engagement and community views

Engagement on this matter is not being undertaken in accordance with Section 6.1g of the Council's Significance and Engagement Policy. This states that the Council will not consult when there are no other practicable alternative options to choose from.

7. Considerations - *Whai Whakaaro*

7.1. Financial/budget considerations

The Roading Storm Reserves fund is currently at $446,000 as at 30 June 2023. This will largely cover the $450,047 local share required to fund these recent storm events. This will clear the storm reserves account for the remainder of this financial year. The annual replenishment amount of $210,000 will see this built back up. The replenishment amount is something staff will continue to review during Annual and Long-term Plan development processes to ensure it is keeping up with the demand from storm event occurrences.

As mentioned previously activities across Council manage budgets for storm events individually. It is recommended that consideration across the whole Council for appropriate funding mechanisms to manage response and reinstatement following storm events is undertaken.

7.2. Strategic alignment

No inconsistencies with any of the Council's policies or plans have been identified in relation to this report.

7.3. Climate change assessment

Based on this climate change assessment, the decisions and matters of this report are assessed to have low climate change implications and considerations, in accordance with the Council's Climate Change Principles."

7.4. Risks

There are no known risks associated with the decision of this report.

6.5 Infrastructure and Planning Report - April 2024

	To:	**Infrastructure and Planning Committee**
	Date:	**Thursday, 11 April 2024**
	Author:	**B Gray / General Manager Infrastructure**
	Reference:	**A2635029**

1. Reason for the report - *Te Take mō tēnei rīpoata*

This report updates and informs the Infrastructure and Planning Committee on the implementation of Council's Infrastructure Strategy, capital works programme, operational service delivery and related policy and bylaws.

2. Recommendation/s - *Tohutohu akiaki*

THAT the Infrastructure and Planning Committee receive the Infrastructure and Planning Report – April 2024.

3. Standing Agenda Items

3.1. Capital Project Reporting

3.1.1. Activity update on key projects

The table below highlights key activities completed since the last Infrastructure and Planning Committee meeting, and the proposed activities planned for the next 2-3 months. This table has been pulled from all key capital projects for Three Waters and Transportation with a value of over $250,000.

3.1.2. Table 1: Activity update report for Key Projects (Three Waters & Transport)

Primary	Phase	Department	Activities completed last quarter	Activities planned next quarter	Revised Budget 23_24
Project Type **Key Projects**					
Otumahi Water Storage	Design / Consent	Three Waters	- Let Tender - Finalising design	- Complete design - Initiate onsite works	$5,483,193
SPR341 LC/LR Improv - Structur (SPR Guard rails (Te Whāiti rd / Waikaremoana / Ruatahuna)	Construction	Transport	- Construction - On track	- Complete Construction activities (May 24)	$4,499,358
Hinemoa SW PS Replace	Procurement	Three Waters	- Progressed procurement activities	- Complete procurement activities - Initiate construction, plan to deliver 20% this FY	$4,304,899
Keepa Road Improvements	Planning	Transport	- Planning activities progressed with harbour development alignment meetings.	- Hold alignment workshop - Apr 24 - Re-engage with key stakeholders to confirm approach (May/Jun 24)	$4,023,257
Matata Wastewater Scheme	Planning	Three Waters	- initial planning & concept design - Information to support land acquisition compiled	- Seek support from community for approach - Land acquisition report tabled with council	$3,701,786
WHK SW Pump Replacements	Project Reallocated	Three Waters	Hinemoa Stormwater P S: 2 out of 3 pumps have arrived. Valving and SS pipe on order. Procurement completed, awaiting approval to award. This project will consume approx.90% of budget for this code. Awatapu SWPS: 1200 mm diam. manifold completed. Install planned for March 2024. Rose Gardens : investigations to options underway.	- Hinemoa P S:Commence physical works Awatapu: Complete install of jockey pump and associated pipework. Rose Gardens: Complete design and order pump.	$2,795,500
TCP-SH30 Shaw Rd to Bridge SUP	Deferred/ On Hold	Transport	- Project on hold. New government has changed funding approach. Project added to improvement list.	n/a	$2,599,779
EQ Water Network Renewals	Construction	Three Waters	- Complete package 1 construction (Pōhutukawa) - Awarded Package 3 - In procurement Package 2 - Initiated design Package 4	- Complete construction Package 2 & 3 - Complete procurement Package 4 (Note : Most construction next FY)	$2,522,341
Murupara Treatment Upgrades	Planning	Three Waters	- Engagement with community progressed - Concept design commissioned	- Progress discussions with community / iwi	$2,432,527

Primary	Phase	Department	Activities completed last quarter	Activities planned next quarter	Revised Budget 23_24
LR341 - LRI - Peace Street Dra	Construction	Transport	- Construction - On track	- Complete Construction activities (May 24)	$2,000,000
Apanui Linear Park	Construction	Three Waters	- Construction started	- Complete construction - April 24	$1,956,850
LR341 - LRI - Landing Road RAB	Construction	Transport	- Landscaping / off road activities	- Complete & close out project (May 24)	$1,900,001
LR341 - RTZ - Smith to Walker	Construction	Transport	- Construction - On track	- Complete Construction activities (Apr 24)	$1,900,000
SPR216 Bridge Renewals (Ruatahuna Rd bridge 164 replacement)	Construction	Transport	- Finalised design - Progressing temporary works (in advance of bridge replacement)	- Complete temporary works - Complete design peer review - Initiate construction (75-80% to be completed this FY)	$1,758,273
Plains W Backflow Preventors	Procurement	Three Waters	- Gathering feedback on policy document from public - Initiated procurement	- Complete procurement - Start construction (Plan to complete 30-40% this FY, remainder in next FY)	$1,274,153
Whakatane WWTP Upgrade	Procurement	Three Waters	- Aerators purchased - Compile list of critical spares	- Install Aerators	$1,157,287
OtumahiW StoragePipeL Rd WMain	Procurement	Three Waters	- Finalising procurement activities	- Complete procurement activities & pipe delivered	$1,000,000

Primary	Phase	Department	Activities completed last quarter	Activities planned next quarter	Revised Budget 23_24
Project Type **Other Significant Projects (Over $250k)**					
LR212 Resurfacing-Chipseal	Construction	Transport	- Construction - On track	- Complete Construction activities (Apr 24)	$2,620,000
LR214 Pavement Rehab	Construction	Transport	- Construction - On track	- Complete Construction activities (Apr 24)	$1,285,284
NFA Seal Extensions (Seal Extensions - Year 2 (Matata causeway / end of Hallet Road))	Close out	Transport	- Construction activities completed - 1 month early - Seal extensions Year 3 - all complete in Feb 24, under budget. 2 additional sites completed using budget available (Opurana / Rangi Road)	- Close out project (Apr / May 24)	$1,111,917
BOF - Edge to Thorn Cycle Trail	Design / Consent	Transport	- Agreed approach - Section 1 - Progressing design - Section 1	- Finalise design - Complete procurement - Initiate construction ($100k this FY)	$898,110
EQ Sewer Network Renewals	Construction	Three Waters	- Construction started	- Completed majority of construction - end Jun 24, minor works in Jul 24	$882,401
WHK SW - Pipe Upgrades	Design / Consent	Three Waters	- Feasibility of options assessed	- Finalise design & initiate construction (plan to complete 60-70% in this FY)	$881,744
WHK W Backflow Preventors	Project Reallocated	Three Waters			$689,520
Ruatoki New Water source	Planning	Three Waters	- Engaged maori trust for land access & initiated discussions	- Complete negotiations with Maori trust - gain access to land	$655,005
LR212 Resurfacing- AC	Construction	Transport	- Construction - On track	- Complete Construction activities (Apr 24)	$640,602
Large Stanley Road 6.6 Reinstatement	Construction	Transport	- Construction - On track	- Complete Construction activities (Apr 24)	$630,284
TCP-Whk Riv Awatapu-CutllerSUP	Deferred/ On Hold	Transport	- Project on hold. New government has changed funding approach. Project added to improvement list.	n/a	$599,949
Ferry Road WW Rising main replacement	Procurement	Three Waters	- Additional budget sought to complete procurement - Procurement completed (Mar 24)	- Works commencing April, completion June 2024	$579,887
WHK WW Discharge Resource Consent	Not Started	Three Waters	- Continue high level discussions with Ngati Awa	- Continue high level discussions with Ngati Awa	$391,370
OHOPE SW - Upgrades	Procurement	Three Waters	- Options analysis received from contractor	- Confirm agreed option / scope - Progress & complete emergency works	$311,978
Muru WW Discharge Resource Consents	Not Started	Three Waters	- Progress discussions with Ngāti manawa	- Progress discussions with Ngāti manawa	$264,849

3.1.3. All Projects – RAG (Red/Amber/Green) Status

For each capital project that is being delivered through the Transportation or Three Waters teams, we have assessed each project to understand the status of the following key components of the project:

- Project scope
- Schedule
- Finances
- Risk

An assessment was carried out to determine the status of key components of successful project delivery and a Red / Amber / Green status was assigned. This review is carried out monthly and updated monthly by activity managers and the General Manager as appropriate.

The Red / Amber / Green assessment uses the following criteria:

Red	**Significant issues / No plan in place**
Amber	Significant issues – plan in place to address, or Moderate issues which are manageable
Green	No issues / Clear plan in place

Section 3.3 of this report highlights proposed plans for all 'Red' flagged items. The RAG Status table (all capital projects for Three Waters) below contains details of RAG status for all capital projects not already covered / discussed within the report to provide overall visibility of how each project is tracking.

3.1.4. Exceptions Report – Red Flags

As highlighted through the RAG Status report, there are some projects which require additional focus in order to get the projects back on track for successful delivery. Table 2 (below) contains details of the proposed 'Go to Green' plans for all red flags identified.

3.1.5. Table 2: Exceptions Report (Red Flag Status), including proposed 'Go to Green' plan

Primary	Department	Phase	Revised Budget 23_24	Scope	Schedule	Finance	Risk	Go to Green Plan : GM Report
Murupara Treatment Upgrades	Three Waters	Planning	$2,432,527	Red	Red	Amber	Red	Finalise design & gain agreement from iwi (Jun 24)
Ruatoki New Water source	Three Waters	Planning	$655,005	Amber	Red	Red	Red	- Seeking legal advice (April 24) - Progress negotiations with Maori trust - gain access to land (TBC)
Keepa Road Improvements	Transport	Planning	$4,023,257	Green	Red	Green	Amber	Wider alignment session council aligned projects (Apr 24). Once this is complete - Need to re-engage & confirm - this FY, then move into design (6-9months)
TCP-SH30 Shaw Rd to Bridge SUP	Transport	Deferred/ On Hold	$2,599,779	Green	Red	Green	Red	None - project on hold. New government has changed funding approach.
TCP-Whk Riv Awatapu-CutllerSUP	Transport	Deferred/ On Hold	$599,949	Green	Red	Green	Red	None - project on hold. New government has changed funding approach.

3.1.6. Completed Projects / Close out Projects

See below for a list of completed projects, this shows progress of completed projects through the year, and contains (where relevant) commentary around learnings, which need to be considered for future projects.

Primary	Phase
Department **Airport**	
Runway Renewals	Complete
Department **Port and Harbour**	
Wairaka Park Harbour Improveme	Complete
Department **Three Waters**	
EQ Water Tele/Scada Monitoring Equipment	Complete
Whaktane Water Treatment plant upgrade	Complete
Whk Cond & Improv - Reservoirs	Complete
Taneatua WTP Access Track	Complete
Edge SW - Stormwater Study	Complete
Te Mahoe SewageTreatment Plant - Expenditure & Income	Complete
MURU WW Oxidation Pond Fencing	Complete
3WR30 WHK W Renew/Upgrades - Matata WTP-Awakaponga Upgrade. 2023-24 project	Complete
Department **Transport**	
Galatea Road Reinstatement	Complete
Nov 22 Herepuru Permanent Rein	Complete
LR341 - LRI - Matahi Road Drai	Complete
LR341 LC/LR Kohi PT Rd SS Extn	Complete
LR341 - W&C - College Road	Complete
LR341 - W&C - Salonika/Crete/G	Complete
LR341 - RTZ - Speed Management	Complete
SPR341 LC/LR Walk & Cycle Imp	Complete

3.1.7. RAG Status (All Capital projects for 3 Waters & Transport)

Primary	Phase	Scope	Schedule	Finance	Risk	Revised Budget 23_24
Department **Three Waters**						
Otumahi Water Storage	Design / Consent	Green	Green	Amber	Green	$5,483,193
Hinemoa SW PS Replace	Procurement	Green	Amber	Amber	Amber	$4,304,899
Matata Wastewater Scheme	Planning	Green	Green	Amber	Amber	$3,701,786
EQ Water Network Renewals	Construction	Green	Amber	Amber	Amber	$2,522,341
Apanui Linear Park	Construction	Green	Green	Green	Green	$1,956,850
Plains W Backflow Preventors	Procurement	Green	Amber	Amber	Amber	$1,274,153
Whakatane WWTP Upgrade	Procurement	Amber	Amber	Amber	Green	$1,157,287
OtumahiW StoragePipeL Rd WMain	Procurement	Green	Green	Green	Green	$1,000,000
EQ Sewer Network Renewals	Construction	Green	Green	Amber	Green	$882,401
WHK SW - Pipe Upgrades	Design / Consent	Amber	Amber	Amber	Amber	$881,744
Ferry Road WW Rising main replacement	Procurement	Green	Green	Green	Amber	$579,887
WHK WW Discharge Resource Consent	Planning	Green	Amber	Amber	Amber	$391,370
OHOPE SW - Upgrades	Procurement	Amber	Amber	Amber	Amber	$311,978
Muru WW Discharge Resource Consents	Planning	Green	Green	Green	Green	$264,849
3WR1 Headworks - Otumahi 2nd	Construction	Green	Green	Green	Amber	$247,692
Equalised W PS renewals	Planning	Amber	Amber	Amber	Amber	$229,231
Matata water meters	Construction	Green	Amber	Amber	Amber	$208,330
WHK W model & install calib - Capital expenditure	Design / Consent	Green	Amber	Amber	Green	$117,411
Tane WW Dischrg Rsrce Consents	Planning	Green	Amber	Amber	Amber	$111,820
WW Model Network Updates	Planning	Green	Green	Green	Green	$82,835
Taneatua Comprehensive SW Consent and Upgrades	Planning	Green	Green	Green	Green	$72,683
Muru WW monitor renewal RC	Construction	Green	Green	Green	Green	$27,955
TANE WW monitor renewal RC	Construction	Green	Green	Green	Green	$16,773
EQ Water WTP Minor Equip Renewals	Construction	Green	Green	Green	Green	$16,773
EDG WW - Monitor WW discharge	Construction	Green	Green	Green	Green	$16,773
Muru WW Asset cond & pipe samp	Construction	Green	Green	Green	Green	$10,290
Department **Transport**						
SPR341 LC/LR Improv - Structur (SPR Guard rails (Te Whāiti rd / Waikaremoana / Ruatahuna)	Construction	Green	Green	Green	Green	$4,499,358
LR212 Resurfacing-Chipseal	Construction	Green	Green	Green	Green	$2,620,000
LR341 - LRI - Peace Street Dra	Construction	Green	Green	Green	Green	$2,000,000
LR341 - LRI - Landing Road RAB	Construction	Green	Green	Green	Green	$1,900,001
LR341 - RTZ - Smith to Walker	Construction	Green	Green	Green	Green	$1,900,000
SPR216 Bridge Renewals (Ruatahuna Rd bridge 164 replacement)	Construction	Green	Amber	Green	Amber	$1,758,273
LR214 Pavement Rehab	Construction	Green	Green	Green	Green	$1,285,284
NFA Seal Extensions (Seal Extensions - Year 2 (Matata causeway / end of Hallet Road))	Close out	Green	Green	Green	Green	$1,111,917
BOF - Edge to Thorn Cycle Trail	Design / Consent	Green	Green	Green	Amber	$898,110
LR212 Resurfacing- AC	Construction	Green	Green	Green	Green	$640,602
Large Stanley Road 6.6 Reinstatement	Construction	Green	Green	Green	Green	$630,284

4. Inter-council waste collaboration

Whakatāne, Tauranga, Western Bay, Rotorua, Ōpōtiki and Kawerau councils are involved in a project looking at regional waste infrastructure and future possibilities for collaboration. The steering group includes WDC, Tauranga and Western Bay.

A Bay of Plenty Waste Infrastructure review is currently being undertaken by Eunomia Consultants. The project group will then look for regional opportunities to change and create new infrastructure that can service the whole region while optimising operations.

On 3rd April Solid Waste Team members attended the Central North Island Waste Liaison Group (CNIWLG) hui. The hui is an opportunity for all Bay of Plenty, Waikato and Taranaki councils to share experiences and knowledge in the solid waste arena and work collaboratively on waste projects. Discussions included litter bin strategies, flytipping, and Central Government waste related legislation.

A workshop was undertaken to explore the opportunity of a Regional Waste Strategy for the whole area. Further work is needed but the strategy will probably look at waste streams and flows of materials across the region and planning an optimised network (Hub and Spoke model) that could serve all Councils and optimise operations. Such a strategy would tie-in with the proposed central government Waste Strategy Activity and Investment Plans.

The hui finished off with a visit to a local building site to on-site waste minimisation in action.

Recycling stations at a Livingstone Building site:

Initial discussions have been held on the possibility of a new organics processing plant situated alongside the proposed Matatā Wastewater Treatment Plant. This plant could serve the wider region and possibly process, greenwaste, foodwaste and biosolids. Further discussions will take place after the current waste infrastructure review and proposed regional strategy are complete. There are a number of options for the development of such a site including joint ventures with other councils and industry. Should the project be considered further it is proposed that a business case take place to look at all the options available.

5. Kerbside Foodwaste Collections

We have included three options for kerbside foodwaste collections in the LTP consultation process. Since starting this process, we have received clarification from central government that kerbside foodwaste collections are not actually mandated.

Despite information available on the Ministry for the Environment's (MfE) website that kerbside foodwaste collections will be provided by territorial authorities (TA's) by certain dates, a guidance document issued to TA's from MfE that states how council must make the changes and other previous communications stating the same, central government have advised that 'while these changes are in policy, they are not legislated or mandated'.

In effect this now means that there is another option in relation to the introduction of kerbside foodwaste collections, that is, to do nothing. There is currently no indication on whether the new government will mandate the collections.

6. Tirohia Landfill

Council's general refuse is transported to Tirohia Landfill in the Waikato. This landfill is currently nearing its capacity and the operators applied for consents to create a new cell and expand the landfill. The application was previously declined and an appeal was lodged to the Environment Court. This appeal has been dismissed by the Environment Court meaning that the landfill will not be expanded and could stop accepting waste in the near future.

Council has arrangements in current contracts that the general waste can be sent to another landfill but it is expected that will significantly increase transport costs, possibly to the tune of and extra $400,000 per annum based on current tonnages.

7. Airport Master Plan

Public consultation on the Draft Whakatāne Airport Master Plan is now to be undertaken separately from the wider Council Long Term Plan public consultation process. The specific consultation on the Draft Airport Master Plan is expected to be undertaken over the coming months. We continue to work closely with our partners, Taiwhakaea for their input into the document and planning process.

8. Airport Users Group

An Airport Users Group meeting was held 21 March 2024. Agenda items covered:

- Aerodrome Safety and Operations Updates
- Report From Working Group
- Airspace Discussion
- Airport Master Plan Update
- Fees and Charges
- General Business

Fees and Charges were discussed and generally accepted by the group. Formal submissions are to be made as part of the Long Term Plan submissions process.

Final recommendation will be presented to council followed by submission to the Minister of Transport before final adoption.

9. Ports Operational Plan Update

The Ports Operational Plan is also now to be undertaken separately from the wider Council Long Term Plan public consultation process. The specific consultation on the Draft Ports Operational Plan is expected to be undertaken over the coming months. This will also involve thorough consultation with our partners (Hapū), harbour users and other relevant stakeholders.

10. Shapley Place/Commerce St intersection

Following the discussions and resolution made at the 15 February 2024 Infrastructure and Planning Committee meeting, Council's Transport staff have been gathering further information to inform the engagement with business owners near the Commerce St/Shapley Place intersection. This includes information about the recorded crash history at this intersection and parking demand survey data. This information will be provided to businesses in the coming month with an opportunity for them to provide feedback on the proposal. Following this engagement an update will be provided at the next Infrastructure and Planning Committee meeting.

11. Three Waters Reform – Local Water Done Well

With the new Government comes a new direction and their focus on a local water done well plan. They are wanting to ensure the drinking water, storm water and waste water remain in local control. We are working through and understanding what this means for us and assessing the opportunities in collaboration with other Councils so will keep you informed as things progress.

12. Apanui Linear Park

The current Peace Street stormwater and safety upgrade project occurring on Peace Street has had some delays to this project with the project being completed in three stages and relying on many different moving parts. Delays have been due to aligning the timing of relocating existing services, additional soil testing of Peace Street Park, and the requirement for development of a site management plan.

We are expecting both the north and south portions of the park to be largely completed, by Friday, 19 April 2024 (weather dependant). After this date some remaining footpath and boardwalk works and planting of natives will be completed.

13. Natures Road Update

Whakatāne District Council have been engaging with Ngāi Tūhoe around the operation of State Highway 38 Natures Road project. Within the State Highway, there are several special purpose roads that the friendship can improve for the future of Te Uruwera.

Through this friendship, we go about the development of capability within the communities along State Highway 38, as this has been critical for the future requirements of infrastructure within Te Uruwera.

6.6 Matatā Wastewater Project Update April 2024

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April 2024**
Author:	**J Joyce / Matatā Wastewater Project Manager**
Authoriser:	**D Bewley / GM Development and Environment Services**
Reference:	**A2635951**

1. Reason for the report - *Te Take mō tēnei rīpoata*

The purpose of this report is to update the Infrastructure and Planning Committee on the Matatā Wastewater Project. A supplementary presentation will be given by Dr. Mark James, Aquatic Ecologist, to update the Infrastructure and Planning Committee on the results of the Environmental Monitoring Programme.

2. Executive summary - *Whakarāpopototanga*

Matatā currently does not have a reticulated wastewater scheme, which means that individual landowners are reliant on their existing on-site septic tank system arrangements. Monitoring has detected elevated levels of faecal indicator bacteria and nutrients, particularly downstream of Matatā. The likely sources of contamination are the septic tanks within Matatā, which are posing risks to public health and contributing to environmental degradation and poor water quality.

Several significant consequences will persist in the absence of an appropriate wastewater treatment and disposal solution in Matatā. These include environmental and public health risks, as well as the potential for homes to fail to meet relevant standards, potentially rendering them uninhabitable. Both the Bay of Plenty Regional Council and Toi Te Ora Public Health have identified key concerns and expectations for mitigation regarding the environmental and public health impacts of the current situation.

The Council has committed to a project for a wastewater solution for Matatā as a matter of priority, implementing the solution as soon as practicably feasible, recognising community, legislative and funding requirements.

3. Recommendation - *Tohutohu akiaki*

1. **THAT** the Matatā Wastewater Project Update April 2024 report be received; and
2. **THAT** the Infrastructure and Planning Committee note a formal report will be coming to a future meeting of the Infrastructure and Planning Committee to seek direction and endorsement on the preferred locations and reticulation system for the Matatā Wastewater Project.

4. Co-Design and Project Partnership Approach

The Co-Design Group meet on a monthly basis throughout the project as well as being involved in any technical planning days. The previous co-design huis were held on Monday, 26 February and 25 March 2024. The next co-design hui is scheduled for 29 April 2024.

The Co-Design Group includes representatives from the Council, Ngāti Awa hapū, Te Mana o Ngāti Rangitihi Trust and Ngāti Tūwharetoa (BOP) Settlement Trust.

It has also been agreed that the Bay of Plenty Regional Council and Toi Te Ora Public Health will support and offer public health and environmental protection advice to the Co-Design Group.

4.1. Te Niaotanga ō Mataatua ō Te Arawa Co-Design Group report to Council

In the first half of this year, the Te Niaotanga ō Mataatua ō Te Arawa Co-Design Group will formally report to Council on the Matatā Wastewater Project, to seek direction and endorsement on key decisions including the preferred locations for treatment and disposal and the preferred reticulation system, to inform the resource consent application process.

5. Phase 3

The key workstreams underway in Phase 3 include:

1. Cultural Narrative	Development of a cultural narrative and technical advice, working collaboratively with Matatā iwi and hapū representatives to inform all other technical workstreams. This will include areas, sites and stories of significance, desired outcomes and community benefits, and land development aspirations.
2. Environmental Monitoring Programme	Develop a consistent and robust set of data and information on the current environment and environmental effects in Matatā to support decisions on the Matatā Wastewater Project.
3. Wastewater System Options Analysis	Determine and analyse appropriate wastewater collection system design options for Matatā, including recommendation of preferred option.
4. Land Analysis Review	Identify the preferred site(s) for the treatment and disposal of wastewater for inclusion in the resource consent application.
5. Resource Consent Application	Develop resource consent application including an AEE that is approved and submitted.

5.1. Environmental Monitoring

Dr. Mark James, an Aquatic Ecologist, will deliver an additional presentation to the Infrastructure and Planning Committee, providing updates on the findings of the Environmental Monitoring Programme. A summary is provided below.

The project's environmental monitoring programme continues with monthly monitoring of both surface and groundwater, along with annual monitoring of macroinvertebrates, habitats, and fish at selected sites.

Monitoring results show consistently elevated levels of nutrients and the presence of faecal indicator bacteria downstream of the township in streams and shallow groundwater. This is observed both where groundwater emerges through seeps and where it is measured below the surface. Furthermore, human faecal sources have been detected at all stream sites downstream of the Matatā township on at least two occasions.

In December 2023, additional sampling was conducted at locations where groundwater emerges at the surface via seeps within the township. The objective of this monitoring was to assess water quality, including indicators of faecal contamination and nutrients, in shallow groundwater. The results revealed significantly higher levels of faecal indicator bacteria (E. coli, faecal coliform) and nutrients compared to what has been measured in deeper groundwater monitoring bores. This observation suggested the presence of effluent in shallow groundwater and/or its movement through preferential flow paths rather than fully percolating into the ground.

To further investigate this, five shallow bores were installed via hand auger in late January 2024 at depths ranging between three and five metres. The initial round of monitoring in two of these bores revealed exceptionally high levels of nitrogen and phosphorus, consistent with wastewater levels. As a result, the monitoring frequency for these bores has been increased to fortnightly to gather as much data as possible. This additional information will be incorporated into the ongoing environmental monitoring programme. Soil samples were also taken at the time of bore installation and will enable a better understanding of soil types within Matatā and a subsequent update to the groundwater conceptual model.

Additional monitoring is also underway on the land sites identified as possibly being suitable for disposal and/or treatment.

5.2. Treatment Plant and Land Disposal Site Update

Discussions with landowners are progressing well with the currently identified properties for a possible land disposal site and location for a wastewater treatment plant (WWTP).

6. Project Progress

The following table summarises the current project steps and progress to date on identified actions:

Task	Progress / Recent Actions Taken	Status
Co-Design Partnership Approach (Iwi and Council)	• Co-Design Group huis held monthly. • Co-Design Group hui 27 November 2023. • Next Co-Design Group hui is scheduled for 26 February 2024.	
Project Phase 1: **Project Set Up**	• Phase 1 complete.	
Project Phase 2: **Review Information and Identify Gaps**	• Phase 2 complete. • Involved completion of two desk top review processes to review relevant past information and data to inform future project phases. The two desk top reviews included 1. Technical engineering and 2. Environmental science perspectives.	
Procure required skillsets and advice	• Specialist skills procured to support the technical project team. These include cultural expertise, technical engineering, environmental science, invertebrate/ecological monitoring and hydrology and groundwater.	
Partner project teams	• Council staff send regular updates to the Bay of Plenty Regional Council, Toi Te Ora Public Health, and the Ministry of Health on project progress. These agencies give both strategic and/or financial support to the project. • Council staff meet regularly with officers from the compliance and environmental planning team(s) at the BoP Regional Council to share project progress and ensure alignment of processes and legislative requirements.	
Communications and Engagement Programme	• Communications and engagement programme continuing with a mix of written material and community engagement opportunities.	
Project Phase 3: Options Analysis and Resource Consent Application		
Cultural Narrative workstream	• Development of a Cultural Narrative Report to support and inform project workstreams and partnerships. • This is consistently updated through the Project, based on multiple iwi/hapū representative hui and co-design and technical team hui.	
Environmental Monitoring Programme workstream	• Surface water monitoring undertaken for over 24 months. • Groundwater monitoring undertaken for over 18 months.	

	• In January 2024, five additional shallow bores were installed and monitored commenced in February. • Additional monitoring has commenced at potential locations for disposal and treatment.	
Wastewater System Options workstream **Land Analysis Review workstream**	• Testing is ongoing at the currently identified possible sites for land disposal, and the treatment plant. Discussions with landowners are underway and ongoing.	
Resource Consent Application	• This will follow and be informed by the other Phase 3 workstreams.	
Project Phase 4: Resource Consent Approval Process		
	• This will follow and be informed by completion of Phase 3.	
Project Phase 5: Finalise for Detailed Design and Construction		
	• This will follow and be informed by completion of Phase 4.	

7. Future Growth Planning

The Eastern Bay of Plenty is experiencing consistent annual population and economic growth and requires an integrated spatial plan to support and guide future planning and investment decisions.

The sub-region's challenging natural geography, increasing demand on housing (including affordability and suitability of housing stock), increasing demand on existing infrastructure, and further development of economically important industries, are all key challenges that require integrated management and partner led solutions.

The Whakatāne District Council has committed to working with its partners to develop an Eastern Bay of Plenty Spatial Plan. Neighbouring communities (Rotorua and the Western Bay of Plenty) have also undertaken significant spatial planning work that has implications for the Eastern Bay of Plenty.

7.1. Matatā Area

Matatā is within a part of the Whakatāne District where higher growth demand exists, and it is important that planning for any future wastewater solution is future proofed so that it could support additional growth if required.

Technical work to develop and determine possible future growth areas has commenced, which aligns well with the Phase 3 workstreams for the Matatā Wastewater Project. The progress of the Matatā Wastewater Project and ultimate capacity of the scheme will be an important determinant in how much growth occurs at Matatā.

8. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

8.1. Assessment of Significance

The decisions and matters of this report are assessed to be of high significance, in accordance with Council's Significance and Engagement Policy.

The following criteria are of particular relevance in determining the level of significance.

- **Level of community interest:** the expected level of community interest, opposition or controversy involved.
- **Level of impact on current and future wellbeing:** the expected level of adverse impact on the current and future wellbeing of our communities or District.
- **Rating impact:** the expected costs to the community, or sectors within the community, in terms of rates.
- **Financial impact:** the expected financial impact on Council, including on budgets, reserves, debt levels, overall rates, and limits within the Council's Financial Strategy.
- **Consistency:** the extent to which a proposal or decision is consistent with the Council's strategic direction, policies and significant decisions already made.
- **Reversibility:** the expected level of difficulty to reverse the proposal or decision, once committed to.
- **Impact on Māori:** the expected level of impact on Māori, taking into account the relationship of Māori and their culture and traditions with their ancestral land, water, sites, wāhi tapu, valued flora and fauna, and other taonga.
- **Impact on levels of service:** the expected degree to which the Council's levels of service will be impacted.
- **Impact on strategic assets:** the expected impact on the performance or intended performance of Council's Strategic Assets, for the purpose for which they are held.

8.2. Engagement and community views

A communications and engagement programme and scheduled is being continually updated with the Co-Design Group.

The project team attended the Awakaponga Market on 24 March 2024 as part of the draft LTP consultation which was a positive evening of discussions.

Further community engagement will occur as preferred sites are agreed. This engagement could include additional information, meetings, and marae hui.

The Mātata Wastewater Project website pages have been updated with all current information.

Ongoing Matatā Matters (newsletters) are regularly developed and distributed to the community and through the co-design iwi representative channels. We also continue to update the community through the Matatā Residents Association meetings.

9. Considerations - *Whai Whakaaro*

9.1. Financial/budget considerations

Project costs are being funded out of the budget for the Matatā Wastewater Project and are included in the 2021-31 Long Term Plan (LTP) and the draft 2024-34 LTP.

9.2. Strategic alignment

Providing a wastewater solution for the Matatā Community has been identified as a key strategic project for Council.

No inconsistencies with any of the Council's policies or plans have been identified in relation to this report.

9.3. Climate change assessment

The matters in this report are assessed to have low climate change implications and considerations, in accordance with the Council's Climate Change Principles.

9.4. Risks

The Matatā Wastewater Project cost has been estimated by Council staff based on a stand-alone wastewater treatment plant discharging to land. Cost estimates will continue to be refined as options are developed.

At this stage, a key risk is obtaining the necessary resource consents. The most effective way of mitigating that risk is through the co-design and partnership approach process with iwi and hapū that is being implemented as part of this project.

10. Next steps - *Ahu whakamua*

Continue to support the Co-Design Group on the collaborative co-design approach for the Matatā Wastewater Project, including the upcoming Co-Design Group hui on 29 April 2024.

Key focus is to work with the Co-Design Group, landowners and Council to formally agree preferred sites for the treatment plant and disposal.

Continue work on the Phase 3 workstreams including preparing for a formal report to come to Council on the preferred locations and reticulation system for treatment and disposal.

Continue monthly environmental monitoring of both surface and groundwater.

Continue wider community engagement, in partnership with the Co-Design Group.

6.7 Building Resilience – Manawahe Road Flooding

To:	**Infrastructure and Planning Standing Committee**
Date:	**Thursday, 11 April 2024**
Author:	**J Farrell / Manager Strategic Projects**
Authoriser:	**B Gray / General Manager Infrastructure**
Reference:	**A2642523**

1. Reason for the report - *Te Take mō tēnei rīpoata*

To outline an adaptive approach to managing the impact of flooding to the section of road between 1825 and 1864 Manawahe Road and to seek approval from the Committee to undertake the Manawahe flood resilience work, i.e. install the necessary flood management infrastructure and put in place the legal instruments necessary to provide certainty of process.

2. Executive summary – *Whakarāpopototanga*

The Manawahe area experienced significant rainfall during 2022-2023.

The rainfall caused significant localised flooding.

The flooding, which resulted in total loss settlements being paid out for two dwellings, an inability to access several properties, business interruption, and road closure, is due to the flooded area being a ponding basin with no natural drainage outlet.

Road closure impacted the wider community who use Manawahe Road to reach SH30 at Lake Rotomā.

The recurrence interval for the rainfall has been estimated at 1 in 46 years or 2.2% AEP and climate change rainfall forecasts are for future rainfall patterns to match historical patterns.

Affected residents sought Council support to manage the flooding. The Council responded with a range of initiatives that included emergency pumping to open the road through to long-term optioneering.

Emergency pumping reopened the road after two weeks. If the pumping option had not been available, the road would have remained closed for several months.

Five long-term options were investigated.

Due to a combination of the moderate recurrence interval of the flooding which is predicted to remain significantly unchanged in the future, and cost, the preferred option (Option 1) is to install a minimum amount of permanent infrastructure and formalise legal agreements with affected landowners to discharge pumped water onto their land when required.

This option provides certainty of process in the event of future flooding from a medium return period event for a small financial outlay.

Although the project has no allocated budget, the project can be funded through the Council's existing roading budget.

3. Recommendations - *Tohutohu akiaki*

1. THAT the Building Resilience – Manawahe Road Flooding report be received; and
2. THAT the Infrastructure and Planning Committee approves the Manawahe Road flood resilience project due to the prolonged period of road closure should flooding recur, the support of current landowners, and the need to provide certainty to both Manawahe residents and Manawahe Road users; and
3. THAT the Infrastructure and Planning Committee notes this project increases the resilience of the Manawahe Road asset to future flood events.

4. Background - *He tirohanga whakamuri*

4.1. The Flooding Events

In the latter half of 2022 through to the end of 2023, properties between 1757 and 1849 Manawahe Road sustained continuous flooding for many months. The flooding covered an area that exceeded six hectares and resulted in one lane of Manawahe Road being closed for 3 weeks in February 2023 and fully closed between 12 May 2023 through to 12 June 2023 due to floodwater rising above the surface of the road to a depth of 500mm making the road unsafe for use. A map of the area affected by the flooding is provided in Figure 1.

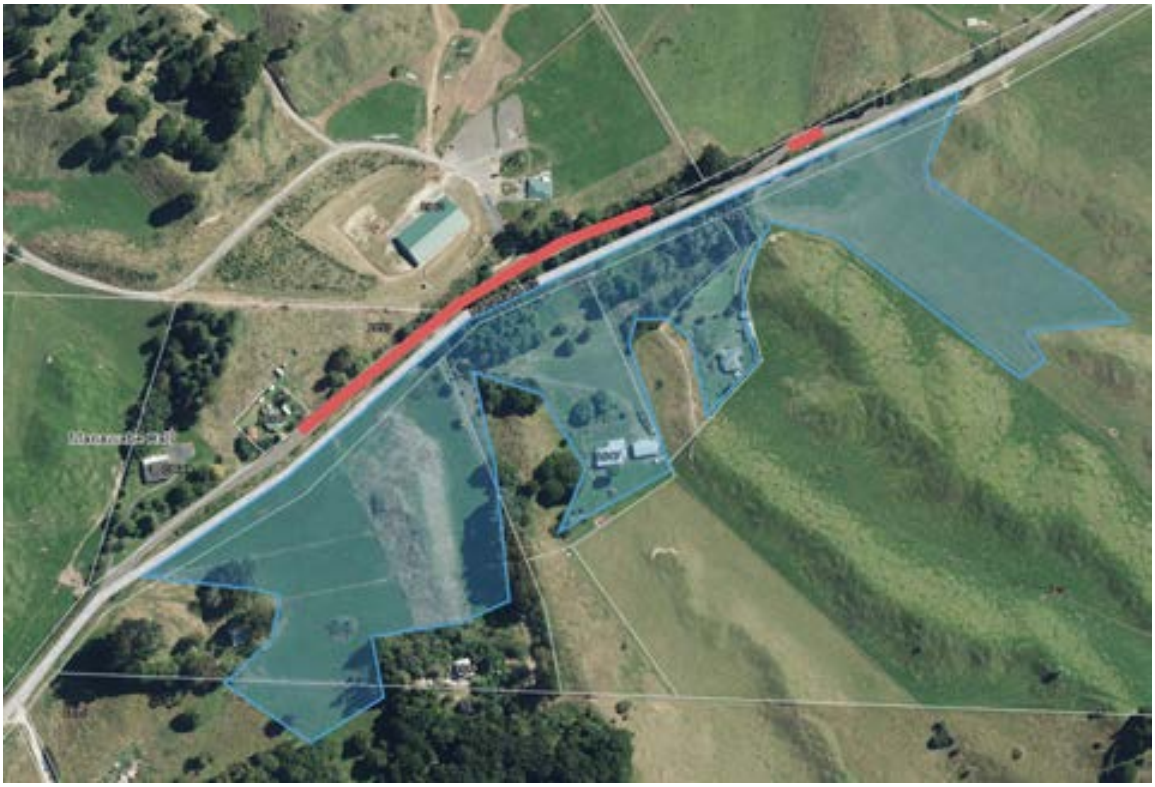


Figure 1 Area of flooding. The red lines depict the sections of Manawahe Road that needed to be closed. The short line is the location of the one lane closure in February and the longer line relates to the full road closure in June.

Inundation of the private properties lasted from October 2022 through to October 2023 with the following consequences:

- Houses, buildings, wastewater and potable water systems were inundated with floodwater up to a depth of 0.5m;
- No vehicle access to the properties was possible due to the depth of floodwater (in excess of 2.0m for two properties);
- Areas of productive pasture continuously flooded for months; and
- Full road closure had an adverse impact on business activities both due to the inability of vehicles to access properties to move product to market.

Examples of the impacts of the flooding are provided in Figure 2.

Figure 2. Flooding of farmland, dwellings and entrance ways to 1757, 1825 and 1847 Manawahe Road between October 2022 and October 2023.

The Council became actively involved in January 2023 when the efforts by affected property owners were overwhelmed and the level of floodwater threatened to inundate houses. The Council's involvement consisted of:

- Supporting property owners through investigating solution options;

- Negotiating preferred solutions with adjoining landowners;
- Arranging for the provision of pumps and coordinating and overseeing the work;
- Project management;
- Providing a range of concept solutions for property owners to consider;
- Overseeing drilling of bore holes to investigate on-site drainage viability;
- Supporting landowners in negotiations with their insurers; and,
- Keeping the Manawahe community and road users informed.

During this period, four pumps were installed and in excess of 500,000 m^3 of floodwater were pumped over farm pasture to a free draining catchment via the internal farm drainage network.

In June 2023, when the level of the flooding overtopped the road, Council's role as a roading asset manager came into play. This required:

- A determination to be made on what depth of flooding was unsafe for users;
- Closure of the road for seven days once that depth of flooding was exceeded;
- Improvements to McIvor Road to accommodate increased traffic usage;
- Investigating and implementing a short-term solution to reopen the road. This involved installing a pipe across the road and, with landowners' consents, pumping the flood water onto pasture on one farm before draining to a farm drainage system on the neighbouring property and from there into an open waterway; and
- Investigating a long-term solution to ensure the road is a resilient roading asset.

Manawahe Road has an average daily traffic count range of between 160 and 170 vehicles, 13% of which are heavy vehicles, and closure of the road caused significant disruption to road users.

4.2. The Flood Hazard

The area defined by the blue polygon in Figure 1 is a ponding basin. It is the lowest point in a 123 hectare catchment, and similar to nearby Lake Rotomā which has also experienced elevated lake levels during the same period, has no natural drainage outlet. In most years, the ponding basin forms a small wetland in the front of 1825 and 1847 Manawahe Road. The 1998 resource consent application to create the two land parcels identified the wetland and specific house sites elevated well-above known flood levels were proposed to avoid any flood hazard.

The average annual rainfall for the Manawahe area is 2.1m which generally drains away naturally with de minimus effects. Rainfall for the 2022-2023 period, however, was exceptional with 3.3m of rainfall falling over a nine month period including 2.3m of rainfall in six months. This amount of rain saturated the catchment diminishing the natural absorption capability of the soil resulting in water sheeting across the surface of the catchment during even moderate rainfall events. In these circumstances, surface water makes its way rapidly to the lowest point in the catchment causing the wetland at 1825 and 1847 to increase in area and expand into adjoining properties. With no natural drainage outlet combined with saturated ground conditions, natural means of reducing water levels is reliant on evaporation. When the flooded area is six hectares and involves a well-trafficked public road, this becomes problematic for the community.

Local knowledge indicated the last time this section of the road overtopped with floodwaters was in 1972. This is reinforced by rainfall data from 1972. The data also identified two other times (1979 and 2011) when the amount of rainfall came within 5% of the 1972 and 2022-2023 rainfall amounts

but houses were not flooded and nor did flooding overtop the road. Using 95 years of available local rainfall data, a probabilistic annual return period for the 2022-2023 event is 1 in 46 years (2.2% annual exceedance probability (AEP)) or 1 in 23 years (4.3%AEP) if a precautionary approach was applied and the 1979 and 2011 events were included.

To round out the flood hazard commentary, climate change predictions for the Bay of Plenty are for more frequent high intensity rainfall events but minimal overall change to annual rainfallf1. As the flooding is caused by prolonged rainfall rather than high intensity short duration rainfall, this infers the likelihood or frequency of the flooding is unlikely to alter significantly in the future.

5. Issue – Kaupapa

An initial assessment of this project against the Council's new roading project prioritisation framework resulted in the project sitting just outside of this year's priority roading resilience projects. However, the assessment criteria do not provide for a situation where floodwaters could close the road for many months or circumstances where current landowner support to implement a solution may not exist in the future resulting in the preferred option not being available when required.

Recognising that a risk prioritisation framework cannot cover every nuanced possibility, it is recommended that, in this instance, in recognition of the above two factors combined with the low cost involved, the Manawahe Flood Resilience Project be considered outside of the roading project prioritisation framework. On the assumption that the Committee supports Option 1 as the preferred option, this would result in the project proceeding during this financial year.

6. Options analysis - *Ngā Kōwhiringa*

Long-term Solution Options

Pinnacles Civil Group Ltd and WM Consulting Ltd were engaged to work collaboratively on an engineering investigation to provide a long-term solution to manage the flood risk to the roading asset. Their subsequent report *Manawahe Road Flooding – Stage 2 Options Evaluation Report* is appended to this report as Appendix one. Five options were reviewed for feasibility, capital and operational cost, and effectiveness of providing resilience to the roading asset. Each option is summarised below but is described in detail in Appendix one.

Options 1-4 negate the need for future road closures when rainfall patterns similar to the 1979 and 2022-23 repeat.

If appropriate trigger levels are set for the commencement of pumping, a large percentage of the adverse flood effects to private landowners experienced in 2022-2023 would also be avoided.

6.1. Option 1: Temporary pumping response to private property overland flow path

Option 1 is the preferred option. It reflects the emergency response carried out to remove flood waters from the road in 20203 and involves installation of a minimum amount of permanent infrastructure (a culvert across the road connected to a manhole to which suction hoses can be fed into) combined with legal agreements with affected landowners to discharge pumped water onto their land when required. This option provides certainty of process in the event of future flooding

from a medium return period event for a small financial outlay (up to $200,000). Note that anticipated operational costs of $157,000/event (temporary mobile pumps and discharge pipes brought in when required) are additional.

6.2. Option 2A: Pump along the road to private property overland flow path

Option 2A involves installing a 900m pipeline in the road verge to a natural drainage channel at 1743 Manawahe Road. Capital and operational costs are in the order of $2M and as these are significantly higher than for Option 4, Option 2A was ruled out due to cost.

6.3. Option 2B: Syphon along the road to private property overland flow path

Similar to Option 2A except a siphon is used instead of a pump. The ground contour along the road berm is such that significant excavation/directional drilling is required to provide any chance of the siphon working. Practicality and an estimated cost of $2M ruled out this option.

6.4. Option 3: Raise the road level through the area of flooding

Option 3 involves raising the 300m section of road that flooded by 1.7m to provide 1.2m of freeboard above the level the road flooded to in 2023. Raising the road will require alterations to property entranceways and also exacerbate flooding on adjacent properties. The cost estimate for this option is in the order of $1.15M plus any land acquisition that may be required as it appears part of the road may sit outside of the road reserve. In addition, if the extent of road to be raised increases, costs escalate rapidly. For these reasons, this option was ruled out.

6.5. Option 4: Install a gravity discharge pipe to private property overland flow path to control the flood level

Option 4 involves directional drilling a gravity pipeline 400m to a natural drain at 1818 Manawahe Road at an estimated cost of $1.13M plus landowner agreement and compensation costs. Option 4 offers the best permanent solution but the cost and infrequent recurrence period between flood events resulted in Option 4 being the second-most preferred option.

6.6. Option 5: Do Nothing

The 'Do Nothing' option will result in the adverse effects associated with the 2022-2023 flooding being repeated. Closures of Manawahe Road would result when flood events occur.

7. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

7.1. Assessment of Significance

The following table provides an assessment against the Council's significance criteria.

Criteria	Assessment
Level of community interest	A moderate level of localised community interest confined to directly impacted property owners and road users.

Criteria	Assessment
Level of impact on current and future wellbeing	A range of impacts dependent on context. High levels of positive impact on occupants of dwellings that would otherwise be flooded if the status quo option was adopted and to one business that could not transport product to market with the road closed. Low impact to road users.
Rating impact	Low impact.
Financial impact	Low impact.
Consistency	The proposal builds in flood resilience to a section of the Council's roading network and is therefore consistent with the Council's current and proposed Climate Change Strategy and its obligations to current and future generations under the Local Government Act.
Reversibility	Any installed infrastructure can be removed relatively easily if required. In addition, the Council could in the future, elect to not utilise pumps to remove floodwaters and close the road instead, leaving the infrastructure in place.
Impact on Māori	Low.
Impact on levels of service	Any option other than the status quo will improve the existing level of surface by ensuring the road remains open during flood conditions.
Impact on strategic assets	Low.

Based on the above, the matters of this report are assessed to be of low significance in accordance with the Council's Significance and Engagement Policy.

7.2. Engagement and community views

During the period of flooding, community views on the need for the Council to act were reported on several occasions by the media. Affected property owners and Manawahe residents have met with several elected members and council staff members on numerous occasions. A presentation on the flooding and potential solutions was provided to the Manawahe Community Group on 7 December 2023.

It is considered that the above community engagement opportunities have provided the Council with sufficient information to be informed of the affected community's views.

Particular recognition must be given to the support provided to the Council by the owners of 1818 and 1840 Manawahe Road who have supported the Manawahe community users of Manawahe Road by allowing the Council to pump floodwaters on to their land thereby enabling the road to reopen in a short space of time where otherwise the floodwaters would have taken several months to drain naturally.

8. Considerations - *Whai Whakaaro*

8.1. Financial/budget considerations

Cost estimates associated with each options are summarised in section 5 of this report and reported in more detail in Appendix A. Budget allocation for prioritised roading resilience projects and unforeseen expenditure associated with extreme weather events exists. Section 5 of this report recommends Option 1 of the Manawahe Road Flood Resilience options be approved so that the work can proceed during this financial year. This project will be funded from within the existing roading budget.

8.2. Strategic alignment

Building flood resilience to Manawahe Road supports the Community Outcomes relating to *Effective Leadership, Sustainable Economic Development and Reliable and Affordable Infrastructure*.

No inconsistencies with any of the Council's policies or plans have been identified in relation to this report.

8.3. Climate change assessment

Projected climate change rainfall patterns have factored strongly into option selection. Acting now and thinking long-term, and enhancing the resilience of communities, are key Council Climate Change Principles this project reinforces. Further, building in climate resilience is a strong feature of many of the Climate Actions Plans relating to Council assets.

Based on this climate change assessment, the decisions and matters of this report are assessed to have moderate climate change implications and considerations, in accordance with the Council's Climate Change Principles.

8.4. Risks

Risks associated with this project include reputational risk to the Council for not acting, and legal and financial risks around property owner agreements and compensation which have not been calculated at this preliminary stage in the process, although these latter risks are low due to established processes and financial formulae in the Public Works Act.

9. Next steps - *Ahu whakamua*

If the Committee accepts the recommendation to proceed with Option 1, the next steps involve:

- Further engagement with identified landowners to formalise legal agreements to enable the Council to pump floodwaters on to their land in a controlled manner when required to prevent Manawahe Road from being closed during flood events.
- Finalising the design and confirming cost estimates to install the basic infrastructure.

10. Conclusion - *Kupu whakamutunga*

A 300m section of Manawahe Road between numbers 1825 and 1849 is subject to flooding. The flooding is caused by high levels of rainfall over several months which accumulates in a ponding basin with no natural outlet. To reduce the flood levels requires either many months of fine weather or intervention using mechanical pumps.

The recurrence period of flood events that cause the road to be closed due to the depth of flood water over the carriageway is 1:46 years and this is expected to not alter significantly due to climate change.

The flooding also impacts on private properties, inundating dwellings and other buildings, preventing access to properties and interrupting business activities.

Five options have been investigated. The preferred option is a low-cost investment in a permanent culvert across the road and a manhole to which pumping equipment can be connected, when required.

The owner of the property upon which the floodwaters will be pumped, is supportive of the project. Should ownership of this property change, there is no certainty that a future landowner will offer the same level of support. In order to provide certainty, a formal legal agreement with this, and the adjacent, landowner to discharge floodwater on to their property when required, is necessary.

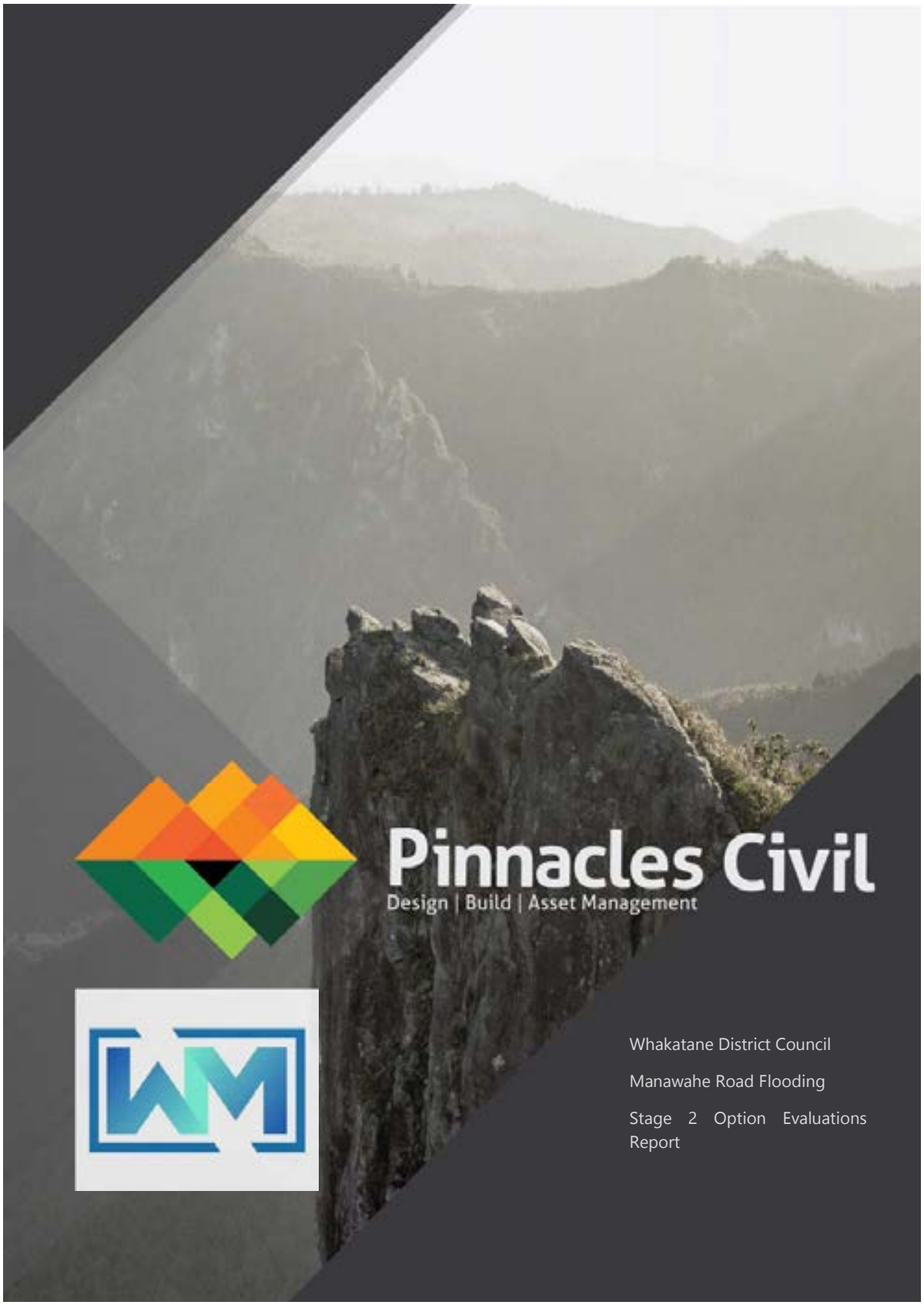
When the combination of factors relevant to the Manawahe Road flooding situation is considered, brings the project into the current year's roading resilience programme.

Attached to this report:

- Appendix 1: *Manawahe Road Flooding – Stage 2 Options Evaluation Report*, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)



6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

Prepared by:

Rodney Stone

Civil Engineer – Pinnacles Civil

Prepared by:

Warren McKenzie
Three Waters Engineer – WM Consulting

Approved for Release:

Brad Laurenson

General Manager – Pinnacles Civil

Pinnacles Civil Group Ltd
www.pinnaclescivil.co.nz

Warren McKenzie Consulting Ltd
www.wmconsulting.co.nz

Date: 08/11/23
Reference: 2-0567
Status: Rev D

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

Contents

1. Executive Summary

Based on rainfall data and district knowledge Manawahe Rd RP 18.1km to 18.5km has reported to have flooded twice in 1972 & 2023, and on review of existing rainfall data back to 1931, it suggests an occurrence interval of the road flooding is in the order of a 1 in 46-year ARI (2.2% AEP). It was noted two other years on record (1979 and 2011) were close to flooding which equates to an occurrence interval of 1 in 23 years (4.3% AEP). This could be considered as a lower bound of potential frequency.

Five solution options have been reviewed for feasibility, capital & operational cost, and effectiveness of providing resilience to the Whakatane DC roading asset. Of these five solutions the following have been short listed as the preferred options for Whakatāne District Councils consideration:

- Option 1: Temporary pumping to private property response which costs approximately $200k in capital investment to setup pumping infrastructure, and then approximately $150k for each flood event occurrence.
- Option 4: Installation of a 400m long gravity discharge pipe to a private property overland flow path which cost approximately $1.2m in capital investment with very minor on-going costs.

Option 1 & Option 4 have been compared over a 100-year lifecycle, looking at different flood reoccurrence frequencies and NPV discount rates. Findings show Option 1 is by far the best economic option based on the event probabilities.

Our recommendation is for Whakatane DC to implement Option 1.

2. Background

During 2022 and 2023, the Rotomā / upper Manawahe area experienced significant rainfall over 18 months. The Lake Rotomā water level exceeded the previous record high level of 1972. Four properties (1757, 1825, 1847 and 1849 Manawahe Road) have been flooded since late 2022. Despite the Council pumping in excess of 500,000 m^3 of floodwater over 3-4 weeks the homes eventually got inundated. Pumping of water stopped in February 2023 due to the floodwater levels being lowered and the potential need to relocate the pumps to assist Cyclone Gabrielle affected local authorities in Tairawhiti and Wairoa.

Prolonged bad weather during May saw the water level in this specific area of Manawahe Road (between RP 18180 and 18425 – 245m) reach above the road surface. The road was closed on 12th May 2023 for safety reasons. The water level at the deepest point on the road was approximately 500mm (approx. 373.8m RL, Moturiki Datum). It is noted that there is no surface outlet (overland flow path) from the area of flooding.

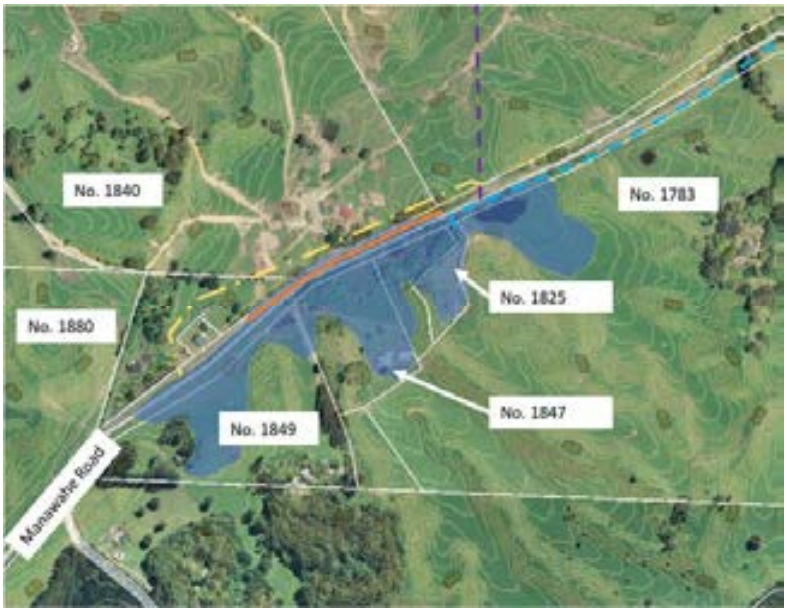


Figure 1 - Plan of flooding extents & property's affected

Access for local residents and businesses was a major issue, further exacerbated by the closure of SH30 by Waka Kotahi due to underslips through the Rotomā section for a lot of the time, and additionally a serious crash closing SH2 at the Matatā Straights on the first weekend of the closure. A detour for residents through McIvor Road was provided, however McIvor Road is a narrow, unsealed, windy track and is not a suitable long term solution.

however McIvor Road is a narrow, unsealed, windy track and is not a suitable long term solution.

Council engaged Pinnacles Civil Ltd, who also utilised the services of HD Geo, to provide a high-level options assessment for the initial response. This assessment contains relevant information for the first stage of evaluating long term solutions.

During the time Pinnacles Civil Ltd was assessing initial response options, Council was able to obtain agreement from adjacent landowners to pump the flood waters onto private property in an attempt to be able to re-open the road. Agreement from landowners was based on using their land to pump the water over the short term only, while long term options are investigated. Pumping recommenced on 12 June 2023, the road was able to fully re-open a week later on 19 June 2023 and has remained open since. The pumps were used for a further two weeks following reopening to create a buffer from future rainfall and to remove recharge of floodwaters during periods of heavy rain. The pumps are currently no longer in use (removed from site in July 2023), but the pipework is in place to readily re-connect the pumps should the floodwaters threaten to overtop the road again. This is currently being managed on a monitoring and reactive basis while WDC determine the optimum long-term solution.

Drone photo of flooding looking west – May 2023

Drone photo of flooding looking east – May 2023

3. Purpose

The purpose of this document is to report on the findings from the flood investigation contributing factors and option evaluation work carried out by Pinnacles Civil & WM Consulting Ltd. The options considered have been reviewed for feasibility, capital & operational cost, and effectiveness of providing resilience to the Whakatane DC roading asset.

The options considered in this report are:

- Option 1: Temporary pumping response to private property overland flow path
- Option 2A : Pump along the road to private property overland flow path
- Option 2B: Syphon along the road to private property overland flow path
- Option 3: Raise the road level through the area of flooding
- Option 4: Install a gravity discharge pipe to private property overland flow path to control the flood level
- Option 5: Do Nothing

4. Flooding Analysis

4.1 Contributing Factors to Flooding

Stormwater analysis typically makes use of the "Rational Method" to determine the quantity and flowrate of runoff from a chosen (surface water) catchment. A system comprising of pipes, storage (ponds) and sometimes pumps and infiltration is used to balance and discharge of the runoff.

The Rational Method was applied to this catchment, alongside a calculation of the stage-storage relationship in the ponded area. However, this methodology does not provide a

reliable means of predicting the flooded volume, with varying contribution of rainfall (25% to 100%) to the ponded volume during the rainfall events analysed.

As a result, the Rational Method should not be used to analyse this catchment. The ponded area should rather be thought of as the groundwater table, with the response of this groundwater table being related to the antecedent conditions in the catchment i.e. the groundwater table reacts significantly to rain when the catchment is saturated.

The groundwater catchment will not match the surface water catchment and will have interconnectivity with the adjoining groundwater catchments and the underlying strata. The response to rainfall in an individual event is therefore very difficult to quantify without the development of a complex groundwater model.

A groundwater model would come at significant cost and timeframes to investigate, develop and calibrate a model. Even then the model would not necessarily provide a reasonable level of confidence. As such an alternative high level approach has been developed to assess the system as discussed in Section 4.2 through 4.4.

4.2 Rainfall Record Analysis

The assessment in Section 4.1 suggests longer term rainfall is critical for the system. As such daily rainfall records were obtained for the area. A relatively full data set (96%) was compiled back to 1931 from six weather stations, the furthest being 11.5 km from the site.

Analysis of rolling totalised rainfall of this data (see Appendix A) over varying time scales showed that the 2022-2023 period was either the wettest or second wettest 3-month to 9-month period in recorded history. Other comparably wet periods were 1970-1972, 1979 and 2011. To put the depth of rainfall in context, the 2022-2023 event reached peaks of:

- 3,300 mm over a 9-month period
- 2,290 mm over a 6-month period
- 1,360 mm over a 3-month period
- 610 mm over a 1-month period

The same data suggests average annual rainfall for the area is 2,180 mm.

Anecdotally the system has only responded once like this in the past in 1972 (J. Farrell, personal communication, October 25, 2023). The 3-month, 4-month and 5-month totalised rainfall for the 1972 event were very comparable to the recent event suggesting a 3-to-5-month rainfall duration is "critical" for the system.

4.3 Flooding Frequency

A report was prepared by NIWA in 2019 for Bay of Plenty Regional Council entitled *Climate change projects and impacts for the Bay of Plenty Region*. Some useful findings from this report are as follows:

- The area receives an annual average rainfall in the lower end of the 2000-2500mm band. This ties in with the data assessment in Section 4.2.
- The predicted change in mean rainfall is from –2% to +2% for various climate change scenarios (RCP4.5, RCP8.5) and timeframes (by 2040, and by 2090). This suggests the likelihood of this flood event is unlikely to significantly change in future.

Based on this assumption, if we consider the "critical" 3 to 5 month duration, with two known events causing flooding (1972 and 2022-2023), the trigger depth is around 1,350mm to 2,000 mm in 3-month to 5-months respectively. This suggests an occurrence interval (over the 93-year record) in the order of a 1 in 46-year ARI (2.2% AEP).

Two other years in the record (1979 and 2011) were within 5% of these trigger values, suggesting the system was close to flooding which equates to an occurrence interval of 1 in 23 years (4.3% AEP). This could be considered as a lower bound.

It is noted that this is a highly subjective analysis, but this has been provided to allow WDC some direction with planning and decision making. Planning decisions should be based on the 1 in 46-year ARI given this is based on known flood events.

4.4 Flow Rate Consideration

This catchment has no surface outlet, it is completely reliant on soakage / infiltration and groundwater flow to discharge of rainfall / runoff. With potential for interconnecting groundwater catchments being larger than the surface water catchment, the possible solutions come with a significant risk and uncertainty.

In the absence of a complicated groundwater model a simplified approach has been considered to assess the required scope of pumping and/or gravity flow, as follows:

- The catchment can usually keep up with annual rainfall via soakage / infiltration / groundwater movements.
- Assuming an average annual rainfall of 2,180 mm, a natural soakage / infiltration / evaporation / evapotranspiration rate of 180mm/month (2,180 mm / 12 months) could be applied.
- A pumping / pipeline system could be designed to convey all rainfall in excess of 180mm/month.
- It appears the system reacts to sustained rainfall of a period of 3 to 5 months. The 3-monthly rainfall in the 2022-2023 was 1,360 mm.
- Over this period, it could be assumed the system naturally copes with 3 months x 180 mm = 540 mm of rainfall.
- Excess rainfall over this period is 820 mm. Applying this over the surface water catchment area of 123.1 ha equates to 1,000,000 m^3 of groundwater.
- This equates to a rate of approximately 130 L/s on a continuous basis over the 3-month period.

- This assumes there is sufficient storage in the catchment to buffer the incoming flow, however, this is unlikely to be the case and pumping rates would increase to 200 L/s over the peak monthly period and over 400 L/s in a peak weekly period.

The peak flow equates to a gravity pipeline (installed at typical grades) with a size in the order of DN450 PE, or a similar size for a pressure / pumped main (over a long distance at sensible flow rates).

A typical 150mm vortex diesel pump set is capable of around 120 L/s and as such a single pump would be required to meet the average flow but ramping up to 2 or 3+ pumps during heavier periods of rain.

5. Flood Solution Option Evaluations

5.1 Option 1: Temporary Pumping to Private Property Overland Flow Path

This option considers a similar response to that undertaken in the 2022-2023 event, with temporary mobile pumps setup to pump flow via existing overland flow channels in the farmland north of the road (1788 Manawahe Rd property).

However, to enable full road passage, a culvert would be installed beneath the roadway. This would connect the ponded area (via a wingwall and screen) to a chamber (manhole) on the northern side of the road. This would allow the mobilisation of pumps and installation of pump suction all to occur on the northern side of the roadway with no road closure.

Locating the culvert at a sufficient depth below the roadway will be important to provide the best use of storage. It is noted that nearing the end of the 2022-2023 event a relatively small weekly rainfall of 62 mm resulted in a response of 0.5m in flooded level. Therefore, it is recommended the new culvert inlet is a minimum of 2m below the existing road level.

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

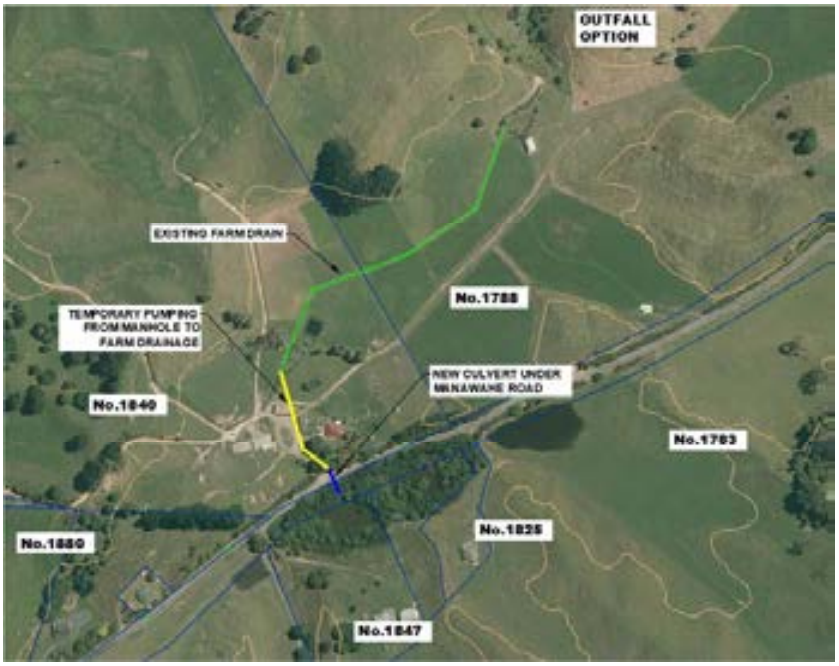


Figure 2 - Plan showing arrangement of Option 1 temporary pumping

Option scope & feasibility:

The scope of works to carry out this option includes:

Capital investment scope:

- Minor earthworks & clearing
- Installation of a new culvert, wingwall & manhole on Manawahe Road sufficient to accommodate 3 x 150mm vortex diesel pump submersible heads.
- Manawahe Rd Pavement & surfacing reinstatement works
- Farm drainage swale scour protection works and culvert construction to accommodate higher flows from temporary pumping
- Memorandum of understanding for access & consent to discharge water to private property.
- Preparation of a flood response plan, with an operating procedure to enable clear direction when to start the pumping operation.

Operational scope:

- Whakatane DC monitoring of local rainfall data and carry out inspections of the actual wetland water level to trigger temporary pumping action.
- Hire of temporary diesel pumps capable of 120litres/second **each**, noting that this may be somewhat restricted by the existing farm drainage.
- Labour to re-fuel and check pumps during the flood pumping response

Option Costing – Capital Investment

A preliminary cost estimate has been produced for this solution and a full breakdown is available in Appendix D. The summary of costs to execute this option are:

Physical Works Estimate	**$124,100**
Investigations & Survey	**$9,900**
Design & Procurement	**$9,900**
MSQA	**$9,900**
Contingency @ 30%	**$46,100**
Total Cost	**$199,900**

Note no private property compensation is considered in this costing.

Option Costing – Operating Cost

Estimated operating cost of temporary pumping are summarised below.

Temp Pumping Costs				
Description	**Unit**	**Quantity**	**Rate**	**Amount**
Pump Hire - 3 x 150mm Vacprime 6000l/minute (24 hour pumping) $400/day per pump	Day	1	$1,200	$1,200
Desiel - 80litres/day per pump	Day	1	$560	$560
Labour - 2 men - 8hrs each to fuel and check pumps	Day	1	$800	$800
Pumping cost per day - peak 7 day period (3 pumps)				$2,560
Pumping cost per day - peak month period (2 pumps)				$1,970
Pumping cost per day (1 pump)				$1,390
Cost to pump an event (3 months)				$147,000

Based on the flow rate discussion in Section 4.4, it is assumed that a single pump would be required for 3 months, supplemented by a second pump for 1 month and further supplemented by a third pump for 7 days. This would equate to a pumped volume in the order of 1,000,000 to 1,500,000 m^3 and a cost of approximately $150K. Considering the estimated frequency of occurrence this spend would be on average once every 23 to 46 years.

It is noted that WDC spent approximately $60K to pump 500,000 m^3 of flood water in the 2022-2023 event over a period of 4 weeks (average rate of 210 L/s) suggesting the above estimate is of the right order.

5.2 Option 2A: Pump along Road to Private Property Overland Flow Path

This option considers the installation of a pipeline in the roadside berm from the ponded area heading east to a natural channel located within 1743 Manawahe Rd.

A platform would be constructed alongside the roadway at 1825 Manawahe Rd which makes provision for mobile pumps to be installed and operated in a flood event. These would pump into an adjoining manifold (camlock fittings located at the start of the pipeline).

The pipeline would discharge flow via a wingwall and riprap structure inside the 1743 Manawahe Rd property.

The required pipeline has a length of approximately 900 m. The diameter of the pipeline depends on the required level of service, but to match the flow outputs of Option 4 would require a similar size DN450 PE pipeline.

The length of this pipeline is substantially longer than that of Option 4, with comparable civil construction at the inlet & outlet to control flows & erosion. This makes the capital costs of Option 2A significantly more than that of Option 4. As such, this option has been ruled out from further analysis.

5.3 Option 2B: Syphon along the Road to Private Property Overland Flow Path

Option 2B comprises of the same works as Option 2A but looks to utilise a syphoning effect in order to increase flow rate and reduce the number of pumps required to operate the system.

A single pump would be mobilised to start the syphon, and once operational the pump would be shut down. The syphon would in theory continue to operate and potentially at a significantly higher flow. The pump would remain on-site throughout the event to restart the syphon as required (i.e. air entrainment breaking siphon etc). There would be advantage in including a pinch valve on the pipeline outlet to aid operation.

Although a promising idea, unless the pipeline was drilled at significant depth over the high point in Manawahe Rd, the hydraulic grade line shows a full vacuum (pipeline pressure is >9.8m below the pipeline) would be experienced. This would break the syphoning effect.

This option is not feasible as a result, and in any case, the capital and operational costs would remain more than Option 4. As such, this option has been ruled out from further analysis.

5.4 Option 3: Raise the Road Level

This solution option consists of raising the road carriageway on Manawahe Rd through the area that experienced flooding to a level that would provide additional resilience against flooding.

Option investigation findings:

- LIDAR levels show the Manawahe Rd longitudinal low point is adjacent the flood catchment low point hence the flooding of the road.
- On review of the LIDAR road vertical alignment, it is evident the feasible level for raising the road is RL 375m providing 1.2m of freeboard to the max flood level recorded in May 2023. Refer to Appendix C for drawing showing the road centreline levels. Note if the road was to be lifted higher than 375m RL it would

approximately double the length of the road to be lifted & therefore significantly increase the costs.

- The typical cross section of Manawahe Rd through the area of flooding is in side cut, with an embankment cut to the north, and downhill slope to the south towards the wetland.

	
Driveway 1840 looking west	Driveway 1840 looking East

- The existing roading asset through the flooded area is in fair condition with some signs of pavement failure attributed by the recent flooding.
- The area of Manawahe Rd flooded contains four existing property vehicle accessways. Two of the accessways service the flooded properties 1825 & 1847 Manawahe Rd.
- The roadway through the flooded section contains two cross stormwater culverts discharging road stormwater into the wetland & flood area.
- Raising the road would exacerbate flooding to properties 1849,1847,1825 Manawahe Rd.
- On review of the road reserve boundary through the flooded area it appears that the actual road asset is outside the legal boundary. If required, WDC should undertake surveying to determine accurate legal boundaries.

Figure 3 - Manawahe Rd road reserve boundary (blue)

Option scope & feasibility:

The scope of works to carry out this option includes:

- Raising the existing road with engineered fill 1.7m over a length of approx. 300m (RP 18185 to 18480)
- Minor re-alignment of the road centreline to the north to avoid road shoulder retaining and embankment cut to waste of the northern embankment. Refer to Figure 1 below showing a typical section.
- Reinstatement of vehicle accessways & road drainage features.
- Land boundary surveying, and potential acquisition of land to accommodate the minor re-alignment of the road.

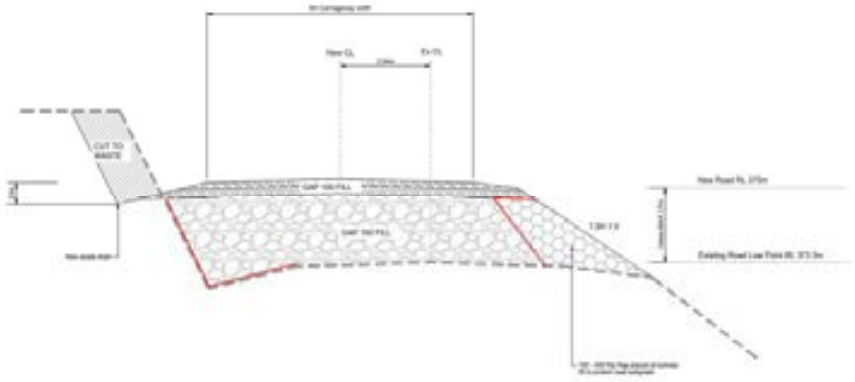


Figure 4 - Typical section of raising the road.

The solution is feasible from an engineering perspective with no major engineering risks.

Option Costing – Capital Investment

A preliminary cost estimate has been produced for this solution and a full breakdown is available in Appendix D. The summary of costs to execute this option are:

Physical Works Estimate	**$784,900**
Investigations & Survey	**$31,400**
Design & Procurement	**$31,400**
MSQA	**$31,400**
Contingency @ 30%	**$263,700**
Total Cost	**$1,142,800**
Land acquisition*	**unknown**

**The scope (if any) of land acquisition is unknown at this point in time*

Option Costing – Operating Cost

No additional operating or maintenance costs over and above the current roading layout are expected for this option.

Summary

The option of raising the road is a feasible solution with no major engineering or construction risks, and with the close proximity of the Manawahe quarry the imported aggregates for engineered fill & pavement are readily available with minimal transport.

The option of raising the road will provide additional resilience to Manawahe Road by increasing the freeboard by 1.7m, equating to approx. 175,000 m^3 of additional flood storage before the road floods. Referencing the water volumes calculated in Section 4.4, this additional storage volume may not be sufficient and future road flooding cannot be ruled out. It is also noted that raising the road beyond 1.7m quickly becomes cost prohibitive as a much longer length of the road would need to be lifted, escalating earthworks volumes and costs.

Raising the road does not solve the root cause of issue and the flood level of the wetland will continue to be un-controlled therefore future flooding to private property and potentially the road is likely.

5.5 Option 4: Gravity Pipe to Private Property Overland Flow Path

This option considers the installation of a gravity pipeline from the flooded area to a natural drainage path (open gully) located in the 1825 Manawahe Road property.

Option scope & feasibility:

The scope of works to carry out this option includes:

- Minor earthworks & clearing
- Installation of a sediment protection inlet structure e.g. inlet manhole with scruffy dome or similar. The manhole is to be positioned at the Lowest RL feasible while still providing a suitable inlet structure designed for sediment protection.
- Installation of a new DN450 PE pipeline via directional drilling and/or open trench. Near the start of the pipeline this will be at a depth of 8 to 10 m.
- Installation of a wingwall outlet and riprap lined channel for energy dissipation.
- Private property easement negotiations for the outfall pipe

Option Costing – Capital Investment

A preliminary cost estimate has been produced for this solution and a full breakdown is available in Appendix D. The summary of costs to execute this option are:

Physical Works Estimate	**$776,300**
Investigations & Survey	**$31,100**
Design & Procurement	**$31,100**
MSQA	**$31,100**
Contingency @ 30%	**$260,900**
Total Cost	**$1,130,500**
Land acquisition / easements*	**unknown**

**The scope (if any) of land acquisition and / or easements are unknown at this point in time*

Option Costing – Operating Cost

Minimal operational inputs would be required, with occasional removal of debris from the scruffy dome being the only operational requirement. The infrastructure would have a life expectancy of at least 100 years.

It is noted that this option will not technically meet the WDC Code of Practice which requires manholes at a spacing of not more than 100m and at changes of direction. However, given the reasonable size of the pipeline and the clarity of the flooded water alongside a sediment protection inlet structure & screen the risk of blockages is considered minor.

5.6 Option 5: Do Nothing

The do-nothing option would be leaving the roading asset as is and not preparing any temporary pumping infrastructure.

The outcome of this option would be to accept that Manawahe Road would need to be closed when flood levels reach 373.3m RL.

Implications of this action are:

- Road close & diversion via State Highway 30 or McIvor road & Braemar road.
- Closed access to four properties 1849, 1847, 1825, 1840 Manawahe Road. This includes the Marijuana Farm.
- Potential pavement damage to the roading asset due to the pavement being saturated. However, these effects are not expected to be major due to low traffic volumes.

6. Conclusion and Recommendations

6.1 Options Ruled Out

Options 2A and 2B can be ruled out at a conceptual level. These options either come with significant risk in terms of engineering feasibility and have a significantly higher capital and operational cost than other options evaluated.

6.2 Feasible Options for Consideration

The remaining options are feasible solutions to the issue, and can be summarised as follows:

- Option 1 (temporary pumping): This option provides enabling works in order to respond to rainfall and mobilise pumps at an early stage of rising water levels and maintains an open road through periods of high rainfall. This is a cost-effective option but requires Whakatane DC operational input to manage & respond during an event.

- Option 3 (road raising): this option will reduce the likelihood of the roadway requiring a closure, with the provision increased floodwater storage. It is difficult to quantify the risk of roadway flooding and the increase level of service this option would provide. This option requires no operational input during an event but has a significant capital cost.
- Option 4 (gravity pipe): this option provides high-capacity conveyance of floodwaters out of the catchment. It is likely to resolve the issue and requires very minor operational and maintenance inputs. The capital cost is significant and of a similar order to Option 3 but this option provides better protection against flooding of the roadway.
- Option 5 (do nothing): this option would allow the road to flood and Whakatane DC would need to accept a sustained road closure every 23-46 years (estimated). This comes with no capital and minimal operational costs (detour signage and possible road maintenance).

6.3 Recommendation

Given that the road raising option (Option 3) does not offer the same level of service as the gravity pipe option (Option 4), Option 4 is the preferred permanent solution to the flooding of Manawahe Road.

However, when considering life cycle costing, and the predicted re-occurrence of the flooding (1 in 46 years), Option 1 quickly becomes the most economical solution to provide flooding resilience to Manawahe Rd.

The 100-year lifecycle costs for both Option 1 & Option 4 have been calculated, looking at different flood reoccurrence frequencies and NPV discount rates. The different lifecycle costs are summarised in the table below:

Option	NPV Discount Rate	NPV (1in45 year occurrence)	NPV (1in25 year occurrence)	NPV (1in15 year occurrence)	NPV (1in5 year occurrence)
OPT1 - Temp Pumping	0%	$533,333	$800,000	$1,200,000	$3,200,000
	3%	$296,437	$378,246	$500,960	$1,114,531
	6%	$240,936	$282,741	$345,449	$658,987
OPT4 - Gravity Pipe	n/a	$1,130,000	$1,130,000	$1,130,000	$1,130,000

Reviewing the figures above it is evident that Option 1 is the most cost-effective solution, even with a relatively low discount rate of 3% the flooding occurrence frequency needs to be 1 in 5 years for Option 4 to become economically viable against Option 1.

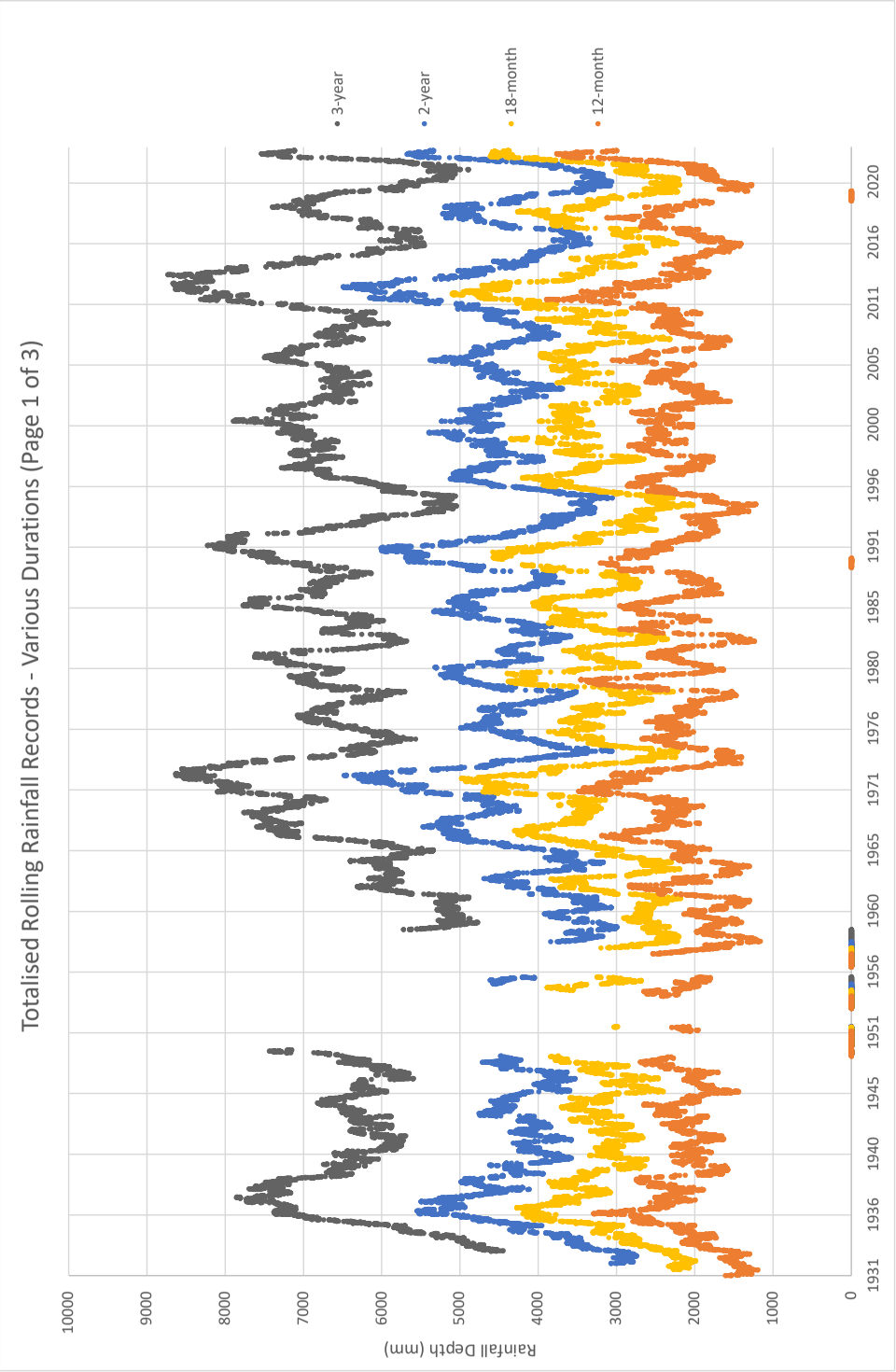
The recommendation is for Whakatane DC to implement Option 1 whilst monitoring the frequency of response events.

As part of the implementation of Option 1, Whakatane DC should proceed with consultation with the affected landowner and look to obtain a memorandum of encumbrance for the proposed activity and obtain agreement for the proposed farm drainage upgrades.

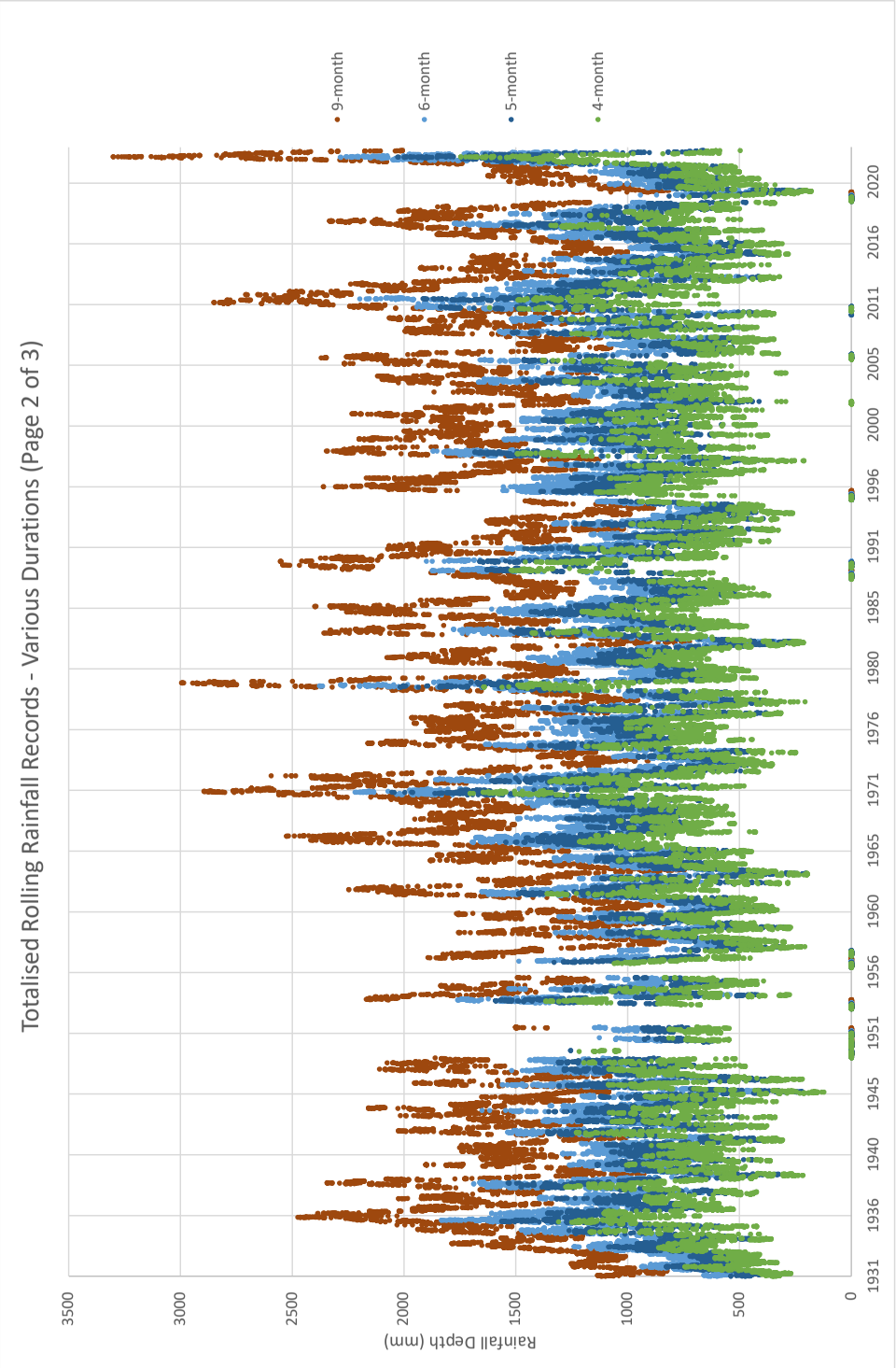
6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

Appendix A – Rainfall Records

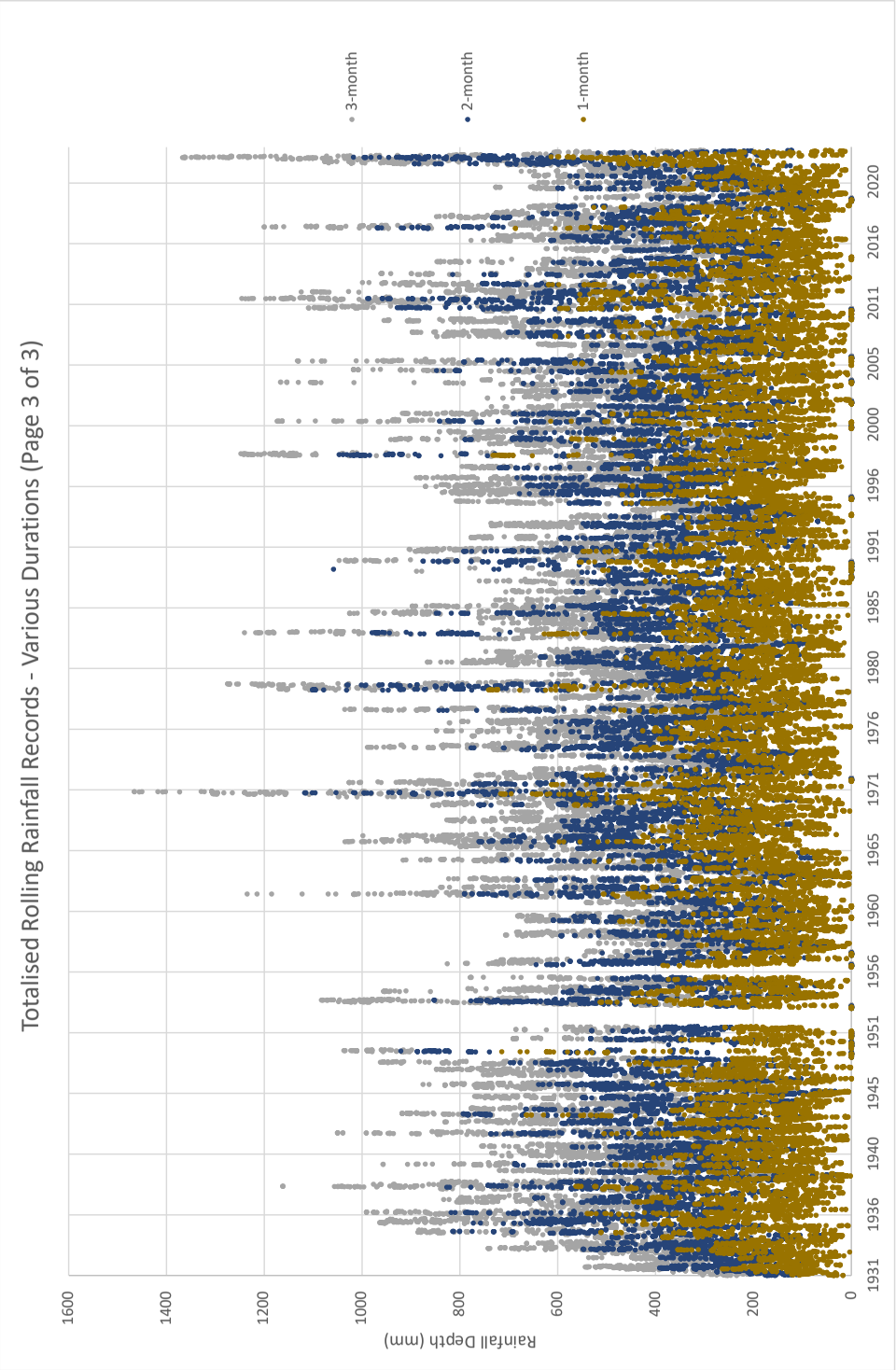
6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)



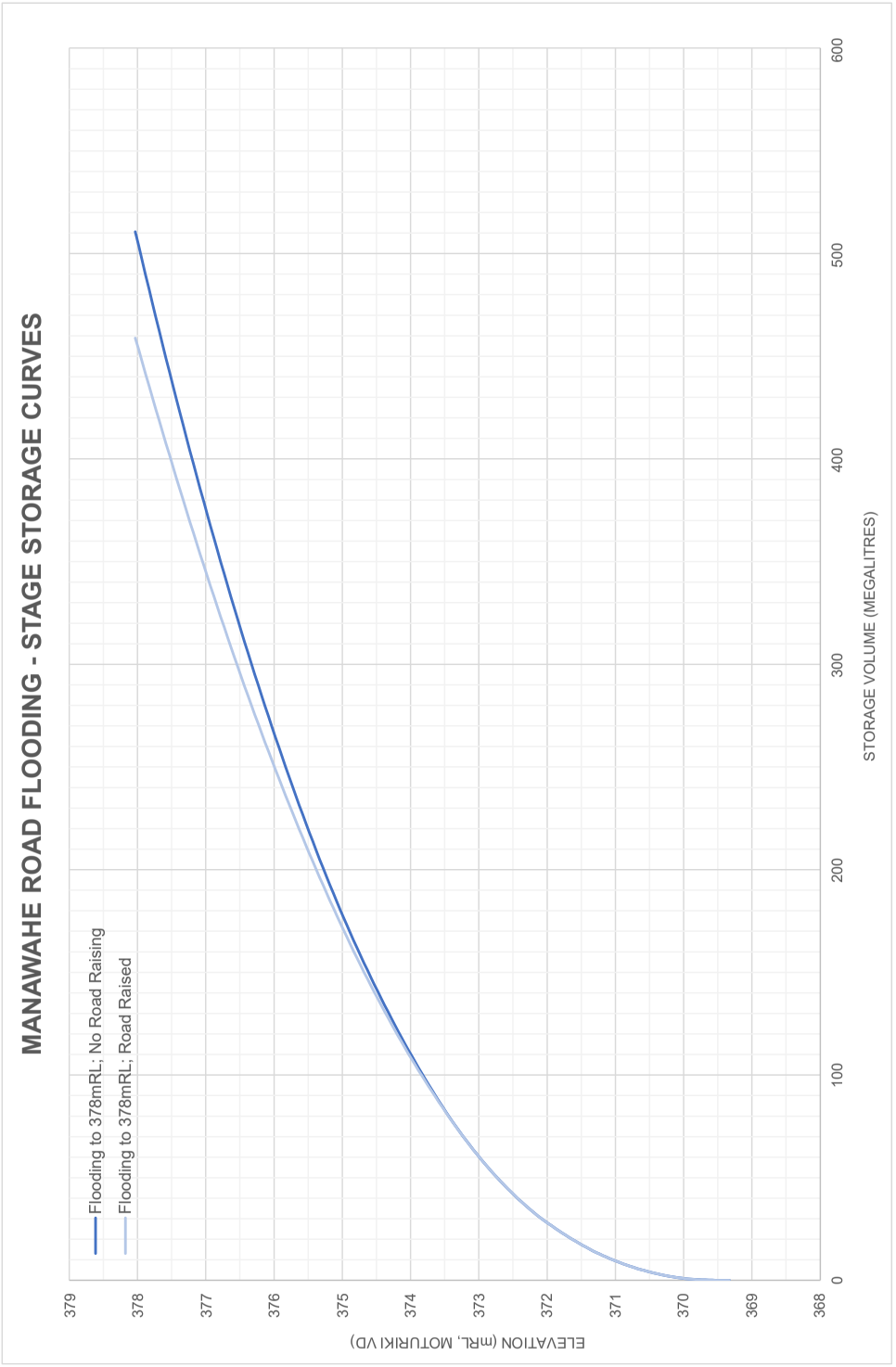
6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)



6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)



6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)



Appendix B – Option Summary Table

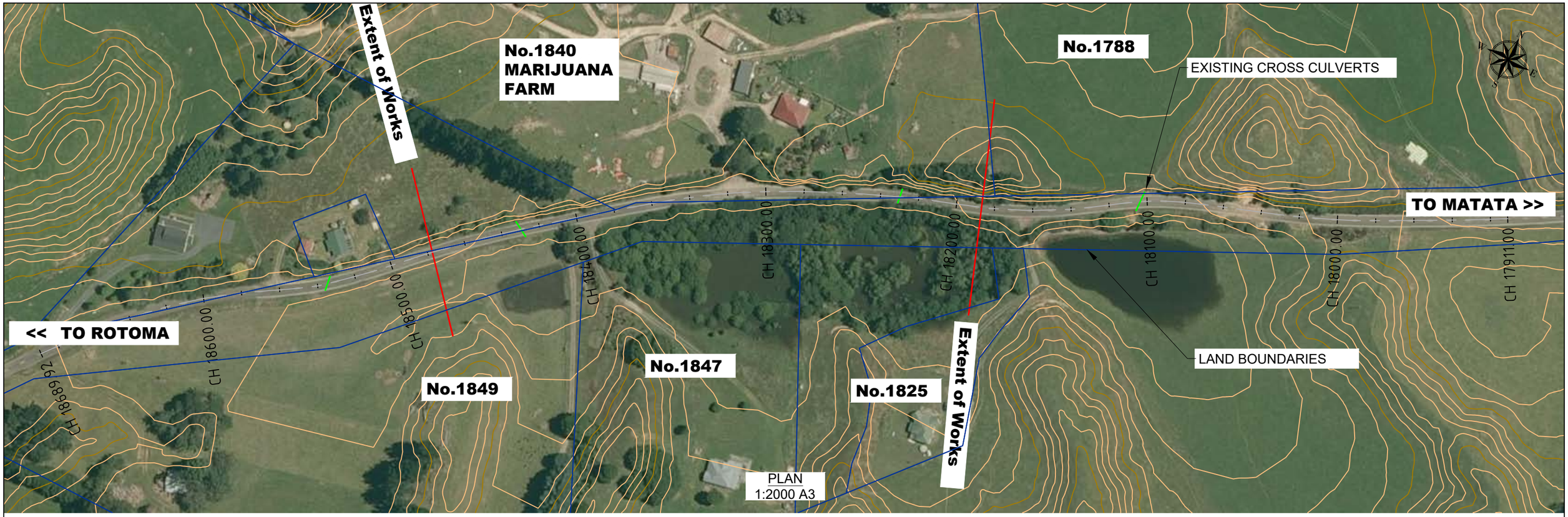
6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

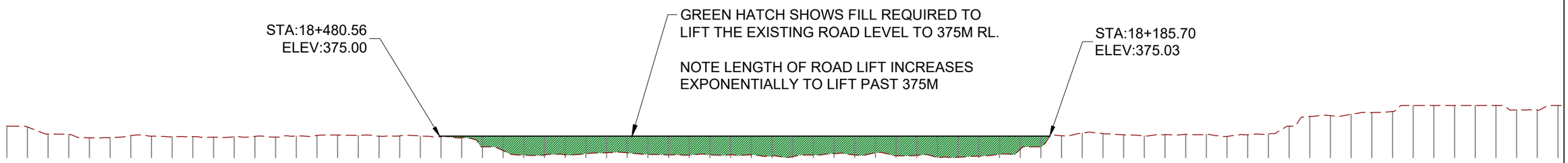
Manawahe Rd Flooding - Options Summary

Revion: Rev A (Report issue)

Option No.	Option Description	Description or works	Capital Solution Cost (excl land agreement costs)	Operational/ Maintenance Cost	Private Property Agreements	Risks	Key Considerations
OPT 1	Temporary pumping to private property outfall.	Construct infrastructure to enable temporary pumping of the wetland the farm drain. When require mobilise & operate diesel pumps and pump wetland flood water to private property 1840 & 1788 Manawahe Rd.	In the order of 200k capital investment to construct pumping infrastructure	Pumping costs are estimated to be in the order of $2500/day (24 hour pumping) $150K per event/response	Yes - agreement to discharge water to farm drain required from properties 1840 & 1788.	•Temp pumping doesn't keep up with rainfall & road floods. •Availability to hire temporary pumps when required	• Operational inputs required to setup and operate multiple pumps • Pumping capacity is limited to farm drain capacity which will require some upgrade work • Flood response plan required to clearly control pumping trigger points.
OPT 2A	Pumping along the road to private property outfall.	Installation of approximately 900m of DN450 PE pipe, and construction of outlet structure. During rainfall events setup several mobile pumps and operate	In order of 1.8-2M+	As per Option 1 but allows increased capacity pumping if required	Yes - agreement to discharge water required from property 1743.	•Temp pumping doesn't keep up with rainfall & road floods. •Availability of temporary pumps when required	• Operational inputs required to setup and operate multiple pumps during events.
OPT 2B	Syphon along the road to private property outfall.	Same as Option 2A but utilise a siphon to reduce pumping costs.	As per Option 2A In order of 1.8-2M+	As per Option 2 but may offer some reduction in operational cost	Yes - agreement to discharge water required from property 1743.	•The hydraulic grade line of the option shows a full vacuum will form in the pipeline breaking the siphon.	• **Not feasible** (at a conceptual level) without a deep drillshot. • Operational inputs required to setup and operate multiple pumps
OPT 3	Raise the road	Raise road 1.7m over a length of 300m to RL 375m. Includes minor re-alignment of centreline approx. 2m north.	In the order of $1.15M capital investment (excl. property agreement costs)	Nil - no more than normal road maintenance	Yes, very Likely, road reserve boundaries are not aligning with current road position.	•Floods exceeding 375mRL in future would flood the road. •Potential increased flooded area to private property	• No additional operating cost • Current flooded properties will continue to flood •Does not solve the root cause and control wetland water level
OPT 4	Gravity pipe to private property outlet	Install approximately 400m of DN450 PE pipe, and construct inlet & outlet structures. Inlet structure requires significant temp works	In the order of $1.13M capital investment (excl. property agreement costs)	Yes - minor allowance for inspecting asset. Self flushing design.	Yes - Easement requirement to multiple properties	•Pipe blockages, •Potential construction complexity such as hard rock, significant ground water control.	• Minimal operational / maintenance cost • Only option likely to reliably control flood level • Design life of pipe would be in the order of 100 years but likely to last longer. Re-lining options are available to extend life
OPT 5	Do Nothing	Accept road closures during heavy annualised rainfall	Nil	Nil	No	Future rainfall patterns trigger flooding more often closing the road more frequently.	• Does not solve issue but comes with no cost • Whakatane DC will have to accept road closures are likely with a reoccurrence interval in the order of every 25 to 50 years.

Appendix C – Option Concept Drawings





CHAINAGE	18690	18650	18600	18550	18500	18450	18400	18350	18300	18250	18200	18150	18100	18050	18000	17950
EXISTING ELEVATION	376.00	374.86	374.99	375.04	375.05	373.63	373.42	373.22	373.21	373.19	373.75	375.16	375.00	377.02	378.00	377.55

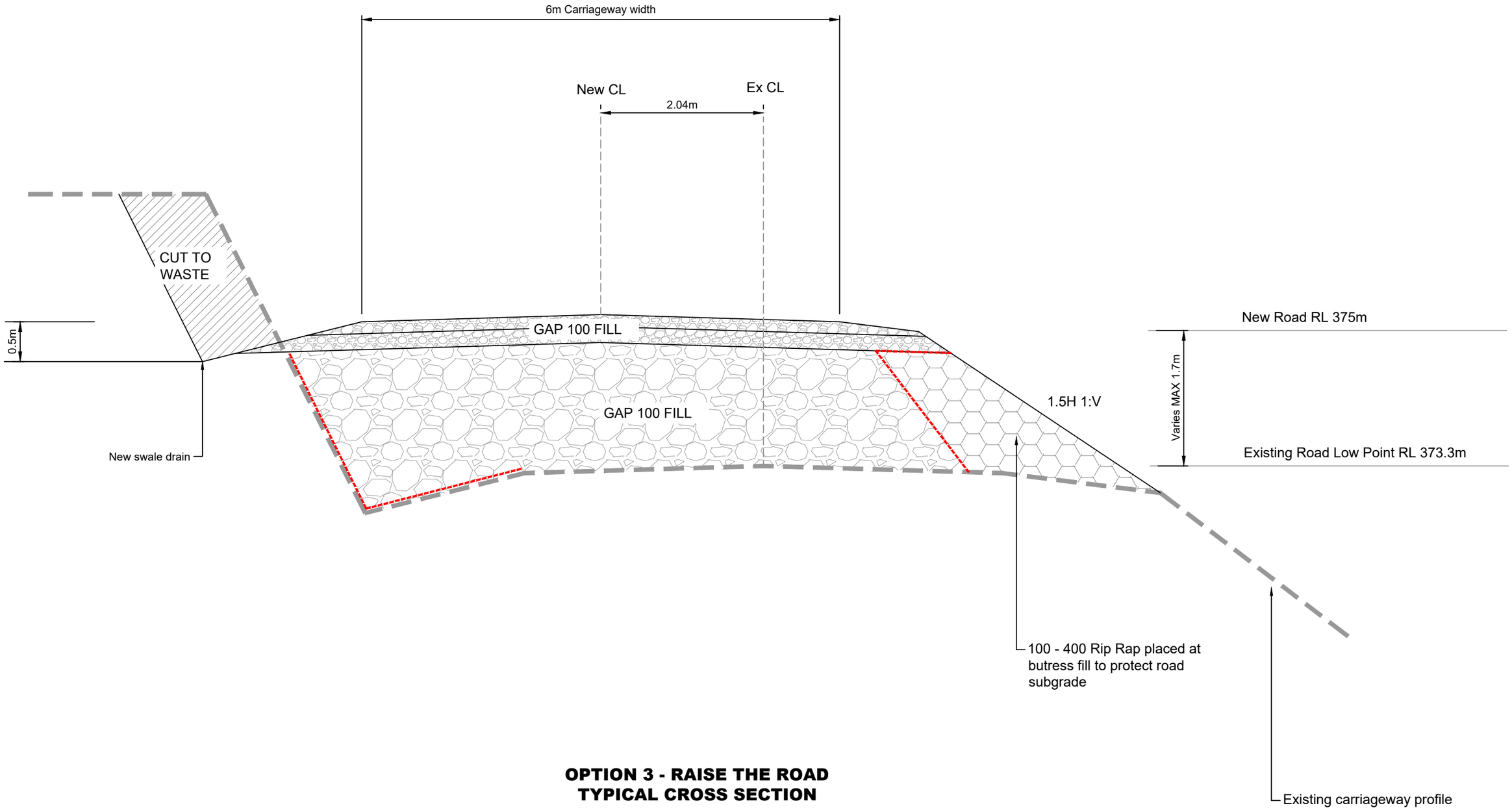
LONG SECTION
1:2000 A3 HOR.
1:400 A3 VERT.

Pinnacles Civil
Design | Build | Asset Management

WHAKATĀNE District Council
Kia Whakatāne au i ahau

Manawahe Rd Flooding - Option 3 Raising the Road
Concept Design
Plan & Long Section

DESIGN	RS/WM	6/11/23				2-0567.01	FOR REVIEW
DRAWN	RS	6/11/23				DWG No.	
APRVD	BL	6/11/23				1:500 A3	A
PROJECT #: 2-0567			REV	DETAILS	DATE	SCALE	REVISION



OPTION 3 - RAISE THE ROAD
TYPICAL CROSS SECTION

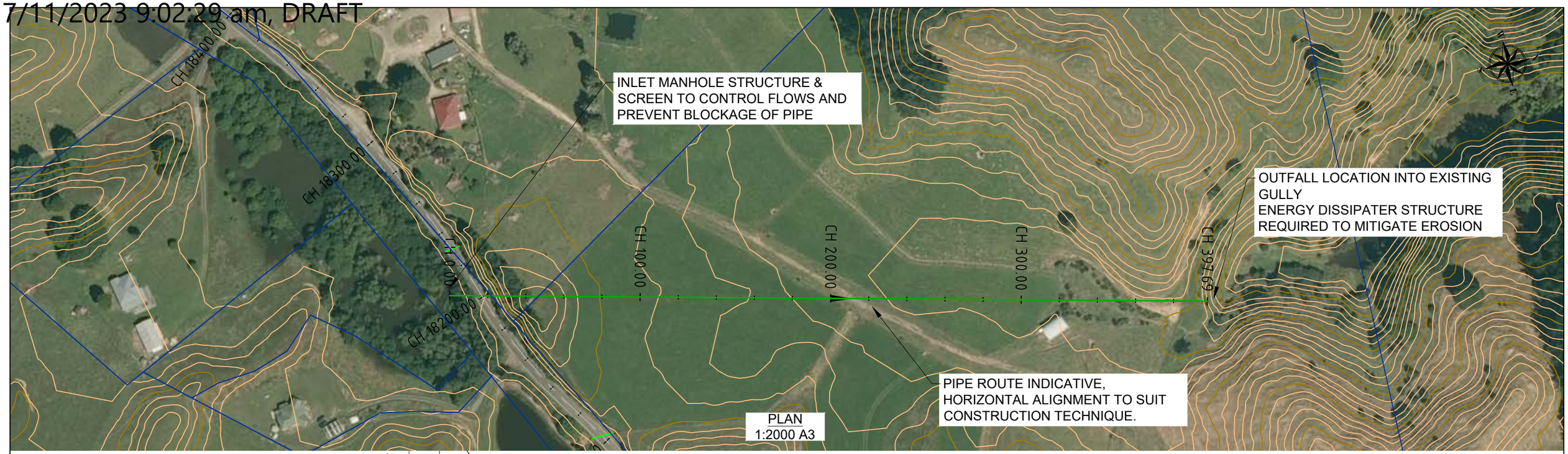
Pinnacles Civil
Design | Build | Asset Management

WHAKATĀNE District Council

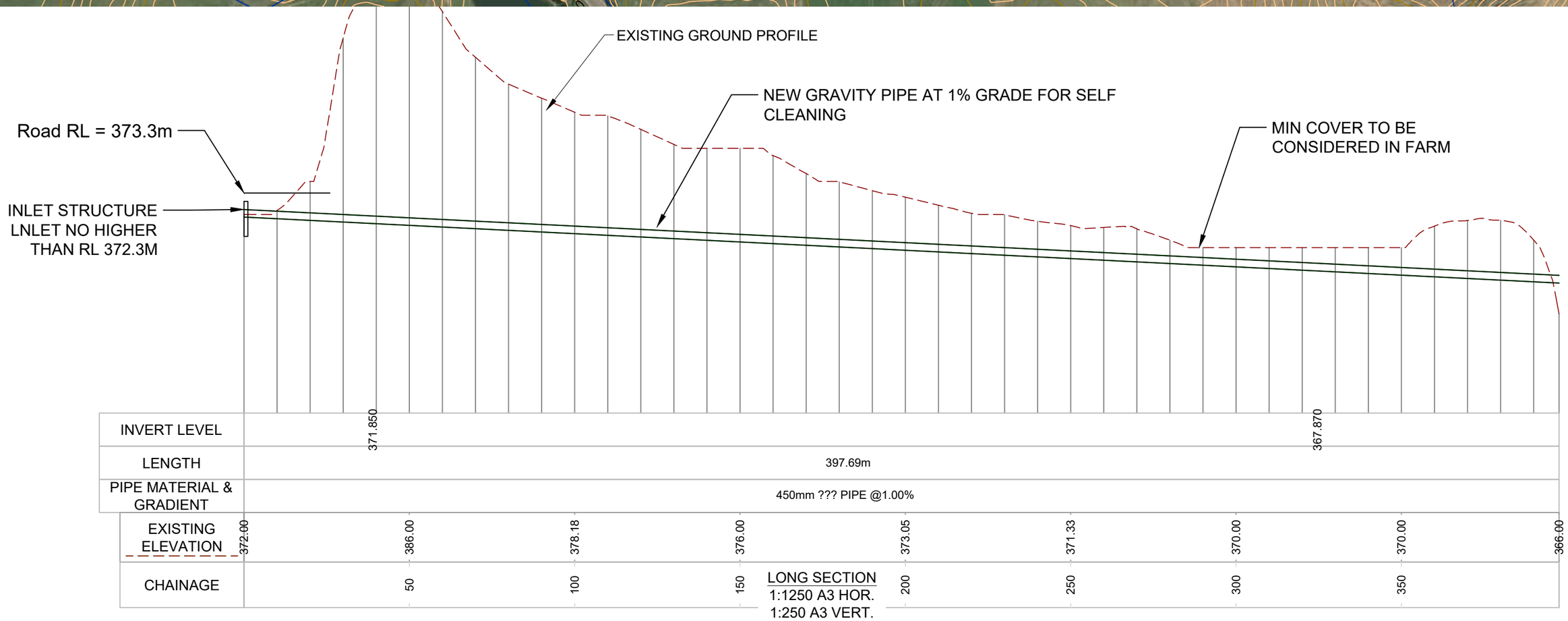
Manawahe Road Flooding - Option 3 Raising the Road
Concept Design
Typical Cross Section Details

DESIGN	RS/WM	6/11/23				2-0567.02	FOR APPROVAL
DRAWN	RS	6/11/23				DWG No.	
APRVD	BL	6/11/23				1:200 A3	A
PROJECT #: 2-0567			REV	DETAILS	DATE	SCALE	REVISION

7/11/2023 9:02:29 am, DRAFT



PLAN
1:2000 A3



INVERT LEVEL								
LENGTH	397.69m							
PIPE MATERIAL & GRADIENT	450mm ??? PIPE @1.00%							
EXISTING ELEVATION	372.00	386.00	378.18	376.00	373.05	371.33	370.00	370.00	366.00
CHAINAGE		50	100	150	200	250	300	350	

LONG SECTION
1:1250 A3 HOR.
1:250 A3 VERT.

Pinnacles Civil
Design | Build | Asset Management

WHAKATĀNE District Council
Kia Whakatāne au i ahau

Manawahe Road Flooding - Option 4 Gravity Pipe
Concept Design
Plan & Long Section

DESIGN	RS/WM	6/11/23			2-0567.03	FOR APPROVAL
DRAWN	RS	6/11/23			DWG No.	
APRVD	BL	6/11/23			AS SHOWN	A
PROJECT #: 2-0567			REV	DETAILS	DATE	SCALE REVISION

Appendix D – Cost Estimate Breakdowns

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

Manawahe Road Flooding - Opt 1 Temp Pumping Infrastructure
Preliminary Estimate
Revision: RevA

Scope: Install a culvert under Manawahe Road, connected to a large manhole to enable temporary submersible pump heads to pump from. Upgrade farm drainage to protect from scour due to increased temp pumping water flows.

Item	Description	Unit	Quantity	Rate	Amount
	Preliminary & General	%	15%	$107,880.00	$16,182.00
	Temporary Traffic Management				
	Temporary Traffic Management	Day	15	$2,500.00	$37,500.00
	Earthworks & Clearing				
	Clearing and minor Earthworks	LS	1	$5,000.00	$5,000.00
	Drainage				
	New Culvert	Ea	1	$10,000.00	$10,000.00
	New Wing Wall & Inlet Screen	Ea	1	$5,000.00	$5,000.00
	New Manhole	Ea	1	$12,000.00	$12,000.00
	Pavement				
	Supply & Install Roading Aggregates	m^3	84	$145.00	$12,180.00
	Two Coat Grade 2/4 Chip Seal	m2	210	$20.00	$4,200.00
	Ancillary Works				
	Traffic service reinstatement	LS	1	$2,000.00	$2,000.00
	Farm swale scour protection and culvert	LS	1	$20,000.00	$20,000.00

Physical Works Estimate	**$124,100**
Investigations & Survey	**$9,900**
Design & Procurement	**$9,900**
MSQA	**$9,900**
Contingency @ 30%	**$46,100**
Total Cost	**$199,900**
Land acquisition	**unknown**

Item	Description	Unit	Quantity	Rate	Amount
	Temp Pumping Costs				
	Pump Hire - 3 x 150mm Vacprime 6000l/minute (24 hour pumping) $400/day per pump	Day	1	$1,200	$1,200
	Deisel - 80litres/day per pump	Day	1	$560	$560
	Labour - 2 men - 8hrs each to fuel and check pumps	Day	1	$800	$800
	Pumping cost per day - peak 7 day period (3 pumps)				$2,560
	Pumping cost per day - peak month period (2 pumps)				$1,970
	Pumping cost per day (1 pump)				$1,390
	Cost to pump an event (3 months)				$147,000

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

Manawahe Road Flooding - Opt 3 Road Lift

Preliminary Estimate
Revision: RevA

Scope: Raising the road in the order of 1.7m high over a length of approx. 300m. Includes re-alignment of the centre line 2m north. Refer to concept drawings for more detail.

Item	Description	Unit	Quantity	Rate	Amount
	Preliminary & General	%	15%	$682,522	$102,378
	Temporary Traffic Management				
	Temporary Traffic Management	Day	40	$2,500	$100,000
	Earthworks & Clearing				
	Clearing and Trimming Vegetation	LS	1	$10,000	$10,000
	Cut to waste	m^3	613	$50	$30,660
	Import & Place Fill (GAP 100)	m^3	3005	$73	$219,342
	Import & Place Buttress Rip Rap	m^3	1288	$95	$122,322
	Drainage				
	New Cross Culverts	Ea	2	$7,500	$15,000
	Form new swale drain	m	292	$50	$14,600
	Pavement				
	Supply & Install Roading Aggregates	m^3	788	$145	$114,318
	Two Coat Grade 2/4 Chip Seal	m2	1752	$15	$26,280
	Ancillary Works				
	Driveway Tie-ins	Ea	3	$10,000	$30,000
				Physical Works Estimate	**$784,900**
				Investigations & Survey	**$31,400**
				Design & Procurement	**$31,400**
				MSQA	**$31,400**
				Contingency @ 30%	**$263,700**
				Total Cost	**$1,142,800**
				Land acquisition	**unknown**

6.7.1 Appendix 1: Manawahe Road Flooding - Stage 2 Options Evaluation Report, Pinnacles Civil Group Ltd and WM Consulting Ltd, 2023, Client report for Whakatāne District Council.(Cont.)

Manawahe Road Flooding - Opt 4 HDD Gravity Pipe

Preliminary Estimate
Revision: Rev A

Scope: Install 400m a gravity pipe from the wetland to the discharge point on Property 1788. Including inlet & outlet structures to control flows and prevent erosion.

Item	Description	Unit	Quantity	Rate	Amount
	Preliminary & General	%	15%	$675,000.00	$101,250.00
	Temporary Traffic Management				
	Temporary Traffic Management	Day	30	$2,500.00	$75,000.00
	Structures				
	Inlet structure including sheet piling and dewatering	LS	1	$150,000.00	$150,000.00
	Outlet discharge structure (cast in-situ build)	LS	1	$80,000.00	$80,000.00
	Pipework				
	DN450 SDR17 - HDD	m	200	$900.00	$180,000.00
	DN450 SDR17 - Open Trench	m	200	$700.00	$140,000.00
	Ancillary Works				
	Access provisions for inlet & outlet maintenance	LS	1	$50,000.00	$50,000.00
				Physical Works Estimate	**$776,300**
				Investigations & Survey	**$31,100**
				Design & Procurement	**$31,100**
				MSQA	**$31,100**
				Contingency @ 30%	**$260,900**
				Total Cost	**$1,130,500**
				Land acquisition/ easements	

6.8 Council submission to Government Policy Statement for Transport 2024

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April 2024**
Author:	**J Metcalfe / Team Leader Transport Strategy and Assets**
Authoriser:	**B Gray / General Manager Infrastructure**
Reference:	**A2641000**

1. Reason for the report - *Te Take mō tēnei rīpoata*

Consultation on the Government Policy Statement for Transport 2024 (GPS) opened 6 March 2024 with submissions closing 2 April 2024. Staff have prepared a submission to the GPS on behalf of Council and have provided opportunity for elected members to provide input into the submission. Due to the timeframes for submissions formal approval of the submission was not possible through a Council Committee and as such staff are now seeking retrospective approval for the submission.

2. Recommendation- *Tohutohu akiaki*

1. THAT the Council Submission to Government Policy Statement for Transport 2024 report be received; and
2. THAT the Infrastructure and Planning Committee retrospectively approve the Council submission to the Government Policy Statement for Transport 2024 as attached in Appendix 2.

3. Issue/subject – *Kaupapa*

The Government Policy Statement on land transport (GPS) sets the Government's priorities for land transport investment over the next 10-year period. It also sets out how money from the National Land Transport Fund (NLTF) is spent on activities such as public transport, state highway improvements, local roads, and road safety. Waka Kotahi NZ Transport Agency and local authorities need to ensure spend on transport reflects Government priorities outlined by the GPS.

The GPS determines what funding will be available to assist the Councils capital works, maintenance and operations programmes for the local transport network and will impact what can be delivered over the 2024-27 Long Term Plan Period.

4. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

4.1. Assessment of Significance

The decisions and matters of this report are assessed to be of low significance, in accordance with the Council's Significance and Engagement Policy.

4.2. Engagement and community views

No engagement has been undertaken or is intended for this Submission.

The GPS Transport is open for public consultation and to receive public submissions.

5. Considerations - *Whai Whakaaro*

5.1. Financial/budget considerations

There are no budget considerations associated with this report.

5.2. Strategic alignment

No inconsistencies with any of the Council's policies or plans have been identified in relation to this report.

5.3. Climate change assessment

Based on this climate change assessment, the decisions and matters of this report are assessed to have low climate change implications and considerations, in accordance with the Council's Climate Change Principles.

5.4. Risks

There are no known risks associated with the matters of this report.

Attached to this report:

Appendix 1: WDC Cover letter – Submission to Draft Transport GPS

Appendix 2: WDC submission to the 2024 Draft Government Policy Statement for Transport

6.8.1 Appendix 1: WDC Cover letter – Submission to Draft Transport GPS

6.8.1 Appendix 1: WDC Cover letter – Submission to Draft Transport GPS(Cont.)

2 April 2024

The Hon Simeon Brown
Minister of Transport
Free Post
Parliament Buildings
Wellington 6160

Tēnā koe Minister Brown

Re: Whakatāne District Council Submission to 2024 Draft Government Policy Statement for Transport (GPS)

Thank you for the opportunity to provide feedback on the Draft 2024 Government Policy Statement on Land Transport. Whakatāne District Council would like to commend the Minister for setting out a clear and timely GPS that will provide councils some certainty in the Governments intent for how the transport system will be developed over the coming term.

I take here the opportunity to emphasise some specific aspects that I am particularly concerned about. The first of these relates to the root causes of New Zealand's widening infrastructure deficit. For much of NZ's history the rate of population growth has been around 1% per annum. However, over the period 2014 – 2019 that growth rate has roughly doubled. In the 2023 the population growth rate reached an all-time record of 2.8%. Any quantity that increases by a constant percentage y-o-y is exponential. A growth rate of 2% would have NZ's population doubling in 35 years and 2.8% would have the population doubling in 25 years. This means that infrastructure would need to keep pace. The reason we have a deficit in the first place is that the infrastructure development has not kept pace with population increase. Since most of that growth is due to net migration, there is a need to look hard at migration settings. I question whether we should be pursuing growth at all costs as a proxy for prosperity.

The GPS seems to emphasise the commitment on the part of your government to achieving the second emissions budget so that net-zero emissions can be reached by 2050 in line with our international pledge. The commitment in the GPS to expanding the EV charging network recognises the importance of EVs in the clean energy transition. However, the removal of the clean-car rebate and the introduction of RUC is going to cause that transition to stall if it hasn't already. I would like to point out here that an EV such as a Tesla 3 (standard range, RWD) is only marginally heavier than a Mazda 6 which is an ICE vehicle of comparable size. Unlike the Mazda the Tesla produces no tailpipe emissions and therefore air pollution which is responsible for nine times the number of deaths as road accident.

OBJECTIVE: DATE: REF:

WHAKATĀNE District Council
P +64 7 306 0500 E info@whakatane.govt.nz Commerce St, Private Bag 1002
F +64 7 307 0718 W whakatane.govt.nz Whakatāne 3158, New Zealand

You are probably already aware that EVs driven in NZ have 70% lower GHG emissions over their lifetime as ICE vehicles and that it is GHG emissions that are the causes of climate change. Therefore, I would urge you to reconsider removing RUC on the basis that EVs are without doubt better for the environment.

We look forward to a considered response to our submission points and a final GPS that will ensure that councils across the rohe can continue to provide a high level of service for our communities through the delivery of an efficient and safe transport system.

Nāku noa nā

Dr Victor Luca

Mayor/Koromatua

OBJECTIVE: DATE: REF:

WHAKATĀNE District Council
P +64 7 306 0500 E info@whakatane.govt.nz Commerce St, Private Bag 1002
F +64 7 307 0718 W whakatane.govt.nz Whakatāne 3158, New Zealand

6.8.2 Appendix 2: WDC submission to the 2024 Draft Government Policy Statement for Transport

6.8.2 Appendix 2: WDC submission to the 2024 Draft Government Policy Statement for Transport(Cont.)

Funding and planning certainty

1. The Council fully supports the ambition to create a 10-year investment plan to align with Council Long Term Plans, provide greater certainty within the industry, and deliver more efficiency, particularly with regard to planning. The challenge presented by the three-year Government election cycle will however make this difficult as we have seen how readily legislation can be rolled back by incoming Governments. Council supports taking a bipartisan approach to the development of any long term investment plan to ensure that this survives beyond election cycles.
2. Councils must also make long term funding decisions through the development of LTPs and RLTPs. We would encourage Government to review how Crown funds are made available so that Councils can be provided with more certainty between changes in Government. The loss of funding for projects through the Climate Emergency Response Fund has disappointed many within our community; meanwhile preparing the projects through to a shovel-ready state has consumed a significant amount of staff time through design, planning and community consultation.

Disposal of land

3. The Council supports, in principle, the intent to make disposal of land a more efficient process for road controlling authorities however there is limited detail as to how this may be achieved and what controls around this would be put in place. The Council would appreciate further consultation prior to any changes to land disposal legislation being completed.
4. Land held by councils and Government needs to be considered for the public benefit, over the long term, and with appropriate consideration for potential future uses before undertaking disposal. Development of the Otago Rail trails has only been possible as long-held, unutilised land was not disposed by previous generations and as a result has provided for significant, unforeseen economic growth that would not be possible otherwise. Any changes to the process for the disposal of land should incorporate protection for public access to amenities and recreational opportunities where this may otherwise be adversely impacted.

Roads of Regional Significance

5. The Council supports the proposed investment in Roads of Regional Significance particularly where these provide additional resilience of networks against storm events; or redundancy/investment in alternative routes in the event of significant natural disasters. Many roads and structures throughout the country are prone to failure during natural hazard events and are critical for providing lifeline functions to our communities and beyond to neighbouring districts. Allocation of funding through NLTF and the standard evaluation process does not capture the full benefits of these lifelines remaining open during high impact natural hazard events and it is critical that alternative funding is made available to remedy prone structures.
6. We would encourage the Government to look more closely at resilience issues in the Eastern Bay of Plenty, in particular our bridges, currently due for replacement, unfunded, and

OBJECTIVE: DATE: REF:

WHAKATĀNE District Council
P +64 7 306 0500 E info@whakatane.govt.nz Commerce St, Private Bag 1002
F +64 7 307 0718 W whakatane.govt.nz Whakatāne 3158, New Zealand

identified as being prone to failure during flood events. Alternative routes are also prone to failure and more resilient connections are needed to prevent large parts of East being cut off.

7. The Council supports the continued investment into the recovery efforts in Te Tairawhiti and Hawke's Bay and the current approach of "building back better" when it comes to the resilience of the road network.

Road user charges (RUC) and the use of technology

8. The Council supports the rollout of RUC to all vehicles in leu of excise duties on fuel. This will ensure that the funding of transport remains fair and equitable as well as providing sufficient funding for the future.
9. The Council would also support RUC based on vehicle weight given that light vehicle mass can vary between 1000kg and 3000kg, and with the relationship between weight and road deterioration being exponential, larger vehicles will do significantly more damage to the road network and should pay a fair share of these costs. With the increased weight of EVs now on the market this will be critical to ensuring equitable RUC.
10. The Council supports time-of-day charging to reduce congestion at peak times, encourage alternative travel choices, and time shifting of non-essential/low value trips. Our export businesses rely heavily on freight transport to the Port of Tauranga and the current unreliability and time delays associated with congestion add significant costs for these businesses.
11. The Council would support the use of GPS tracking technology for collection of RUC, toll collections, time of day pricing and for the provision of anonymised travel information to better inform planning for transport. The use of data captured through these devices would significantly reduce the cost of developing and validating transport models while significantly improving accuracy. Toll and RUC processing costs would be significantly reduced while allowing for congestion to be managed in an equitable manner. New Zealand has fallen far behind many nations in the use of technology and data to deliver better transport outcomes within the sector and this is weighing on productivity.

Footpaths, cycleways, and us

12. The Council does not support any move to reduce funding assistance rates (FAR) for the maintenance and renewal of footpaths and/or cycle paths. These paths are an essential part of the transport network for everyone in our communities (regardless of their main mode of transport) and there has already been historic underinvestment in maintaining these essential assets across the country. Councils are facing significant increases in the cost to deliver Three Water and transport maintenance programmes and any change to FAR rates will either add to the burden for ratepayers or result in poorly maintained footpaths. Poorly maintained footpaths create trip hazards and result in significant injuries to the elderly and infirm on a regular basis ultimately result in increased cost pressures on the health system at a time when it is struggling to meet existing demand of an aging population.
13. The Council does not support the reduction in funding availability for the development of cycleways. On a constrained roading network providing additional separated cycleways can

OBJECTIVE: DATE: REF:

provide significant extra capacity in the network and typically have a much higher benefit to cost ratio than road capacity projects. Whilst there are many opposed to cycle paths there are still many opportunities, particularly within our District, where infrastructure can be delivered without negative impacts on drivers, and at relatively low cost, through the use of reserves, stop banks, and other corridors. We would like to see additional funding made available to deliver these projects with potential funding conditions that ensure that disadvantages to the driving public do not accrue.

Network Operating Contracts (NOCs) and a better way forward

14. The Council supports the initiative of reviewing NOCs to achieve efficiencies within these long term maintenance contracts but does not support targets based on a percentage for resurfacing and rehabilitation. Soil types, historic investment in pavements, traffic loads and many other factors all contribute to how quickly a pavement or surface fails and therefore maintenance activities will need to be undertaken at different rates across the country. Council would support a national target for pavement renewal and surfacing but NOC targets should reflect existing and historical pavement performance to gain better efficiencies.
15. The Council does not support the requirement to fix potholes within 24-hours in NOCs. This may have an adverse impact on maintenance contracts particularly where potholes are in isolated areas, away from maintenance depots. For parts of our network a single pothole may require several hours of driving in each direction taking a crew of people (traffic management and repair) a whole day to repair. We would suggest a lesser requirement with a 24-hour repair only being needed under certain conditions (traffic volumes, location of pothole in live traffic lane, where likely to cause damage to a vehicle or safety hazard).
16. Current NOCs include inefficiencies as a result of historical requirements for the management of some assets between Councils and Waka Kotahi. Councils are responsible for the maintenance of street signs on State Highways when these direct people to a local road. Waka Kotahi is responsible for advanced warning signage directing people to State Highways when these signs are located on the local road network. This arrangement is highly inefficient, increases temporary traffic management costs and often not captured within NOCs which can result in signage going unmaintained or maintained at a very high cost and waste of financial and human resource. The Council supports changes to NOCs and asset maintenance responsibilities that will provide greater efficiencies within the transport system.
17. The Council requests that the review and update to NOCs is consistent with the maintenance requirements set out in the NZTA Waka Kotahi Knowledge Base. This is currently not the case with most NOCs taking a 'kerb to kerb' approach for maintenance within urban areas. However, Knowledge Base and the Work Category descriptions of qualifying activities clearly includes provision for maintenance of assets outside the kerb within the State Highway Maintenance Activity Class. These inconsistencies cause unnecessary friction and time wasting between the adjoining road controlling authorities, and this impacts on the service delivery for the transport system customers. A clear demarcation of RCA responsibilities set at a national level, will provide consistency and clarity for all. Then Memorandum's of Understanding can be developed for the select few exceptions where a local authority may

OBJECTIVE: DATE: REF:

desire a higher than normal level of service. Currently much time and effort is being spent drafting specific MOU that would not be required if this demarcation was more clearly set out at a national level and NOCs remained consistent with it.

18. The Council would encourage the Government to look at alternatives to the NOCs to achieve better outcomes and greater cost efficiencies across the transport system. Our Council currently maintains 906 kms of local road network and is home to 106 kms of State Highway. There is a significant opportunity to achieve the GPS value for money priority by allowing local councils to manage sections of the State Highway within its borders and reduce the duplication of function that currently exists, particularly for districts where the State Highway is only a small portion of the network. This would ensure consistent customer experience, a single point of contact for complaints, and in our instance, the use of local contractors who are able to be more responsive to issues such as potholes, while reducing the layers of sub-contractor management and margins.

Traffic Management

19. The Council supports the review of the current traffic management system with the intent to reduce the cost that this imposes within the transport delivery space and for other users of the road corridor. An emphasis should be placed on providing more standardised solutions to reduce the requirements for low risk, low hazard tasks (changing of signs, footpath works, etc) and for small public events that have minimal impact on the road network. Recognition should be given to the significant cost associated in the preparation of traffic management plans which can result in delays and opportunity costs.

Business case process

20. The Council supports a review of the current business case process to identify how this process can be streamlined, reduce planning costs and project development time frames. Overall the process has been valuable in ensuring stakeholders are engaged early in the planning process and that a wide array of options are considered, however the specialism, time and cost required to deliver business cases presents significant additional costs for projects and results in significant delays. Often the full process is taking longer than the three-year NLTP cycle and with the changing GPS between cycles it can also result in a lot of rework to the business case, and/or a lot of time and expense going into a business case which then doesn't proceed because it doesn't align with the new GPS. An improved process which reduces the time involved will provide councils with more delivery surety when embarking on a business case process. The Council would not support a full revocation of the business case process without a replacement mechanism that also supports stakeholder engagement and option evaluation.

Safety

21. The Council does not support the singling out of speed humps for reduced funding within the local road activity class or State Highway activity class. Speed humps are an effective tool in reducing speeds in high-risk area, can be delivered cheaply and are proven effective at

OBJECTIVE: DATE: REF:

reducing death and serious injury (DSIs), often with minimal impact on travel times. These should be a part of RCAs tool kit, particularly given the strategic priorities for "value for money" and "Safety". Communities in our District request speed humps frequently and some have gone as far as describing the consequent reduced speeds as "life changing". There is also the issue of administering and separating the costs of speed humps as these are often included as part of a wider project or intersection improvements rather than standalone projects; having to separate funding buckets or FAR for a small component of larger projects will add to the inefficiencies associated with delivering roading improvements.

22. The Council does not support the significant reduction in funding available for safety improvement projects. The Draft GPS identifies safety as a strategic priority however the funding available, after allowing $400M annually for road policing, represents a reduction from 2023/24 of 60-80% with only $100M to $200M available nationally, per annum for safety improvements. Our community has been demanding safer roads for many years and this reduction puts in jeopardy improvements that will prevent friends and family from dying on our roads or suffering life changing injuries.
23. The Council recommends a stronger focus on vehicle safety within the GPS and, in particular, would like to see restrictions placed on vehicle imports based on safety star ratings. This can be delivered at minimal cost to Government and will significantly improve the safety of the vehicle fleet in the long term.

Rail funding

24. The Council does not support the removal of funding for rail from the GPS. Underfunding of the rail network will, over the long term, result in more trucks on our State Highways and local roads that will have impacts on the wellbeing of our communities through increased greenhouse gas emissions, increased pollution (and associated health impacts), increased road maintenance costs, reduced freight competitiveness with other regions, and potentially congestion effects on key routes and intersections.
25. The GPS has identified that any Crown investment will be focused on the Golden Triangle (Auckland, Hamilton, Tauranga) but excludes Kawerau despite this section of the East Coast Main Trunk (ECMT) having one of the highest utilisation rates across the country. Council would like to see the GPS amended to include the Kawerau branch of the ECMT included for Crown funding alongside other sections of the rail network.

WHAKATĀNE District Council
P +64 7 306 0500 E info@whakatane.govt.nz Commerce St, Private Bag 1002
F +64 7 307 0718 W whakatane.govt.nz Whakatāne 3158, New Zealand

6.9 Three Waters Asset Management Plan (AMP)

To:	**Infrastructure and Planning Committee**
Date:	**Thursday, 11 April 2024**
Author:	**M Van Tilburg / Team Leader Three Waters Asset Management and Planning**
Authoriser:	**Bevan Gray / General Manager Infrastructure**
Reference:	**A2641723**

1. Reason for the report - *Te Take mō tēnei rīpoata*

To present the latest version of Council's Three Water Asset Management Plan (AMP). This AMP is a significant shift from past Asset Management Plans in the sense that previously Council had individual Asset Management Plans for water supply, wastewater and stormwater networks.

2. Recommendation - *Tohutohu akiaki*

1. **THAT** the Three Waters Asset Management Plan report be received; and
2. **THAT** the Infrastructure and Planning Committee approve the Three Waters Asset Management Plan and recommend that Council adopt it as underlying information to the LTP.

3. Background - *He tirohanga whakamuri*

Like other local authorities during the 2020-23 period, Council worked to map out what a water entity might look like. As part of that an 'Entity B' needs-based unconstrained Asset Management Plan (AMP) was produced in draft. This work was moderated by external experts and undertaken alongside other local authorities in the grouping. For our Council, it included a proposed 10-year capital work programme totalling almost $440M.

With the rise of the new coalition government, the three waters assets are now firmly back in Council hands. We do not have the capacity to manage this level of investment. In fact, through the LTP process, Council has had to take a balanced approach and reduced this programme to $170M (uninflated). This was managed by reducing the level of renewals to 70% of the desired rate, reducing the level of investment into resilience/improvement projects and entirely removing the physical works costs of upgrading the wastewater treatment plants.

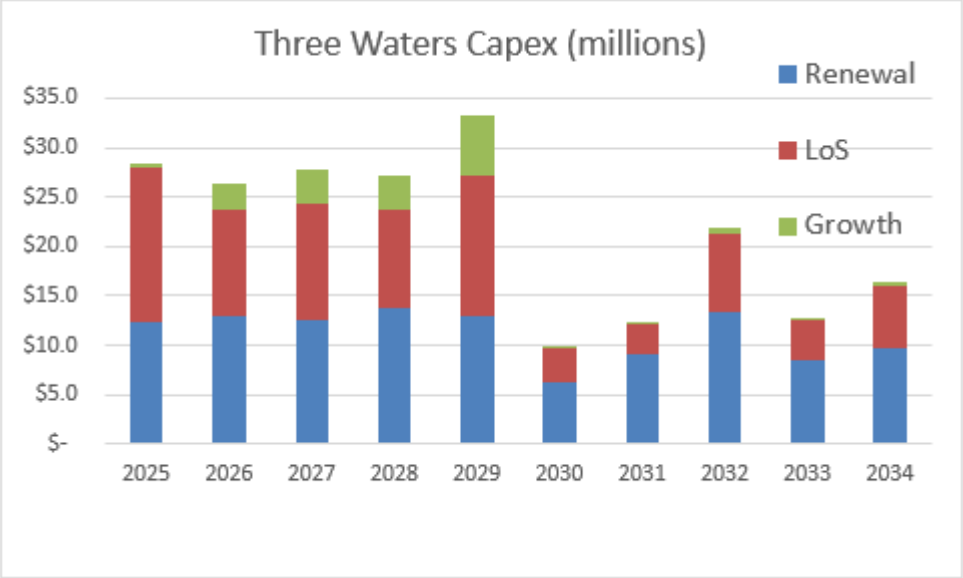
4. Issue/subject - *Kaupapa*

The Three Waters Team is working through the final stages of developing the 2024-34 Three Waters AMP. The AMP document compiles evidence based, systematic way in which we approach maintaining and where possible extending, improving, and renewing our water assets and coping with the significant challenges Council face.

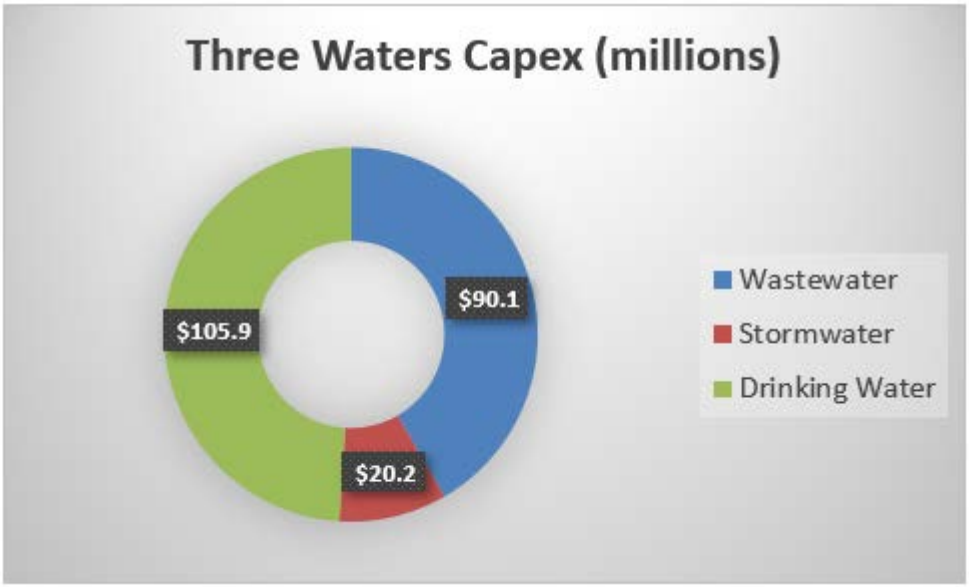
4.1. Capital forecast

The capital forecast for three waters over the next 10 years is shown below. Approximately $216M (inflated) capital investment is required over the next decade – 49% for drinking water supply, 42% for wastewater and 9% for stormwater. As can be seen there is a heavy spend on wastewater until the end of Y5. Drinking water capex varies as major projects are delivered. Stormwater capex is small and declines over time.

4.1.1. Expenditure based on Levels of Service

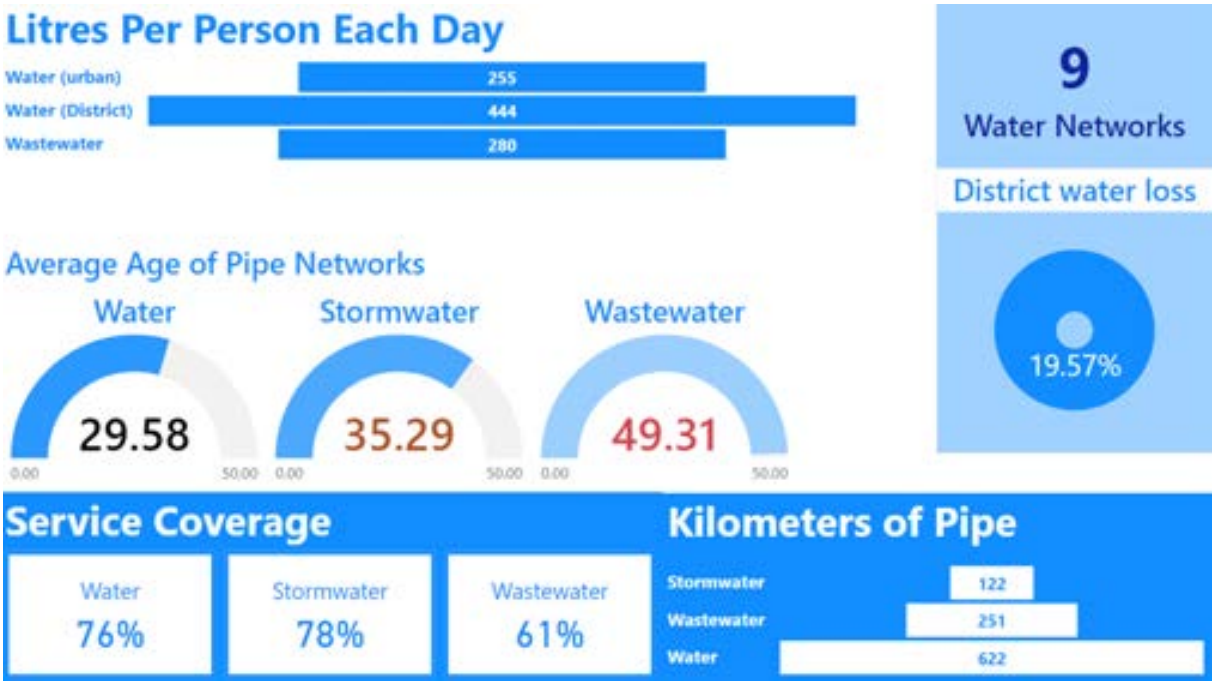


4.1.2. Expenditure based on Wastewater, Stormwater and Drinking Water



4.2. Assets we manage

The AMP goes through all aspects of the asset we manage, from number of schemes, their magnitude, length of linear assets, drinking water use, water losses, age of assets and service coverage. The below information is a snapshot of parts of this information.



5. Options analysis - *Ngā Kōwhiringa*

Asset Management Plans are a mandatory requirement under the Local Government Act, as such no options have been identified relating to the matters of this report.

6. Significance and Engagement Assessment - *Aromatawai Pāhekoheko*

6.1. Assessment of Significance

This report is part of a broader process of the LTP and mandatory requirement and assessed to be of moderate to high significance, in accordance with the Council's Significance and Engagement Policy.

7. Considerations - *Whai Whakaaro*

7.1. Financial/budget considerations

The budget considerations associated with the recommendations of this report.

7.2. Strategic alignment

No inconsistencies with any of the Council's policies or plans have been identified in relation to this report and the AMP is part of a broader process of the LTP.

Three Water services within the AMP, are essential for protecting public health, safeguarding the environment, respecting Te Mana o te Wai, complying with regulations, and enhancing community wellbeing.

7.3. Climate change assessment

Climate change assessment is an integral component of asset management, and we aim to manage resources in a sustainable way for our infrastructure. We deliver assets over multiple generations, as such the AMP is assessed to have medium to high climate change implications in accordance with the Council's Climate Change Principles.

7.4. Risks

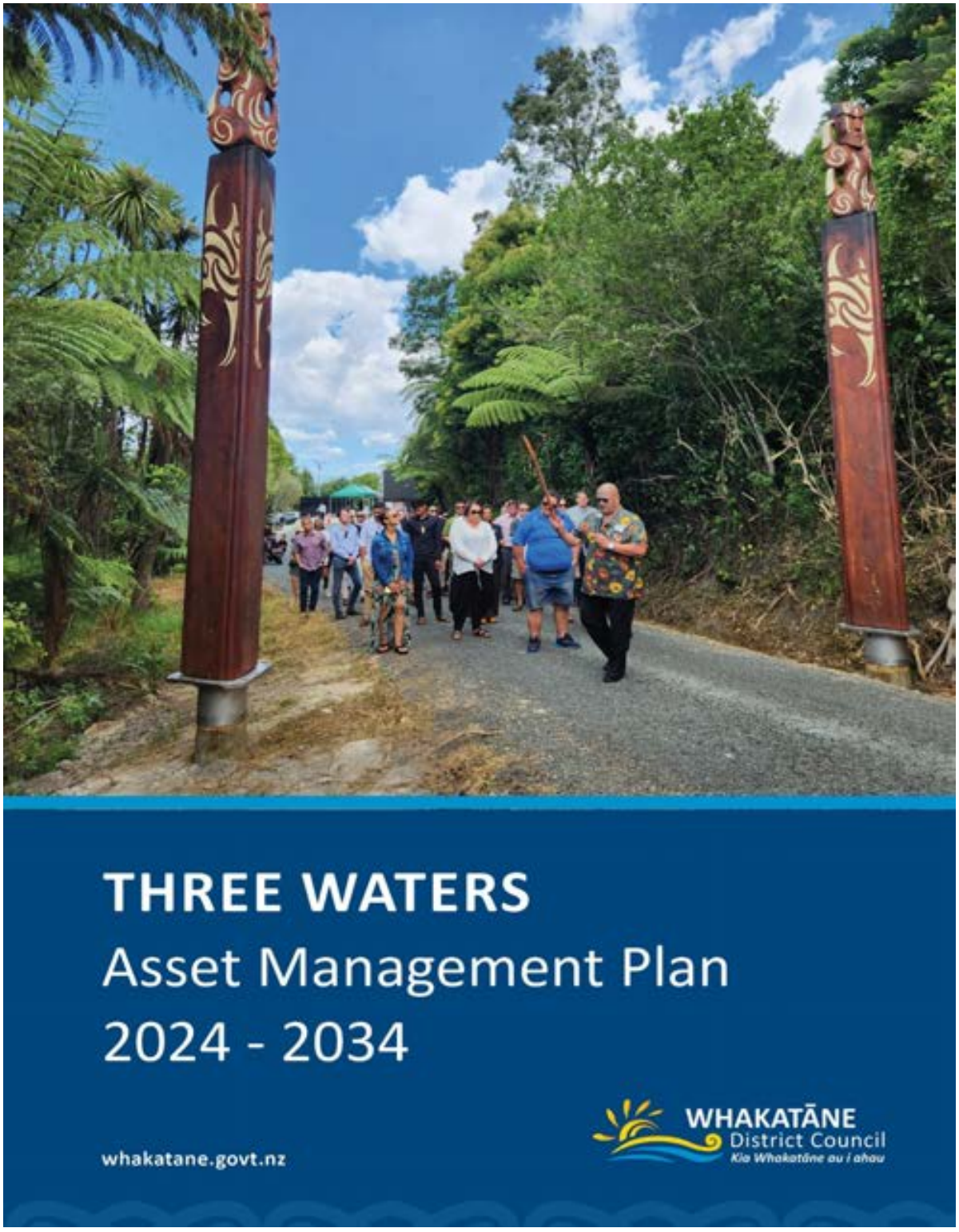
The risks associated with the matters of this report will be no compliance with the local government act.

Attached to this report:

Appendix 1: "THREE WATERS Asset Management Plan 2024 – 2034", this is draft version and subject to change through the LTP process. Draft is marked via page footer

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)



6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

1. Executive summary

1.1 This Asset Management Plan

This asset management plan (AMP) outlines the current state, performance and quantum of three waters assets. It describes present and future days pressure on service delivery and details an investment plan proposed over the next 10 years. This AMP takes a detailed view over the next 10 years and links into Council's Infrastructure Strategy, taking a longer and more holistic view of the Council's wider infrastructure portfolio over the next 30 years.

1.2 Three Waters in Whakatane District in 2024

Like other local authorities during the 2020-23 period, we worked to map out what a water entity might look like. As part of that an 'Entity B' needs-based unconstrained AMP was produced in draft. This work was moderated by external experts and undertaken alongside other local authorities in the grouping. For our Council, it included a proposed 10-year capital work programme totalling almost $440M. This represented the value of investment required to meet drinking water, renewal, growth and environmental compliance over that period. Notably, this included a $200M wastewater treatment plant upgrade programme to bring four treatment plants up to modern standards.

With the rise of the new coalition government, the three waters assets are now firmly back in our hands. We do not have the capacity to manage this level of investment. In fact, through the LTP process, Council has had to take a balanced approach and reduced this programme to $170M. This was managed by reducing the level of renewals to 70% of the desired rate, reducing the level of investment into resilience/improvement projects and entirely removing the physical works costs of upgrading the wastewater treatment plans. For the latter, this is a signal that this level of investment is unaffordable to our communities at present until alternative funding and financing options are available. At this stage, the best we can do is to undertake a thorough approach to reconsenting – they expire in 2026 – and lodge new consent applications. Any upgrading works resulting from such consenting lies outside the ten-year planning period.

1.3 This Plan

This AMP outlines the systematic way we approach maintaining and where possible extending, improving and renewing our assets and coping with the issues we face.

1.4 Setting the scene

Whakatāne District Council owns and operates three waters infrastructure that serves communities throughout the Eastern Bay of Plenty, from Ōhope in the east, Matatā in the west and as far inland as Murupara. The networks provide services in the six largest communities throughout the district with an asset gross replacement cost of about $650 million. The population served is approximately 30,000, spread across urban and rural communities.

The main objective of this Asset Management Plan (AMP) is to set out how we prioritise investment for infrastructure assets including how we will renew current infrastructure and plan for new assets. This plan includes details of three waters asset inventory, asset condition and performance, future, renewal and operational planning and the capital and operational investment decision making and its outcomes. Our waters activities contribute primarily to the following community outcomes:

- Strong, connected, interdependent, diverse communities
- Constructively and collaboratively engaging with Iwi Māori
- Integrating nature into our decision-making

- Thriving circular economies.

To achieve these objectives, this AMP is developed under the International Infrastructure Management Manual (IIMM) 2020 framework.

1.5 What we do

We provide drinking water to about 30,000 customers, collect and treat wastewater from around 12,000 homes, businesses and industries and provide stormwater services to protect roads and communities from flooding. We manage, maintain and operate nine water supply schemes, six wastewater schemes and nine stormwater schemes.

1.6 Why we do it

These services are delivered by local authorities within New Zealand. Quality drinking water supply, wastewater and stormwater services are essential for protecting public health, safeguarding the environment, respecting Te Mana o te Wai, complying with regulations, and enhancing community wellbeing.

We aim to manage resources in a sustainable way and for our infrastructure and facilities to be modern and robust. Our work is guided by strategic frameworks, which detail how we plan to ensure the development of resilience, and other strategic documents.

We operate under resource consents authorised by the regional council and are required to meet drinking water standards and other key legislation.

We deliver services to agreed levels and ensure these are met by:

- Maintaining and renewing assets.
- Investing capital in response to increasing demands for growth (greenfield and infill).
- Improving the quality of stormwater discharges to address waterway degradation.
- Providing a high quality, clean, safe and sustainable drinking water supply as an essential service.

1.7 Needs based assessment

As part of the lead-in work towards three waters reform entities we carried out detailed analysis of linear assets, their age and assessed condition. This has given rise to a renewal framework. This work was carried out alongside peer organisations and had the benefit of external moderation to ensure consistency. As such it is considered that good information exists about asset condition and the requirement for asset renewal.

This plan talks about the need to defer big-ticket investment in new assets. Nevertheless, the need to continually assess the condition of existing assets and plan for their upgrade or renewal remains vitally important.

1.8 Asset condition and performance

It is essential that we know the condition of our assets and how they are performing. An asset register including asset condition is housed within the AMS to enable us to plan for future expenditure and make management decisions regarding maintenance and renewals.

We have carried out a number of condition assessment projects over the past 5 years, including water reservoirs and stormwater pumping stations to ascertain their condition and performance. In addition to this, we have internal CCTV capabilities to undertake the inspection, reporting and assessment of gravity pipe assets.

The below graph is an indication of the length and age of our piped network.

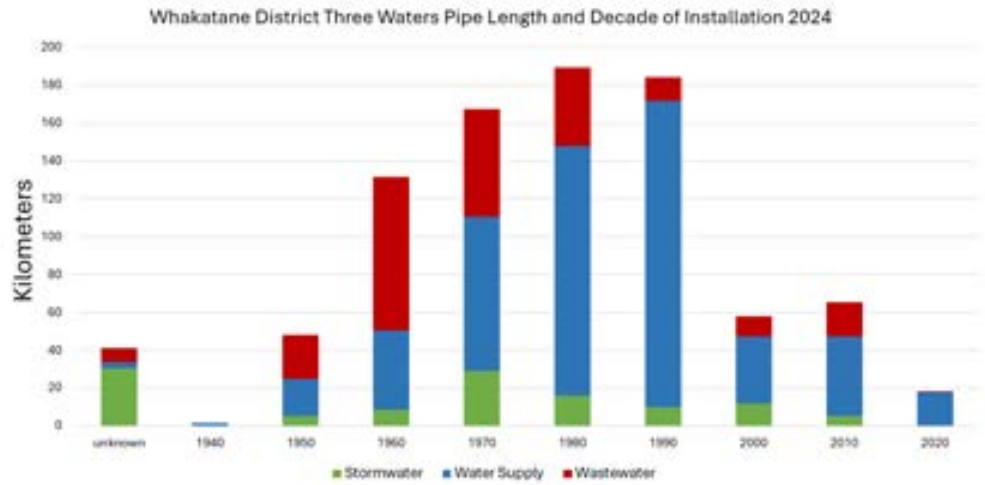


Figure 1A – Linear assets – Activity and installation decade

1.9 Future levels of service and performance measures

To ensure effective management of service levels, we will adopt the latest national level of service framework. This framework is crucial for aligning investment decisions with the maintenance of service levels. It is designed to be adaptable, establish a benchmark, promote consistency, encourage stakeholder engagement, and provide a means of measurement.

When developing future levels of service, we consider various factors such as service quality, cost, and risk. To maintain flexibility, the service level targets will be adjusted accordingly. The process will involve analysing the benefits, outcomes, and potential risks associated with different service levels through a cost, service, and risk optimisation process. By adopting a level of service framework and considering multiple factors, we aim to optimise its service provision while managing costs and risks effectively.

1.10 Planning for the future

The population of Whakatane District is expected to grow by about 20% in the next 30 years. Based on insights from the three waters asset condition and performance, it is evident that we have a significant need to address asset renewals and upgrades to improve current levels of service and to provide for growth. The demand for capital investment over the initial years of the LTP is projected to be dominated mainly by resource consent compliance and renewals.

1.11 Focus of the capital and operational investment plan

This asset management plan lays out the strategy for investing in assets to achieve desired services and community outcomes. It identifies areas for improvement, determines the necessary capacity to facilitate growth, and details plans for maintaining, enhancing, and renewing the existing asset base.

1.12 Capital forecast

The capital forecast for three waters over the next 10 years is shown below. Approximately $214M of capital investment is proposed over the next decade – 49% for drinking water supply, 42% for wastewater and 9% for stormwater. As can be seen there is a heavy spend on wastewater until the end of Y5. Drinking water capex varies as major projects are delivered. Stormwater capex is small and declines over time.

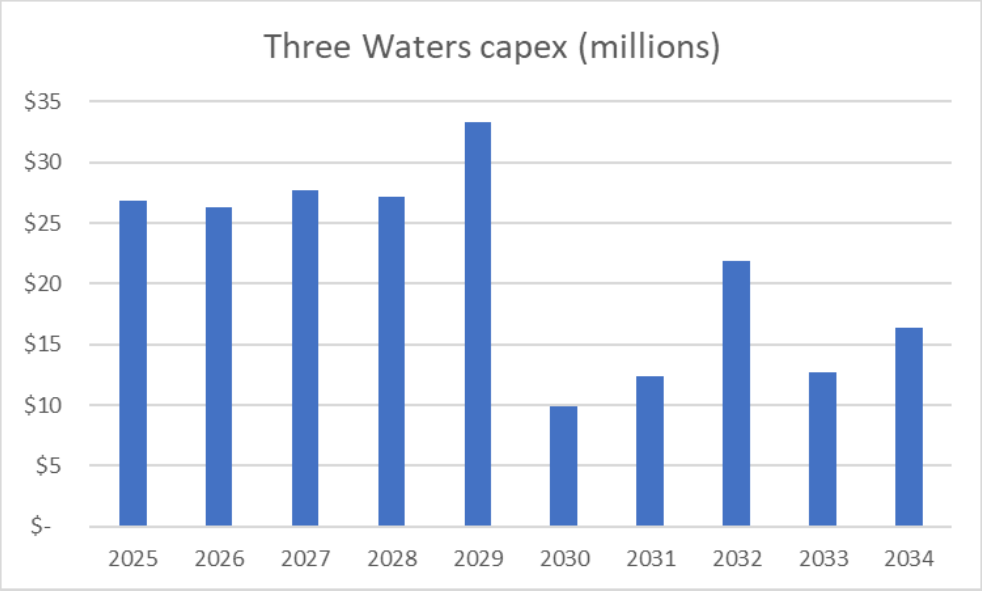


Figure 1B – Proposed Capex – Y1-Y10

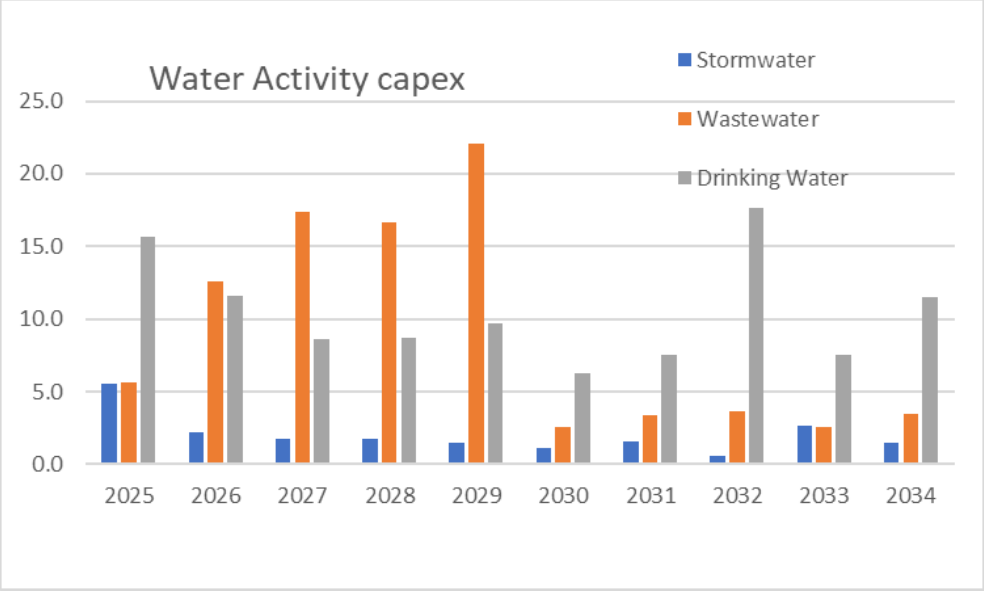


Figure 1C – Proposed Capex – Split by waters activities

1.13 Operational expenditure forecast

The operational forecast for three waters over the next 10 years is shown below

Drinking Water	$ 158.4
Wastewater	$ 107.5
Stormwater	$ 60.6
	$ 326.6 Million

Approximately $327M of direct operational investment is required over the next decade – 48% for water supply, 33% for wastewater and 19% for stormwater. The total operating expenditure is primarily driven by depreciation (34%) then direct costs (31%) and debt servicing (18%). Looking ahead, further information is contained in the Development Contributions policy, the Revenue & Financing Policy and Draft Fees & charging schedule.

2. Introduction

2.1 Purpose

This plan outlines our approach to managing our three waters assets and services during the period 1 July 2024 to 30 June 2034. The asset management plan sets out the investments we need to make over the next ten years to continue providing safe and reliable water, wastewater and stormwater services to our customers.

2.2 Objectives

The objectives of this plan are to:

- Highlight our approach to managing long life assets by providing clear descriptions, objectives and targets for them.
- Be transparent with our stakeholders, particularly around the risks inherent in our networks and the systematic processes in place to mitigate those risks.
- Explain the challenges we face as an organisation and how these will be addressed by our funding application.
- Demonstrate the links between the plan objectives, our Asset Management Policy, Strategic Asset
- Management Plan, corporate goals, business planning processes, and plans.
- Provide visibility of forecast investment programmes to external users of the plan.
- Provide updates to stakeholders on improvements to our asset management practices.

2.3 About this plan

Assets we manage – an overview of three waters assets and services with an assessment of condition and criticality.

Current levels of service and performance – an overview of different levels of service provided to our communities and an assessment of asset and service performance.

Future levels of service and performance measures – proposed levels of service based on industry and regulator expectations to be confirmed with stakeholders and communities.

Planning for the future – factors affecting future service demand and measures required to meet demand in the short and long term.

Renewal planning – an overview of key renewal drivers and themes and renewal planning strategy considering asset condition, performance, and criticality.

Lifecycle management – an overview of current and future practices around operations and maintenance, renewals, creation, and disposal of three waters activities.

Managing risk and resilience – an assessment of how risks, including climate change and natural hazard risks, are incorporated into the management of water activities to enhance resilience of water service provision to disruptions.

Operational planning – operational and maintenance plans and strategies and post-event response planning to minimise disruptions to system operation.

Investment decision making – the transitional and proposed future decision making frameworks.

Plan monitoring and improvement – the level of current and desired asset management practices along with recommendations to deliver and monitor improvements.

2.4 Water sector regulators

Three waters activities and services provided are regulated via Taumata Arowai and Regional Councils. Respectively, these organisations provide regulatory controls for drinking water quality and environmental compliance. Councils must comply with standards and report on performance measures set by these regulators. As such, they are key stakeholders in this plan.

New Zealand's drinking water regulator, Taumata Arowai, is dedicated to the oversight and management of the country's freshwater resources, with the primary goal of safeguarding drinking water quality. Taumata Arowai sets national standards for drinking water services, monitors compliance, and promotes effective water management practices across various sectors. Current drinking water standards and quality assurance rules are in place. Future wastewater policies and standards are anticipated.

Regional Councils develop and implement regional policy statements and plans that guide land use, resource management, and environmental protection. They monitor and enforce regional rules and resource consent compliance.

3. The assets we manage

3.1 Three waters networks overview

Several diagrams follow to graphically display information about our three waters networks. Information shown relates to number of schemes, their magnitude, length of linear assets, drinking water use, water losses, age of assets and service coverage.

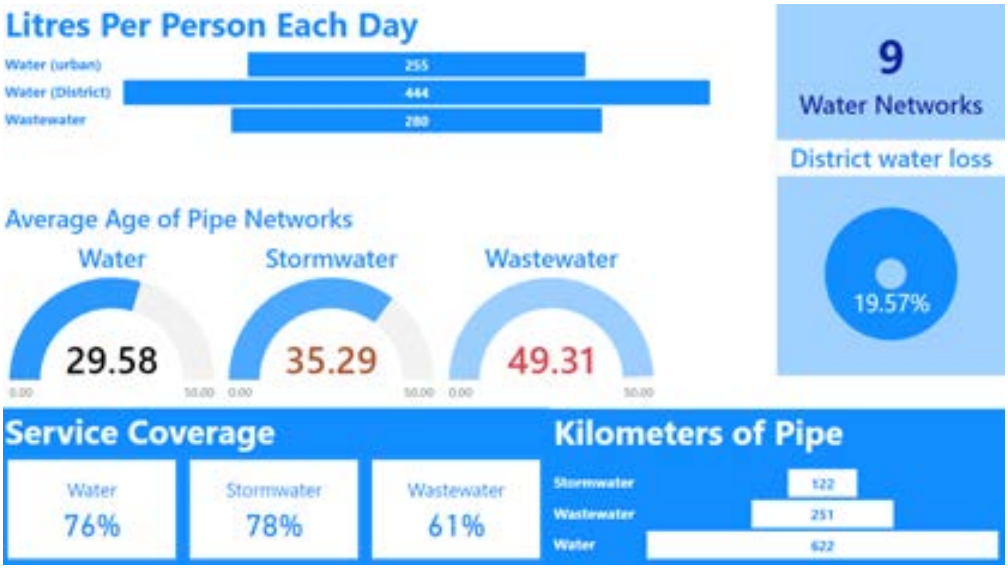


Figure 3A – Three waters info snapshot

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

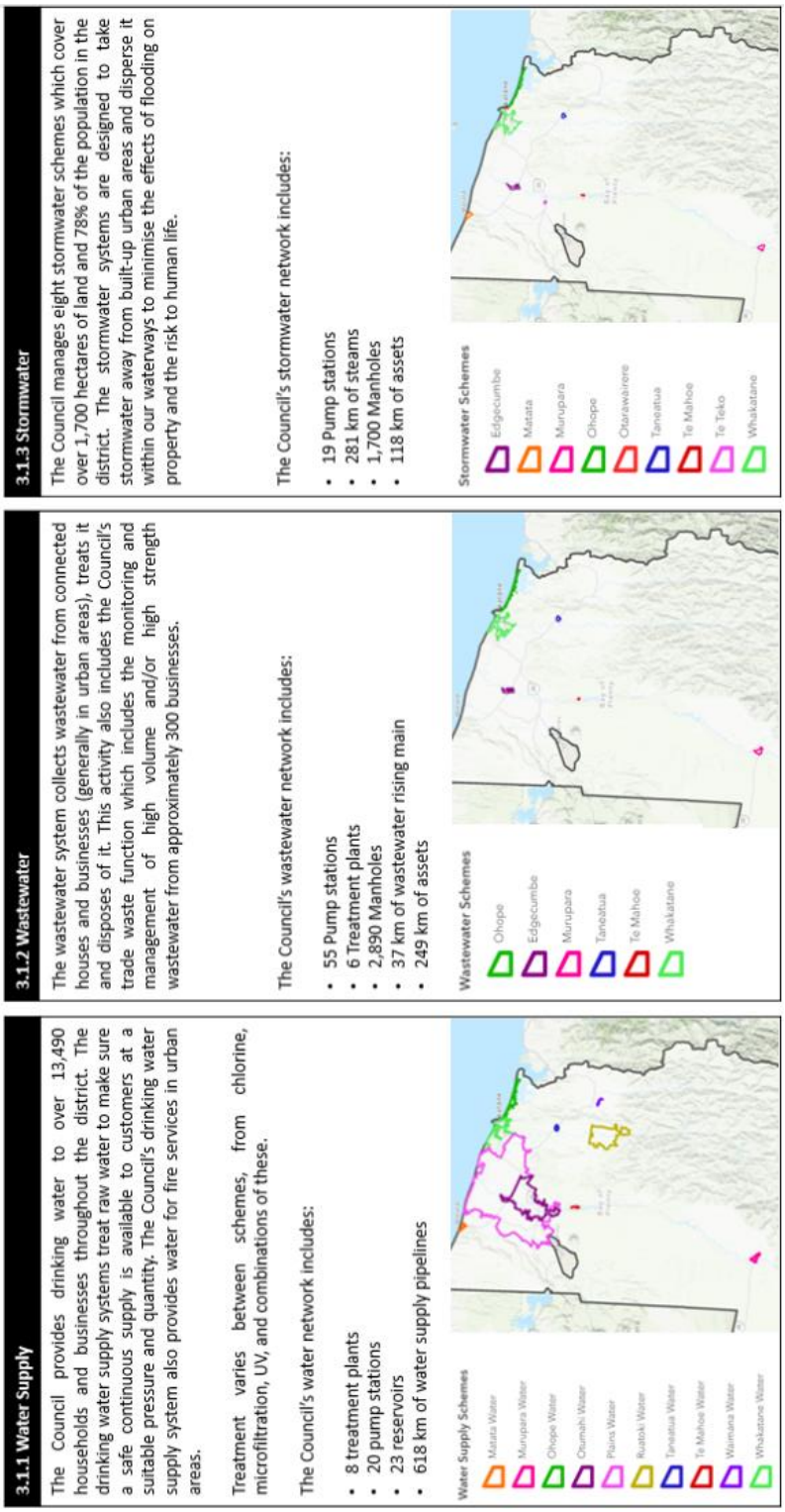


Figure 3B – Three waters assets by geographic location

Activity	GRC	DRC	AD
Stormwater	$129,479,261	$77,068,718	$1,345,121
Wastewater	$115,914,855	$48,936,606	$1,436,377
Water	$209,370,507	$119,211,234	$2,493,988
3 Waters	**$454,764,623**	**$245,216,558**	**$5,275,486**

[1]

Table 3C – Valuation - Three Waters Infrastructure Assets (Linear Assets) – 2023(* uninflated dollars)

Activity	GRC	DRC	AD
Stormwater	$30,530,390	$14,550,156	$489,162
Wastewater	$91,247,554	$38,503,641	$1,217,646
Water	$77,505,644	$25,483,203	$1,866,744
3 Waters	**$199,283,588**	**$78,536,999**	**$3,573,551**

Table 3D – Valuation - Three Waters Infrastructure Assets (Point & Plant Assets) – 2023 (* uninflated dollars)

[1] GRC = Gross Replacement Cost, DRC = Depreciated Replacement Cost, AD = Annual Depreciation

3.2 Drinking Water Asset overview

We undertake regular independent performance assessment against compliance with the required health standards for bacteria and protozoal. Each treatment plant is continuously monitored via SCADA systems and water reports compiled through Water Outlook. As is required, Council uses WaiComply to independently report on Drinking Water compliance each quarter.

The average metered water consumption in the district for the past three years is approximately 408 litres/resident/day. Approximately 21% of treated water is lost within our metered networks before reaching customers, compared to the national average of 24%. This is pleasing but not something to celebrate. Further emphasis is planned to focus efforts on leakage with specific funding for leak management provided on each of the larger schemes.

Average response times to faults within the district's water supplies are similar to the national average with Council's in-house operations team continuing to provide a timely response to most water related events.

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

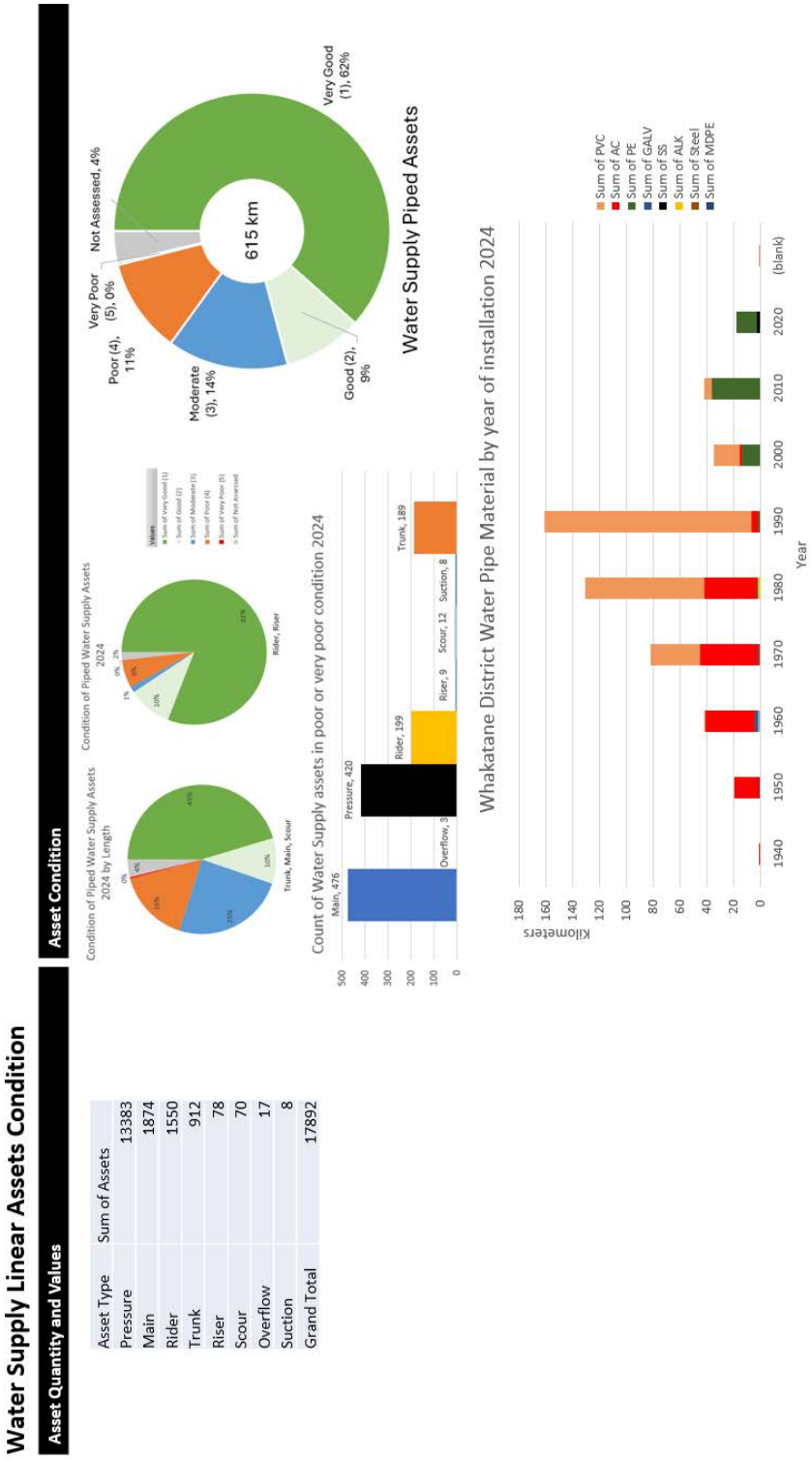


Figure 3E – Drinking Water Linear Assets - Condition

Water Supply Linear Assets Criticality

List of Critical Assets

11 water treatment plants (IS?)
- Whakatāne
- Paul Road
- Tahuna
- Johnson Road
- Braemar
- Te Mahoe
- Tāneatua
- Awakaponga
- Rūātoki
- Waimana
- Murupara

19 Water Storage Reservoirs
- Whakatāne A
- Whakatāne B
- Whakatāne C
- Ōtarawairere
- Ngāti Awa
- Kowhai A
- Kowhai B
- Braemar
- Matatā A
- Matatā B
- Awakeri
- Tahuna
- Te Mahoe
- Tāneatua
- Rūātoki
- Waimana
- Murupara A
- Murupara B
- Murupara C

9 Water Schemes
- Whakatane, Coastlands, Ōhope
- Otumahi
- Rangitāiki Plains
- Matatā, Awakaponga
- Te Mahoe
- Tāneatua
- Rūātoki
- Waimana
- Murupara

Figure 3F – Drinking Water Assets - Criticality

Condition of Critical Assets

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

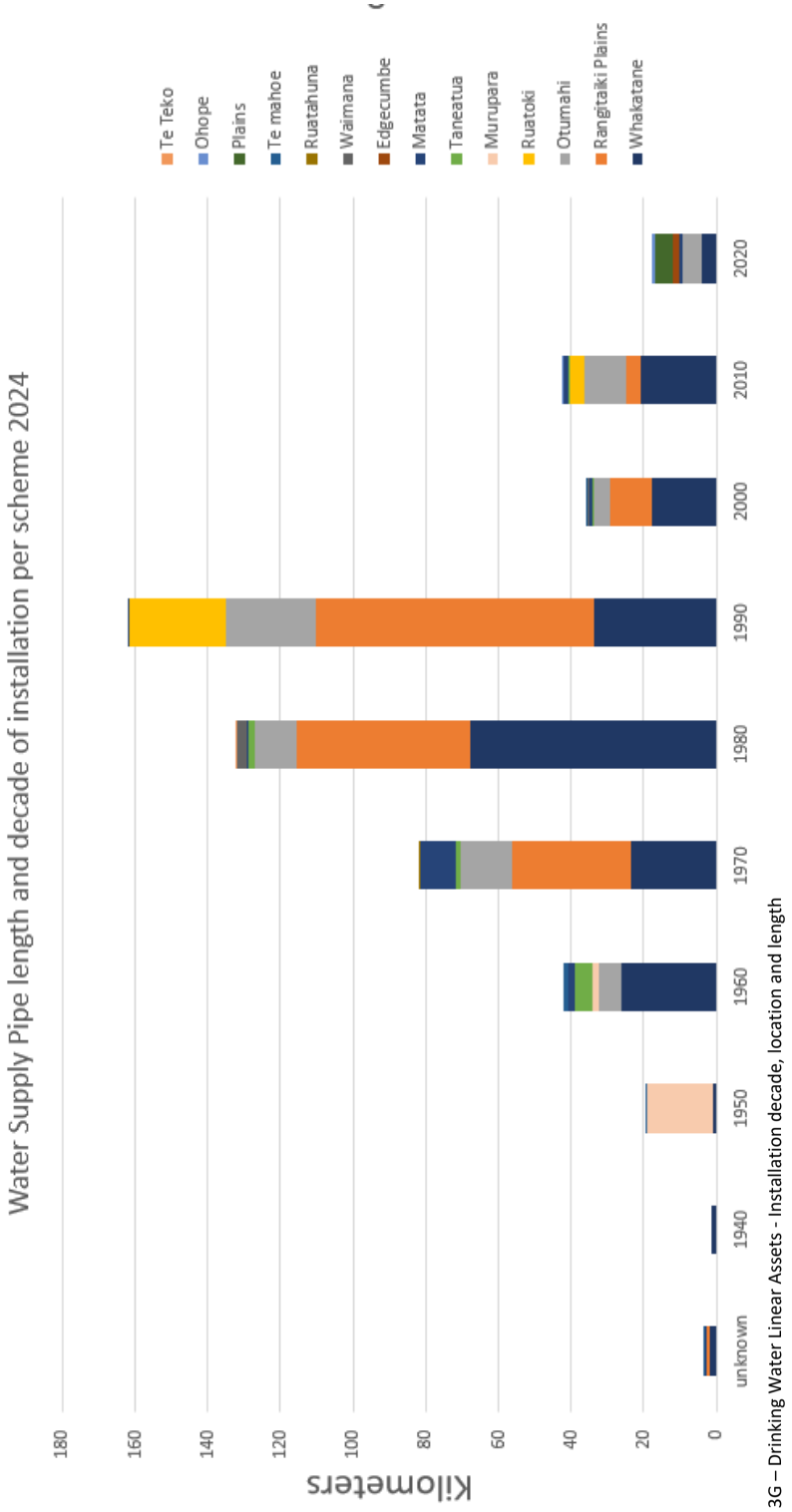


Figure 3G – Drinking Water Linear Assets - Installation decade, location and length

3.3 Stormwater Assets overview

The devastating effects of recent flooding events across the country have highlighted the need to reassess the level of service that will be provided to our communities. This will include the ongoing improvement in the performance and capacity of both below ground (pipes) and above ground overland flow paths, waterways, and storage to improve resilience in future events. Improving stormwater quality via treatment or related mechanisms will also require focus.

We have worked towards obtaining a comprehensive stormwater consent for Whakatane scheme, which is currently being reviewed by Bay of Plenty Regional Council. The remainder of the district's stormwater schemes are managed through individual consents. These are extensive and many are likely to be retired upon final issue of the comprehensive stormwater consent. Their management will fall under the control of a comprehensive stormwater management plan.

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

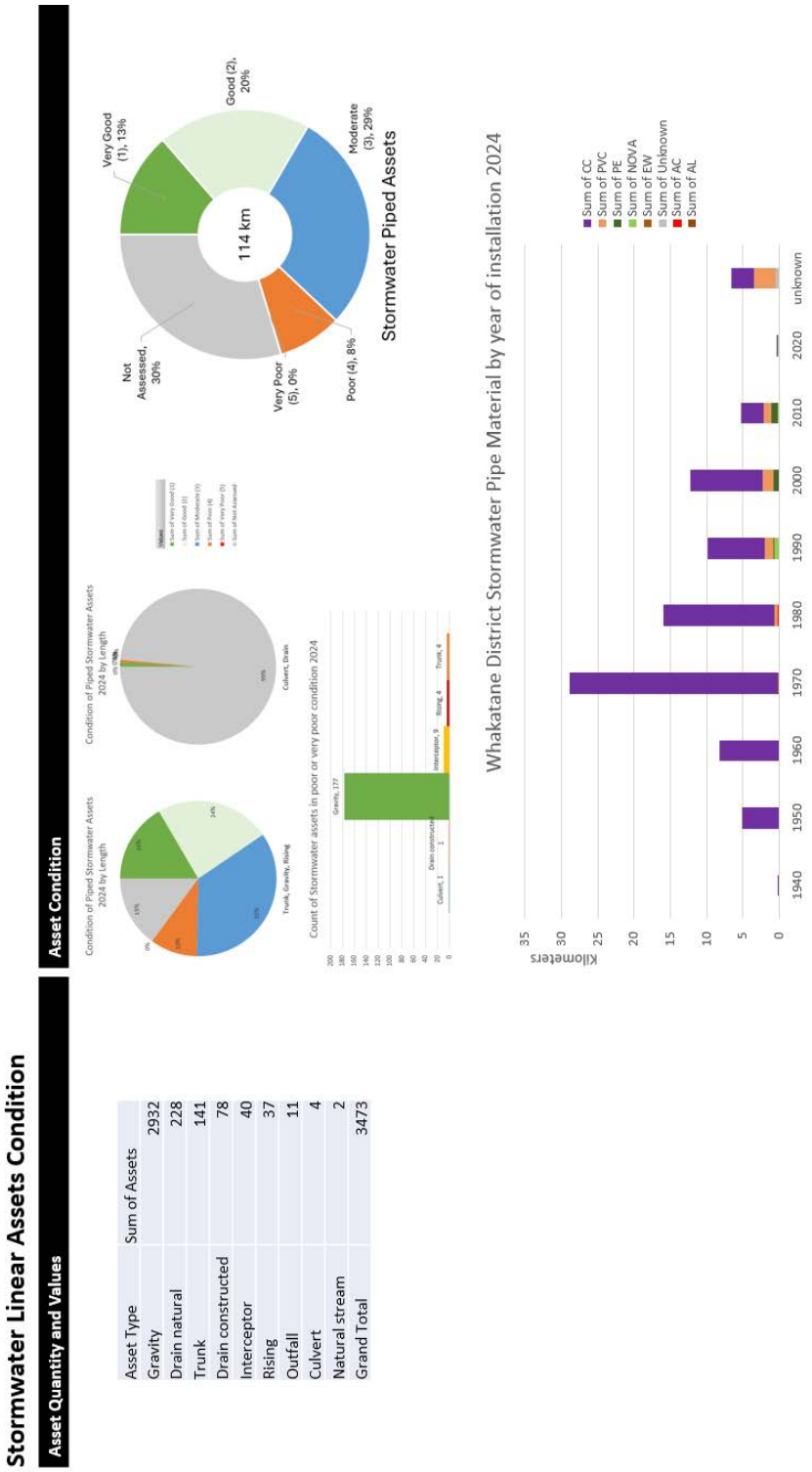


Figure 3H – Stormwater linear assets - condition

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

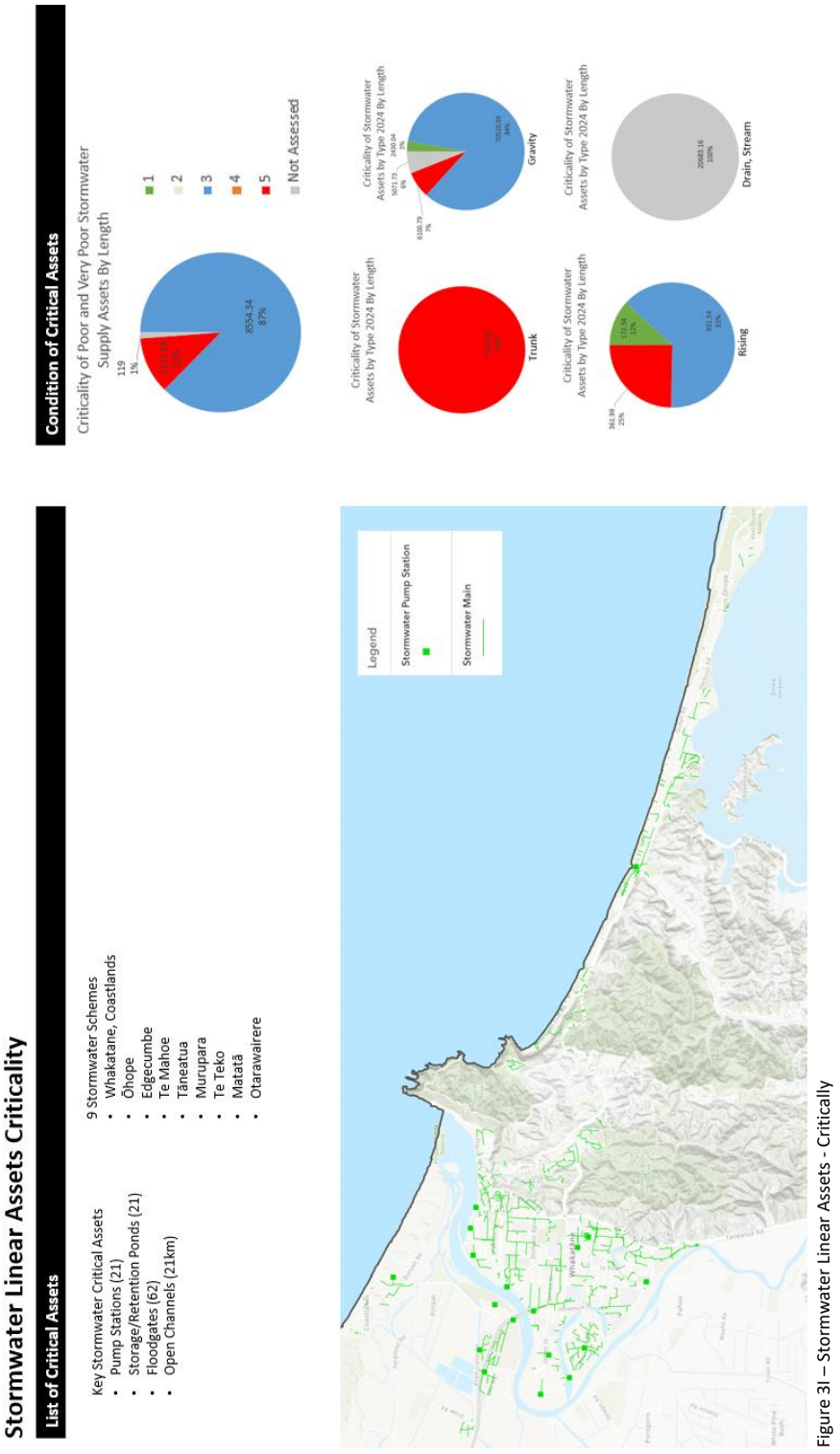


Figure 3I – Stormwater Linear Assets - Criticality

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

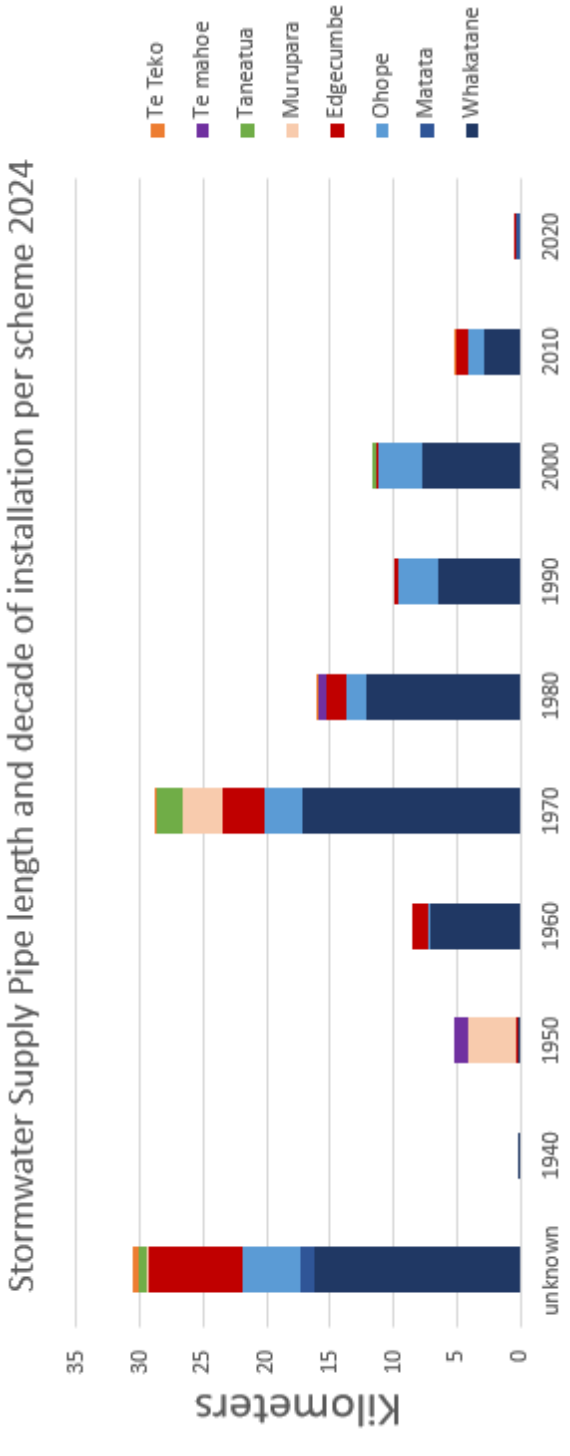


Figure 3J – Stormwater Linear Assets - Installation decade, location and length

3.4 Wastewater Assets overview

Our wastewater discharge consents have been largely compliant for a number of years, however, all but two wastewater discharge consents are due to expire by 2027. We will carry out the necessary scientific and planning work to support a fresh consent application. However, any significant physical upgrade works are excluded from the first 10 years of the LTP as they are considered to be unaffordable.

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

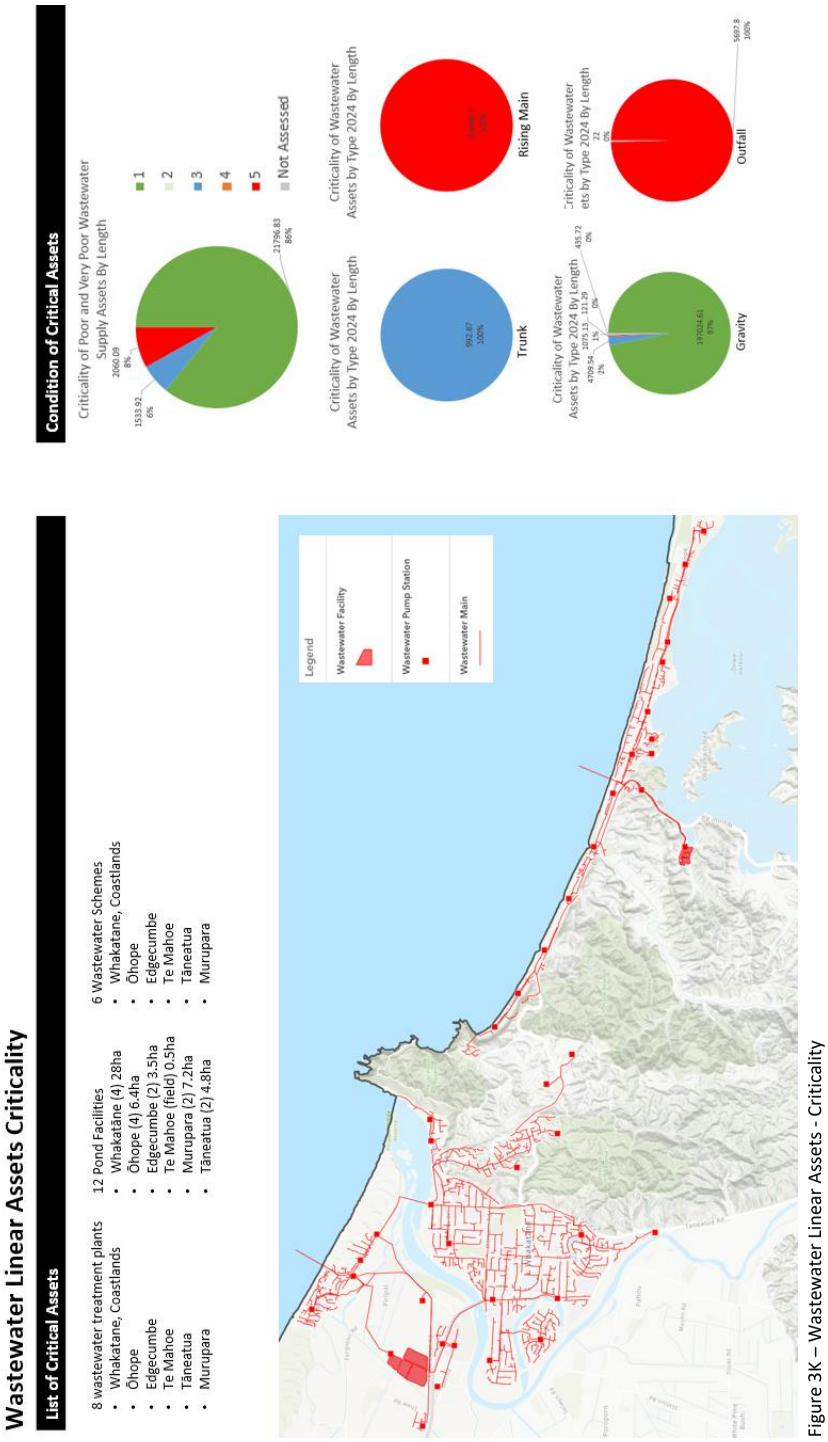


Figure 3K – Wastewater Linear Assets - Criticality

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

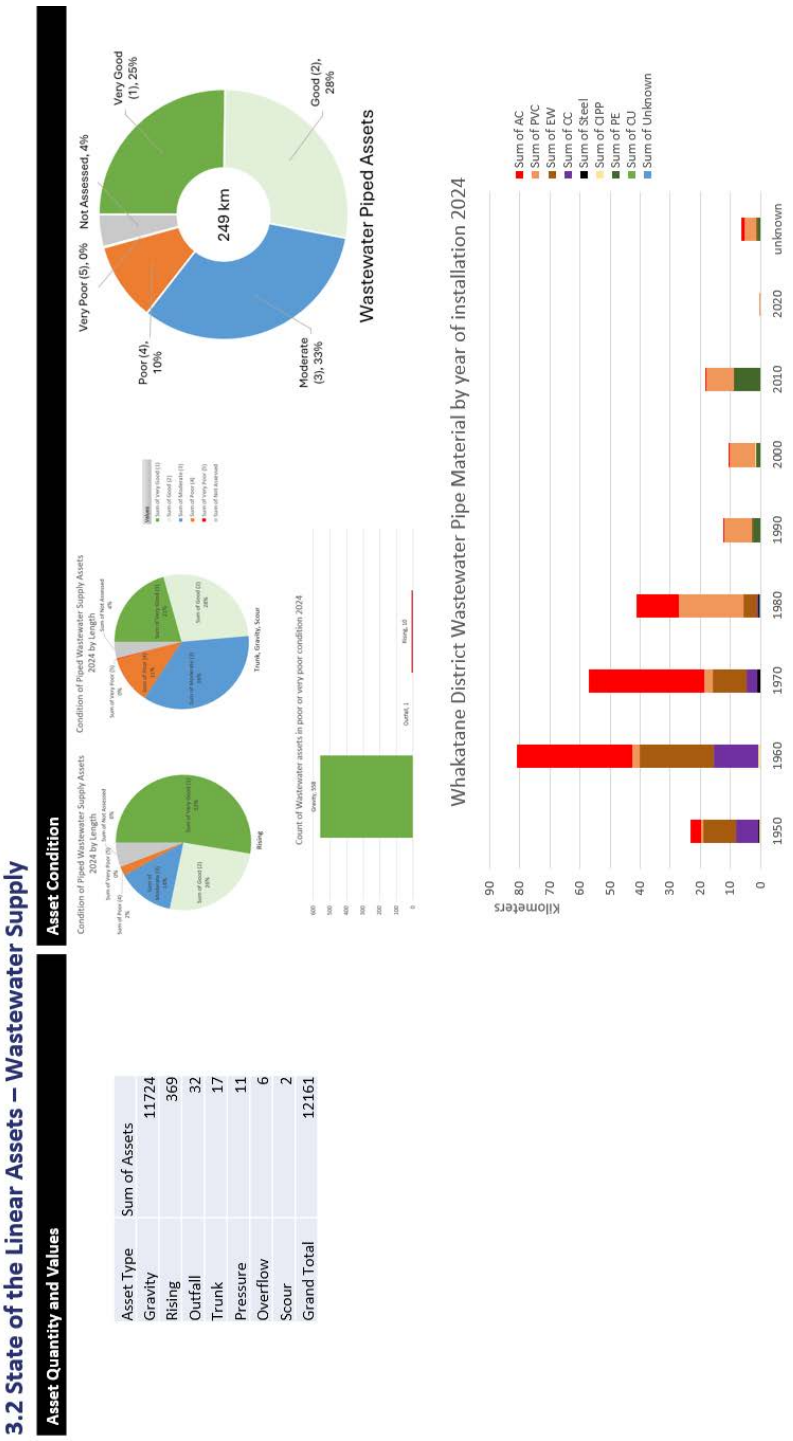


Figure 3L – Wastewater Linear Assets - Condition

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

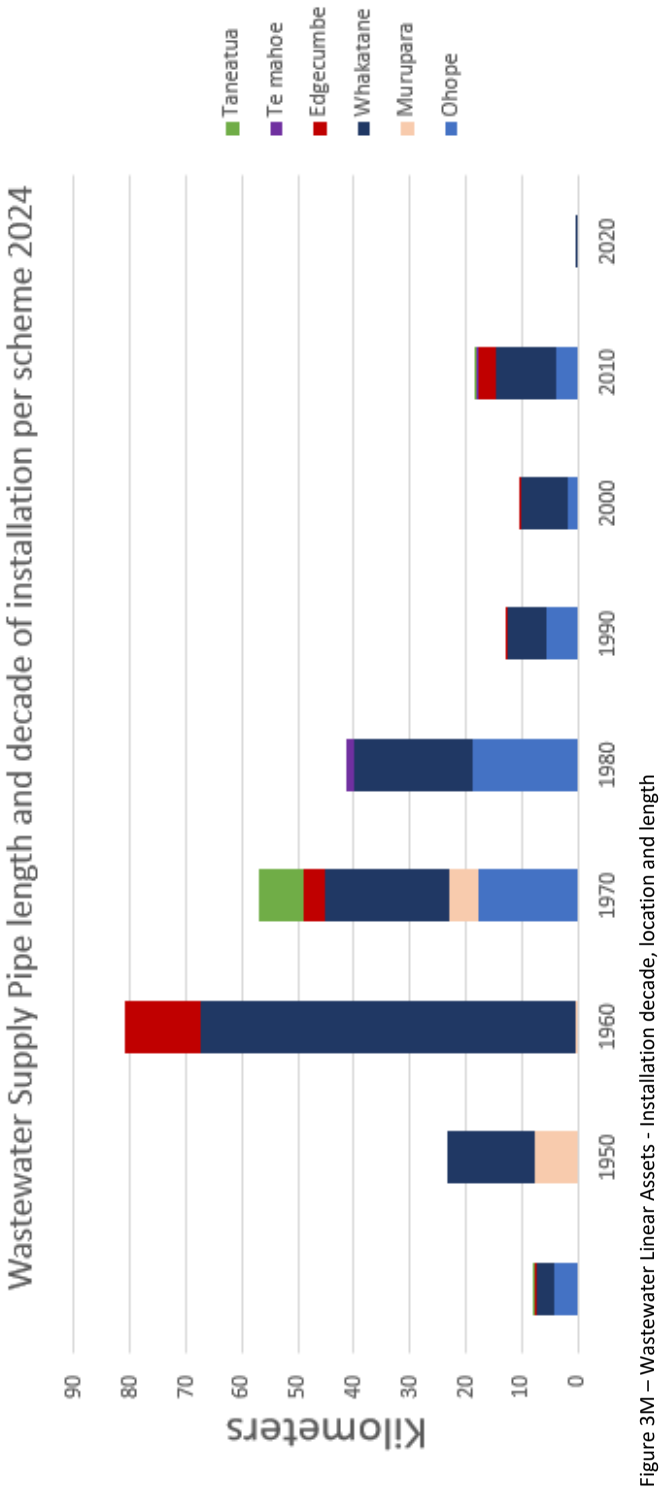


Figure 3M – Wastewater Linear Assets - Installation decade, location and length

3.5 Asset condition

3.5.1 Drinking Water Asset Condition

3.5.1.1 Linear assets

For drinking water assets we have assigned condition ratings to the majority of the piped assets. These were derived from the 2020 condition assessment based on the remaining useful life and pipe material. The assessment was based on actual pipe sample data from our pipe network and within the region and using deterioration modelling.

3.5.1.2 Point assets - Reservoirs

Also, in 2020 we engaged consultants to complete condition, seismic and isolation assessment for our concrete reservoirs, the full report is available. The following table summarises the overall condition rating for each element of the reservoir based on the highest condition rating of defects (Highest 5 to Lowest 1) affecting the sub-elements. The report is extensive and explains in detail the defects found. The Table below summarises the findings of this work.

3.5.1.2 Point assets - Plants

With a couple of exceptions, the drinking water treatment plants produce drinking water every single day. Taumata Arowai drinking water QA rules require the water produced to meet their published standards. As such drinking water treatment plants are considered to be generally in good or very good condition. Any components that are not delivering the required level of service are well known and generally there is an active upgrade programme to address such matters. Protozoal barriers are a well known example of this situation.

Whakatāne Reservoir condition summary 2020

Reservoir location	Condition rating: C1=very good, C2=good, C3=moderate, C4=poor, C5=very poor					
	Roof	Walls	Pipework	Access	Reference	AMP comments
Ngatiawa	C2	C2	C3	C2	Table 9	
Valley Road 1	C3	C3	C3	C2	Table 10	
Valley Road 2	C2	C4	C4	C1	Table 11	
Valley Road 3	C3	C4	C4	C4	Table 12	
Matata SH2	C3	C3	C4	C1	Table 13	
Taneatua	C2	C3	N/A	C1	Table 14	
Murupara 1	C4	C3	C4	C1	Table 15	
Murupara 2	C4	C3	C1	C1	Table 16	
Murupara 3	C4	C3	C1	C1	Table 17	
Murupara 4	C1	C3	C3	C4	Table 18	Currently not in service
Te Teko	C4	C3	C4	C1	Table 19	
Braemar Road	C2	C3	C3	C3	Table 20	
Murupara Pump Station	C4	C4	C2	C1	Table 21	Suction Tank
Melville Drive 1	C3	C3	C4	C3	Table 22	Decommissioned 2022
Melville Drive 2	C3	C3	C3	C1	Table 23	Decommissioned 2022
Melville Drive 3	C3	C3	C3	C1	Table 24	Decommissioned 2022
Melville Drive 4	C3	C3	C3	C1	Table 25	Decommissioned 2022
Melville Drive 5	C3	C4	C4	C1	Table 26	Decommissioned 2022
Te Mahoe	C4	C3	C4	C4	Table 27	
Awakeri Plains	C4	C4	C3	C2	Table 28	
Onepu 1	C3	C4	C3	C1	Table 29	Currently not in service
Onepu 2	C4	C4	C1	C1	Table 30	Currently not in service

Table 3N – Drinking Water reservoirs – Condition

3.5.2 Wastewater Asset Condition

3.5.2.1 Linear assets

For wastewater assets we have assigned condition ratings to the vast majority of the piped assets. These were derived from the 2020 condition assessment based on the remaining useful life and pipe material. The assessment was based on actual pipe sample data from our pipe network and within the region and using deterioration modelling.

In addition to this work, we have in-house CCTV capabilities and undertake gravity pipe inspections throughout the wastewater network. These assessments are uploaded onto a digital platform 'ReticManager' and further interrogation of this data gives detailed analysis of pipe condition.

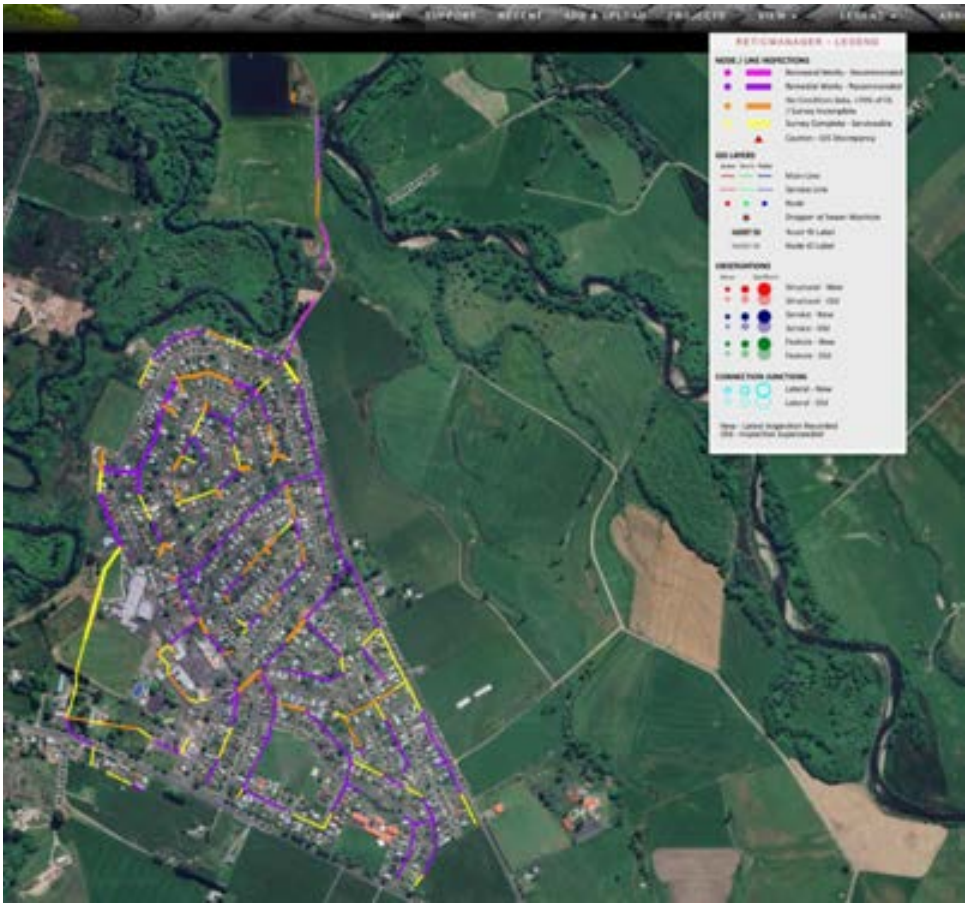


Figure 3O – Wastewater network – condition - Murupara

3.5.2.2 Point assets

Wastewater point assets include mainly pumpstations and treatment plants. Pumpstations operate many times per day making any performance issue immediately noticeable. In addition, we have engaged external expertise to carry out a slightly higher level analysis of pump station condition with a view to identifying possible upgrade works. See the table below for an example of the findings.

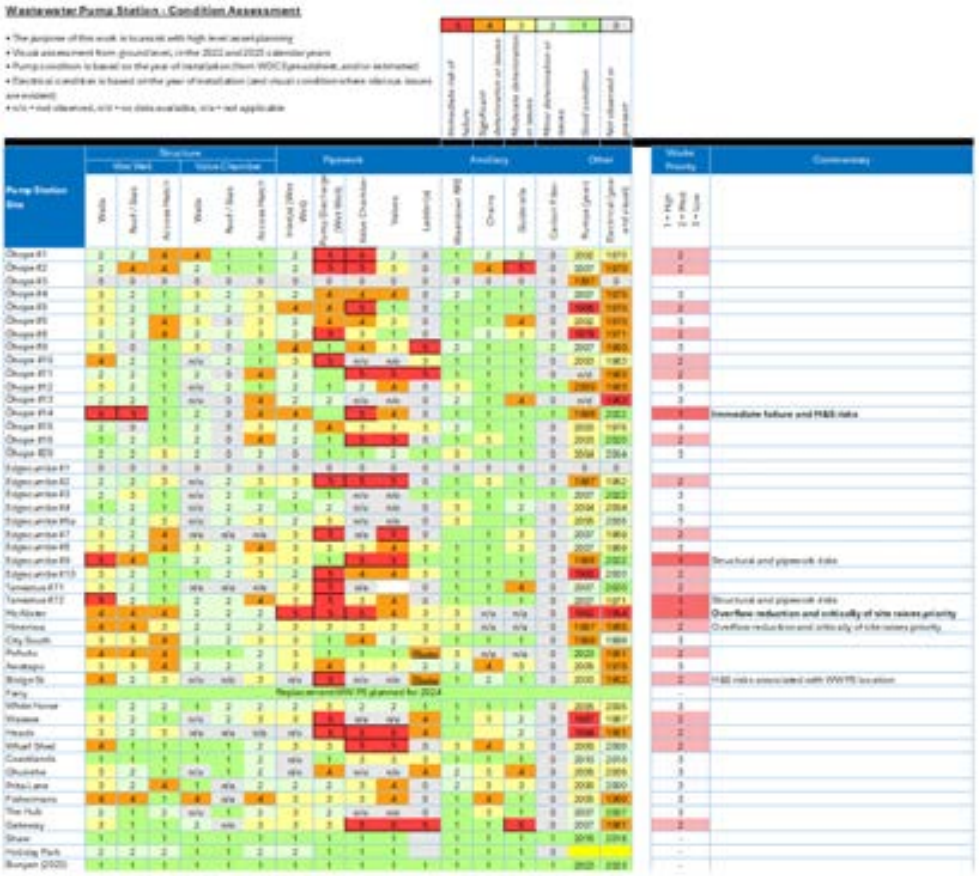


Table 3P – Wastewater pumping station – condition – high level

The treatment plants are known to be of a rudimentary mid-20th century style. Individual components are on maintenance schedules and have been operating for many years with ongoing maintenance. This maintenance is of a mature nature. We are in the process of securing critical spares for treatment plant mechanical items to assist if any unforeseen breakdowns occur.

3.5.3 Stormwater Asset Condition

3.5.3.1 Linear assets

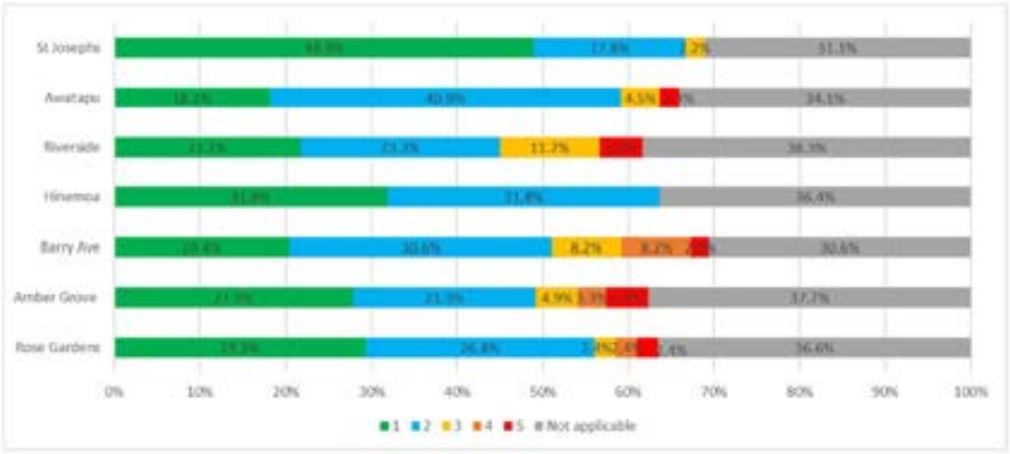
For stormwater assets we have assigned condition ratings to the vast majority of the piped assets. These were derived from the 2020 condition assessment based on the remaining useful life and pipe material. The assessment was based on actual pipe sample data from our pipe network and within the region and using deterioration modelling.

In addition to this work, we have in-house CCTV capabilities and undertake gravity pipe inspections throughout the stormwater network. These assessments are uploaded onto a digital platform 'ReticManager' and further interrogation of this data gives detailed analysis of pipe condition.

The open drain and overland flowpath network also comprise a vital part of the stormwater network. Because the assets are all visible their condition is relatively easy to discern at any time. In general, regular maintenance identifies any condition abnormalities and maintenance interventions required.

3.5.3.2 Point assets

Stormwater point assets include mainly pumpstations and detention/retention treatment ponds. Pumpstations operate much less frequently than wastewater pumpstations meaning that a different operating regime is required. We have undertaken a stormwater pumpstation condition and capacity assessment for our critical older stations. The "Whakatane Stormwater Pumpstations Condition and Capacity Assessment" has further details of pump station assessment. The asset condition profile of pumping stations is shown below.



Note: Range from 1 (very good) to 5 (very poor)

Figure 3Q – Stormwater pumping station – condition assessment

The ponds are passive assets designed to operate without human intervention. Individual components are on maintenance schedules and operate routinely. Their performance is of vital importance during rainfall events hence their performance characteristics and condition are generally very well known.

3.6 Data Confidence

A data confidence rating was undertaken as part of 2017 three waters valuation. Our assets were given a combined rating of B – C which is a confidence level (±25%). The confidence gradings run from A – excellent, B – good, C poor through to D - -very poor.

The rating showed that our database had anomalies at that time. We've upgraded matters since then. The table below outlines the asset confidence rating from the 2017 valuation.

Asset Group	Asset Type	Cost Rate	Quantity	Total Life	Remaining Life	Current Value (ODRC)
Storm Water (B)	Gravity Main	B	B	A-B	B	A-B
	Rising Main	B	B	A-B	A-B	A-B
	Open Channel	C-D	B	A-B	A-B	B
	Retention Pond	C-D	C-D	C	C	C
	Pump Station	C	C-D	C	C	C
	Resource Consent	C	C-D	C	C	B-C
Water Supply (B-C)	Reservoirs	C-D	C	B	A-B	B
	Trunk Mains	B-C	B	A-B	B	B
	Mains	B-C	B	A-B	C	B
	Service Line	C	B	A-B	B	B
	Pump Stations	C	C-D	C	C	C
	Resource Consent	C	C-D	C	C	B-C
	Treatment Plant	D	D	C	C	C-D
Waste Water (B-C)	Service Line	C	C	B	C	B
	Gravity main	B	C	A-B	B-C	B
	Rising main	B	D	A-B	B-C	B-C
	Pump Station	C	B	B	B	B-C
	Treatment Plant	C	B-C	B	B	B-C
	Outfall	C	B	B	B	B
	Resource Consent	C	B	C	C	B-C

Table 3R – Data confidence rating - 2017

As a follow up and after data improvements, in 2020, we engaged an external consultant to undertake an evaluation for the water, wastewater and stormwater network pipe data to validate and ascertain data completeness and confidence.

Results indicate that overall we have high confidence in our pipe data set as shown below:

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

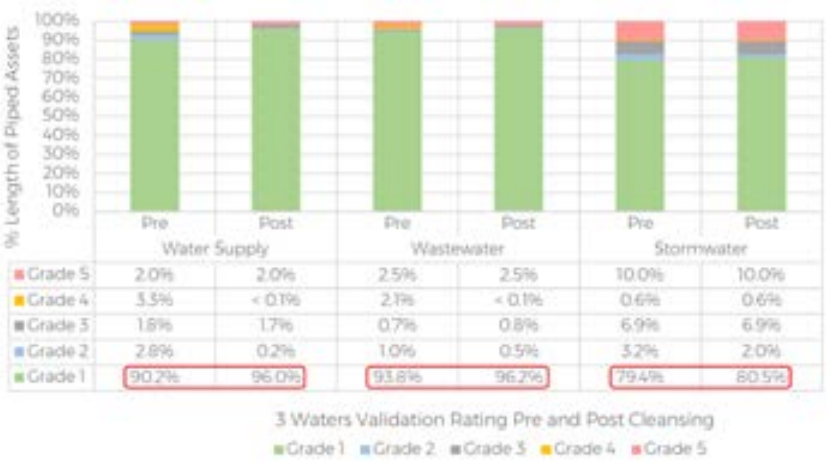


Figure 3S – Data completeness and confidence - 2020

Grade (Validation Rating)	Definition
1	Pipe Material, Year Installed & Diameter are valid
2	Pipe Material and Year Installed are valid, DN is either invalid or unknown
3	Pipe Material and Diameter are valid, Year Installed is either invalid or unknown
4	Pipe Material is known, Year Installed and / or Diameter are invalid or unknown
5	Pipe Material is unknown

Table 3T – Validation grades

Further reference and details can be review in the "Three Waters Piped Asset Data Management – District Wide" report.

3.7 Asset criticality

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction in service provision. Typically, assets that service more customers or facilities have a higher criticality rating, e.g. hospitals, schools, emergency centres.

Assessing critical assets and their potential failure modes allows us to focus limited resources (time, funding, staff, and contractors) on activities that prevent or reduce service disruptions. To do this, we need to understand the potential consequences of asset failure and consider all the relevant risk criteria, such as social, environmental, and financial impacts, within their risk framework.

A high-level list of three waters asset types and their typical level of criticality in providing services is shown in the following table: Level 5 indicates the most critical asset. Level 1 indicates the least critical asset.

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

Drinking Water Supply Criticality Overview

Asset type	Description of criteria	Base approach critical rating
Pipes	Less than 100mmØ	Low (1)
	100mmØ to 300mmØ	Medium (3)
	Greater than 300mmØ	High (5)
	All falling and rising mains to and from sources, reservoirs and pump stations	High (5)
	Pipes that are important to supply critical customers	High (5)
	Single pipes serving more than 1,000 customers	High (5)
	Potential pipe failures which may cause significant social, environmental or economic impact	High (5)
Valves	Valves located along the critical water pipes	High (5)
	All other valves	Low (1)
Pumpstations	Water pumpstations without resilience (i.e. backup alternative power supply)	High (5)
	Water pumpstations with resilience (i.e. backup alternative power supply)	Medium (3)
Reservoirs	All water reservoirs	High (5)
Treatment plants	All water treatment plants	High (5)

Table 3U – Drinking water criticality

Wastewater Supply Criticality Overview

Asset type	Description of criteria	Base approach critical rating
Pipes	Less than 250mmØ	Low (1)
	250mmØ to 375mmØ	Medium (3)
	Greater than 375mmØ	High (5)
	All rising mains	High (5)
	Outfall mains	High (5)
	Potential pipe failures which may cause significant social, environmental or economic impact	High (5)
Valves and fixtures	All – including air, non-return, isolation valves	High (5)
Manholes	Manholes on critical pipes (pipes greater than 375mmØ)	High (5)
	All other manholes	Low (1)
Pumpstations	Wastewater pumpstations without resilience (i.e. backup alternative power supply, by-pass pumping arrangement)	High (5)
	Wastewater pumpstations with resilience (i.e. backup alternative power supply, by-pass pumping arrangement)	Medium (3)
Treatment plants / Oxidation Pond	All	High (5)

Table 3V – Wastewater criticality

Stormwater Criticality Overview

Asset type	Description of criteria	Base approach critical rating
Pipes	Less than 150mmØ	Low (1)
	150mmØ to 600mmØ	Medium (3)
	Greater than 600mmØ	High (5)
Open drains/channels, stream & watercourse banks	Minor drains/channels	Low (1)
	Medium drains/channels, minor stream & watercourse banks	Medium (3)
	Large drains/channels, all other stream & watercourse banks	High (5)
Stormwater outlets	Stormwater outlet to 'dry' stream/watercourse	Low (1)
	Stormwater outlet to 'wet' stream/watercourse	High (5)
Storage Pond/ retention dams	Dry	Low (1)
	Wet	High (5)
Manholes	Manholes on critical pipes (pipes greater than 600mmØ)	High (5)
	All other manholes	Low (1)
Floodgates and wingwalls	Floodgates and wingwalls at 'dry' locations	Low (1)
	Floodgates and wingwalls at 'wet' active locations	High (5)
Pump stations	All	High (5)

Table 3W – Stormwater criticality

3.8 Opportunities for improvement

A number of opportunities exist for asset management improvement. These are addressed as time and resource allow.

Asset data – confirm existing data accuracy and completeness. Develop an asset data management strategy which aligns with levels of service, performance measures and initiatives to improve efficiency. The strategy would include a prioritised programme of improvements with an estimate for funding required over at least a 10- year period.

Above ground asset condition - collate existing above ground asset information from various information sources, evaluate and input to asset management system to inform future decision-making processes. This will also need to include collation of seismic assessments and the status of upgrade to improve seismic resilience.

Underground asset condition - develop protocols for underground asset condition assessment and confirm existing information to date prior to committing to a medium to long term renewals programme.

Asset criticality - develop and implement a criticality framework based upon national standards, which can be applied to (standardised) asset classes where possible. This will improve investment decision making by prioritising renewals and upgrades to those most critical assets at risk of failure.

Assets owned by others – cross-reference with available legal property information and improve the capture of assets owned by other parties and the impact that may have for the operation and management of Council assets.

Asset data and confidence - develop a standardised approach to the assessment and description of asset

confidence and accuracy which aligns with national standard practice.

4. Levels of service and performance

This section provides an overview of levels of service and performance measures. It includes the results of selected measures from mandatory performance reporting and the voluntary Water New Zealand National Performance Review, offering insights into the recent performance of assets and services. It also reports on compliance with regional resource consent and details the upcoming expiry dates.

Setting levels of service and performance measures are a fundamental part of prudent asset management practice. Levels of service are the means of setting community expectations on three waters services provided. Generally, service levels align with our objectives and are measured against performance targets determined based on factors such as: statutory requirements, industry best practice and standards, community expectations and affordability.

Consistent collection, recording and reporting of performance measures can provide valuable information about the effectiveness of infrastructure networks.

To inform future appropriate levels of service to meet customer, iwi, stakeholder and community expectations, historical performance data is useful in:

- Demonstrating the current and past level of service provision.
- Identifying gaps between the current and appropriate status of asset performance.
- Mapping the pathway of achieving the desired level of service to meet expectations.

Change is afoot in the NZ water industry in relation to performance measures with the most recent mandatory reporting requirements from Taumata Arowai.

4.1 Performance Measures – Past, Current & Future

There are a number of performance metrics relating to the provision of three waters services. The principal ones are listed below.

Non-Financial Performance Measures (Department of Internal Affairs)

In 2010, the Local Government Act was amended, requiring local authorities to report non-financial mandatory performance measures via their Annual Reports. The aim was to help the community contribute to discussions in determining levels of service and allow them to compare the level of service provided by different councils. Currently, there is a cross-over and duplication of the non-financial performance measures for water supplies with Taumata Arowai reporting.

Taumata Arowai – Drinking Water Quality Assurance Rules 2022

This is a dense, 87-page publication outlining rules that drinking water suppliers must meet relating to drinking water networks.

Taumata Arowai – Drinking Water Network-Environmental-Performance-Measures (NEPM)

The Water Services Act 2021 empowered Taumata Arowai to require collection of and publish performance measure outcomes. The 28-page guidance material is designed to aid water suppliers to provide greater transparency about the performance of networks and the impacts they have on the environment and public health. Refer https://www.taumataarowai.govt.nz/for-water-suppliers/network-environmental-performance-measures/

At this stage, these monitoring and reporting requirements only relate to drinking water network operators but in the future, measures will be introduced that apply to wastewater and stormwater operators.

The first NEPM data collection was for the period 1 July 2022 to 30 June 2023. We reported details in September

2023.

Voluntary Council-specific performance measures

Councils have frequently carried out surveys such as satisfaction surveys to determine customer satisfaction findings. These are variously reported upon in line with their make-up and collection methods.

National Performance Review (Voluntary)

The National Performance Review, co-ordinated by Water New Zealand, collates and compares water, wastewater, and stormwater service provision across the nation. Its principal purpose is to provide accessible and comparable data to identify improvement opportunities and allow benchmarking across organisations.

We have participated in this voluntary review since the start in 2012/13 until 2021/22 which was the final year offered.

Regional resource consent compliance (based upon information collected by regional councils).

4.2 Levels of service and measuring performance

The data in the below sections represent a selection of key performance measures to assess three waters service performance. It does not represent the full set of measures available. These can be found in our annual report and the National Performance Review annual reports.

4.3 Drinking Water supply performance

4.3.1 Safety of drinking water

The figure below shows our reported compliance with Part 4 and Part 5 for the last five years.

Water Supply Measure Description	National Median	2018-19 Target	2018-19 Achieved	2019-20 Target	2019-20 Ach.	2020-21 Target	2020-21 Ach.	2021-22 Target	2021-22 Ach.	2022-23 Target	2022-23 Ach.	Future 24-27	Future 28-35
The extent to which Council's drinking water supplies comply with Part 4 of the Drinking Water Standards (bacteria compliance criteria)		9	8	9	8	9	8	9	8	9	8	9	
The extent to which Council's drinking water supplies comply with Part 5 of the Drinking Water Standards (protozoal compliance criteria)		9	8	9	8	9	8	9	8	9	8	9	

Table 4A – Drinking Water Safety - Sourced from DIA Non-financial performance measures

Note the following.

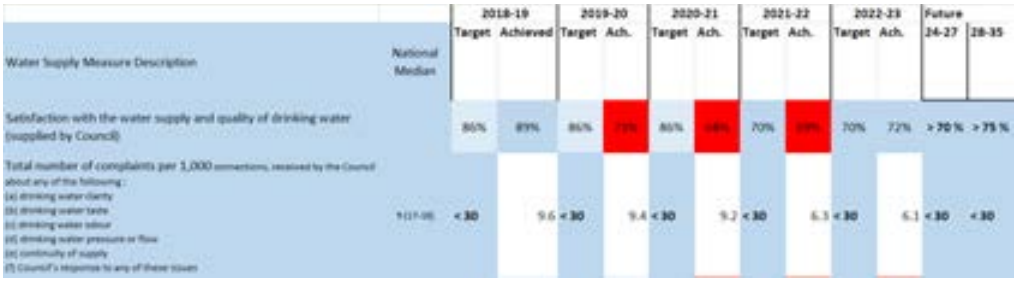
- Numbers refer to number of schemes compliant – 9 being the maximum possible and the target.
- Parts 4 & 5 have been discontinued. In future the metric will be compliance with the Drinking Water QA rules.
- Over time the required standards have become increasingly difficult to fully meet for all schemes, all of the time.

4.3.2 Customer satisfaction

Customer satisfaction is measured by the total number of complaints received. For drinking water supply, the performance measures monitor the water clarity, taste, odour, water pressure or flow, continuity of supply, and our response to any of these issues. The figure below shows the average complaints received for water supply systems in the last five years. The most common complaints were about water clarity, followed by continuity of supply.

For the six years prior to 2020, we engaged the National Research Bureau Council (NBRC) to undertake the CommunitrakTM survey to gather public opinion and to communicate our decisions and programmes to

residents. From 2019/20, we engaged SIL Research to undertake the annual residents' survey. The change in provider and methodology means that comparisons between the most recent 2020 survey and those in earlier years will not be exact. However, we are confident that the new methodology will increase coverage and create a more diverse response and therefore the information gathered will be more representative of community opinion.



Water Supply Measure Description	National Median	2018-19 Target	2018-19 Achieved	2019-20 Target	2019-20 Ach.	2020-21 Target	2020-21 Ach.	2021-22 Target	2021-22 Ach.	2022-23 Target	2022-23 Ach.	Future 24-27	Future 28-35
Satisfaction with the water supply and quality of drinking water (supplied by Council)		86%	89%	86%	73%	86%	68%	70%	69%	70%	72%	> 70 %	> 75 %
Total number of complaints per 1,000 connections, received by the Council about any of the following : (a) drinking water clarity (b) drinking water taste (c) drinking water odour (d) drinking water pressure or flow (e) continuity of supply (f) Council's response to any of these issues	9 (17-18)	< 30	9.6	< 30	9.4	< 30	9.2	< 30	6.3	< 30	6.1	< 30	< 30

Table 4B– Drinking Water Safety - Customer satisfaction and complaints

4.3.3 Service interruptions and response

Drinking water supply interruptions occur when there is a disruption to the water supply service, which can be planned or unplanned. Planned interruptions occur when scheduled maintenance or repairs are planned on the public network and customers can be notified in advance that an interruption to service will or may occur. Unplanned interruption occurs when there is an asset failure in the public reticulated network. A high level of unplanned interruptions indicates a network potentially requiring renewals and upgrades to improve performance. Unscheduled disruptions can be disruptive and costly to customers due to disruption of their businesses. Emergency repairs are also an expensive alternative for us.

This metric can reveal high levels of customer dissatisfaction - such as reported recently for Wellington Water.

Our proportion of planned vs unplanned water supply service interruptions is similar to the national median as showcased below. Data accuracy varies as some councils are unable to separate planned and unplanned interruptions in their reports.

DIA Measure (per FY)	Water Supply Measure Description	National Median	2018-19 Target	2018-19 Achieved	2019-20 Target	2019-20 Ach.	2020-21 Target	2020-21 Ach.	2021-22 Target	2021-22 Ach.	2022-23 Target	2022-23 Ach.	Future 24-27	Future 28-35
(1) (a)	Median response time to attend urgent call-outs for areas supplied by Council from the time that the local authority receives notification to the time that service personnel reach the site	0.92	< 1	0.3	< 1	0.6	< 1	0.7	< 1	0.6	< 1	0.6	< 1 hour	
(1) (b)	Median response time to resolve urgent call-outs for areas supplied by Council from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption	2.39	< 8	2.4	< 8	2.9	< 8	2.9	< 8	2.4	< 8	2.9	< 8 hours	
(1) (c)	Median response time to attend non-urgent call-outs for areas supplied by Council from the time that the local authority receives notification to the time that service personnel reach the site	18.48	< 24	17.4	< 24	17.5	< 24	19.8	< 24	18.4	< 24	16.7	< 24 hours	
(1) (d)	Median response time to resolve non-urgent call-outs for areas supplied by Council from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption	34.2	< 48	30.2	< 48	31.2	< 48	33.3	< 48	33.3	< 48	30.2	< 48 hours	

Table 4C – Median response times – Drinking Water callouts

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

4.3.4 Water loss

Water Supply Measure Description	National Median	2018-19 Target	2018-19 Achieved	2019-20 Target	2019-20 Ach.	2020-21 Target	2020-21 Ach.	2021-22 Target	2021-22 Ach.	2022-23 Target	2022-23 Ach.	Future 24-27	Future 28-35
Percentage of real water loss from Council-networked reticulation system for metered schemes based on the standard International Water Association (IWA) water balance	[illegible]	< 20	17%	< 20	20%	< 20	[illegible]	[illegible]	[illegible]	< 20	[illegible]	[illegible]	< 20
Percentage of real water loss from council-networked reticulation system for unmetered schemes	[illegible]	[illegible]	[illegible]	< 50	[illegible]	< 50	40%	[illegible]	42%	[illegible]	[illegible]	[illegible]	< 30

Table 4D – Percentage of real water loss

4.3.5 Water consumption

For our water supply systems that no customer water meters are installed, we are consistently hitting below our existing target this is due to continually installing water meters throughout the district.

For average consumption of drinking water on metered supply, the reverse is indicated, whereby the number is continually increasing. There are a few contributing factors to this:

- the way reporting is undertaken
- we have meters on our rural sector and the consumption by dairy industry skews the results
- that there are no real incentives for customers in saving water as there is no consistent volumetric charging across the district

We are continuing to install water meters on all properties within the district to better demand manage our water supplies.

Water Supply Measure Description	National Median	2018-19 Target	2018-19 Achieved	2019-20 Target	2019-20 Ach.	2020-21 Target	2020-21 Ach.	2021-22 Target	2021-22 Ach.	2022-23 Target	2022-23 Ach.	Future 24-27	Future 28-35
Average consumption of drinking water per day per resident in the District for metered areas supplied by Council	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	< 450	< 400
Average consumption of drinking water per day per resident in the District for unmetered areas supplied by Council	[illegible]	< 450	[illegible]	< 450	[illegible]	< 450	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	< 350	< 300

Table 4E – Drinking water consumption

4.3.6 Drinking Water Resource Consents

Resource consents are a requirement for water supply management works due to the potential impact of water takes on the environment and other customers.

We have a database of consents that relates to drinking water supply management activities, which are shown below. In accordance with both Regional and District Plans, several requirements must be met during the life of the consent. These requirements will stipulate monitoring conditions in the consent and will require the consent holder to report on the compliance with those conditions.

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

Consents related to drinking water supply

Permit Number	Permit Activity Type	Permit Purpose	Permit Location	Permit Granted Date	Permit Expiry Date
20094	Take	Take and use water for the purpose of water supply to Edgecumbe Township and Rangitāiki Plains	Braemar Spring Rangitāiki Plains and Edgecumbe Township	5/04/1973	1/10/2026
20114	Take	Take and use water from an underground stream for public water supply purposes	An underground stream adjacent to the Rangitāiki River situated in State Forest No.1 Murupara	6/09/1973	1/10/2026
20198	Take	Take and use water from the Whakatāne river for a municipal water supply and also a right to discharge waste water to the river	Adjacent to Whakatāne Water Treatment Plant	3/07/1975	1/10/2026
20223	Take	Take water from a bore for irrigation	Bore Rugby Park Whakatāne	4/12/1975	1/10/2026
20280	Take	Take water from a spring at Awakaponga for community water supplies	Spring, Manawahe Road, Awakaponga Matata Township	2/12/1976	1/10/2026
20283	Take	Take water from a well for the Waimana water supply	Well on the Grantee's Property Hodges Road Waimana	2/12/1976	1/10/2026
21044	Take	Take water from bores adjacent to the Waimana River for Tāneatua Town water supply	Tāneatua community water supply	2/12/1982	1/10/2026
21454	Take	Orchard irrigation on the properties of scheme members in the McDonald Road area, Awakeri.	A bore on Paul Road, Te Teko	5/04/1984	1/10/2026
62627	Take	Take water from a bore for community water supply	Rūātoki	14/06/2004	Continuing under Section 124 of the RMA
66359	Bore	Take and use water from a bore for municipal supply	124 Paul Road, Te Teko	1/11/2010	30/09/2045
RM15-0017-WT.01 & .02	Take	Take water from a bore	58A Johnson Road, Otakiri	15/12/2016	31/12/2031
RM15-0017-WU.01	Take	Use of water from well no. 2510 and well no. 2511 for municipal supply	58A Johnson Road, Otakiri	15/12/2016	31/12/2031

Permit Number	Permit Activity Type	Permit Purpose	Permit Location	Permit Granted Date	Permit Expiry Date
RM18-0540-WT.01 & .02	Take	Take and use of groundwater from a bore for municipal supply of the Otumahi Water Supply Scheme	Tahuna Road, Te Teko	20/12/2018	30/09/2045
RM22-0032-WT.01	Take	Take and use of groundwater from BN-11204 for the municipal supply of the Te Mahoe Village, at 1B Te Mahoe Village Road, Te Mahoe	Te Mahoe Village, Matahina	04/05/2022	30/04/2037

Table 4F – Water take consents

4.4 Wastewater performance

4.4.1 Discharge compliance

As seen below at a macro level we have not received abatement or infringement notices nor enforcement orders nor conviction. However there may from time to time be instances where consent conditions have not been complied with. Many of the current consents are at a ”basic” level meaning that compliance is relatively easily achieved. Future consent conditions are likely to be much more prescriptive requiring more active compliance.

Table 4G – Wastewater consent infractions

4.4.2 Customer satisfaction

Until 2020-21 we set an ambitious level of customer satisfaction – 83%. This has proven difficult to achieve. For 2021-22 & 2022-23 this has been reset to 75%. For the first 3 years of the LTP it has again been lowered to 70%, then rising again to 75%.

Table 4H – Customer satisfaction

For the six years prior to 2020, we engaged the National Research Bureau Council (NBRC) to undertake the CommunitrakTM survey to gather public opinion and to communicate our decisions and programmes to residents. From 2019/20, we engaged SIL Research to undertake the annual residents’ survey. The change in provider and methodology means that comparisons between the most recent 2020 survey and those in earlier years will not be exact. However, we are confident that the new methodology will increase coverage and create a more diverse response and therefore the information gathered will be more representative of community opinion.

The result of the survey is shown below and represents a deeper dive than the headline values above.

Figure 4I – Customer satisfaction and complaints

4.4.3 Service interruptions and response

As can be seen below our responsiveness is in line with national median times for both attendance and resolution of these issues. In all cases target times have been met. In 2021-22 an opportunity was taken to make the targets more challenging. In the future there is a desire to make the resolution time even more challenging.

WastewWater Measure Description	National Average	2018-19 Target	2018-19 Achieved	2019-20 Target	2019-20 Ach.	2020-21 Target	2020-21 Ach.	2021-22 Target	2021-22 Ach.	2022-23 Target	2022-23 Ach.	Future 24-27	Future 28-35
Median response time to attend a sewage overflow resulting from a blockage or other fault in the Council's sewerage system, from the time that the Council receives notification to the time that service personnel reach the site	0.9	< 1	0.6	< 1	0.4	< 1	0.5	< 1	0.5	< 1	0.7	< 1 hours	< 1 hours
Median response time to resolve a sewage overflow resulting from a blockage or other fault in the Council's sewerage system, from the time that the Council receives notification to the time that service personnel confirm resolution of the blockage or other fault	2.98	< 10	3.2	< 10	3.9	< 10	2.3	< 8	1.9	< 8	3.8	< 8 hours	< 5 hours

Table 4J – Wastewater responsiveness

4.4.4 Dry weather overflows

As can be seen below dry weather overflows are in line with national median values. In all cases the target has been met. In 2021-22 an opportunity was taken to make the target more challenging.

WastewWater Measure Description	National Average	Target	Achieved	Target	Ach.	Target	Ach.	Target	Ach.	Target	Ach.	24-27	28-35
Number of dry weather sewage overflows from the Council's sewerage system per 1,000 connections to that sewerage system	1.299 (2017-18)	< 15	0.4	< 10	1.4	< 10	2.4	< 3	1.2	< 3	0.9	< 3	< 3

Table 4K – Wastewater dry weather overflows

4.4.5 Inflow and infiltration

During wet weather events our wastewater systems are typically impacted by inflow and infiltration. Inflow is excess rainwater directly flowing into the network via dislodged manhole covers, household gully traps or illegal connections to the network. Infiltration is excess rain or groundwater entering the network via fractured or displaced underground pipes. Both inflow and infiltration place strain on our wastewater networks and in severe

instances result in network surcharging and inability to meet discharge consent conditions. The southern low-lying area of Edgecumbe township is prone to flooding requiring additional attention to address this situation. See Figure 4L, below as an example of I&I response over time.

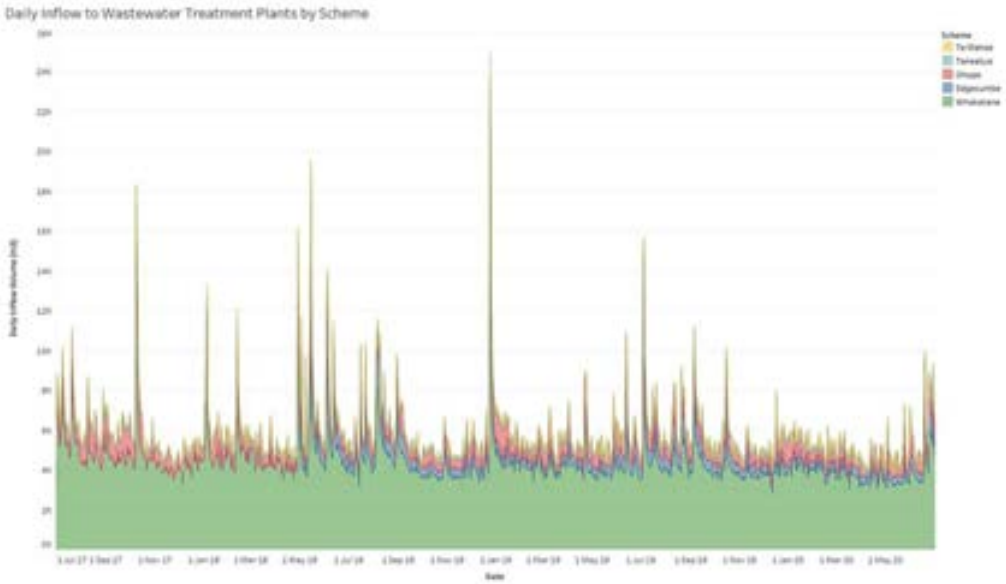


Figure 4L - Daily wastewater volume coinciding with major rain events

4.4.6 Resource Consents

Resource consents are a requirement for wastewater management works due to the potential impact on receiving environments.

We have a database of consents that relate to wastewater management activities. These are provided in the table below. There are several requirements that must be met during the life of the consent. Operating, monitoring and reporting conditions are typically stipulated.

The resource consents for discharges from the Whakatāne, Edgecumbe, Tāneatua, and Murupara wastewater treatment plants expire in 2026. Prior to expiry, we will need to seek new resource consents. It is expected that it will be necessary to undertake works to improve the treatment of the wastewater and that this will be a requirement of new consents. Funding for any upgrade works is absent from the first 10 years of the LTP due to funding and financing constraints. Consent expiry is a key driver for the treatment plant upgrades planned though our Long-Term Planning and highlighted within our 30-year infrastructure strategy.

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

The table below provides an overview of all discharge permits, including their purposes, locations and relevant dates.

Permit Number	Permit Activity Type	Permit Purpose	Permit Location	Permit Granted date	Permit Expiry Date
20049.0.01-DC	Discharge Wastewater	Discharge wastewater from Oxidation Ponds to be constructed at Tāneatua into the natural waters of the Whakatāne River	Whakatāne River at a point downstream of Tāneatua	6/04/1971	1/10/2026
20368	Discharge Wastewater	Discharge treated effluent from oxidation ponds into the Bay of Plenty	Whakatāne urban area	8/06/1978	1/10/2026
20702	Discharge Wastewater	Discharge effluent from Edgecumbe oxidation ponds into the Omeheu Canal	Edgecumbe Soldiers Road	1/05/1980	1/10/2026
20778	Discharge Wastewater	Discharge effluent from the Murupara Borough Oxidation Ponds into the Rangitāiki River	Murupara Borough Oxidation Ponds into the Rangitāiki River	5/03/1981	1/10/2026
62656	Discharge To Air	Discharge odorous gases from Murupara sewage treatment facility to the air	Murupara sewage treatment facility	1/11/2004	30/09/2026
62657	Discharge To Air	Discharge odorous gases from Edgecumbe sewage treatment facility to the air	Edgecumbe sewage treatment facility located at Edgecumbe Soldiers Road Edgecumbe	1/11/2004	30/09/2026
62658	Discharge To Air	Discharge odorous gases from Tāneatua sewage treatment facility to the air	Tāneatua sewage treatment facility	1/11/2004	30/09/2026
62659	Discharge To Air	Discharge odorous gases from Whakatāne sewage treatment facility to the air	Kopeopeo Canal Road, Whakatāne	8/08/2006	30/10/2026
RM16-0143-DC.01	Discharge To Land	To discharge treated wastewater to land	16 Te Mahoe School Road, Lake Matahina, Te Mahoe	28/07/2016	30/06/2051
65984.0.01-DC	Discharge Other	Discharge of treated effluent from the Ōhope Wastewater treatment plant to the Pacific Ocean	Ōhope wastewater treatment plant	23/11/2016	30/09/2035
65984-CC.01	Discharge Other	Occupy space in the common marine and coastal area for a discharge structure associated with the Ōhope wastewater treatment plant.	Ōhope wastewater treatment plant	23/11/2016	30/09/2035
RM21-058-AP	Discharge To Air	Authorise and set conditions for the discharge of contaminants (gases and aerosols) to air from the Ohope Wastewater Treatment Plant	Wainui Road, Ōhope	15/02/2022	30/09/2035

Table 4M – Wastewater Discharge Consents

4.5 Stormwater performance

4.5.1 Three Waters Regional resource consent compliance performance

Resource consents are required to undertake an activity that might affect the environment and not allowed, as a permitted activity in the District or Regional Plan.

We report to the Regional Council quarterly on the performance against stormwater consents. Currently, it's fair to say the stormwater consent report is fragmented and only really covers discrete locations in the network and these are typically at the locations of more recent point discharge locations. We welcome a compliance approach under the proposed Whakatane comprehensive stormwater consent that will provide a more holistic way to monitoring the effects of stormwater at a catchment level. Currently, we have observed that stormwater discharges meet compliance.

4.5.2 Customer satisfaction

For the six years prior to 2020, we engaged the National Research Bureau Council (NBRC) to undertake the CommunitrakTM survey to gather public opinion and to communicate our decisions and programmes to residents. From 2019/20, we engaged SIL Research to undertake the annual residents' survey. The change in provider and methodology means that comparisons between the most recent 2020 survey and those in earlier years will not be exact. However, we are confident that the new methodology will increase coverage and create a more diverse response and therefore the information gathered will be more representative of community opinion.

The result of the survey is shown

Figure 4N – Stormwater customer satisfaction

4.5.3 Resource Consents

BOPRC requires all territorial authorities to have a comprehensive stormwater consent (CSC) for all catchments. Weare working closely with BOPRC towards delivering the CSC. We have submitted the Whakatane urban catchment CSC and are awaiting its approval before proceeding with the remaining catchments within the next 10 years. Along with the CSCs, each catchment will have an associated catchment management plan (CMP) which will identify issues within the stormwater networks and the best way of addressing these.

Resource consents -"discharge" primarily - impose conditions on stormwater management due to the potential impact on receiving environments.

We have a database of consents that relate to stormwater management activities. These are provided in the table below. There are a number of requirements that must be met during the life of the consent. Operating, monitoring and reporting conditions are typically stipulated.

The table below provides an overview of our database of consents that relate to stormwater management activities (**excluding consents for temporary discharges**).

Consent no.	Purpose	Granted Date	Expiry Date	Location
20183	For the purpose of stormwater runoff from a proposed subdivision at Mokorua, Whakatane.	6/03/1975	1/10/2026	WHITE HORSE DRIVE, MOKORUA, WHAKATANE
20210	For the purpose of discharging stormwater from a 53 acre area of the Taneatua stormwater drainage system into a watercourse on the property of S. L. Mayne, Taneatua.	2/10/1975	1/10/2026	TANEATUA STORMWATER DRAINAGE SYSTEM
20267	For the disposal of stormwater from the Awatapu urban area.	2/09/1976	1/10/2026	AWATAPU URBAN AREA, WHAKATANE
20319	Discharging stormwater from the Grantees' subdivision adjacent to State Highway No. 2 at Whakatane. Discharge stormwater from an industrial subdivision at Whakatane.	1/09/1977	1/10/2026	Kopeopeo Canal, Whakatane
21117	For the purpose of discharging stormwater from a residential subdivision adjacent to Harbour Road opposite Tuati Street, Ohope.	7/04/1983	1/10/2026	ADJACENT TO HARBOUR ROAD OPPOSITE TUATI STREET, OHOPE
21785-1	Discharge stormwater from a subdivision into the Waiewe Stream	5/12/1985	1/10/2026	Waiewe Stream, Whakatane
21785-2	Discharge stormwater from a subdivision into a gully leading to the Wainui Te Whara Stream	5/12/1985	1/10/2026	Waiewe Street, Whakatane
24283	Discharge stormwater to the Whakatane River.	16/10/1995	31/08/2004	From an outfall at the Whakatane Gardens to the Whakatane River
24801	Discharging stormwater containing sediment from a catchment incorporating 1.9 hectare of earthworks during the construction of a residential subdivision to Waiewe Stream and to discharge clean stormwater from the completed subdivision to Waiewe Stream.	4/12/1996	30/11/2011	Waiewe Stream, Whakatane
40251	Discharge stormwater to Ohiwa Harbour.	20/12/1996	30/11/2006	Ohiwa Harbour, Ohope
24943	Discharging clean stormwater from the Waterford Estate subdivision and adjacent road and residential areas to the Maraetotara Stream. Discharge stormwater to water.	15/07/1997	30/06/2012	An outfall on the Maraetotara Stream within the Maraetotara Reserve, Ohope

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

Consent no.	Purpose	Granted Date	Expiry Date	Location
60053	Discharging stormwater from the 1.2 hectare residential subdivision on Walnut Grove, Whakatane into Awatapu Lagoon.	15/10/1998	31/10/2008	Walnut Grove, Whakatane
60171	For the purpose of discharging stormwater from a 4400 square metre catchment at Port Ohope, Ohiwa harbour.	20/01/1999	30/12/2033	PORT OHOPE, OHIWA HARBOUR
60344	To authorise the discharge of sediment contaminated stormwater from sediment retention ponds during earthworks operations, and continuing until the site is fully rehabilitated, and to authorise the discharge of treated stormwater from an urban residential subdivision. Discharge treated sediment contaminated stormwater to Ohiwa Harbour, and to land where it may enter Ohiwa Harbour; and treated stormwater to Ohiwa Harbour, and to land where it may enter Ohiwa Harbour.	14/09/1999	31/08/2014	Ohiwa Harbour
61841	For the purpose of diverting stormwater, detaining stormwater in a stormwater detention pond, and discharging stormwater from a stormwater detention pond to land where it may enter the Wainui te Whara stream.	10/12/2002	30/11/2022	White Horse Drive, Wainui Te Whara Stream, Whakatane
62713	For the purpose of authorising and setting conditions on the placement and use of an outlet structure in the bed of the Whakatane River, and the discharge of stormwater from a commercial development into the Whakatane River via a pump station. Constructing and using an outlet structure in the bed of the Whakatane River, and the discharge of stormwater from a commercial development into the Whakatane River via a pump station.	27/02/2005	30/06/2015	The discharge point is located on the Whakatane River, Whakatane
63352	Discharge storm water to the Kopeopeo Canal	26/10/2005	30/09/2030	The Hub, State Highway 30, Whakatane
64930	For the purpose of implementing a reticulated stormwater system for the residential areas above the escarpment at Cliff Road, Brown Road, and Otarawairere Village and discharging stormwater.	20/09/2007	30/09/2027	OHOPE WEST END, ESCARPMENT
65353	To provide for the construction of a stormwater outfall structure in the bed of the Wainui te Whara stream and for the permanent discharge of up to 1,000 litres per second at the maximum pumping rate. The proposal will provide increased stormwater capacity and will reduce the risk of flooding in the adjacent residential catchment.	29/05/2008	30/04/2028	ADJACENT TO 35 DOUGLAS STREET, WHAKATANE
65617	To authorise earthworks, the damming and diversion of stormwater, the discharge of stormwater to water and the installation of structures to protect Edgecumbe from surface and stormwater flooding from land to the west and from direct rainfall.	22/09/2009	31/08/2044	Pump station at corner of Otakiri Rd and Te Teko Rd, culverts in south west Edgecumbe, Rangitaiki Plains
65604	For the purpose of authorising the discharge of stormwater to the Whakatane River and the placement, use and maintenance of associated discharge structures and erosion protection.	1/06/2010	30/04/2045	WHAKATANE RIVER BANK, ADJACENT TO 2 KEEPA ROAD, WHAKATANE
66394	To authorise and set conditions on the extension and use of stormwater outlets on Ohope beach, the discharge of stormwater to the coastal marine area (see advice note 12), the scraping of beach from the sand to cover extended outlets, and occupation of space in the coastal marine area.	29/09/2010	31/08/2020	Several locations along Ohope beach
65835	To authorise the re-grading of existing stormwater drains to	20/01/2011	31/12/2045	RANGITAIKI PLAINS/

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

Consent no.	Purpose	Granted Date	Expiry Date	Location
	increase capacity, the discharge of stormwater to water from a new pump station in the north-west of Edgecumbe, and associated in-stream structures.			EDGECUMBE
67409	For the purpose of authorising the discharge of stormwater to a drain.	12/03/2013	28/02/2048	OPEN DRAIN AT 98B COLLEGE ROAD, EDGECUMBE
67420	For the purpose of authorising the discharge of stormwater to Lake Sullivan and works associated with the formation of the stormwater outlet.	12/03/2013	28/02/2048	Lake Sullivan, Whakatane
68000	To authorise and set conditions for the removal of existing stormwater outlet and erosion protection structures and construction of new stormwater outlet and erosion protection structures.	19/11/2014	30/11/2049	Maraetotara Stream, Ohope
68057	Discharge stormwater to a tributary of the Whakatane River and the Whakatane River	4/08/2015	4/08/2040	Whakatane Recycling Park, 60 Te Tahi Street to a tributary of the Whakatane River and Whakatane River
RM16-0450-DC.01	To authorise and specify the conditions associated with the discharge of stormwater from Ohope recreation reserve to ground soakage via subsurface stormwater chambers, and during heavy rain events to the Maraetotara Stream via subsurface conveyance and an open swale.	15/12/2016	3/08/2051	251B-291 POHUTUKAWA AVENUE & 5 TE AKAU STREET, OHOPE, WHAKATANE DISTRICT
RM20-0113-DC.01	To authorise and set conditions for the discharge of residential stormwater to land soakage.	13/05/2020	1/05/2055	Ocean Road, Ohope
RM20-0493-DC.01	Discharge of stormwater to surface water, or to land where the discharge enters surface water, where the rate of discharge is greater than 125 litres per second for a 10 minute duration 10% AEP storm event.	30/10/2020	30/10/2023	Orini Canal and Keepa Road Reserve, 80 m north of the Fergusson Road and Keepa Road intersection, Whakatane

The consents shaded green in above table will become inclusive within the Whakatane urban catchment CSC.

Table 4O – Stormwater Discharge Consents

4.6 Energy management performance

Although not regulated, we have undertaken a journey of assessment of high energy consumption assets and facilities so that we can track energy performance and work towards carbon emission reductions across our business.

We undertook assessment of 'low hanging fruit' which mainly consisted of older, large, inefficient pumps across our water network. By replacing these pumps with modern efficient pumps significant savings were made towards the reduction of carbon emissions.

The below diagrams and figures show the effects of our effort for our Whakatane Water Treatment plant which is one of the latest pump replacement programmes. For further details please see Council's Carbon and Energy Reporting dashboard:

https://app.powerbi.com/view?r=eyJrIjoiMzQwMDQwNjktMDcwMi00NDUxLTk5NzctOGYyOTRjYjRmNmY3IiwidCI6IjA5NjdiMzI2LTg4MzY

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

tNGQ2ZS1iYWRhLTFkMDI3YmNjYWJjNSJ9

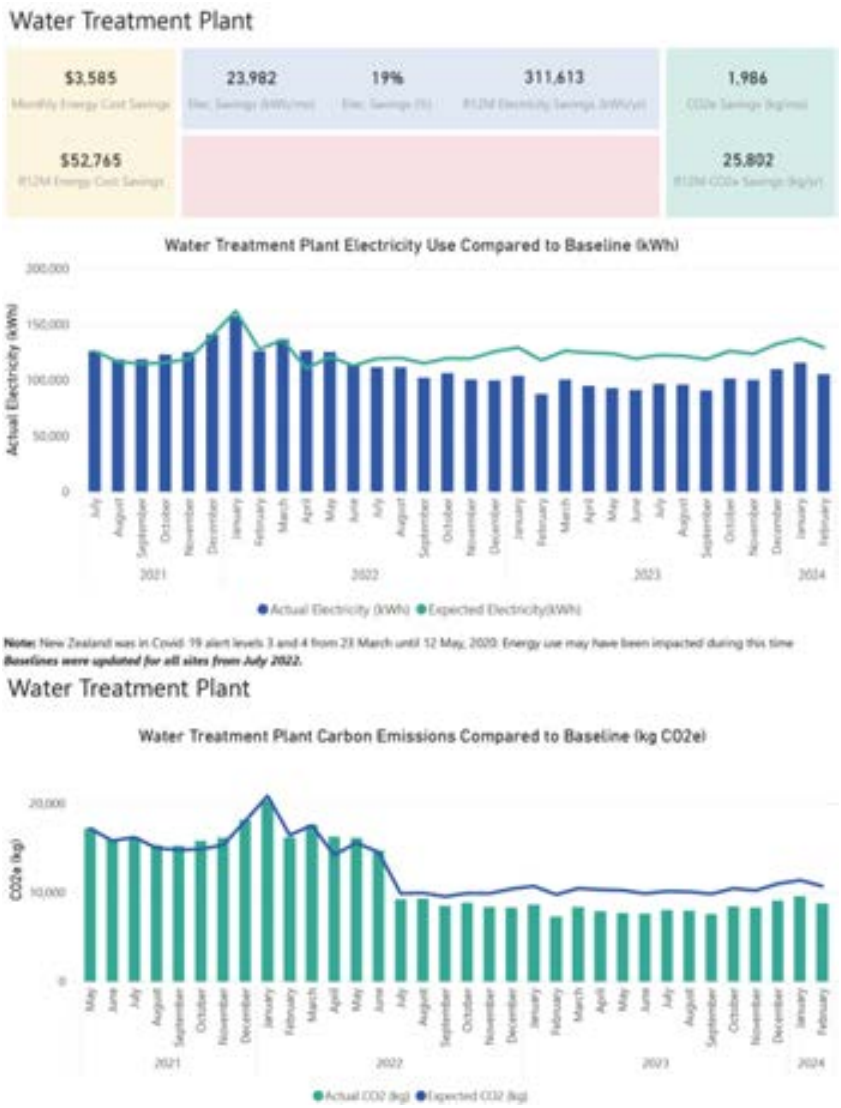


Figure 4P – Whakatane Water Treatment Plant Energy profile

4.7 Climate change strategy and action plans

Climate change and its related impacts cannot be avoided. Therefore, factoring in future climate change events is an essential task for Council, we have developed a Climate Change Strategy which align and streamline works already underway throughout Council's activities. Supporting the strategy are several action plans, one of which is Climate Change Action Plan – Water Services. Full details of the current Water Services action plan can be found via: https://www.whakatane.govt.nz/sites/www.whakatane.govt.nz/files/documents/climate-change-action-plans-water-web.pdf

4.8 Three Waters Opportunities for improvement

A number of opportunities exist for LoS and performance improvement. These are addressed as time and resource allow.

Drinking water compliance – review drinking water compliance issues in terms of water safety plans, QA rules and other metrics. Continuously refine operational matters and programme for capital upgrades to meet all drinking water standards.

Wastewater compliance - review wastewater compliance issues. Continuously refine operational matters and programme for capital upgrades to meet requirements.

Reducing water loss – investigate water supply networks with high water loss and develop remediation programmes which may include upgrade/renewal of poor condition assets and establishment of pressure management programme.

Reducing dry weather overflows – investigate wastewater networks with high incidence of dry weather overflows to determine the root causes and apply mitigation measures. This may include: real time monitoring of the wastewater network; asset management practice (regular inspection, cleaning, and repair of pipes, pumps, and other equipment); capacity investigations and upgrades; and public education to reduce the amount of non-flushable items and other materials that can cause blockages and overflows.

Reducing inflow and infiltration – investigate wastewater networks with high inflow and infiltration and develop a remediation programme which may include testing for illegal stormwater connections and upgrade of poor condition assets. Include consideration of "private" assets that contribute.

Resource consent compliance – Maintain resource consent information database. Undertake a review and prioritisation exercise to identify focus areas based on expiry dates, conditions not being met, work done to date, non- compliances, and engagement with mana whenua.

5. Planning for the future

5.1 Understanding demand drivers

5.1.1 Demand drivers

Drivers that may impact demand for three waters services are:

- **Population, and land use change -** population growth will result in increased consumption of drinking water and discharge of wastewater. It will also generally result in land use intensification.
- **Demographics –** changes in demographics can lead to changed diurnal and seasonal demand patterns for water and wastewater services.
- **Consumer behaviour change -** consumer behaviours directly impact demand, such as choosing to adopt water conservation practices to reduce demand for drinking water and consequently reduce wastewater discharges.
- **Seasonal demand –** fluctuations in demand for water and wastewater services due to seasonal changes such as tourism and industry.
- **Legislative, regulatory and policy change –** these aspects can incentivise or otherwise modify consumer behaviour, or how the service is provided.
- **Economic change –** economic growth, such as the introduction of new industry, can significantly increase demand for drinking water supply, and alter wastewater discharge flows and characteristics, and increase impervious areas.
- **Climate change adaptation and carbon reduction –** adapting practices and infrastructure to accommodate the effect of climate change and reducing built and operational carbon.

5.1.2 Challenges in meeting demand

Projecting the levels and timing of water supply, wastewater and stormwater infrastructure investment to meet demand is a complex process that presents several challenges, including:

- **Where will growth occur?** Growth can currently occur anywhere within the Whakatane District in accordance with the District Plan. As per RMA requirements, developers submit their development proposals one by one as their perception of the market dictates. This makes it impossible to forecast the implications of growth at scale. We are reduced to considering the implications of growth based on the development proposals that "cross the planning desk". This results in significant time and information pressures when assessing individual development applications.

  To allow a more proactive approach, Council has teamed up with neighbouring Kawerau and Opotiki to develop a joint spatial plan. All infrastructure providers have an opportunity to contribute to this workstream. Once the spatial plan is published in mid to late 2025, we intend to incorporate its recommendations into a District Plan review. This will allow controls and measures to be put in place to guide future development in general accordance with the spatial plan. This will allow a more holistic approach to infrastructure provision. The District Plan review will however take some time to come to fruition. For more information about the spatial plan see Council's draft development contributions policy.

- **Uncertainty in demand projections -** projections of demand for infrastructure are influenced by factors such as population growth, land use changes, and economic growth, but are subject to uncertainty, making it challenging to determine appropriate investment levels. The current economic climate is a risk to investment planning for new and existing infrastructure, as interest rates and inflation are high,

potentially slowing economic and residential growth. Underutilisation of infrastructure in low-uptake areas could have severe funding and affordability impacts on investments and should be considered in planning for growth.

- **Cultural concerns -** in order to give effect to Te Tiriti o Waitangi and Te Mana o te Wai, a number of changes are required to services. This is especially relevant in respect to wastewater discharges and surface water takes but has implications across all aspects.
- **Changing community expectations -** as society changes, expectations for service levels increase, with some expectations defined by legislation and standards, while others, such as resilience, are less clearly defined. Community expectations are changing in key areas such as wastewater discharges and overflows, network resilience, drinking water taste, offensive odours, vulnerability to flooding, and ecological impacts.
- **Limited resources -** infrastructure investment requires significant financial resources, and it is not possible to invest in all necessary infrastructure at once. Council must prioritise investment decisions based on the most pressing needs.
- **Regulatory requirements -** regulatory requirements may impact the nature, timing and scope of infrastructure investment. Allowing volumetric billing for wastewater services would be a demand management tool.
- **Political considerations -** infrastructure investment decisions may be subject to political considerations, which may also impact the nature, timing and scope of investment.

5.2 Demand planning

We use several methods for demand planning and management, operations planning and to inform the need for renewals.

5.2.1 Meeting existing demands

The ability of the networks to manage current demand varies. This is evidenced by performance against levels of service targets as covered in Section 3. Key aspects associated with meeting existing demand are given below.

Table 5A Meeting existing demands

Service goal	Comment
Water supply	
Provision of safe and healthy drinking water. As measured by compliance with Drinking Water QA rules and Environmental Performance Measures.	Ensure that drinking water supplied is in accordance with demands placed on the system by customers. Ensure that the supply is in compliance with the Drinking water QA rules.
Provision of firefighting water supply to maintain public safety. As measured by compliance with SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice.	Measuring direct compliance with SNZ PAS 4509:2008 is not achievable at scale and not done by any water suppliers in NZ. This results in a variety of approaches. The larger councils have hydraulic models that are used to give an understanding of capacity, set levels of service, and identify improvements. These improvements are then integrated with renewal and growth projects for efficient delivery. Moving forward, a more consistent approach that can be applied nationally should be developed. Under section 73 of the Fire and Emergency New Zealand (FENZ) Act 2017, FENZ must review the code of practice every three years. It will be important that Water Network Operators have input into this review. Currently we strive to comply with SNZ PAS 4509:2008 for all our urban communities.

Service goal	Comment
Provision of water which meets community expectations. As measured by drinking water complaints regarding: • clarity • taste • odour, • pressure or flow • continuity of supply	Refer section 3.3.2 Since adjusting the targeted level of customer satisfaction we have achieved the target. The number of complaints registered is close to or below the national median level.
Wastewater	
Safe conveyance of wastewater which protects the environment. As measured by number of dry and wet weather overflows from the network.	Refer section 3.4.4 Dry weather overflows are in line with national median values. In all cases the target has been met. In 2021-22 an opportunity was taken to make the target more challenging
Safe treatment and disposal of wastewater which protects public health and the environment. As measured by compliance with consent conditions at each treatment facility.	Refer section 3.4.1 At a macro level we have not received abatement or infringement notices nor enforcement orders nor conviction. However there may from time to time be instances where consent conditions have not been complied with. Many of the current consents are at a "basic" level meaning that compliance is relatively easily achieved. Future consents are likely to be much more prescriptive requiring active compliance.
Stormwater	
Safe collection and disposal of stormwater which protects the community property. As measured by the number of events of flooding of habitable floors through inadequate capacity of the stormwater network to manage stormwater runoff.	Over the last five years there is a record of 1 habitable floor having flooded in the District, due to inadequate stormwater systems.

5.2.2 Meeting future demands

Population is increasing and projected to keep increasing in Whakatāne District.

5.2.3 Effect of land use change on three waters services

Community aspirations and strategies for growth have the potential to impact the natural environment and the three waters services through:

- New greenfield development, which can degrade receiving environments and increase flooding risks.
- New developments which may increase the size and extent of the networks, increasing operation and maintenance costs.
- Active involvement with papakainga developments in order to address the often-unique challenges that these face.
- Extra growth and demand can exceed the capacity of present infrastructure, and/or the ability of the existing infrastructure to provide services.
- Intensification of existing urban areas, which can significantly increase rainfall runoff, placing additional stress on the capacity of existing infrastructure and exacerbating existing adverse effects.
- Land use change is particularly applicable to stormwater management services. Effective stormwater management requires an integrated water-sensitive design approach that occurs from the start of the

land use planning process, combined with the provision of good quality green and built infrastructure.

- Aligning work programmes and investment priorities with growth priorities and infrastructure strategies.
- Active involvement in plan changes, spatial planning and other major consents/development processes to ensure effective three waters services outcomes, including the development of provisions that encourage sustainable stormwater management and networks.
- Developing and communicating guidelines, including for urban design, that enable communities and developers to apply water sensitive/low impact design principles and techniques.
- Utilising robust and integrated quality assurance, subdivision and development standards and vesting processes for new three waters infrastructure.
- Supporting and enabling growth by obtaining required discharge consents aligned to priority intensification and future urban areas.
- Working with other infrastructure providers to identify opportunities for collaboration and sequencing of infrastructure.

5.2.4 Demand drivers and impacts

Demand drivers and their expected impact on three waters services are outlined below.

Table 5B Demand drivers and impacts

Driver	Trend and impact on demand
Population	As the population grows, there will be a higher demand for services, leading to the need for investment in new infrastructure and sustainable water sources. Additionally, population growth can increase stormwater runoff, which requires more robust stormwater infrastructure to prevent flooding, erosion, property damage, and degradation of water quality in receiving environments. Greenfield areas are being developed and offer opportunities for growth, but also pose risks and challenges that need careful management.
Land use change	Land use change as described above and intensification requires extension of new and capacity upgrades to existing infrastructure.
Un-serviced areas	We may be called upon to service areas that are currently un-serviced. The current example is a wastewater scheme for Matata. A co-design process is well advanced and construction is anticipated in the early years of the LTP for Matata. Other areas may be identified by the spatial planning work currently underway. Possibilities include extensions to existing serviced areas or new standalone areas e.g. - Awakaeri and Te Teko amongst others.
Demographic change	As with the rest of New Zealand, an ageing population influences Whakatane District. The challenges of demographic shift include changes in lifestyle choices – e.g. potential peak demand times for wastewater and water supply services.
Consumer behaviour change	Consumer behaviours are expected to generally remain static. However, this can be directly influenced by demand management programmes (refer Section 5.3).
Seasonal demand	Seasonal demand changes, such as an increase in holiday makers or seasonal workers or changes in industrial demand over the course of a year, can have a significant impact on wastewater and water supply services. To manage these impacts, we may need to invest in the upgrade of existing networks and associated treatment plants to cater for increased demand and allowing for fluctuations in demand.
Policy and regulation changes	Changes in regulations and policies can significantly impact the delivery of wastewater, water supply, and stormwater services. For instance, some existing assets may need to be renewed before the end of their useful lives due to changes in water quality standards, discharge consent limits, and zoning regulations. These changes can impact on future planning and investment decisions for three waters infrastructure.
Economic growth, change or closure	Economic growth and development can also impact the delivery of water supply and wastewater services. As new businesses and industries move into an area, the demand for three waters services may increase. Examples of key recent and potential developments include mussel processing in neighbouring Opotiki, industry in neighbouring Kawerau or the paperboard mill at the Hub.:

Driver	Trend and impact on demand
Climate change adaptation, carbon reduction, energy usage and cost.	Climate change adaptation and carbon emission reduction will affect the delivery of water services. More sustainable and resilient infrastructure will be required. Upgrading existing systems, carbon reduction. reducing energy consumption, targeting renewable energy, and implementing efficient water management practices will be necessary. Carbon usage and production and energy costs can also impact the delivery of water supply and wastewater services. In particular, wastewater treatment is carbon generative and energy-intensive. Refer also section 4.6 – Energy Management.

5.3 Demand management

This asset management plan proposes demand management strategies where practicable to deliver service provision and implement priority projects. Where possible we will manage changes in demand through non-asset, operational demand management programmes to influence behaviour and minimise asset-based solutions.

Demand management objectives and measures are described in the table below and in the following sections.

Table 5C: Demand Management Objectives and Measures

Demand management objectives	Demand management measures
• Optimise utilisation / performance of existing assets. • Reduce or defer the need for new assets. • Meet organisational strategic objectives. • Deliver a more sustainable service. • Respond to customer needs. • Increase consumer information	• Operation control and optimisation, e.g. leakage and I&I. • Regulation, e.g. bylaws or equivalent. • Incentives, e.g. pricing structure. • Educational initiatives to change customer behaviour. • Demand substitution, e.g. water reuse. • Smart metering

5.3.1 Operation control and optimisation

Water loss detection and management - management of water loss from the networks includes addressing leaks and bursts, meter failures and under-recording. Responses include acoustic leak detection guided by monitoring of district metering area night flows, network maintenance and renewal programmes, pressure management and continual improvement of meter management. Water loss can be measured as a % of the total water used or by the Infrastructure Leakage Index (ILI). Refer section 3.3.4 for water loss information. Water losses from metered schemes are generally in line with national averages. Unmetered schemes have lower leakage than targets but exceed national averages.

Note that Whakatane District is extensively metered compared to other districts which assists with knowledge about water usage and leakage. The majority of customers pay volumetrically which also adds to awareness of water use. The tariff structure of fees and charges is an area where Council feels that improvements can be made in the future.

We have deployed a number of smart devices to record pressure variations and flow records – Smart meters. The information gained form smart devices can assist both Council and customers. This is an area for future innovation and growth.

Wastewater flow control and storage - flows within wastewater networks are managed at pump stations via telemetry networks and by identifying emergency storage quantities and opportunities at vulnerable points in

the network.

Pressure management - an infrastructure change that reduces the amount of water lost to leaks and used by appliances by moderating the normal operating pressure of a water supply network. It also helps extend the life of the pipes and reduce the break rate. Care is required to not adversely affect network performance including low pressure areas and fire suppression systems.

Inflow and infiltration programs - stormwater entry into the wastewater network through inappropriate connections and surface flooding, and ingress of groundwater through network faults can be addressed through specific inflow/infiltration programmes. These need to cross the public/private system boundary.

5.3.2 Regulation

Water restrictions - water restrictions are a behaviour change tool that is undertaken in a phased approach when there is risk that demand will approach or exceed supply. Phases progress from heightened awareness and requests to reduce water use, to steadily increasing restrictions on outdoor use. Most councils in New Zealand employ water restrictions to heighten awareness and to manage summer demand.

Trade waste bylaws - used to regulate the volume and nature of wastewater that commercial and industrial customers can discharge to the network. They are an important tool in ensuring that the network and wastewater treatment plant can accept and treat the wastewater it receives. Pre-treatment by individual trade waste customers can reduce loads on our systems and also reduce trade waste charges paid by those customers.

Development controls - increasing demand on stormwater systems is managed by requiring new developments to not increase runoff rates compared to the predevelopment condition. This is achieved through the use of stormwater detention and soakage devices. Such devices can come with high operational costs. Another development control for stormwater management is to restrict development of land subject to natural or man-made hazards to the extent possible by the RMA & Building Acts.

Future regulatory change – Regulatory change will occur in the future. This could include the ability to implement volumetric billing for wastewater. This has been proven to heighten awareness of water usage and associated cost in Auckland where it has been deployed.

5.3.3 Incentives

Water metering – Volumetric charging for drinking water is a strong lever or incentive for customers to minimise use. Whakatane uses volumetric billing for 89% of its drinking water customers.

UAC/Volumetric split – The split between these two sources of water revenue should be designed with care. Artificially high or low UACs or volumetric charges can be perceived as unfair or may counter-incentivise customer behaviour.

5.3.4 Educational initiatives

Education is a critical part of the behaviour change component and can be one of the most cost-effective tools available. Initiatives can include:

- Despite volumetric billing being in place for the majority of its customers, knowledge of this fact is not universal. There are opportunities to further enhance customers' understanding of this situation and their opportunity to influence their own usage and resultant costs.
- Water, wastewater and stormwater programmes through media as well as specific community forums and school visits. The water programmes focus on water conservation, wastewater focuses on what

should go down the sewer (and what shouldn't) and stormwater on minimising contaminants entering the stormwater system.

- Targeted programmes for specific users, such as those on septic tanks, low pressure sewer and other technologies with specific requirements.
- Direct engagement with high water-use commercial and industrial customers.
- Participation in the formulation of government policy, regulation, and standards (e.g. flushable products).

5.3.5 Demand substitution

Typical substitutions for water supply are rainwater collection and greywater reuse. Both of these practices tend to be installed and managed by private property owners.

Rainwater collection – is most common in rural areas which are not connected to the public drinking water supply or for properties which receive a restricted water supply service. The district population is estimated to be 39,230 currently and the population served by drinking water networks is thought to be 29,590. Those non-network residents are likely to either take water from local ground, or surface water sources, and/or collect rainwater. If residents use such sources they are responsible for installing their own systems and ensuring compliance with Building Code, territorial and regional Council regulations.

Greywater reuse - involves the collection and treatment of wastewater generated from household activities, excluding toilet waste, for various non-potable purposes. Greywater typically comes from sources such as showers, bathtubs, bathroom sinks, and washing machines. Water can be re-used on the property for plants and vegetation or collected and treated for other purposes. Greywater reuse is currently not common practice in New Zealand. The individual property owner must install such systems themselves and ensure compliance with Building Code, territorial and regional authority requirements. "Availability" charges frequently apply, further disincentivising such measures.

6. Risk Management

6.1 Tough decisions already made

Decisions fundamentally influence the investment we intend to make in the three waters infrastructure over the next 10 years. The funding and financing situation described in the executive summary looms large over the riskscape that we face.

For Y1-Y10 this has resulted in the following decisions:

- No budget has been allowed for the implementation of Wastewater Treatment Plant upgrades to support re-consenting.
- We have reduced renewals of existing infrastructure assets down to 70% of what the needs based assessment recommended.
- We have reduced compliance and resilience based projects down to 50% of what the needs based assessment recommended.
- We are forecasting our opening depreciation reserve balances for the Long Term Plan 2024-34 to be $4.5million overdrawn, which means we are already on the back foot for funding asset renewals.
- We need to acknowledge, heading into a Long Term Plan that is forecasting a significant step change increase in capital expenditure, that the current funding model is not sustainable and no longer fit for purpose.

6.2 Risks and their proposed management

With a constrained budget, come a number of key risks that we must effectively manage across the three waters programme. The following outlines these risks including identifying relevant projects that won't be delivered or only partially delivered in the first ten years of the Long Term Plan. The specific risks identified are outlined below:

1. Failure to meet current regulatory requirements

- Inability to meet modern discharge consent conditions [Accept]

2. Deferral of treatment plant upgrades

- Increased failures due to age and condition [Manage using limited budget]
- Consents expire 2026. Propose to use RMA s124 to operate on expired consents [Accept]
- Negative iwi/community perception – e.g. discharge to surface waters. [Accept]
- Negative iwi / community perception – discharging into rivers [Accept]

3. Limited magnitude of wastewater network renewals

- Increase in blockages / pipe collapses / breaks / spills [Manage using limited budget]

4. Various smaller projects

- Lack of resilience – storm events [Accept]
- Potential rising main failures result in environmental consequences [Manage using limited budget]
- Budgets could be exceeded if storm events / significant failures [Accept]
- Limited magnitude of wastewater network renewals

5. Limited magnitude of drinking water network renewals

- Increased pipe failures, reactive cost more expensive [Manage using limited budget]

6. Limited drinking water treatment plant upgrades/renewals (excludes Ruatoki & Murupara, both included in Y1-Y3)

- All other issues (moderate / minor) from Water Safety Plans [Manage using limited budget]
- Risk of rural pollution, saline intrusion and possible cyanobacterial event at Whakatāne plant [Accept].
- Dissatisfaction with performance of existing plant, nearing end-of-life. Continuing taste issues due to surface water source. No flexibility of separated, non-interconnected plants. Plant prone to saline, cyanobacteria and rural runoff pollution events. [Accept]

7. Johnson road upgrades

- May be able to re-scope or reduce. This will become clearer as we learn about the performance of the newly upgraded Braemar plant and consent renewal implications. [Manage]

8. Various smaller projects

- Reservoirs ageing & not earthquake complaint – risk of damage or failure during seismic events [Accept]
- Coastlands watermain – lack of resilience & configuration issues [Accept]
- Budgets could be exceeded if storm events / significant failures [Accept]

9. Edgecumbe drainage improvements

- Poor performance SW network in Edgecumbe [Accept]
- Budgets could be exceeded due to storm events / significant failures [Accept]

10. Inaction on our own plans – e.g. Climate Change Strategy and Climate Change Action Plan: Water Services

- Reputational risk - residents lose faith in Council – not implementing their own plans [Accept]

11. Frequent project budget exceedances due to 50% & 30% budget withdraws mentioned above.

- Reputational risk – [Accept]

7. Renewal planning

Understanding renewal drivers and approaches for three waters networks and overall themes. Renewal forecasts are based upon age, performance and condition information.

As assets age and deteriorate, the risk that they are unable to function as designed, or deliver the required service reliably or efficiently increases. Eventual failure presents health and safety risks to people and the environment. Renewal activities, such as replacement and rehabilitation works, mitigate these risks by returning the asset to its original condition, capacity and function.

7.1 Renewal drivers

Key renewal drivers for the three waters are:

- **Decreased performance -** structural deterioration leading to compromised ability to meet the required level of service. This includes leaks and infiltration with associated capacity consequences, tuberculation of ferrous water supply pipelines compromising pressure and flow, structural collapse and blockage.
- **Increased maintenance -** requirements making it more economic to renew the asset.
- **Obsolescence -** the parts needed to maintain an important asset in operation may be difficult or impossible to source in case of failure.
- **Opportunistic -** opportunities to co-ordinate programmes with other utility providers, or other works programmes, are taken to achieve cost efficiencies (e.g. shared reinstatement costs) and potentially decrease disruption to the community. This can also include asset renewal as a result of growth requirements needing greater asset capacity.
- **Growth -** asset renewal as a result of growth requirements needing greater asset capacity.
- **Climate Change -** asset renewal / relocation as a result of ever increasing climate change conditions facing our communities.
- **Energy management –** renewing assets based on old and inefficient technology to minimise energy usage and maximise carbon emission reduction.

7.2 Renewal approach and themes

Our renewal approach endeavours to renew assets when they reach the end of their useful lives. Several factors come into play when assessing the renewal of an asset.

The following information is used when making renewal decisions:

- Asset installation date
- Expected asset lifetime (top down)
- Local knowledge of longevity factors (e.g. special ground conditions, construction materials)
- Climate change (e.g. incorporate climate change considerations when renewing assets)
- Knowledge of asset condition (e.g. inspection or testing records)
- Comparison with other peer assets
- Opportunities (e.g. roading or other service upgrades)
- Level of service delivered information (e.g. breaks, leaks, bursts)
- Maintenance history (e.g. work orders, costs)
- Obsolescence (e.g. availability of parts)
- Compatibility (e.g. interface with other components, fittings)
- Criticality
- Consequence of failure
- Grouping with other assets nearing renewal

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

In many instances some of these matters conflict with others. The weight of these factors also differs. Accordingly, renewal decision making is seldom simple.

We are developing a renewals framework for piped assets, guided by international and local standards. See Figure 7A below for the renewal roadmap/framework.

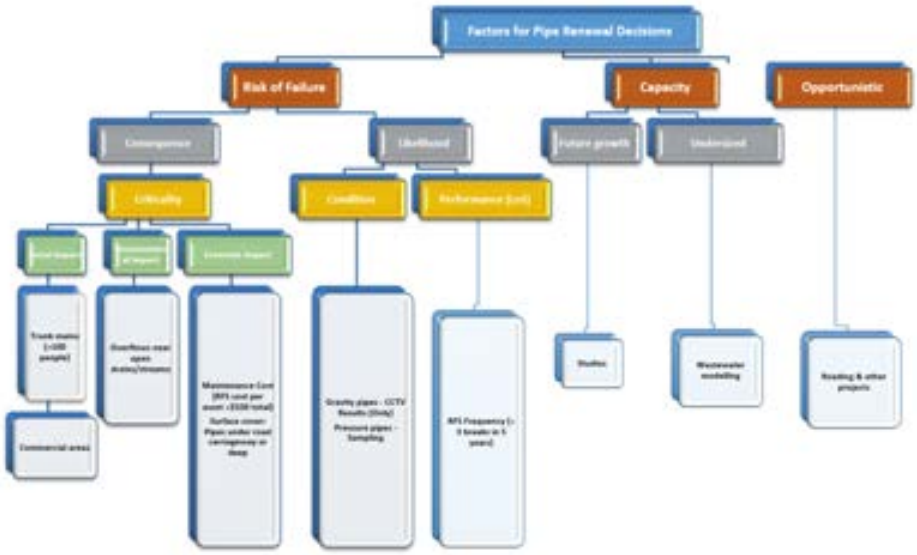


Figure 7A - Renewals roadmap – framework

7.3 Renewal forecasts

7.3.1 Drinking water pipeline assets

Renewal work is naturally targeted to those assets assessed as being in poor or very poor condition. The length of water supply pipelines assessed to be in poor or very poor condition, and therefore expected to be approaching the end of their service life is presented in the figure below.

This indicates that more than 1.73 km of pipes are likely to begin failing (Very Poor condition assessment), causing consumer and community disruption, and requiring increased maintenance and renewal effort within the next 5 to 10 years, with a further 68 km of pipes likely over the next 10 to 20 years (Poor condition assessment).

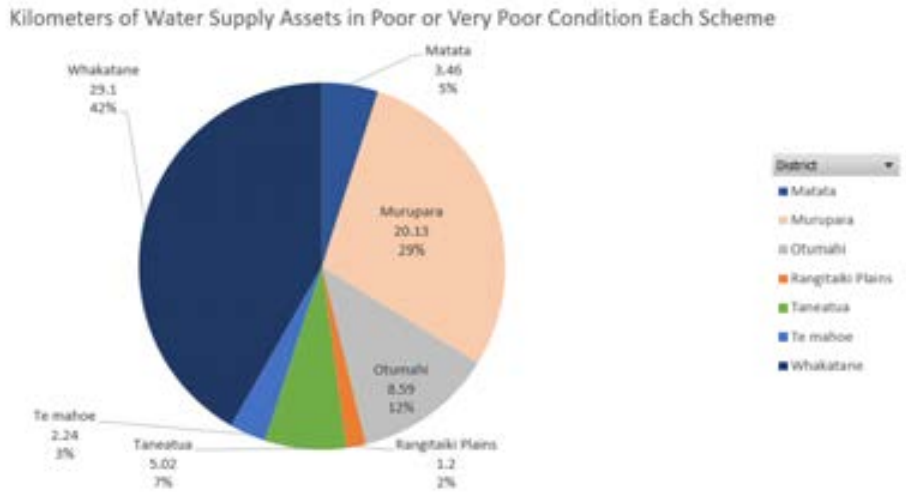


Figure 7B – Locations of condition 4 & 5 (poor-very poor) drinking water pipe assets

7.3.2 Wastewater pipeline assets

The length of wastewater pipelines assessed to be in poor or very poor condition, and therefore expected to be approaching the end of their service life is presented in the figure below. This indicates that more than 0.31 km of pipes are likely to begin failing (Very Poor condition assessment), causing consumer and community disruption, and requiring increased maintenance and renewal effort within the next 5 to 10 years, with a further 25 km of pipes likely over the next 10 to 20 years (Poor condition assessment). Overall, the wastewater pipe network is estimated to be halfway through its expected life.

The figures below show the areas with the worst condition wastewater networks, triggering renewal spend.

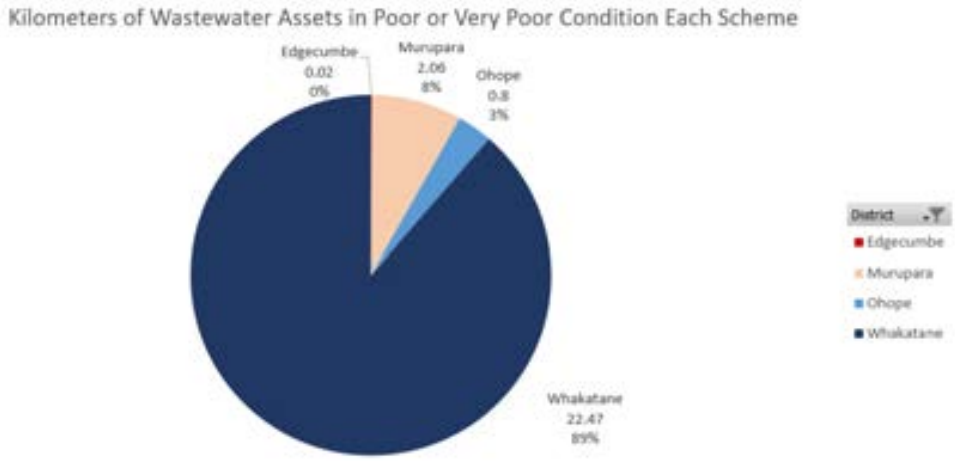


Figure 7C – Locations of condition 4 & 5 (poor-very poor) wastewater pipe assets

7.3.3 Stormwater pipeline assets

The length of stormwater pipelines assessed to be in poor or very poor condition, and therefore expected to be approaching the end of their service life is presented in the figure below. This indicates that about 10 km of pipes are likely to require increased maintenance and renewal effort within the 10 to 20 years (Poor condition assessment).

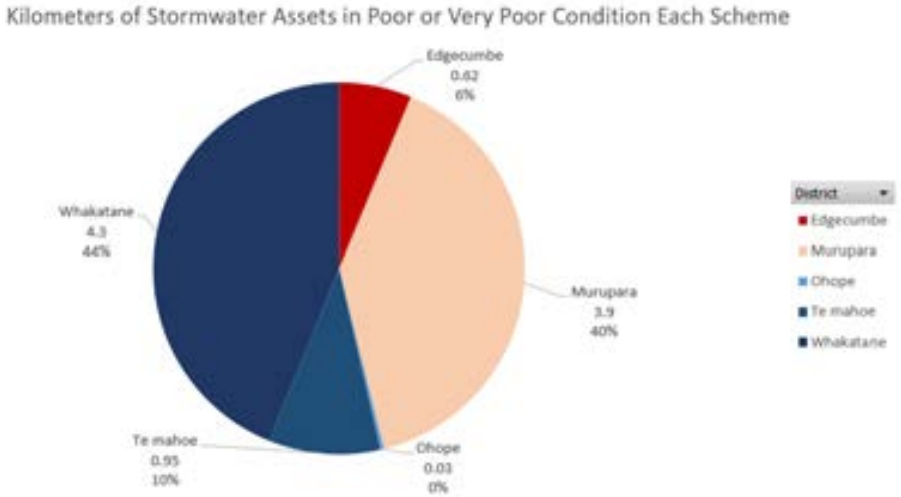


Figure 7D – Locations of condition 4 & 5 (poor-very poor) stormwater pipe assets

7.3.4 Effect of renewal deferrals on levels of service and maintenance

Deferred renewals, or those renewals which are undertaken after the assessed optimum replacement time, increase risk that levels of service will be compromised through unexpected failure. This can lead to:

- Service outages to customers.
- Damage to third party assets, including roads, flooding of private property and health, safety and environmental impacts associated with wastewater overflows.
- Repeated disruption to the community from the event, response and reinstatement works.
- Increased cost through repeated maintenance efforts.
- Discharges or leakage from poorly maintained assets is wasteful and culturally disrespectful to the mauri of water and te mana o te wai principles.

8. Operational planning

8.1 Emergency response and continuity plans

In providing our three waters services, we use an incident escalation system to manage emergency incidents. This system defines roles, responsibilities, and processes for response. It is documented in our incident response and management plan, which aligns with other plans, including:

- Risk management framework.
- Water Safety Plans (including water contamination communication plans).
- Wastewater risk abatement plan.
- Pandemic response plan.
- Drought response plan.
- Flood risk response plan.
- Business continuity plan.
- Crisis management plans.
- Contractors' contingency plans.

8.2 Response planning

At an operational level, we also have contingency plans to manage planned or respond to emergency events as well as issues with specific critical assets. These plans are key components of our water safety framework and include:

- Site-specific incident response and contingency plans.
- Site-specific business continuity plans that set out procedures we follow to maintain service levels and minimise disruption to our customers.
- Water safety plans for each water treatment scheme.
- Source water safety plan.
- Shutdown procedures for bulk water mains.
- Wastewater incident response plan.
- Flooding response plan and early warning systems.
- A drought response plan.

8.3 Effects of asset extensions and upgrades on asset maintenance

The overall maintenance requirement increases in correlation with expansion or extension of the asset base. However, maintenance cost per asset group unit (e.g. per metre of pipe) is lower for new or upgraded assets and the addition of digital resources and technologies could also improve maintenance efficiencies and lower cost and the need for other maintenance resources. New or upgraded assets tend to require mostly preventive or planned maintenance compared to increasing reactive maintenance which could be required with ageing infrastructure.

Asset extensions to the networks will lead to progressively increasing maintenance needs. This has been allowed for in the maintenance expenditure forecasts especially for any growth areas.

8.4 Supply chain deliverability constraints

The supply chain deliverability takes into consideration the availability of professional and construction services and in-house resources such as project managers and supporting technical staff to ensure the success of a project.

The capacity to deliver our capital work programmes has steadily increased over time; this has doubled over the last five years. At times capex under-delivery occurs.

The reasons for under delivering on the LTP programmes are generally due to:

- **Resourcing –** availability of appropriately skilled internal and external resources.
- **Procurement –** supply chain management, lead-in time for materials, tendering and approvals, stakeholder agreement.
- **Project life cycle management –** business case approvals, scheduling, land purchases associated with developer led timelines, incorrect investment appraisals, unforeseen technical issues.
- **Optimism –** project managers are generally optimists (especially at the beginning of projects). Most initial estimates of effort, time or cost are generally optimistic. Realism often occurs later.

In order to increase capacity within the supply chain a transparent forward work programme is required that is supported by transformational change to procurement practices.

8.5 Future approach to decision making

Our level of maturity when it comes to decision making and supporting information is recognised as being moderate. The approach used for this asset management plan endeavours to ensure that projects are assessed using an appropriate level of information.

- Second-generation models using a similar decision tree are being developed and may be utilised when they reach national acceptance. The model has been developed utilising the following principles:
- Simplicity – easy to comprehend, implement and adapt to suit demands of the operating environment.
- Transparency – high visibility on output, rationale, assumptions, and inclusion.
- Delivers on outcomes – focused on delivery of desired outcomes and risk mitigation whilst recognising Te Mana o te Wai hierarchy of needs.
- Equitable for the community – considers different needs of communities and ensure delivery and impact of projects are equitable across the region.
- Deliver the most for least – maximise value to the community within resource constraint limits.
- Efficiencies applied – identify where efficiencies can be found within the programme and apply these to the overall investment profile.
- Climate change - Reduce the adverse environmental impacts and greenhouse gas emissions from existing water and wastewater services by incorporate climate change considerations into future three waters infrastructure projects and through the asset renewal process.

9. Lifecycle Investment

9.1 Overall Three Waters

$216M (inflated) of capital expenditure is proposed for three waters over the next ten years.

The figure below provides an overview of the capital forecast for three waters over the next 10 years.

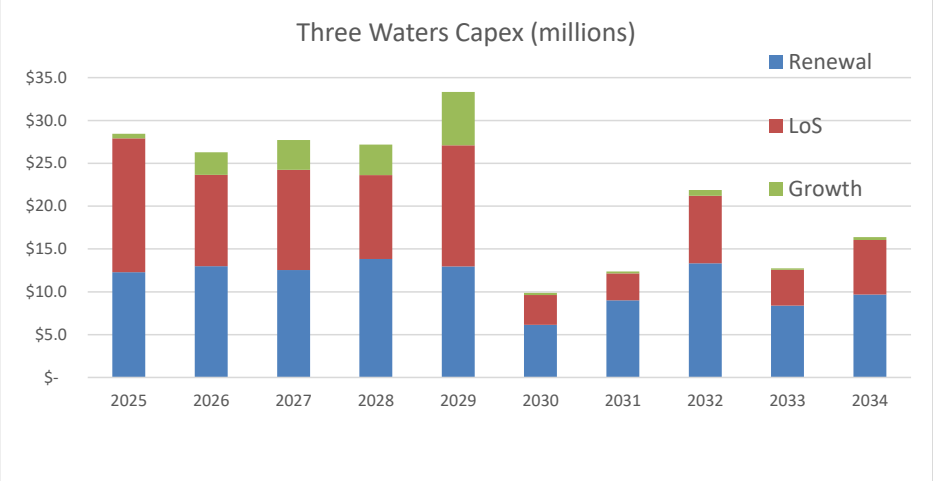


Figure 9A – Overall three waters capex

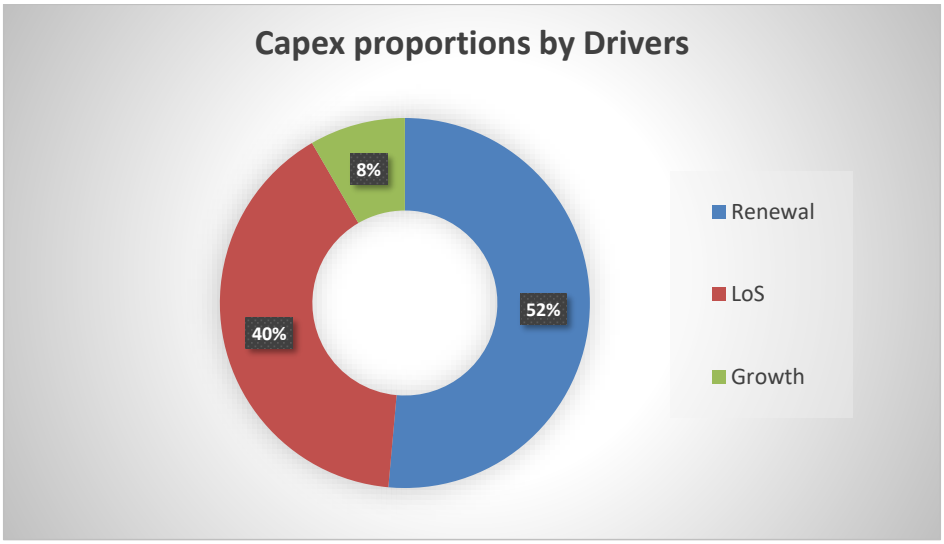


Figure 9B – Overall three waters capex

The proportion of capital investment required for three waters activities is shown below. The drinking water activity will require the largest proportion of investment, followed by waste, then stormwater. Proposed stormwater expenditure is relatively stable over the next 10 years.

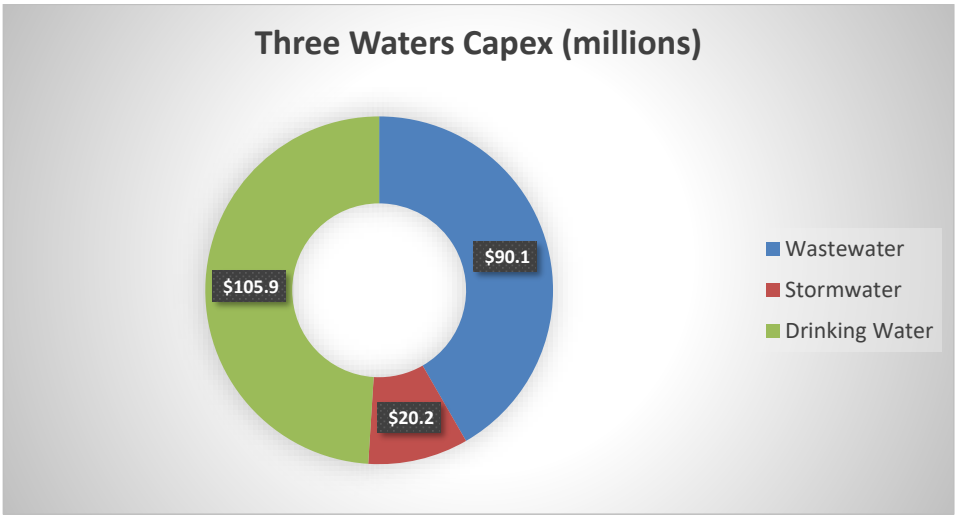


Figure 9C – Three waters capex by activity

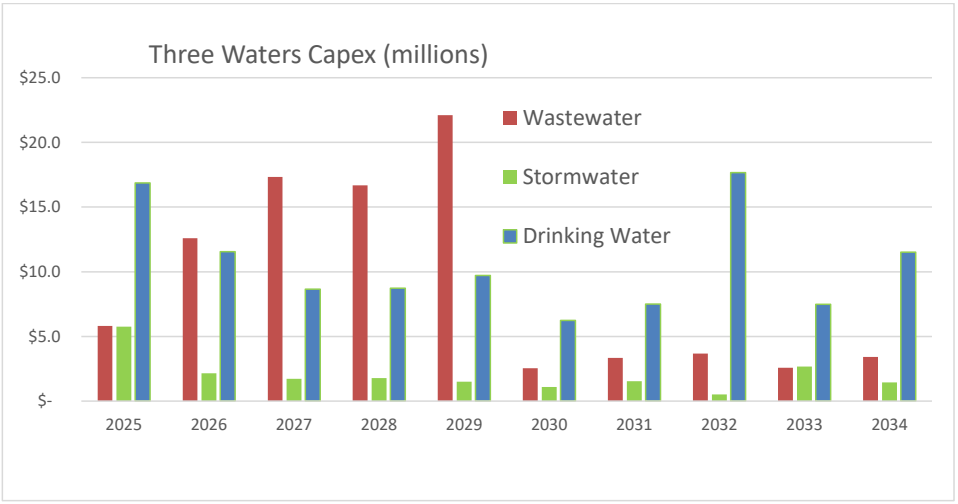


Figure 9D – Overall three waters capex – year by year

9.2 Drinking water capital investment

This subsection identifies the need for capital estimated investment for drinking water activity.

9.2.1 Drinking water growth

The figure below illustrates the drinking water capital investment, specifically driven by growth. There is a peak in growth expenditure in Y2 due to several projects being completed. The Y8 spike is due to a project at Johnson Road water source. Compared to either renewals of LoS projects growth expenditure is very low.

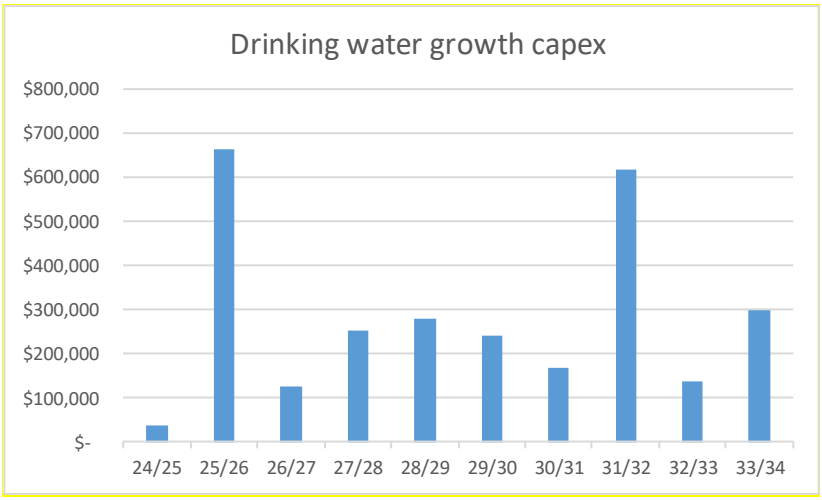


Figure 9E – Drinking water growth capex

9.2.2 Drinking water renewals

The figure below presents the drinking water capital expenditure investment driven by renewal. Expenditure is reasonably steady in the $4M to $8M range.

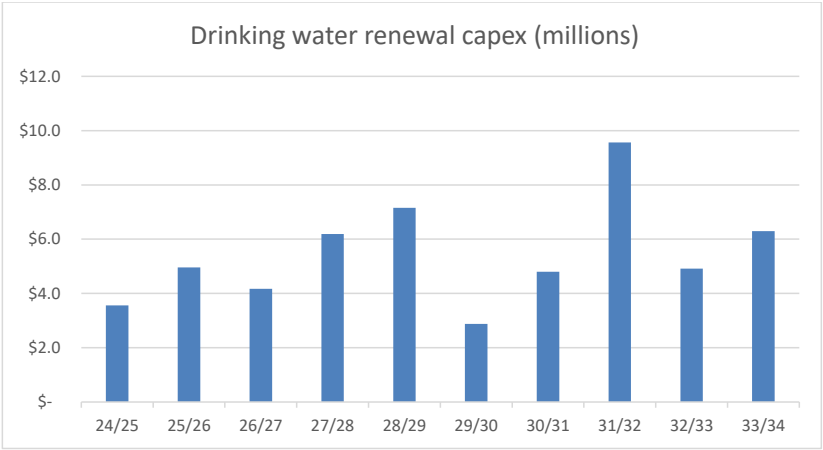


Figure 9F – Drinking water renewal capex

9.2.3 Drinking water levels of service

The drinking water capital expenditure investment driven by level of service is shown below. Y1 is dominated by projects at Blueberry curves, Ohope and boundary backflow prevention. Y8 signals the start of expenditure on the Whakatane drinking water treatment plant.

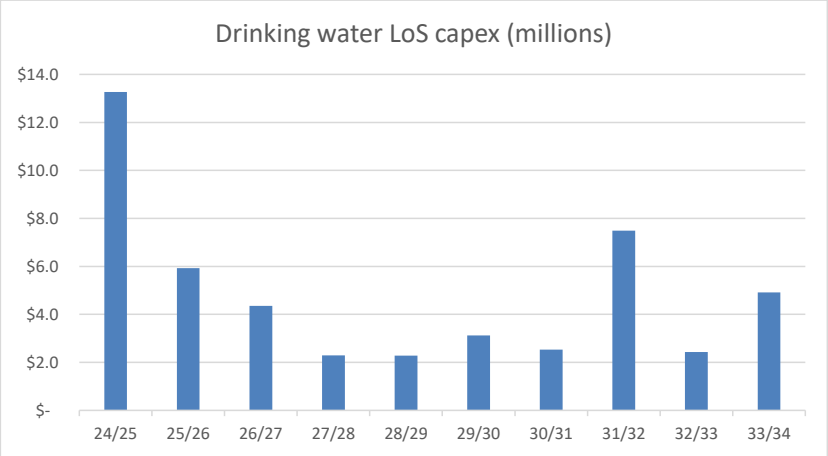


Figure 9G – Drinking water LoS capex

Project	Driver	Cost	Duration	Description
Network Renewals, all Systems	Renewal	$28.6M	10y	All Systems (Except Murupara and Rangitāiki Plains) - water pipes, service laterals, pipe samples, customer meters
Rangitāiki Plains Provisional water reactive 'emergency' renewal works	Renewal	$9.4M	10y	Rangitāiki Plains Provisional water reactive 'emergency' renewal works
Rangitāiki Plains - Johnson Road upgrades - assist growth	Level of Service	$8.5M	10y	Johnson Road treatment upgrades - assist growth
Otumahi Reservoir	Level of Service	$7.2M	4y	Otumahi Reservoir
Water Treatment Plant minor Upgrade/Renewals	Renewal	$6.1M	4y	Water Treatment Plant minor Upgrade/Renewals
Backflow prevention installation	Level of Service	$6.1M	10y	Equalised backflow prevention installation
Bore Pump renewal - station (Tāneatua)	Renewal	$4.3M	2y	Bore Pump renewal + station (Tāneatua)

Table 9H – Key Drinking Water Projects

9.3 Wastewater capital investment

This subsection focuses on the wastewater capital expenditure requirements.

9.3.1 Wastewater growth

An overview of the wastewater capital investment specifically driven by growth, for the next 10 years, is illustrated below. The growth expenditure is totally dominated by a single project - the Matata wastewater scheme. This scheme shows how extremely expensive modern best-practice land disposal systems are.

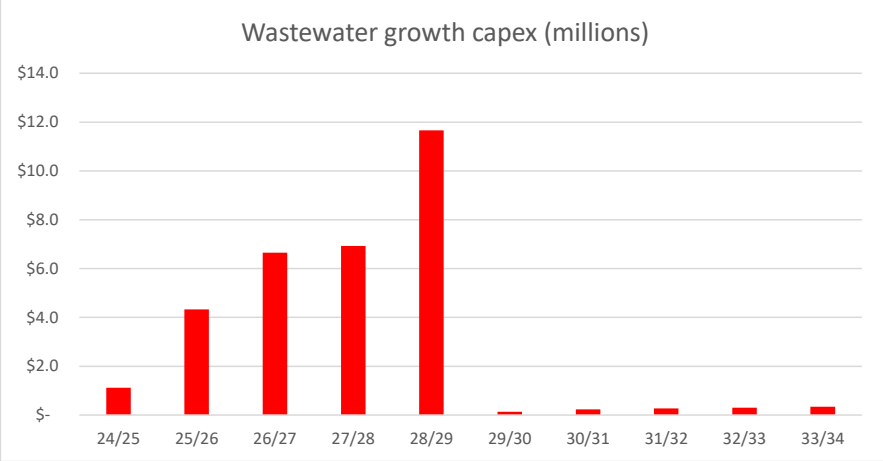


Figure 9I – Wastewater growth capex

9.3.2 Wastewater renewals

The figure below presents the wastewater renewals investment for the next ten years. It is notable that the wastewater systems have the greatest average age in the district of 49 years. Annual depreciation is funded at a level of approximately $2.6M per annum. This means that it is difficult to fund any renewals greater than $2.6M per annum. Figure 9J below shows wastewater renewal spend being greater than $2.6m annually for most years – some much greater. This adds to our funding pressures in trying to maintain mature infrastructure.

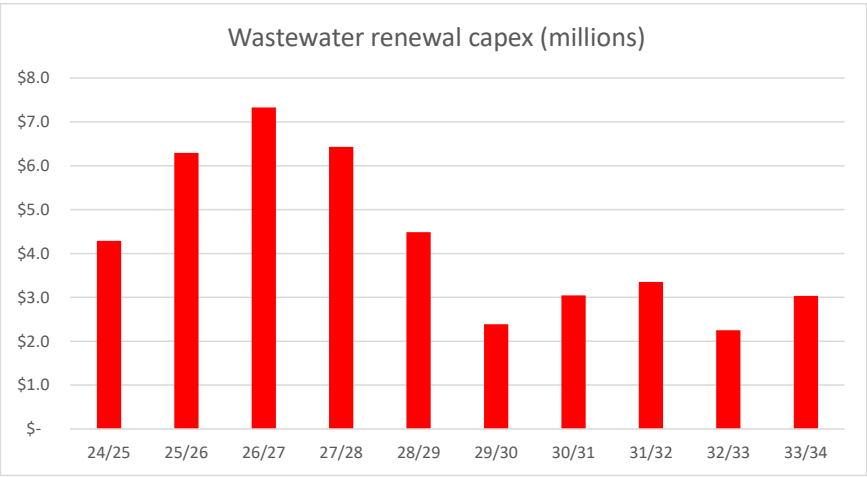


Figure 9J – Wastewater renewal capex

9.3.3 Wastewater levels of service

The wastewater capital investment driven by levels of service for the next 10 years is shown in the figure below.

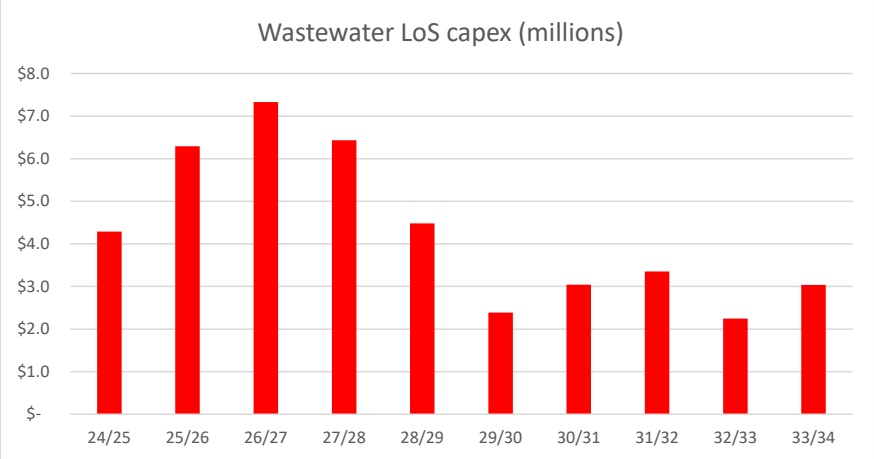


Figure 9K – Wastewater LoS capex

Project	Driver	Cost	Duration	Description
Matata wastewater scheme	Level of service & growth	$42.4M	5y	New Wastewater scheme for un-serviced town
Emergency unforeseen reactive Wastewater renewal	Renewal	$16.2M	10y	Emergency unforeseen reactive Wastewater renewal
Rising & Outfall Mains - Whakatāne District wastewater Rising Main Renewal	Renewal	$9.0M	10y	Rising & Outfall Mains - Whakatāne District wastewater Rising Main Renewal
Murupara Wastewater Treatment Plant upgrade advance works	LoS & Renewal	$7.3M	10y	Murupara Wastewater Treatment Plant upgrade advance works
Wastewater model network updates	LoS	$4.5M	4y	Wastewater model network updates
Whakatāne District Wide Pump Station renewal and upgrades	Renewal	$3.0M	10y	Whakatāne District Wide (48) Pump Station renewal and upgrades

Table 9L – Key Wastewater Projects

9.4 Stormwater capital investment

This subsection focuses on the stormwater capital expenditure. The figure below illustrates the projected stormwater capital investment over the next ten years.

9.4.1 Stormwater growth

The figure below provides an overview of the stormwater capital investment, specifically driven by growth, for the next ten years. The figure is extremely low, based on a single project. We attempt to sheet home growth costs to individual development projects where there is a clear linkage and this is a reasonable approach. The development of the spatial plan and accompanying District Planning implementation tools will make it easier to make ”growth” pay for growth.

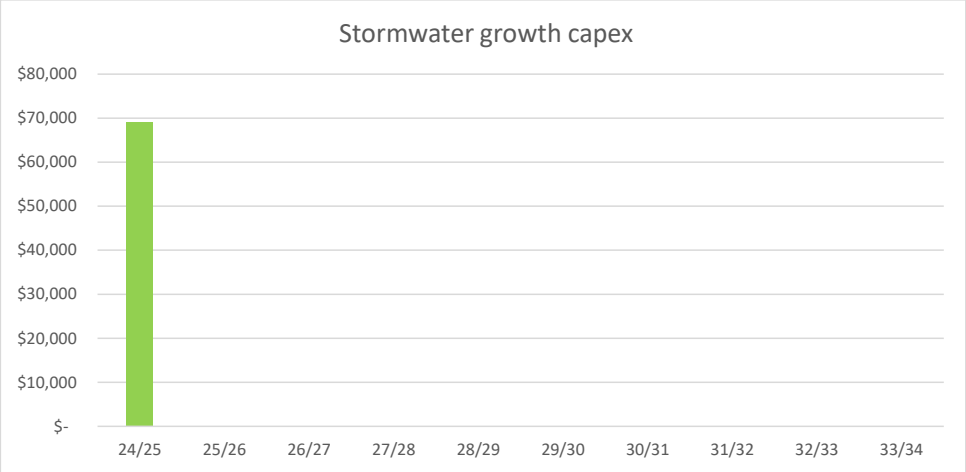


Figure 9M – Stormwater growth capex

9.4.2 Stormwater renewals

The stormwater capital expenditure for activity driven by renewals over the next ten years is detailed in the figure below. Year 1 is dominated by several large multi-year renewal projects nearing completion. After this stormwater renewals decrease to a low level. This is termed “sweating the asset”.

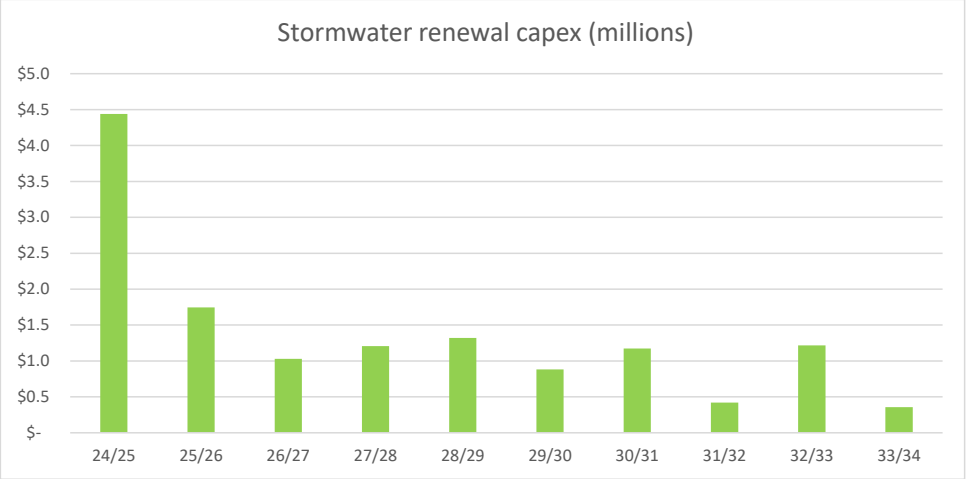


Figure 9N – Stormwater renewal capex

9.4.3 Stormwater levels of service

The figure below illustrates the estimated stormwater capital expenditure driven by levels of service for the next ten years. The funding in Y1 is mainly for the completion of the multi-year Apanui linear park project. The funding in Y9 & Y10 is for the Edgecumbe stormwater study.

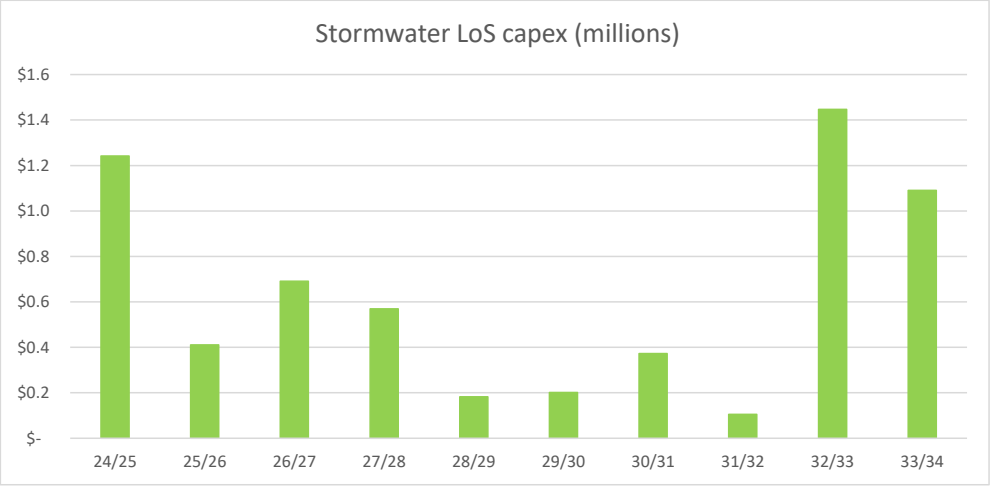


Figure 9O – Stormwater LoS capex

Project	Driver	Cost	Duration	Description
WHK SW Pump Replacements	Renewal	$4.0M	7y	Whakatane Pump Replacements
Reactive Emergency SW Renewals	Renewal	$2.9M	10y	Reactive Emergency SW Renewals
Whk SW WesternCatch UpgradeRen	Renewal & LoS	$2.3M	1y	Whakatane SW Western Catchment Upgrade
Edge SW - Stormwater Study	LoS	$2.3M	5y	Edgecumbe stormwater study
Whakatāne Stormwater Network Upgrades	Renewal & LoS	$1.6M	7y	Whakatāne Stormwater Network Upgrades
OHOPE SW Upgrades - Capital expenditure	LoS & Renewal	$960K	2y	OHOPE SW Upgrades

Table 9P – Key Stormwater Projects

9.5 Operational investment

The figures below present the operational investments for three waters activities over the next ten years. The forecasted operational expenditure amounts to $327 million, with the majority allocated to drinking water (48%), wastewater (33%) and stormwater (19%).

Drinking Water	$158.4	
Wastewater	$107.5	
Stormwater	$ 60.6	
	$326.6	Million

Table 9Q - Three waters operational investment for the next ten years

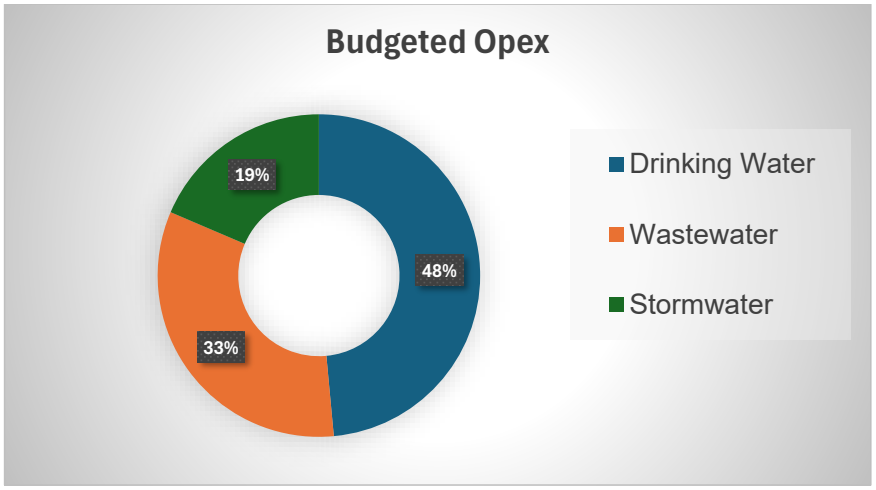


Figure 9R - Three waters operational investment for the next ten years

The narrative below discusses the four major components of operational expenditure.

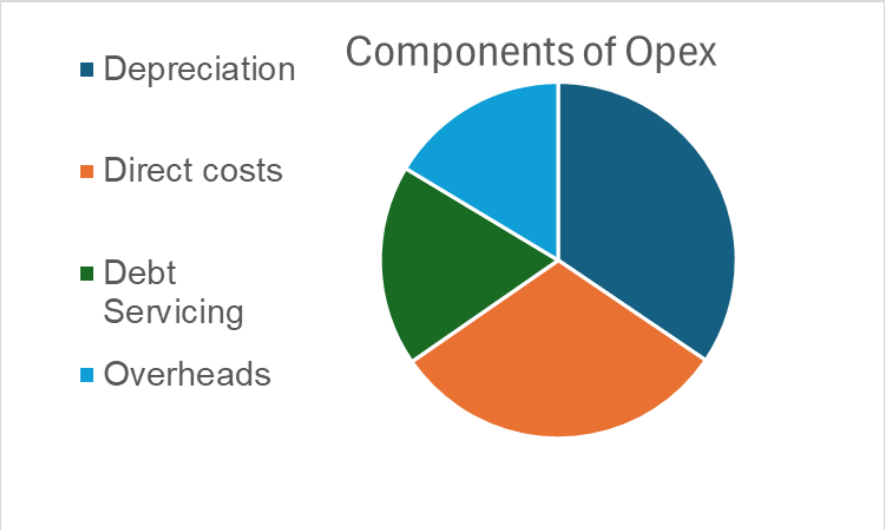


Figure 9S - Components of Operational costs -Three Waters

9.5.1 Depreciation

Overall, and for each of the three individual waters, depreciation is the largest cost centre. It represents 34% of three waters expenditure overall. It varies from a low of 13% for the Stormwater activity, through 22% for Wastewater to a high of 35% for Drinking water. This is understandable as three waters is a very asset intensive activity, especially so for the active infrastructure associated with drinking water supply and wastewater management.

Depreciation can be thought of as the ongoing consumption of the asset. Funding of depreciation provides an income stream that is used in order have funds available to replace the asset at the end of its lifetime.

9.5.2 Direct costs

Direct costs include matters such as operations & maintenance, staff costs, chemicals, electricity & gas, SCADA controls and other costs.

Direct costs represent the second largest cost centre. Direct costs vary from a low of 12% for the Stormwater activity, through 21% for Wastewater to a high of 31% for Drinking water. It represents 31% of three waters expenditure overall. This is understandable as three waters is an active activity, especially so for the active infrastructure (e.g. pumping and storage) associated with drinking water supply and wastewater management.

9.5.3 Debt Servicing

Debt servicing is interest we pay for current (and future) debt involved in asset creation.

Overall, and for each of the three individual waters, debt servicing is the third largest cost centre. It represents 18% of three waters expenditure overall. It varies from a low of 7% for the Stormwater activity, through 13% for Wastewater to a high of 18% for Drinking water. This shows the proposed debt position.

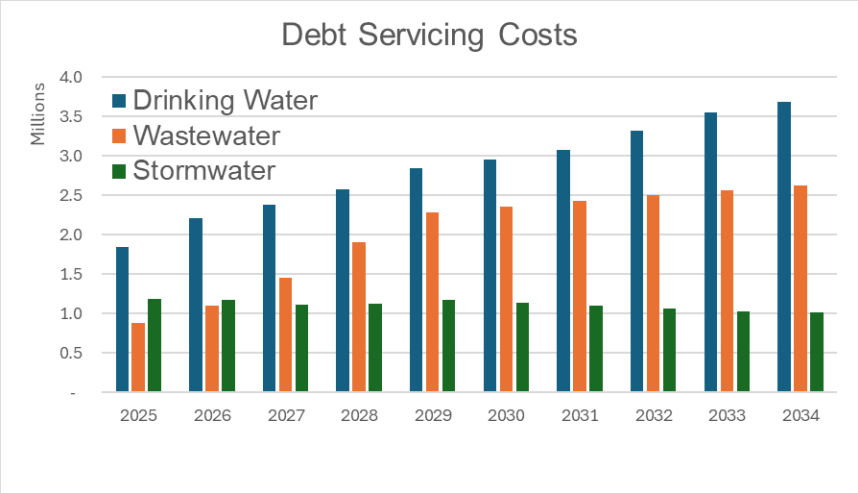


Figure 9T - Debt servicing costs

Debt servicing costs show a rapidly rising debt position for Wastewater then plateauing from Y5 onwards. Drinking water debt servicing starts at a high level (effectively twice the other two) and climbs steadily over the 10 year period. Stormwater debt servicing actually decreases over the 10 year period.

9.5.4 Overheads

Completing the picture of cost centres is allocated costs or Overheads. These are the costs that three waters pays (to other parts of the organisation) for services such as Finance, IT, HR, Comms, Strategic management etc. Typically overheads are calculated in accordance with demands placed upon the supporting services by the actual activity.

9.5.5 Operational Investment by activity

The Tables below describe the operational costs for each of the waters activities year by year at a cost centre level. All numbers are thousands ($000's)

Drinking Water

FY	Depreciation	Interest	Direct Costs	Overheads	Total
2025	4,698	1,847	4,297	2,022	**12,866**
2026	4,947	2,211	4,411	2,142	**13,712**
2027	5,200	2,381	4,549	2,223	**14,353**
2028	5,563	2,571	4,681	2,253	**15,069**
2029	5,762	2,839	4,839	2,298	**15,739**
2030	5,925	2,954	5,054	2,345	**16,277**
2031	6,072	3,076	5,192	2,385	**16,725**
2032	6,166	3,321	5,355	2,410	**17,253**
2033	6,469	3,547	5,547	2,455	**18,018**
2034	6,565	3,685	5,696	2,489	**18,436**
	57,367	**28,435**	**49,622**	**23,023**	**158,447**

Table 9U – Drinking water operational investment at cost centre level

6.9.1 Appendix 1: THREE WATERS Asset Management Plan 2024 – 2034(Cont.)

Wastewater

FY	Depreciation	Interest	Direct Costs	Overheads	Total
2025	2,842	878	2,503	1,706	**7,928**
2026	2,857	1,104	2,605	1,826	**8,393**
2027	2,912	1,455	2,738	1,907	**9,013**
2028	2,921	1,904	3,289	1,930	**10,043**
2029	2,937	2,289	3,370	1,961	**10,556**
2030	4,056	2,362	3,503	2,004	**11,926**
2031	4,058	2,431	3,604	2,039	**12,132**
2032	4,062	2,508	3,624	2,065	**12,258**
2033	4,065	2,568	3,759	2,113	**12,505**
2034	4,084	2,623	3,863	2,142	**12,713**
	34,793	**20,122**	**32,858**	**19,692**	**107,466**

Table 9V – Wastewater operational investment at cost centre level

Stormwater

FY	Depreciation	Interest	Direct Costs	Overheads	Total
2025	1,904	1,190	1,484	943	**5,521**
2026	1,991	1,171	1,655	1,005	**5,823**
2027	2,006	1,112	1,734	1,042	**5,895**
2028	2,024	1,119	1,788	1,050	**5,981**
2029	2,042	1,168	1,732	1,071	**6,013**
2030	2,057	1,136	2,112	1,094	**6,399**
2031	2,081	1,101	1,861	1,112	**6,156**
2032	2,100	1,060	1,922	1,124	**6,206**
2033	2,105	1,027	1,993	1,150	**6,275**
2034	2,138	1,014	2,049	1,166	**6,367**
	20,450	**11,100**	**18,329**	**10,758**	**60,637**

Table 9W – Stormwater operational investment at cost centre level

10 Continuous Improvement

10.1 Overview of the improvement programme

Sections 3.8 and 4.6 identify opportunities for improvement. It won't be possible to advance all of these, all at once. A number of focus areas have been identified for early attention during the first three years of the LTP.

10.2 Current asset management maturity

We assess our current level of maturity to me moderate. A future action is to apply a formal maturity model and broaden this assessment in order to validate the level of maturity. This will also reveal focus areas and discrete actions to be adopted.

10.3 Review of progress against previous plan

Previously we prepared individual asset management plans for water, wastewater and stormwater. This led to a certain amount of duplication and diluted the overall messaging. The current approach of a single asset management plan aligns with the direction undertaken nationally throughout New Zealand.

Major advancement within the asset management industry with the release of the new edition of the IIMM, which is the global benchmark for infrastructure asset management and a valuable resource to Council.

Continuation with review of asset data and address gaps within the data source with particular attention to critical assets.

Opportunistic condition assessment of assets by field staff has assisted in the programming of renewal works.

10.4 Improvement plan 2024

Further progress with asset management system to establish system processes and controls around asset data management including:

- Development of proactive maintenance schedules for critical assets
- Improvement of capturing asset data for newly constructed and vested assets in a timely manner
- Develop robust process for updating of GIS data

11 Conclusion and key takeaways

- Like many Councils across the country, we are facing significant funding and financing pressures to deliver the requirement investment. In order, these come from wastewater treatment plant upgrades, water and wastewater pipe renewals, climate change and resilience projects to improve the ability to provide continuity of service in case of asset failure or severe weather events.
- A needs based capital investment programme indicates that almost $440M of investment is needed over the next 10 years. Due to affordability and delivery constraints, this has been reduced to $170M over the same period. The most significant impact of this is the deferral of the physical works costs to upgrade our four wastewater treatment plants that have consents expiring in 2026.
- We have reasonably good knowledge of the condition of our above and below ground wastewater assets and good knowledge of water assets, albeit it through a more discrete sampling programme. For stormwater, we have taken a more criticality based approach and have good information on above ground pumpsations but a very limited view of below ground pipe assets.
- The introduction of a dedicated drinking water regulator has provided a stronger and more robust oversight of drinking water quality standards and expectations. Our most notable drinking water safety risk is in Murupara where the supply lacks a permanent treatment facility. Whilst funding is in place to address this, there remains strong community opposition for treatment (particularly chlorination), therefore, we are taking a very considered and community focused approach to implementing the necessary safeguards.
- Across the country, the majority of resource consents expire in 2026. This places significant strain within the industry in developing and resourcing this volume of consents and on regional councils, as the regulator, to process and approve consents. We have over 20 three waters resource consents that expire in 2026, so our challenge will be in undertaking the preparation and consultation for numerous new resource consent applications prior to lodgement for approval.

Glossary

Asset condition: A measure of the state of an asset in providing its intended function.

Asset criticality: A measure of the importance of an asset in relation to the overall performance of a system.

Asset data confidence: A measure of the quality, accuracy, and reliability of the data used in asset management processes, such as decision making, planning, and performance monitoring. High asset data confidence enables better-informed decisions, while poor data confidence can lead to suboptimal outcomes.

Asset lifecycle: The stages an asset goes through from creation or acquisition to disposal.

Asset management planning: The process of making informed decisions about the acquisition, operation, maintenance, renewal, and disposal of assets to provide the required level of service to customers at the lowest long-term cost.

Asset performance: The asset's ability to meet service objectives related to capacity, reliability, quality, efficiency, and/or utilisation.

Asset resilience planning: A proactive approach to asset management that focuses on enhancing the ability of assets and systems to withstand, adapt to, and recover from disruptions, failures, or extreme events, ensuring the continuity of essential services and minimising impacts on communities.

Asset valuation: A process used to determine the estimated value of an asset for financial planning, asset management planning, and financial reporting.

Closed-Circuit Television (CCTV) inspection: A method used to assess the condition of pipelines by inserting a camera into the pipe and recording video footage.

Common data confidence and accuracy assessment: Assesses all asset groups and types in terms of quantity, age, condition and performance. Understanding data confidence and accuracy benefits valuation, criticality and auditing activities.

Condition grading: A method of rating the condition of an asset to inform future intervention decisions.

Critical assets: Are defined as those which have a high consequence of failure causing significant loss or reduction in service provision.

Data maturity: A measure of an organisation's ability to effectively collect, manage, and utilise data in its decision-making processes. Higher data maturity levels indicate a more advanced and efficient use of data, leading to better- informed decisions and improved organisational performance.

Dry weather overflows: Overflows in the wastewater system during dry weather, often caused by blockages or plant failures.

Failure mode: is the way in which assets can fail (such as cracks in pipes).

Inflow and infiltration: The entry of stormwater and groundwater into the wastewater system, often during rainfall events.

Infrastructure Leakage Index (ILI): A measure of water loss in a water supply network, used to identify areas

where investment is needed to reduce water loss and improve network effectiveness.

Infrastructure strategies: Long-term planning documents that outline the strategic direction, priorities, and investment requirements for the development, maintenance, and renewal of infrastructure assets, such as water, wastewater, transportation, and energy systems. These strategies inform and support the development of Long Term Plans (LTPs) and other asset management initiatives.

International Infrastructure Asset Management Manual (IIMM): A published guide to best practices in infrastructure asset management.

Level of service (LOS): The agreed outcomes that an organisation delivers for its customers based on performance measures and targets.

Mana whenua kaitiaki: Māori guardians responsible for protecting and managing the environment within their region.

Mauri: A Māori concept that refers to the vitality or essence that supports life.

Network assets: Infrastructure that enables the flow of water, wastewater, and stormwater, including pipes, laterals, and structures.

Natural water bodies: Fresh water accumulations that occur naturally in the environment and include lakes, groundwater aquifers, rivers and streams, wetlands, and ponds.

Open channels: Linear waterways, either natural or modified, that form part of a network.

Stations and sites: Locations serving as a water source, storage, and/or pumping functions.

Stormwater network services: The infrastructure and services related to the management and treatment of stormwater.

Tāngata whenua: The indigenous Māori people of a specific region in New Zealand.

Taumata Arowai: New Zealand's three waters regulator

Te Mana o te Wai: A concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.

Tikanga, kawa, and mātauranga-a-iwi: Māori customs, traditions, and protocols that influence the way they interact with the environment.

Treatment plants: Facilities that process and improve the quality of water or treat wastewater.

UAC: Uniform Annual Charge: A method of collecting revenue using a fixed charge per (say) household. As opposed to volumetric charging (say) for water by metered amount used

Wai: (noun) Māori – Water, liquid, stream, creek, river.

Wastewater network services: The infrastructure and services related to the collection and treatment of wastewater.

Wastewater Risk Abatement Plan: A strategic document outlining the potential risks associated with

wastewater treatment plants (WWTP) and their associated infrastructure (e.g., pumping stations), and identifying strategies and actions to mitigate or manage these risks to protect public health and the environment.

Water New Zealand National Performance Review (NPR): An annual review of water and wastewater services in New Zealand.

Water Safety Plans (WSP): A comprehensive risk assessment and risk management approach that encompasses all steps in the water supply chain, from catchment to consumer, to ensure the safety and quality of drinking water. (Note that a major consulting firm in New Zealand also shares this acronym.)

Water supply network services: The infrastructure and services related to the provision of water supply.

Wet to dry weather flow ratio: A measure of inflow and infiltration in the wastewater system, calculated as the peak wet weather flow divided by the average dry weather flow.

Wetlands: Ecosystems that are saturated with water, either permanently or seasonally, and support a wide range of flora and fauna.