

ATTACHMENTS

UNDER SEPARATE COVER 1

Ordinary Council Meeting

31 May 2024

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PURPOSE AND EXECUTIVE SUMMARY

1. Council manages significant 3-waters and transport infrastructure on behalf of the community. Most of this infrastructure has a long-life, typically many decades. While the Long-term plan provides Council’s delivery plans for the near future¹, this infrastructure strategy ensures that this planning is done within the context of ensuring sensible, efficient and sustainable management of three-waters and transport infrastructure for the long-term.
2. This strategy aims to demonstrate that Council is carefully managing these assets by setting out how council will ensure it meets these objectives:
 - Assets are well looked after and in good condition for future generations Page 4
 - We are planning and investing to support growth and housing development Page 10
 - We are maintaining levels of service and improving public health and environmental outcomes Page 21
 - We are managing natural hazard risks to ensure our infrastructure is resilient Page 35
3. This strategy also sets out the major infrastructure challenges that we expect to face over the next 30 years, the options for addressing these, and when important decision will need to be made. These are:
 - Identifying a Northern Access solution Page 15
 - Managing wastewater north of the Waikato River Page 17
 - Improving the disposal of wastewater in Tūrangi Page 31
4. This strategy also sets out 30-year planned revenue and expenditure. Page 39

SCOPE IS LIMITED TO 3 WATERS AND TRANSPORT INFRASTRUCTURE

5. This Strategy sets out how Council will manage the community’s infrastructure relating to:
 - Water, wastewater, and stormwater Including treatment plants, pipe networks, and disposal systems
 - Transport Including local roads, bridges, footpaths, streetlights, cycle paths, road signs and bus shelters, and roads that are used for stormwater management.
6. For the areas of solid waste, parks and reserves, and community buildings and facilities, the long-term plan sets out the objectives and investment plans for the next 10 years, and we have long-term asset management plans for each area that underpins these investment plans.

¹ The next 1 – 3 years in some detail, and then indicative plans looking out 10 years.



ALIGNMENT BETWEEN FINANCIAL AND INFRASTRUCTURE STRATEGY

7. Prudent asset management and prudent financial management go hand in hand. Identifying investment needs must be paired with identifying appropriate and sustainable funding arrangements.
8. Our financial strategy includes several measures to ensure sustainable and prudent financial management to support the additional investment identified in this infrastructure strategy. Additional investment is being driven by increased renewals and maintenance requirements, higher growth expectations, improvements to meet new legislative requirements, and improvements to ensure the resilience of our essential services. Measures identified in the financial strategy include:
 - Funding 100% of depreciation.
 - Using Development Contributions and development agreements to fund growth projects (noting there are still debt impacts)
 - An increase in Council’s debt allowance from 225% to 250% of annual revenue, to recognise increased growth.
 - Signalling higher levels of rates increases for the short-term, and funding voluntary debt repayments and depreciation reserve top-ups throughout the 10-year period, to ensure future generations are not funding the eventual replacement of the assets used by current ratepayers.
 - Rationalisation of Council’s discretionary capital projects, a focus on increasing 3rd party funding opportunities, and improved management of financial assets.
 - Planning for unexpected events by ensuring financial sustainability over the long-term, maintaining sufficient debt headroom, and prudent management of Councils investments. Council uses the assets of the TEL as self-insurance for underground assets, avoiding the challenges underground insurance and significant insurance premiums on these assets. Council also maintains a disaster recovery reserve as another element of planning for unexpected events, such as natural disasters.
9. Council’s budget is under pressure. The effects of the prolonged period of inflation and subsequent interest rate rises, looking after community infrastructure and paying for things like insurance mean that the services our community relies on us for are costing more than ever.
10. Council in its long-term plan has made some hard calls on what to deliver in the next 10 years. We have thought carefully about the challenges we face and agreed we must prioritise our core services - providing safe drinking water, protecting our environment and looking after our infrastructure so our children and their children aren’t unnecessarily burdened in the future.
11. Our number-one responsibility is do the essentials well. This means continuing to invest in our infrastructure so that our pipes, water networks and roads remain in good shape. We must also plan for future growth and build resilience for the effects of climate change. We’ll continue to take a partnership approach across the projects and activities that are important to iwi and hapū.
12. We’re focusing primarily on the basics over the next few years. This means that the areas of focus for this infrastructure strategy remain priorities and have not been reduced to meet affordability constraints. Instead, our more discretionary investment plans – like some of the projects that will improve our places and spaces will have to wait until a bit later.
- 9-13. One area where we have to make an adjustment from the original goals was for water pipe renewals. Affordability concerns, particularly with debt levels, and the levels of funding available in depreciation / renewal reserves for water, means that council has revised its water renewal

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programme over a longer timeframe, expecting it to take around 15 years to clear a backlog of renewals rather than 10.



ASSETS ARE WELL LOOKED AFTER AND IN GOOD CONDITION FOR FUTURE GENERATIONS

TIMELY RENEWALS REMAINS A TOP PRIORITY FOR COUNCIL

40-14. Keeping on top of renewals, and making sure that the community’s assets are maintained in good working condition, remains a core responsibility and top priority for council.

44-15. We have a reasonable knowledge of the condition of our assets, and we have a plan to continue improving that knowledge over time. Our Stormwater pipe network is relatively new and in good condition. Our wastewater network has some older asbestos cement pipes that need renewal. For these two areas, there is a stable programme of renewals planned to deal with the older parts of the networks. For our transport and water pipe networks, we have a major increase in renewals programme planned:

- Despite condition assessments not identifying significant problems, frequent failures of asbestos cement water mains means that we are planning to replace all these pipes with a ramped-up programme of renewals over the next 10 to 15 years.
- Our roads continue to hold up beyond their expected lives because we have free draining pumice soils that support a longer pavement life. However, increased heavy vehicle traffic has put increased pressure on the network, and our roads remain at risk of micro-cracking allowing water to infiltrate the pavement causing pavement failure. We have identified the need for a step change increase (doubling) in reseal renewals to protect our roading network and avoid more costly deterioration.

42-16. In total, our waters and transport renewal programme will increase from \$13 million a year (2023/24 annual plan) to \$23 million a year on average over the next ten years.

ASSET MANAGEMENT PLANNING

43-17. Asset Management Plans (AMPs) have been developed for water, wastewater, stormwater, and transportation to inform Council’s Long-term Plan. AMPs combine management, financial, engineering, and technical practices to ensure assets are managed in an affordable, efficient, sustainable, and effective manner to deliver service levels at the lowest long-term cost to the community – including both current and future generations. AMPs demonstrate that Council is managing the community’s assets responsibly by:

- Demonstrating service level options and standards.
- Identifying minimum lifecycle (long term) costs for an agreed level of service.
- Providing and forecasting asset management options and costs.
- Demonstrating the management of the risks of asset failure.
- Improving decision making based on identifying the costs and benefits of investment and delivery options.
- Providing clear justification of forward works programmes and funding requirements
- Ensuring accountability over the use of public resources.

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SUMMARY OF ASSETS

<u>Area</u>	<u>Major assets</u>	<u>Estimated useful life</u>	<u>Value of assets²</u>	<u>Condition</u>
<u>Transport (excluding land)</u>	<ul style="list-style-type: none"> 762 km of sealed road 	<p>3 – 20 years for seals (top surface)</p> <p>45 – 65 years for pavement (base)</p>	\$500 million	<p>38% of chip seal roads are 16 years or older. The advanced age is due to deferred renewals based on limited funding and low signs of road distress.</p> <p>Pavement is in good condition, many that are past their expected design life are still in good condition and only those experiencing additional loadings are showing signs of failure.</p> <p>Asset Condition Data is at a B confidence rating</p>
	<ul style="list-style-type: none"> 51 km of unsealed road 			
	<ul style="list-style-type: none"> 395 km of paths 	30 – 80 years		
	<ul style="list-style-type: none"> 19 road bridges 	60 - 100 years		
	<ul style="list-style-type: none"> 81 large culverts 	50 – 80 years		
<u>Water – pipes (reticulation)</u>	<ul style="list-style-type: none"> 645 km of pipe <ul style="list-style-type: none"> 376km PE and PVC 259km AC and Galv 9.5km Other 	45 – 120 years	\$149 million	<p>Water reticulation age and condition across the District is variable. There remains significant quantities of asbestos cement and galvanised pipelines estimated to be beyond their useful life. The current construction backlog value is estimated at approximately \$26M.</p> <p>Asset Condition Data is at a C confidence rating</p>
	<ul style="list-style-type: none"> 20 Pump Stations 	20 – 60 years		

² Estimated replacement cost

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<u>Area</u>	<u>Major assets</u>	<u>Estimated useful life</u>	<u>Value of assets²</u>	<u>Condition</u>
<u>Water – treatment plants</u>	<ul style="list-style-type: none"> • <u>18 Treatment plants</u> 	<u>10 - 80 years</u>	<u>\$62 million</u>	<p><u>Treatment assets are continually assessed, and asset condition updated in a live document.</u></p> <p><u>Renewals programmes are updated based on this annual assessment.</u></p> <p><u>Overall asset condition for the treatment plants is Good.</u></p>
<u>Wastewater – pipes (reticulation)</u>	<ul style="list-style-type: none"> • <u>510 km of pipe</u> 	<u>65 - 120 years</u>	<u>\$198 million</u>	<p><u>Average asset age is 37 years, Inflow and Infiltration is the primary issue across the network.</u></p> <p><u>Asset Condition Assessment is at a C confidence rating</u></p>
	<ul style="list-style-type: none"> • <u>124 pump stations</u> 	<u>20 – 60 years</u>		
<u>Wastewater – Treatment plants</u>	<ul style="list-style-type: none"> • <u>11 treatment plants</u> 	<u>10 - 80 years</u>	<u>\$130 million</u>	<p><u>Plants performing well, many need nitrogen analysers installed to be optimised further and some plants require increased capacity to meet growth demands.</u></p> <p><u>Asset Condition Data is at a C confidence rating</u></p>
<u>Stormwater</u>	<ul style="list-style-type: none"> • <u>220 km of pipes</u> 	<u>50 - 120 years</u>	<u>\$124 million</u>	<p><u>Majority of pipes are due for renewal in 26-30 years based on EUL.</u></p> <p><u>Based on condition assessments the network is overall very good and assets are expected to meet or exceed their designed life.</u></p> <p><u>Asset Condition Data is at a B confidence rating</u></p>
	<ul style="list-style-type: none"> • <u>3 pump stations</u> 	<u>20 – 60 years</u>		
<u>Total</u>			<u>\$1,162 million</u>	

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COUNCIL'S CONDITION ASSESSMENT PROGRAMME

14-18. When our infrastructure assets get old or worn out, we need to replace them to keep services running, maintain service levels, and avoid failures. Undertaking these renewals at the right time, and not too early will maximise the use of assets, and the investment that we have in our infrastructure. Doing it at the right time, and not too late will avoid our infrastructure failing, interrupting services to the community, and resulting in expensive repairs.

15-19. Generally, there is an expected minimum useful life for an asset, however Council undertakes a condition assessment programme to identify the actual current performance and condition of assets, and the risk of asset failure, which are used to determine Council's asset renewal programme.

AGE AND CONDITION OF ASSETS

Transport

16-20. Over the last three years we have undertaken a thorough pavement condition assessment of our entire road network alongside our 3 yearly Deighton Total Infrastructure Management System (dTIMS) modelling exercise. A key concern has been micro-cracking of the pavement surface which is not a trigger in dTIMS, which can allow water in and swiftly deteriorate the road subsurface. A complete external validation through a visual assessment has been undertaken to identify our reseal needs, that were not previously picked up by traditional condition assessments focused on rutting, cracking, and potholes.

17-21. We have a strong understanding of our reseal and rehabilitation renewal needs over the next 10 years with a renewal programme built around high volume and critical routes and critical-risk, high-risk, medium-risk, and low-risk treatment sections. We have identified the need for a step change increase (doubling) in reseal renewals to protect our roading network and avoid more costly deterioration. Around 70% of our planned renewals programme is preventative reseals. This work is critical to prevent water ingress and to avoid higher costs of complete road rebuilds in future. Around 30% of our renewals programme is for rehabilitation due to road failure (where the substructures of the roads have already deteriorated).

18-22. While we have very good information on pavement renewal needs (our largest risk), over the next 5 – 10 years we will focus on improving our knowledge of the condition and renewal needs for:

- road drainage and stormwater assets
- roading structures (like bridges and retaining walls).

Water

19-23. We have progressively increased our water renewals funding over the last two Long-term Plans, but further increases are needed. We have a large backlog of water pipe renewals that need to be urgently addressed. Asbestos cement and galvanised water mains were laid in the 1950s, 60s and 70s and are at the end of their life. The asbestos in these pipes is not considered a health risk, however these pipe types are more fragile and prone to spontaneous failure (pipe bursts) when they get to the end of their life. We currently experience frequent pipe bursts and failures in affected areas. These older pipes represent approximately 40% of the network. We are planning a significantly increased programme of water pipe renewals to replace all these pipes and clear the backlog. This catch-up programme will take around 10 to 15 years to complete, after which we will be ahead of renewals – replacing pipes before they reach a high risk of failure.

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20-24. Renewals spend requirements will reduce significantly once the asbestos and galvanised steel water mains are replaced. Operational budgets will also be able to be reduced due to the expected reduction in pipeline failures. Annual renewal budgets in the future will be able to be set proactively to target pipe replacements prior to end of life.

24-25. While we have good information on our water pipe network condition and renewal needs, over the next 5 – 10 years we need to focus on improving our knowledge of the condition and renewal needs for our water treatment plants, this data is currently incomplete and sits outside of Councils primary database (Assetfinda).

Wastewater

22-26. We have undertaken a programme of condition assessment for our wastewater pipe network, primarily using CCTV inspection and targeting our older areas of the network, such as Turangi and Mangakino (both hydro construction towns largely built in the 1970s and 1950s respectively). We have also undertaken a programme of relining works where required to extend the life of the network.

23-27. We have identified a reasonably steady programme of pipe renewals needed over the 20 years of around \$1.5 to \$2 million (today's dollars), there will then be a significant increase in pipe renewals around 2045 - 2050.

24-28. Continued collection of asset information on our wastewater pipe network condition remains a priority and targeted renewals will be completed based on the data collected. We also need to focus on improving our knowledge of the condition and renewal needs for our wastewater treatment plants, this data is currently incomplete and sits outside of Councils primary database (Asset Finda).

Stormwater

25-29. Council's stormwater reticulation network is a combined network of pipes, gullies and overland flow paths (including roads) which are relatively new as much of the district's urban growth has occurred within the last 30 – 40 years.

26-30. Most stormwater assets have an expected age of in excess of 100 years. Based on recent condition assessment of some of the older assets (35% of assets), it is anticipated that the majority of our stormwater assets will meet or exceed their anticipated design lives.

27-31. Additional condition assessments are required to further refine our renewal profile especially as the pipe networks within Turangi and Mangakino (both hydro construction towns) are nearing the end of their predicted life.

