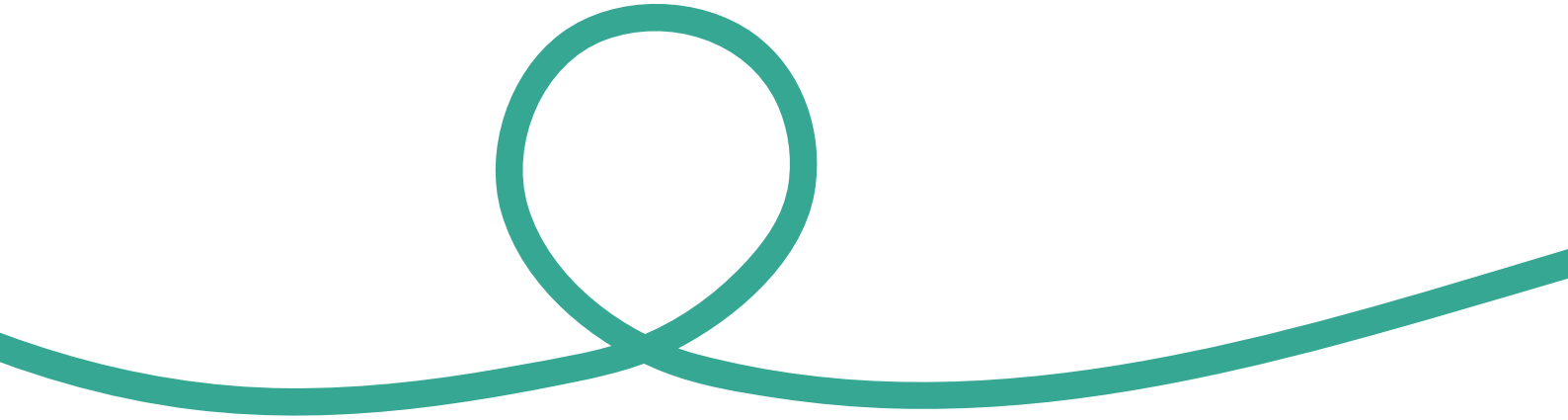
MANAWATŪ DISTRICT COUNCIL

What Matters Manawatū?

Getting to the heart of what makes this place home

Long-term Plan 2024-34

Infrastructure Strategy



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Introduction

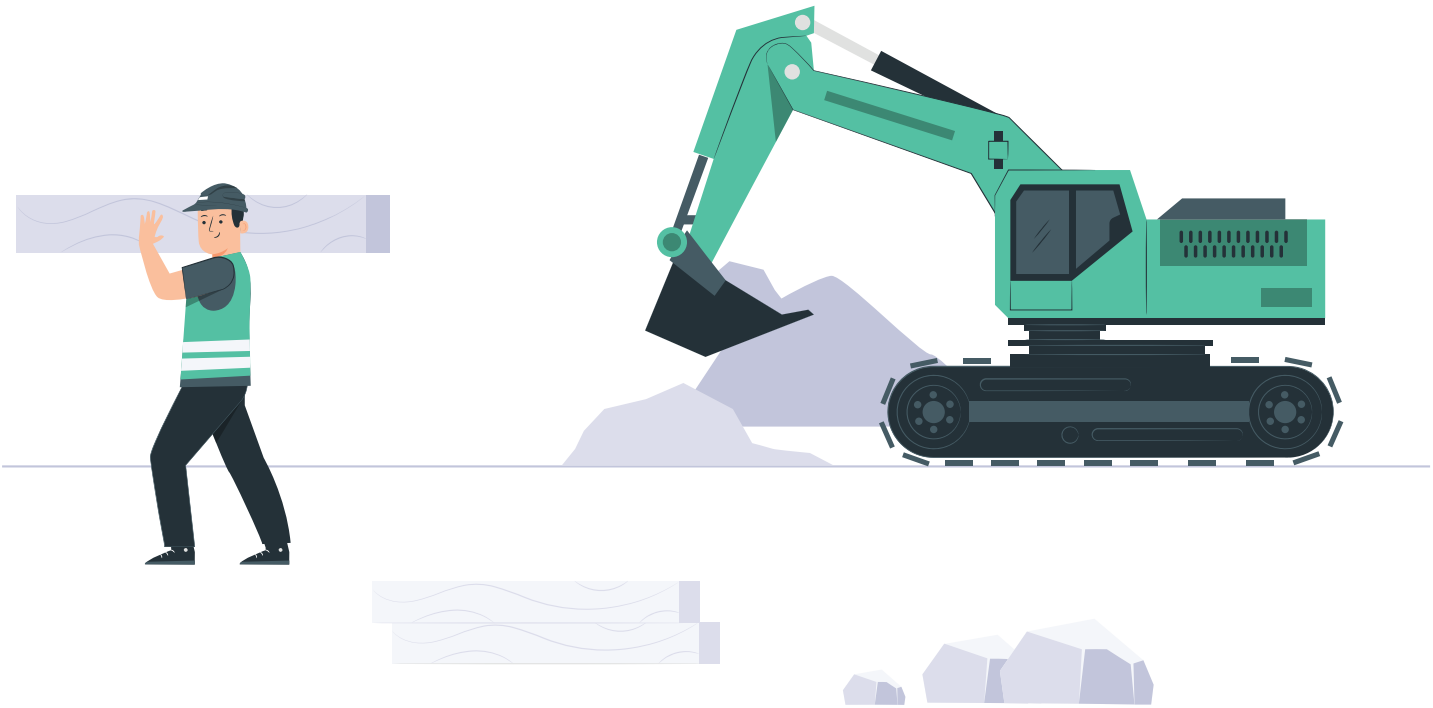
The provision of infrastructure, including roading, three waters infrastructure (water supply, wastewater and stormwater) and community facilities, is critical to the wellbeing of people in the Manawatū District. The current inflationary environment, ageing population, and moderate growth limits our communities' ability to pay for infrastructure assets and services.

Council's strategic infrastructure goal is "to provide the Manawatū community with resilient infrastructure in a cost-effective way, meeting both current needs and future growth and demand".

In the Manawatū District Council's ("Council") previous two Infrastructure Strategies (2018-2048 and 2021-2051), a deliberate decision was made to reduce the investment in water and wastewater pipeline renewals. This decision was based on significant investment in the preceding six years and a proactive risk management approach around network failure.

This Infrastructure Strategy (2024-2054) represents a recommitment to Council's deferred water and wastewater renewals programme, with scheduled renewals spread throughout the duration of the 30-year infrastructure period. Within the 30-year term of this Infrastructure Strategy, Council expects to complete all previously deferred water and wastewater renewals, ensuring optimised water and wastewater networks that meet the needs of the Manawatū community. Council has been keeping up to date with its roading renewal programme, in alignment with the New Zealand Transport Agency's (NZTA) co-funding requirements including levels of service and asset data driven decisions. This will continue over the life of this Infrastructure Strategy.

The programme also includes upgrades to existing infrastructure, the reconsenting of infrastructure assets, responses to changes in regulation, and investment to increase the resilience of key infrastructure to climate events. Council also maintains a resilience fund that it uses to offset some of the costs for recovery from emergency events, particularly the local share of any roading emergency works that are not funded by the New Zealand Transport Agency (NZTA) emergency works subsidy.



Council recognises that past investment has been focused on wastewater and drinking water compliance. Council is now committed to increasing its investment in stormwater management through this 2024-34 Long-term Plan. This investment is both to catch up on historical underinvestment as well as a direct response to recent flood events, which are forecast to become more frequent and intense in the future. Once Council has completed its programme of capital upgrades to the Feilding and Village stormwater networks, new assets will be renewed in future years via a whole of life cyclic renewal programme.

While Council's Long-term Plan focuses on a 10-year planning horizon, this infrastructure strategy considers infrastructure provision over a 30-year time horizon. This extended planning horizon is necessary given the role that infrastructure provision plays as an enabler of economic growth, in serving the health and wellbeing of the Manawatū community, and in affecting how our district functions and grows.

The Infrastructure Strategy identifies significant infrastructure challenges for Council over the next 30 years, the implications of those challenges for Council's roading and three waters infrastructure, and how council is responding to those challenges.

The key challenges addressed through this strategy include:

- Affordability;
- Resilience and climate change;
- Managing growth and demand;
- Changing regulatory environment; and
- Impact of central government direction on land-use change.

Council has committed to developing a capital works programme that is both realistic and affordable. To achieve this commitment, Council has had to delay some significant capital projects such as Stage 2 of the Turners Road extension and upgrades to Feilding's stormwater network to later than originally intended.

The Infrastructure Strategy is informed by Council's vision and community aspirations. The information on infrastructure asset condition and performance has been taken from Council's Asset Management Plans. Financial considerations within this strategy inform, and are informed by, Council's Financial Strategy.

Council must ensure that infrastructure is provided in the right place, at the right time, and with enough resilience and capacity to meet current and future needs.

What's included in the Strategy?

This Infrastructure Strategy is unique in that it is being developed within a period of transition between two Governments. The previous Government introduced a significant number of regulatory and legislative changes, including in areas of three waters and resource management. The new Government has repealed Three Waters Legislation, and announced its intention to repeal many of the recently introduced legislative changes enacted by the previous Government.

The repeal of the previous Government's Three Waters Legislation on 14 February 2024 gave assurances of continued council ownership and control of water services, and responsibility for service delivery. This Infrastructure Strategy therefore includes information on three waters services as well as roading and footpaths.

Asset Portfolio

This Infrastructure Strategy covers the following assets:

- Roading and footpaths
- Water supplies
- Wastewater (sewage treatment and disposal)
- Stormwater

The Strategy outlines the following for these assets:

- Requirements for renewing and replacing existing assets;
- How Council will respond to changes in demand for services;
- How Council will allow for planned increases and decreases in levels of service provided through these assets, including in relation to the timing of new infrastructure investment;
- How Council will maintain or improve public health and environmental outcomes, or mitigate adverse effects; and
- How Council will provide for the resilience of infrastructure by identifying and managing risks relating to extreme weather events and other natural hazards.

Council also provides other Community infrastructure such as the Manawatū Community Hub and libraries (previously the Feilding Library), Makino Aquatic Centre, solid waste infrastructure and community buildings and facilities. These activities and assets are not included in this Infrastructure Strategy but are described in Section 5 of the Long-term Plan.

Table 1

	Optimised Replacement Cost ($)	Depreciated Replacement Cost ($)	Annual Depreciation Cost ($)
Roading and footpaths	1,157,934,773	620,378,517	15,138,357
Water supplies	207,727,172	109,109,105	2,525,997
Wastewater (sewage treatment and disposal)	195,123,961	119,263,366	3,224,612
Stormwater	108,497,275	75,259,446	708,109
Total	**1,669,283,181**	**924,010,434**	**21,597,075**

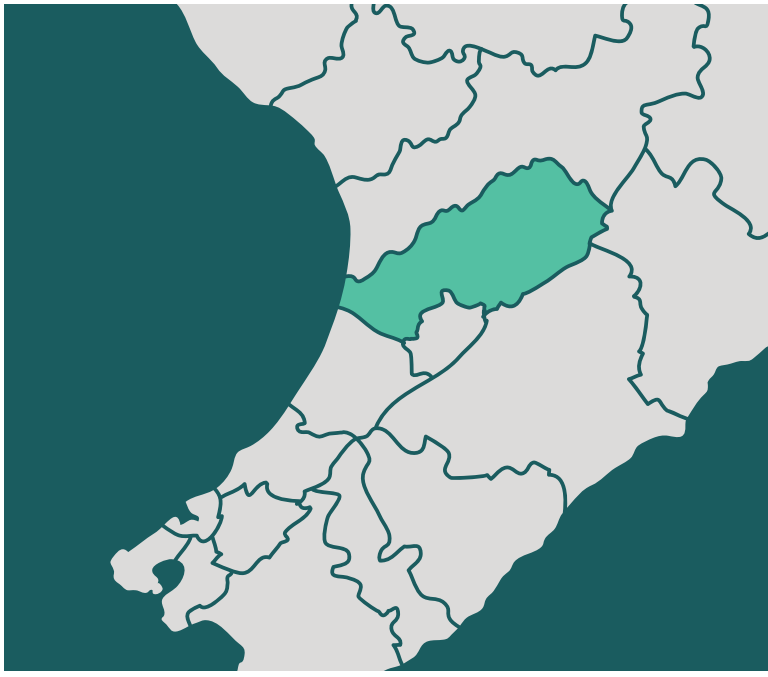
The "Optimised Replacement Cost" is the cost of constructing a new asset or modern equivalent asset using present day technology and maintaining the original service potential. "Optimised Depreciated Replacement Costs" is a valuation method that makes optimised replacement costs more realistic by depreciating to reflect the shorter remaining life of existing assets. The annual depreciation indicates the quantity of funding that Council should set aside each year to cover the cost of renewing the existing asset with an equivalent asset at the end of its useful life. This is generally calculated based on a straight-line method where it is assumed the asset will degrade at the same rate over its life.

Over the last 10 years (2013/14 to 2022/23), Council has spent an average of approximately $12.6 million per year on the renewal of assets across our infrastructure network (roading, stormwater, water supply and wastewater).

Snapshot of the Manawatū District

The economic, social, demographic and geographic characteristics of the Manawatū District all impact on the provision of infrastructure assets and services. Section 2 of the Long-term Plan provides a detailed description of our District. This snapshot sets the context for our infrastructure strategy.

The Manawatū District is uniquely placed in its central location as the gateway to four other regions: Hawke's Bay, Wairarapa, Rangitīkei and



Horowhenua. This central location gives the district strategic economic advantages. With easy access to four seaports, seven airports and major Defence Force bases, it is an accessible and centralised cargo, transport, and business hub for the lower North Island and the country.

The main trunk railway, which passes through Feilding, enhances the potential for connectivity, particularly for freight. Primary industry (agriculture and forestry) comprises our biggest economic sector, making up nearly 18% of District GDP. Manufacturing and Defence (primarily the Ōhakea Airbase) also contributes strongly to the local economy.

Several infrastructure projects, collectively known as "Te Utanganui" are planned over the next 10 years to develop the Manawatū as a multi modal distribution hub. Key projects within Te Utanganui include KiwiRail's Regional Freight Hub, Te Ahu a Turanga: Manawatū Tararua Highway and the Ōtaki to north of Levin expressway. Significant public and private investment in the Manawatū are expected to drive significant growth in distribution and logistics, as well as providing economic, social and environmental benefits for the region and the country. Expected growth in freight movements as a result of Te Utanganui will place increased pressure on our roading network. Council will work with neighbouring councils and central government agencies to ensure impacts on the roading network are addressed.

Transport is an enabler of wider social, economic and environmental outcomes. Local authorities are a partner in the delivery of land transport infrastructure and services. Council is committed to investing in transport infrastructure based on robust evidence to sustain the network in the long term; by targeting the right solution, to the right place, at the right time, and for the right cost.

Increases in population, dwellings and rating units, as described in Forecasting Assumptions, all have implications for our infrastructure services. These factors can affect the capacity of our assets to deliver services to the community and the timing of capital projects. For example, population growth generally leads to an increase in the volume of traffic using the roading network, placing increasing pressure on our roads and other infrastructure, such as stormwater. It is therefore essential that we ensure our asset management is sustainable and anticipates future growth and land use change in the District.

In managing its infrastructure, Council needs to balance quality and reliability of service with affordability. Further details about how we aim to keep our rates affordable while achieving levels of service are described in the Financial Strategy in Section 4.1.

Challenges impacting on Council's infrastructure decision making

As a community we face a range of challenges that can influence our decision making. As part of our Long-term Plan we have identified the following five challenges that have an impact on roading and three waters infrastructure, as follows:

- Affordability;
- Resilience and climate change;
- Managing growth and demand;
- Changing regulatory environment; and
- Impact of central government direction on land-use change.

Affordability

The current cost of living pressures mean that affordability is a key concern for a broader spectrum of the Manawatū community. The Manawatū District deprivation index has been reducing steadily since 2013. There is still a significant gap between those that have the highest deprivation and those with the lowest. The median household income for our District is $118,919 (2023), slightly lower than the New Zealand mean average household income ($125,177 in 2023). With the increase in the proportion of residents aged 65+, we expect a greater proportion of residents on a fixed income. Affordability is a key concern for this age group.

Council makes use of a range of local government funding tools and manages cost pressures through the use of shared service agreements, consolidated purchasing and joint procurements. Even with these tools, the reliance on rates as the primary source of funding for local government is considered to be unsustainable in the long-term. Inflation, increasing interest rates and rising delivery costs for infrastructure projects are all contributing to affordability concerns.

New capital works are primarily funded via rates, with the cost of financing those loans, including interest and depreciation funding, spread over the expected life of that asset. While this is consistent with the principle of intergenerational equity, it means that Council has reduced head-room for new capital works. Third party funding for new capital projects is often via a competitive process, whereby councils compete with other councils for the same bucket of money. Council is mindful of the lasting impact of COVID-19 on our community, including economic hardship and its resultant impact on new infrastructure investment.

Council has made a considerable effort to keep forecast rates rises at an affordable level for the Manawatū community by phasing key projects over the life of the Long-term Plan to smooth peaks in borrowing. This means that Council cannot always deliver on those projects that the community wants, such as the resolution of known stormwater flooding issues in Feilding and the rural villages, as quickly as we would like to. Council has also prioritised the completion of capital works carried forward from previous financial years over starting new projects. Council has been realistic about how much work contractors are able to deliver in any given financial year, making sure not to overcommit the capital works programme and to keep the budget within Council's rates cap.

The following table (Table 2) summarises Council's key forecasting assumptions that are relevant to the affordability challenge, their impact on roading and three waters infrastructure, and how Council is responding to that challenge.

Table 2

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Transportation Funding Council expects that it will continue to receive a 51% subsidy from NZTA for the maintenance and renewal of roads over the life of this Long-term Plan. Council also assumes that the total amount of central government funding available to local government through the National Land Transport Fund will not change.	Overall Risk that Council will not receive a 51% subsidy = High (16) Overall risk that the amount of NZTA funding is reduced = High (24)	Any reduction in NZTA subsidy affects Council's ability to maintain roads to the standard expected by the community. If Council has to reduce the amount of money spent on maintaining roads, this increases the risk of failure, and the amount that Council will likely have to spend repairing roads following extreme weather events.	Council maintains an awareness of any issues that may affect the level of NZTA funding. If there is a reduction in the subsidy or amount of funding available for roading maintenance and renewal Council would either fund the additional expenditure via rates, or delay roading maintenance and renewal projects to fit within funding constraints.

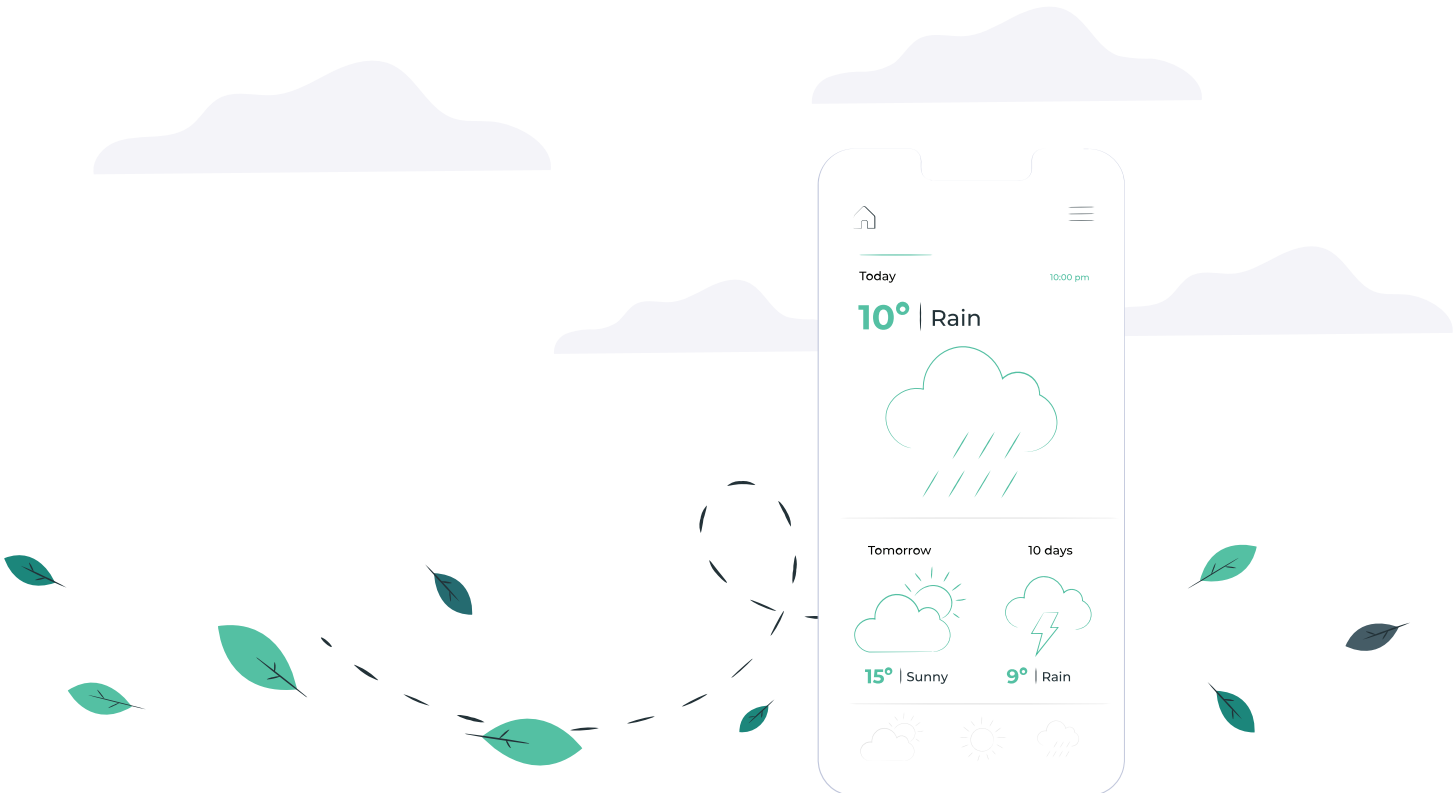
Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Inflation Council assumes that costs will increase as set out in the Business and Economic Research Ltd (BERL) Local Government Cost Adjustor Forecast "Legacy LGCI".	Risk that inflation costs increase at a significantly higher rate than forecast by BERL = High (16) Risk that inflation costs increase a significantly lower rate than BERL = Low (2).	Council may face increased costs if inflation rates are significantly different from what we have forecast. Significant cost increases would affect rates affordability in subsequent years.	Council uses industry-specific advice (BERL) on current inflation and predicted trends. Council closely monitors its budget and performance against budgets and adjusts spending if necessary to ensure there are no sudden impacts. Council uses several sources of funds, so the risk of inflation does not apply equally to all sources of funding.
Interest rates Council has assumed that interest rates on loans will range from 5.06% to 6.63% over the life of the Long-term Plan.	Risk that interest rates on loans will be significantly higher than forecast = Guarded (4) Risk that interest rates will be significantly lower than forecast = Low (2)	Higher than expected interest costs would impact on Council's ability to fund infrastructure activities and to undertake planned upgrades and renewals.	Council would respond by delaying planned projects or reducing levels of service to keep rates affordable. We will optimise our investment and apply asset management practices to our planning. We will smooth our costs where possible over time.
Ability to Borrow Council assumes it will be able to borrow at the approved borrowings level.	Risk that Council cannot borrow at the required level = Moderate (8)	If Council cannot borrow the money it has budgeted in the Long-term Plan, Council will have to either delay capital projects, cut levels of service, increase rates, or increase other operational funding (fees and charges, grants) to fund capital works. If projects have to be deferred or delayed this would mean lower levels of service.	The Council has access to finance through the New Zealand Local Government Funding Agency (LGFA), a dedicated financing vehicle for local government. The Council also enjoys access to an on-demand loan facility with its transactional banker. Active monitoring of Councils financial position enables Council to react quickly to changes in the ability to borrow.
Valuations Council assumes that the value of infrastructure, land and buildings will increase at the same rate as the relevant inflation category, as published by Business and Economic Research Ltd (BERL) in October 2023.	Risk that the value of infrastructure, land and buildings will increase at a higher rate than forecast = Guarded (4) Risk that the value of infrastructure, land and buildings will increase at a lower rate than forecast = Guarded (4)	If the value of infrastructure, land and buildings increases at a higher rate that Council has forecast this will mean that Council will need to increase the amount it rates for depreciation. This would impact on Council's ability to deliver planned projects within forecast funding limits.	As valuations are reviewed annually, Council can adjust its depreciation funding regularly through Annual Plans and Long-term Plan processes.

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Sources of funds for future replacement of significant assets Council assumes that the deprecation reserves will adequately fund the renewal of assets over the life of the Long-term Plan, and the longer term (to 2054).	Risk that the depreciation reserves are insufficient to fund the renewals of significant assets over the life of this Long-term Plan = High (16)	If there is a shortfall of depreciation reserves to replace assets Council will have to either reduce levels of service, increase debt and/or increase rates.	Since 2009, Council has built depreciation reserves to fund the long-term renewals of assets, however, many assets were nearing the end of their life at that time so recent renewals have depleted the fund. If there is a shortfall in funds to replace assets, Council will either have to reduce levels of service, increase debt and/or increase rates.

Resilience and Climate Change

Resilience is a central theme of Council's Infrastructure Strategy. The frequency and severity of extreme weather events is forecast to increase as a result of more frequent climate events. The availability of funding is the biggest constraint on Council's ability to recover from extreme weather events, and to enhance the resilience of our infrastructure to future events. Council has a resilience fund where there are varying levels of rating contribution made in any given year, and equally varying levels of draw on that fund in response to largely weather-related events.

Council prioritises the renewal and repair of damaged critical infrastructure over other assets of a similar age, and where possible, improves the resilience of that infrastructure to future severe weather events (refer to Table 3). We have included budgets of around $13.6 million per annum (over the 30-year period) for the renewal of our roading and three waters assets.



The following table (Table 3) summarises the key forecasting assumptions relating to the challenge of resilience to climate change, impacts on roading and three waters infrastructure, and how Council is responding.

Table 3

Key Forecasting Assumptions	**Climate Change** Council assumes that the climate of the Manawatū-Whanganui Region will change by the middle of the century, as a result of climate change, in the following ways (NIWA predictions based on the IPCC Fifth Assessment Report): • Temperature increases up to 1.5°C across the region. • Annual average precipitation will increase by up to 15% in the north of the Region and decrease by up to 20% in the southeast of the region. Increased precipitation could lead to increased frequency and intensity of inland flooding events in the district. • Change in number of annual hot days across the region up to 10 days. • Fewer wet days up to minus 15 in the northeast of the region. • The annual mean relative humidity change decreases up to 2.5 percent.
Overall Risk that Council's assumption proves false[1]	Risk that climatic changes in the Manawatū District, including the intensity and frequency of extreme weather events, are more extreme than predicted by NIWA based on the IPCC Fifth Assessment Report = Moderate (8) Risk that climatic changes in the Manawatū District, including the intensity and frequency of extreme weather events, are less extreme than predicted by NIWA based on the IPCC Fifth Assessment Report = Low (2)
Impact on roading and three waters infrastructure	Council anticipates that the effects of climate change will include increased likelihood of more frequent severe weather events such as storms, floods and droughts and may affect infrastructure capacity in certain areas.
Council's response	Council has planned for predictable impacts of climate change through our Asset Management Plans and Activity Management Plans. Generally, the district is well-placed in terms of exposure of threewaters infrastructure to flooding as a result of the range of sea level-rise scenarios, and in terms of current projected flood risk. Council is improving the resilience of its threewaters networks through new works and renewals and by using resilient design materials and pipelaying techniques. Critical infrastructure assets are prioritised for renewal over other assets of a similar age to increase resilience and reduce our risk profile. Council makes submissions to national government to advocate for changes to national direction to better enable farmers to diversify their activities and adapt to climate change impacts.

Key Forecasting Assumptions	**Extreme weather events** Council assumes that the intensity and frequency of extreme weather and climate events in the Manawatū District will increase over the 30-year period of this Infrastructure Strategy.
Overall Risk that Council's assumption proves false[1]	Risk that climatic changes in the Manawatū District, including the intensity and frequency of extreme weather events, are more extreme than predicted by NIWA based on the IPCC Fifth Assessment Report = Moderate (8) Risk that climatic changes in the Manawatū District, including the intensity and frequency of extreme weather events, are less extreme than predicted by NIWA based on the IPCC Fifth Assessment Report = Low (2)
Impact on roading and three waters infrastructure	Storm events result in flooding, landslips and damage to roading assets such as bridges and culverts. Severe weather events result in significant reactive maintenance expenditure, disruption to the network and increased road safety risks. Some vulnerable roads have no alternative route available, causing delays and access issues for Council residents during remedial works. Extreme weather events and increased rainfall increase the risk of inland flooding and reduce the capacity of stormwater infrastructure. Increased frequency of extreme weather events will likely contribute to rising costs for repairing damaged infrastructure, Civil Defence and emergency management response to events, and community assistance (such as provision of a supplementary water supply). Other risks include impacts on the economic and social wellbeing of our communities through more frequent or severe flooding, drought and/or heavy snowfall. Shifts if climatic conditions over time may drive land-use change. More frequent events can also increase demand from the community to increase resilience to future events. Over the period from 2016/17 to 2021/22, Council spent a total of $9,285,041 on emergency works. In the 2022/23 financial year, Council spent a total of $3,475,605 on emergency works relating to Cyclones Hale and Gabrielle. There is also an outstanding claim for $9,775,000 with NZTA for the loss of three bridges. If the cost of emergency works exceeds Council's ability to borrow, the provision of council services and critical infrastructure could be disrupted for considerable periods of time, and Council will be unable to meet agreed levels of service. Increased frequency and intensity of rainfall events result in infiltration and inflows that increase wastewater volumes to be treated. The Manawatū District is well-placed in terms of water security (adequacy of supply into the future), but some rural communities are already experiencing water scarcity during prolonged periods of drought, which are anticipated to increase in frequency due to future climate events. Water supply for firefighting is also an area of vulnerability for these communities.

Council's response

To mitigate flood risk, the District's major infrastructural assets, including the Manawatū Wastewater Treatment Plant, have been located outside the area likely to be affected by a 1 in 200-year (0.5% Annual Exceedance Probability) flood event. Horizons stop banks for the Lower Manawatū, the Kiwitea Stream and the Ōroua River are designed to withstand a 1% AEP flood and the Reids Line spillway flood protection scheme helps mitigate the risk of flood for the urban area of Feilding.

Further investment in maintenance and renewal of roading infrastructure is needed to improve network resilience, reducing the risk of closure due to landslides or storm events and minimising the duration of future road closures. Council focuses attention on roadside drainage to make the roading network more resilient to damage during high intensity rainfall events, reducing the cost of emergency works.

Council is improving the resilience of its threewaters networks through new works and renewals and by using resilient design materials and pipelaying techniques. Critical infrastructure assets are prioritised for renewal over other assets of a similar age to increase resilience and reduce our risk profile.

Council has leak detection programmes in place to address infiltration and inflows that create capacity issues at the Manawatū Wastewater Treatment Plant in Feilding.

Council is working with relevant organisations including Fire and Emergency New Zealand, to help ensure those communities that are vulnerable to water scarcity are well-positioned to meet foreseeable demands for both drinking and general/firefighting water supplies, taking into account the likely impacts of climate change. Under Council's future plans to extract more of Feilding's drinking water supply from groundwater, less pressure will be placed on the Ōroua River.

Council is looking to support farmers by exploring new rural stock water supply schemes in areas susceptible to drought. Council is also proposing a programme of stormwater upgrades for Feilding and the rural villages to improve resilience of urban areas to higher volume rainfall events.

The Emergency Management Bill proposes to make the inclusion of Māori members on Emergency Management Committees and Emergency Management Coordinating Executives mandatory. As Māori are disproportionately affected by climate change-related natural hazards, the inclusion of Māori members will ensure the needs of Māori are given adequate consideration at all levels and across governance, planning and operational activities.

Guidance and greater central government direction is needed when it comes to coastal planning, managed retreat and where existing settlements are already exposed to significant natural hazard risks.

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Borrowing for emergency events Council assumes that its $5 million buffer between its Financial Strategy and the Borrowing Management Policy will ensure it has adequate borrowing facilities in case of emergencies. Catastrophic events are also assumed to attract Government and private charitable sector support.	Risk that Council is unable to borrow at the required level = Moderate (8)	If the amount of borrowing required for recovery exceeds Council's reserves and borrowing limits, the provision of council services and critical infrastructure could be disrupted for considerable periods of time, and Council will be unable to meet agreed levels of service.	Council has taken measures to ensure it has the financial means to respond to more frequent and intense weather events. These measures include investing in externally sourced insurance, while also maintaining a self-insurance reserve of $1 million, building resilience reserve funds over the life of the Long-term Plan, and a self-imposed $5 million debt cap buffer to ensure there is capacity to borrow if required.

Managing Growth and Demand

A growing population means that total rates are spread across more rating units, softening the burden of future rate rises on exiting ratepayers. Council has a role in ensuring that the core infrastructure it provides (water supply, wastewater, stormwater, and roading) has sufficient capacity, quality and connectivity to enable the district to achieve its growth potential.

Council has a 20-year growth programme of works, which is set out in its Development Contributions Policy and schedule. Debt is drawn each year to cover the difference between the amount of money that Council spends each year on new infrastructure to support growth, and the development contributions received from new development. The current level of debt incurred by growth (as of 30 June 2023) is approximately $16.4 million.

Council's Asset Management Plans are based on these population forecasts, ensuring that infrastructure to support growth is installed in the right place and at the right time.

Assumptions around the distribution of population growth between Feilding, rural and village areas over time is useful to inform Council's growth strategy, the Financial and Infrastructure Strategies and planning for new growth works through Council's Activity and Asset Management Plans. The distribution of population growth is dependent on many factors, including the availability of vacant land, the provision of lead infrastructure to facilitate growth, the attractiveness of certain areas (including the quality of services provided, affordability and lifestyle factors) and external influences, including the restrictions imposed on rural subdivision through the National Policy Statement (NPS) for Highly Productive Land with further changes ahead when the Government releases its planned revised NPS. The distribution of growth in later years will be strongly influenced by the decisions that Council makes around future growth planning, rezoning and provision of new infrastructure.

The following projects occurring within the Manawatū-Whanganui Region are expected to generate employment and economic benefits for the Manawatū District over the medium to long term. These projects are relevant to Council's growth planning, and in prioritising growth-related works, as well as influencing Council's population and household forecasts and assumptions around the distribution of this growth.

- Te Utanganui, including KiwiRail's Regional Freight Hub, Te Ahu a Turanga: Manawatū Tararua Highway, the Palmerston North Integrated Transport Initiative – Regional Freight Ring Road, and the Ōtaki to north of Levin expressway. Collectively, these projects are expected to generate employment and to encourage more distribution companies to the region, further boosting employment and economic growth. These investments are also expected to result in increased freight movements and to alter commuter patterns between Feilding and Palmerston North.
- Royal New Zealand Air Force (RNZAF) Base Ōhakea Expansion – impacts on roading, wastewater reticulation and treatment in partnership with NZTA and the RNZAF and attraction of new families to the district.

The following assumptions (Table 4) are key to Council's infrastructure planning to accommodate growth:

Table 4

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Population Growth The population of the Manawatū District is forecast to increase from 34,898 residents in 2024 to 39,694 in 2034 (13.74% increase in population over 10 years) (Infometrics May 2023, high population scenario).	Risk that the resident population of the Manawatū District will increase more rapidly than forecast in Figure 1 = Guarded (6)	A growing population means that the cost of funding new projects and services is spread across more people. However, rapid population growth can also impact on levels of service. Council must plan to ensure that there is sufficient serviced land available to support residential, industrial and commercial growth.	Council uses assumptions around where people will live to inform its growth strategy, the Financial and Infrastructure Strategies and planning for new growth works through Council's Activity and Asset Management Plans. Council regularly reviews population and household growth and development trends (such as the distribution of growth) through the following processes: • Monitoring and reporting under the NPS-UD • Annual Estimated Resident Population from Statistics New Zealand; and • Long-term Plan processes. • In addition, subdivision and building consent data is used for annual updates to the schedule of works contained within Council's Development Contributions Policy. Through the above processes, actual growth and development trends are assessed against projected growth enabling review of the need for, and timing of capital expenditure over the Long-term Plan period. Planned rezoning and investment in infrastructure roading and three waters infrastructure to support growth may be brought forward to reflect greater than anticipated demand. If population and household growth is slower than forecast, we might have to delay infrastructure projects, so rates remain affordable for existing ratepayers. Council responds to changes in the demographic characteristics of the district over time, including through the prioritisation of projects and services to meet the needs of the community. Council will ensure that the capacity, quality and connectivity of the infrastructure is sufficient to enable the district to achieve its growth potential (i.e. infrastructure will be an enabler of growth).
Demographic Change The demographics of the Manawatū District population is forecast to change in a number of ways, including: • Significant increase in the 80-84 and 85+ age brackets • Short-term proportionate decline in the working age population (30-34, 50-54, 55-59 and the 60–64-year age groups) to 2034, followed by growth in the greater than average growth in the 40-44 and 45-49 years in later years. • Growth in the 5 – 9-year age bracket by 60% to 2054.	Risk that the demographics of the Manawatū District will differ significantly from the Infometrics high age group projections (May 2023) to 2034 and 2054 as described in Figure 5 = Guarded (3)	The forecast demographics of the Manawatū District community is relevant when considering the types of services, projects and activities delivered by Council. If there is more growth in the working age population than expected, this could place pressure on housing and services to support young families. If the number of older people increases faster than expected this could affect what services Council needs to provide and the community's ability to pay for those services.	

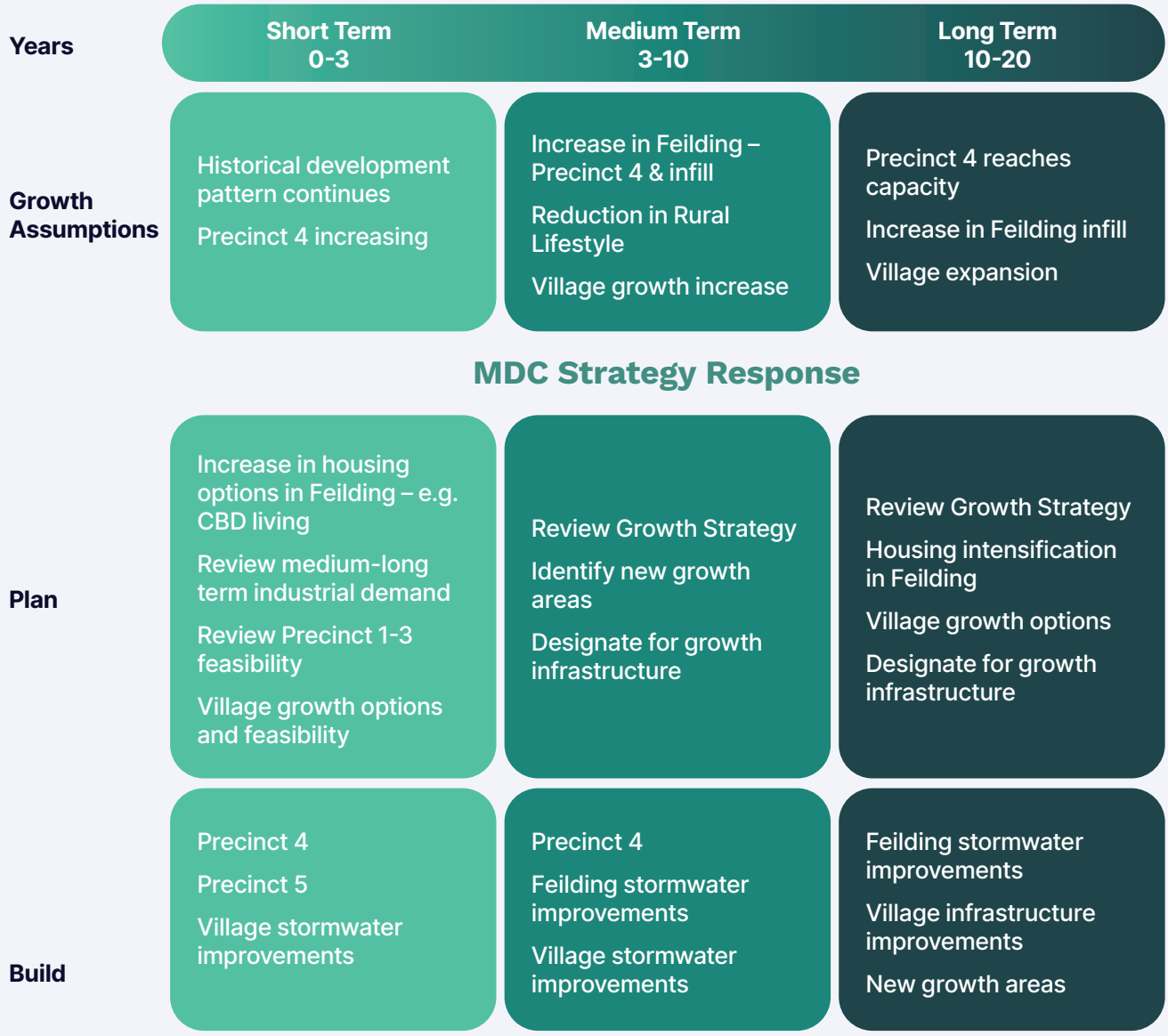
Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Household Growth Household growth projections for the Manawatū District were commissioned from Infometrics (High growth scenario). Council assumes that the number of households in the Manawatū District will increase by 0.76% per annum over years 1 – 3 of the Long-term Plan, increasing to 1.08% per annum between years 4 to 10 and by 0.76% per annum from year 11 to year 30. This means that the number of households is forecast to increase from 13,242 in 2023 to 17,404 in 2054.	Risk that the number of households in the Manawatū District in 2054 will be significantly more than forecast in Figure 2 = Guarded (6) Risk that the number of households in the Manawatū District in 2054 will be significantly less than forecast in Figure 2 = Guarded (3)	Household growth is generally dependent on new subdivisions, which increase the rating base and spread the cost of services (providing no major roading or infrastructural investment is required to support this growth). If the number of new households is less than forecast this will mean that the cost of providing planned levels of service for roading and three waters will be higher per household, making rates less affordable. If there is insufficient serviced land available in the right locations to meet market demand, growth may be redirected outside of the district.	Council uses assumptions around where people will live to inform its Growth Strategy, the Financial and Infrastructure Strategies and planning for new growth works through Council's Activity and Asset Management Plans. Council regularly reviews population and household growth and development trends (such as the distribution of growth) through the following processes: • Monitoring and reporting under the NPS-UD • Annual Estimated Resident Population from Statistics New Zealand; and • Long-term Plan processes. • In addition, subdivision and building consent data is used for annual updates to the schedule of works contained within Council's Development Contributions Policy. Through the above processes, actual growth and development trends are assessed against projected growth enabling review of the need for, and timing of capital expenditure over the Long-term Plan period. Planned rezoning and investment in infrastructure roading and three waters infrastructure to support growth may be brought forward to reflect greater than anticipated demand. If population and household growth is slower than forecast, we might have to delay infrastructure projects, so rates remain affordable for existing ratepayers. Council responds to changes in the demographic characteristics of the district over time, including through the prioritisation of projects and services to meet the needs of the community. Council will ensure that the capacity, quality and connectivity of the infrastructure is sufficient to enable the district to achieve its growth potential (i.e. infrastructure will be an enabler of growth).
Distribution of Population and Household Growth The proportion of the Manawatū District's population living in Feilding (relative to rural and village areas) is expected to remain constant at 53.4% from July 2024 to July 2026, will increase to 53.6% by July 2028, and to 53.8% by July 2034. Introduction on the National Policy Statement on Highly Productive Land is likely to change future housing growth patterns. Since 2000, approximately 50% of all new housing in the Manawatū District has been in Rural Land, and it anticipated this will reduce significantly.	Risk that the proportion of the residents living in Feilding relative to rural and village areas of the Manawatū District will increase more rapidly than forecast in Figure 1 = Guarded (6) Risk that the proportion of the residents living in Feilding relative to rural and village areas of the Manawatū District will decrease or increase at a slower rate than forecast in Figure 1 = Guarded (3)	Council uses assumptions around where people will live to inform its growth strategy, the Financial and Infrastructure Strategies and planning for new growth works through Council's Activity and Asset Management Plans. If growth happens in Feilding at a faster rate than expected this will affect the ability of roading, three waters and community infrastructure to keep up with demand. If growth occurs in rural and village areas quicker than expected Council may have to plan for new growth works, redirect planned spending from Feilding to other areas, or decrease levels of service.	

Council's plan for managing the long-term growth of the district is set out in the Feilding Framework Plan 2013. Implementing that plan involves feasibility investigations, infrastructure planning, and structure plans. Land is rezoned by making changes to the Manawatū District Plan. Council has rezoned Maewa (Precinct 4 - the northern Feilding residential growth precinct) to provide for short-medium term housing growth. The Precinct 5 area provided for industrial growth in the short-medium term. Land in Precinct 1, 2 and 3 has been identified for medium to long-term growth in the District Plan. This land remains zoned rural until Council has completed feasibility investigations, including stormwater management.

Work is under way to review the medium to long-term growth approach. This project is referred to as the Manawatū Growth Strategy.

Council's current assumptions on future growth over the life of this Long-term Plan are summarised as follows (Figure 1:):

Figure 1



Planning for growth in years 1 - 3

Council has a committed growth programme in place building infrastructure to support housing growth in Maewa , industrial growth in Precinct 5, and village stormwater improvements. During this period, Council will also plan for greater housing options, including CBD living and urban intensification. Council will complete an urban capacity model to confirm the availability of residential land, and undertake a review of the feasibility of developing residential growth precincts 1 to 3.

Council also plans to commence detailed design and consenting for its Feilding Stormwater Upgrade project, and to increase investment in stormwater services across the villages, to address known urban stormwater issues.

Council's growth commitment is to the Maewa housing area and indications are this will provide for housing growth over the next 10-15 years. Housing growth demand is influenced by the availability of land in Palmerston North City, and Council will monitor housing development to plan ahead.

Council is planning to undertake further feasibility assessments of existing identified growth areas that are yet to be developed (Precincts 1, 2, and 3). In particular, these feasibility assessments will consider how affordable it will be for Council to construct the necessary infrastructure to support growth.

Planning for growth in years 3 – 15

It is anticipated that sufficient land is available in Feilding to provide for growth out to year 15 of the Infrastructure Strategy. This includes a combination of:

- Maewa
- Infill and multi-unit housing in Feilding
- Vacant greenfield land

Providing for growth over years 3 to 10 of the Long-term Plan is divided into two phases – 2a and 2b. Council will continue to construct infrastructure to facilitate development in Maewa over this timeframe. Council plans to begin construction of capital works to address Feilding stormwater issues in year 6.

Council will consider including budget in its Long-term Plan 2027-37 to complete feasibility investigations to identify new medium and long term growth areas (not previously identified). Once new growth areas have been identified, Council's focus will shift to feasibility studies to address serviceability and value for money. Once preferred options are identified, it will be prudent for Council to designate areas for future infrastructure provision. Over years 3 to 10 Council assumes that:

- residential and industrial development continues in Feilding;
- that rural-lifestyle subdivision on highly productive land will reduce (as the current supply of vacant rural land is exhausted and further subdivision on highly productive land is constrained by the requirements imposed by the National Policy Statement for Highly Productive Land); and
- that there will be an increase in rural-lifestyle development on non-highly productive land around the rural villages.

Council will need to review Feilding's housing options during the 2030-2040 Long-term Plan.

In phase 2b Council anticipates significant growth in Rongotea, as land that was recently rezoned through a private plan change request is serviced. Council is also assuming that during the later years (3 – 10) there will be an increasing supply of vacant land for development in Palmerston North that will reduce demand in the Manawatū District. This is based on the rezoning work the Palmerston North City Council (PNCC) currently has underway, as well as changes to medium density development controls. Council will monitor growth trends to track these trends over time.

Planning for growth from years 15 - 30

By years 15 to 30, the identification and evaluation of growth areas will have been completed and Council will be facilitating growth (funded through its Long-term Plan) by designation and/or constructing targeted lead infrastructure in the confirmed growth areas. It is anticipated this will involve:

- Village edge growth
- Large-lot development around Feilding

During these years Council assumes that previous

trends of growth in Feilding, and declining rural lifestyle on highly productive land, will continue but that Maewa will reach full capacity.

Council forecasts that between years 20 and 30:

- greater intensification in Feilding (multi-unit housing intensification and infill)
- large-lot, semi-serviced development surrounding Feilding and some villages
- Rural-lifestyle development on non-highly productive land will continue to provide a lifestyle alternative.
- The status of rural settlements may need to be reviewed if infrastructure is available.
- It is also assumed that the Council will compete with the Palmerston North City Council for growth as Palmerston North City has an increased supply of land for development in Kākātangiata.

Changing regulatory environment

Local Government has been in a period of significant legislative reform, including in relation to the delivery of three waters services, resource management, building consent services and waste management. Council is required to make assumptions about the future direction of central government and how this impacts on the roles and responsibilities of local authorities.

When Government introduces new legislation without the necessary financial assistance to councils to carry out new roles and functions assigned to them, the costs fall on ratepayers. Where new legislation is reliant on staff with specialist skills, this may increase costs for Council, particularly if Council must compete for this talent. Changes in central government priorities also impact on the amount of funding that may be made available to local government, and the types of projects that are likely to receive funding (such as through NZTA subsidies).

Council monitors, reports and submits on new legislative requirements as they are notified by Government. Council considers the resource implications of central government reforms and new national direction. Table 5 summarises changes in the regulatory environment that impact on the Council.

Table 5

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[1]	Impact on roading and three waters infrastructure	Council's response
Drinking Water Changes to central government legislation do not fundamentally change the current delivery model for drinking water. It is our understanding that the government intends to keep water services regulatory Taumata Arowai (the water quality regulator), as well as the new Water Infrastructure Regulator (focuses of investment and pricing).	The risk that the national regulations and delivery model remain unchanged = Low (2) The risk that the changes to the drinking water regulations and the delivery model are greater than anticipated = Guarded (6).	All drinking water supplies are required to comply with the Drinking Water Standards of New Zealand (DWSNZv2022), the Drinking Water Quality Assurance Rules (DWQAR 2022) and Drinking Water Aesthetic Values (2022). Signals from central government are that there are no fundamental changes proposed to the current delivery model. However, if there were to be changes to the delivery model or significant changes to the regulatory criteria, Council may have to increase its investment in drinking water infrastructure.	The Feilding water supply scheme has multiple sources of water to increase the reliability of the scheme (Ōroua River, Campbell Road and Newbury Line). The Feilding water resilience project is future proofing Feilding's drinking water supply by reducing reliance on the Ōroua River and the ageing infrastructure at the Almadale Water Treatment Plant. Council will achieve compliance with the Drinking Water Quality Assurance Rules 2022 by constructing a new water treatment plant and reservoir to provide for chlorination, fluoridation and storage at Campbell Road. Upgrades to the Stanway-Halcombe rural water scheme in Year 1 will ensure compliance with the NZ Drinking Water Standards for protozoa.

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Resource Management Reform Government repealed the Natural and Built Environment Act 2023 and the Spatial Planning Act 2023 on 24 December 2023. Council assumes that Government will replace the Resource Management Act with new resource management laws premised on the enjoyment of property rights (Correspondence from Hon Simeon Brown, 14/12/23). Government has also indicated an intention to simplify the planning system and related statutes including the Public Works Act and the Reserves Act. Until such time as the Resource Management Act 1991 is repealed and replaced, Council assumes to continue its current roles and responsibilities for resource management.	The risk that the Manawatū District Council will be unable to meet the requirements under new legislation and legislative instruments due to insufficient capacity = Moderate (12)	The shift towards regional spatial planning and regional plan making would have altered the way that Council plans for lead infrastructure to support growth in the later years of the infrastructure strategy (i.e. beyond year 10). While the Coalition Government has repealed the new Resource Management legislation and signalled its intention to replace the RMA with new resource management laws, it is not clear, at this time, what the impact of future resource management legislation will be.	Council will consider the impact of new resource management legislation as it is drafted.
Transportation Priorities Government has indicated it will prepare a new Government Policy Statement (GPS) Transport and will reduce expenditure on cycleways.	The risk that roading maintenance and renewal projects will not secure NZTA funding = High (16)	Council has prepared its Long-term Plan budget based on the previous GPS Transport. If there is a significant shift in Government priorities this may affect Council's ability to progress its programme of works. For example, Council has a cycling facilities programme with a total cost of $4,956,519. If NZTA withdrew its subsidy for cycling facilities this would leave a funding shortfall of $2,527,824 (51%) over the first three years of the Long-term Plan.	If there is a significant change in Government priorities for transport that creates a misalignment with Council's current transport programme of works, this would mean that NZTA subsidies are no longer available for planned projects. Council could choose to rates fund 100% of all or some of the planned projects. If Council decided not to proceed with planned programmes that no longer attract a NZTA subsidy, the rated portion (49%) of these projects would be added to Council's reserves.

Key Forecasting Assumptions	Overall Risk that Council's assumption proves false[2]	Impact on roading and three waters infrastructure	Council's response
Waste Management The previous Government was drafting new legislation to replace the Waste Minimisation Act 2008 and the Litter Act 1979. The proposed legislative changes were favourable for Council as they would make it easier and less expensive for councils to undertake litter enforcement, and would make private waste providers more accountable for their waste data. It is not clear what direction the new Government will take in relation to the review of waste legislation.	The risk that the Manawatū District Council will be unable to meet the requirements under new legislation and legislative instruments due to insufficient capacity = Moderate (12)	Actions from Council's Waste Management and Minimisation Plan 2023 are consistent with the previous Government's direction and transition towards a low-emission low-waste circular economy. However, it is not clear how well aligned our Plan will be with the new Government's priorities for waste management and minimisation.	Council will fund new waste initiatives through enhanced waste levy funding where possible, to minimise impact on rates.
National Direction for Freshwater The previous Government's national direction for freshwater was expected to result in new requirements for managing stormwater quality. The NPS-FM water quality targets may mean that Council has to eliminate all direct discharges of treated wastewater to waterways. The new Government has signalled several changes to regulation and legislative instruments that will impact on Council's roles and responsibilities. Indicative changes include replacing the NPS-Freshwater Management 2020 and the National Environmental Standards for Freshwater.		To date, Council's focus for stormwater discharges has been on managing stormwater quantity. If Council has to improve the quality of its stormwater discharges, it will cost more to renew stormwater discharge consents, and to comply with new consent requirements. If Council has underestimated the impact of freshwater reform, it may need to increase budgeted expenditure to renew stormwater and wastewater discharge consents and invest in new mitigations to improve the quality of discharges.	Council made allowance in its budgets for more stringent requirements when renewing its wastewater and stormwater discharge consents. Council's investment in the Manawatū Wastewater Treatment Plant in Feilding means that it already achieves a high quality of treated wastewater discharge.

Impact of Central Government Direction on Land-use Change

Council is aware of current land use trends, including rural land being used more intensively than it was in the past. However, these trends may slow or reverse as new requirements are introduced to the District Plan and to Horizon's One Plan to ensure compliance with new central government direction. Council is required to give effect to national direction as signalled in legislative instruments, including National Environmental Standards and National Policy Statements under the Resource Management Act 1991. The following legislative instruments are considered to be particularly relevant to Council's assumptions around land-use change in the Manawatū District over the life of this Infrastructure Strategy:

- **NPS for Highly Productive Land (NPS-HPL)** The NPS-HPL has the effect of limiting rural subdivision on highly productive (LUC Class 1 – 3) land. Council must balance the protection of highly productive land under the NPS-HPL with the requirements to provide a certain amount of development capacity to meet expected demand for new housing and business land over the short to medium term.
- **NPS for Plantation Forestry, pricing of agricultural emissions and the carbon price set through the NZ Emissions Trading Scheme** These legislative instruments are assumed to encourage land conversion away from primary production to new forestry, including exotic carbon forestry. Council is aware that areas of forestry in the district will reach harvestable age between 2021-2030.
- **NPS for Indigenous Biodiversity (NPS-IB)** The NPS-IB currently requires that Council identify and protect areas of indigenous biodiversity. Land-owners with significant natural areas may be limited in what they can do with their land. Council may also be required to maintain and restore natural areas to meet vegetation cover targets.

The interplay between new legislation, National Policy Statements under the Resource Management Act 1991 and Horizons One Plan means that land use change in the moderate to long term is inevitable, but there is a high level of uncertainty about where, how and when that land use change will take place. The level of uncertainty increases over time as new targets are set in legislation and through National Policy Statements and plans.

Council is expecting moderate changes in land use over the next three years and more significant changes to current trends are forecast to occur between years 4 and 10. Forecast changes include:

- diversification of land use from agriculture to forestry and other low emission land uses;
- a reduction in rural subdivision on highly productive land;
- de-intensification or relocation of intensive primary production away from waterways; and
- greater protection of land for indigenous biodiversity purposes.

Council has evaluated the risk that current land use in the Manawatū District changes more rapidly, or in different locations or ways than anticipated (Refer to "Alternative 1" in the Land Use Change Forecasting Assumption on page 280), as "Guarded" (risk score of 4 for years 1 – 3, and 6 for years 4 to 10)1. Council has evaluated the risk that current land use in the Manawatū District will persist or that land use change will occur at a much slower rate or in fewer locations or ways than forecast as "Guarded" for years 1 – 3 and "Low" for years 4 – 10.

Rural land is largely self-serviced so changes in land use will not alter demand for reticulated networks. However, rapid changes in land use could result in anticipated demand for new (or upgrades to existing) services and the need to undertake additional road maintenance or improvement works.

There is uncertainty regarding the response to highly productive land protections and future housing development trends. A large shift of development to rural villages will see the need for additional infrastructure programmes, or lowering levels of service.

Land conversion away from primary production into forestry, has implications for:

- food security,
- employment (i.e. concerns around job losses in agriculture)
- indirect financial implications.

The new government has signalled the review, amendment or replacement of several national standards and policy statements, the implementation of which would have had a

considerable impact on land use change, including:

- Undertaking an urgent review into the implementation of the National Policy Statement (NPS) on Indigenous Biodiversity before any implementation, including ceasing the implementation of new Significant Areas.
- Replacing the NPS – Freshwater Management 2020 and the National Environmental Standards (NES) for Freshwater, including by:
  - Rebalancing Te Mana o Te Wai to better reflect the interests of all water users.
  - Allowing district councils more flexibility in how they meet environmental limits and seek advice on how to exempt councils from obligations as soon as practicable.
- Amending the NES for Plantation Forestry regulations to place a duty upon harvesters to contain and remove post-harvest slash.
- Introducing an NPS for Renewable Electricity Generation.

The summary of the incoming Government's priorities, as expressed in the Coalition Agreements signed on 24 November 2023, do not include any reference to the NPS for Highly Productive Land.

Until such time as Government has completed its review, amendment or replacement of the above national direction, it is difficult to anticipate the impacts on land-use change.

Roading

Strategic Alignment

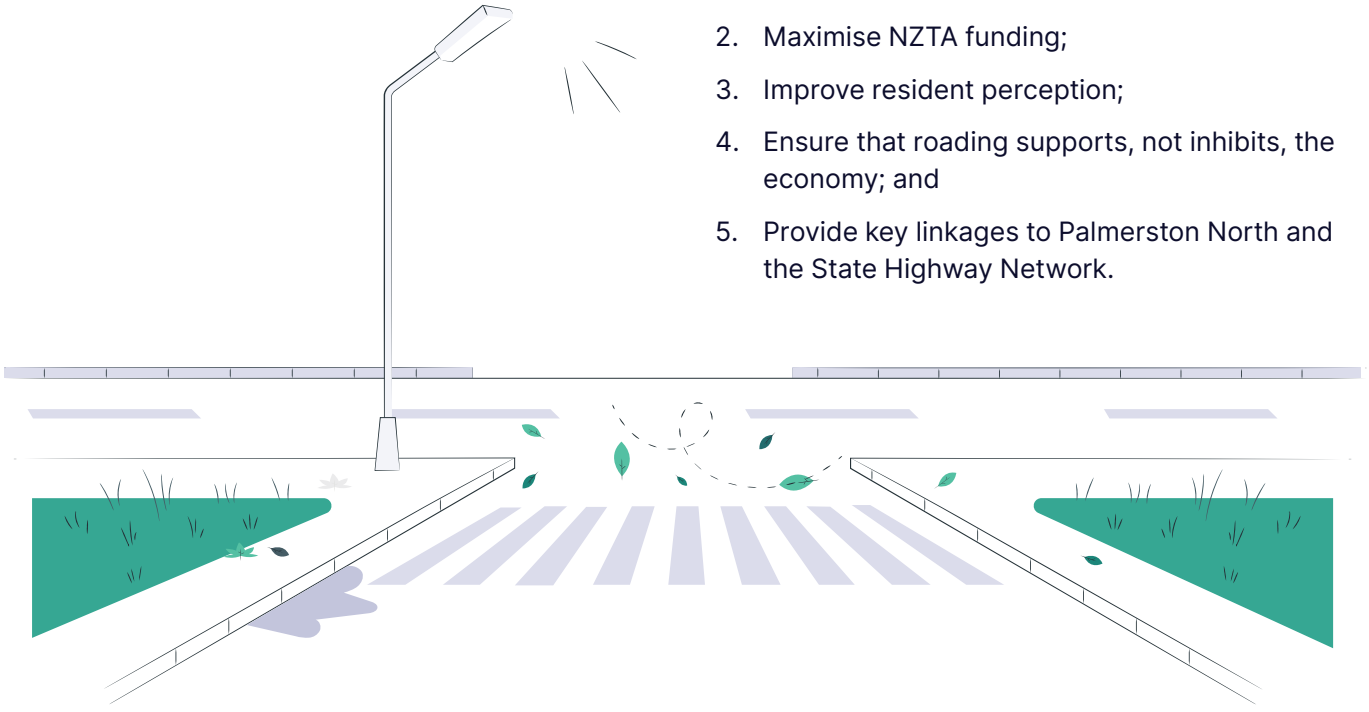
As noted in the Activity Statement in Section 5.7, the Roading Group contributes to the following community outcomes:

	Roading Group
A place to belong and grow	✓
A future planned together	✓
An environment to be proud of	✓
Infrastructure fit for the future	✓
A prosperous, resilient economy	✓
Value for money and excellence in local government	✓

Council has also developed the following strategic priorities for the roading network that it will use to help guide decision-making and prioritisation of roading projects for this Long-term Plan.

Council's strategic priorities for roading are to:

1. Deliver a fit for purpose, safe and affordable roading network;
2. Maximise NZTA funding;
3. Improve resident perception;
4. Ensure that roading supports, not inhibits, the economy; and
5. Provide key linkages to Palmerston North and the State Highway Network.

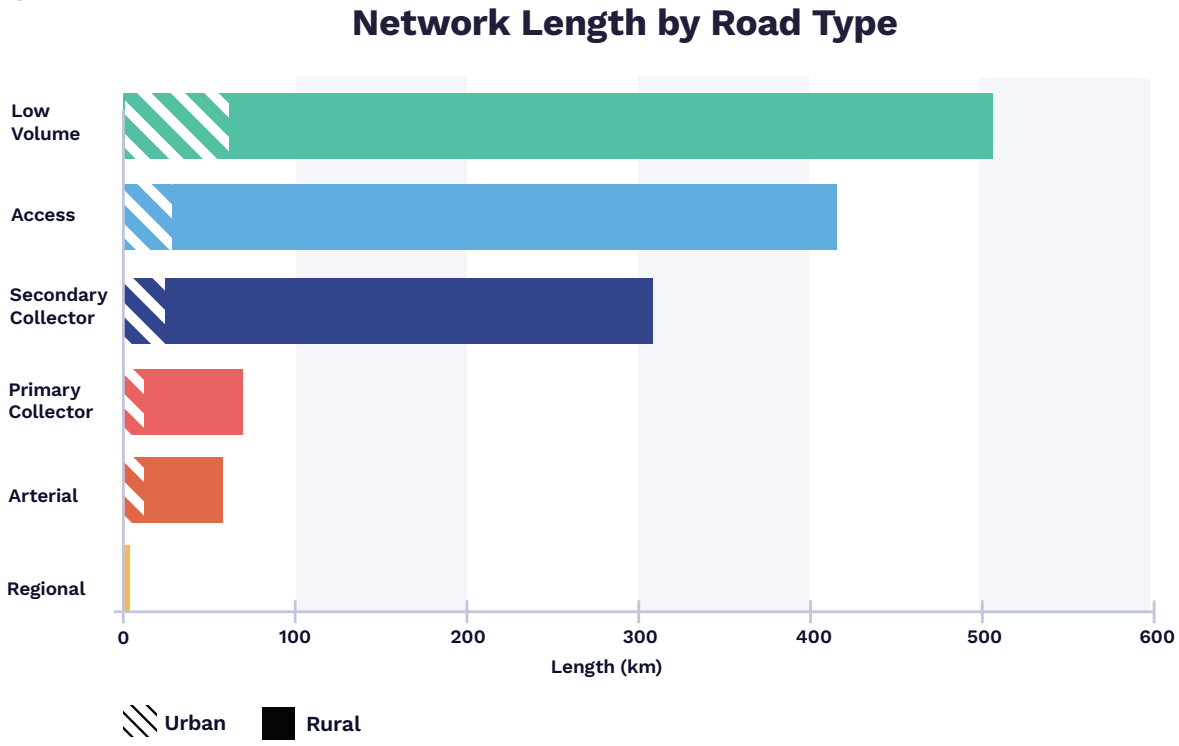


Key Roading Assets

Council's network includes 1,373km of roads, of which approximately 1,002km (73%) is sealed and 369km (27%) is unsealed. The roading network in the Manawatū District, classified using NZTA's "One Network Road Classification (ONRC) system.

As illustrated by Figure 2 below, approximately 90% of the network consists of low volume, access and secondary collector roads, which carry 39% of the district's traffic. Approximately 90% of road length (1237km) is classified rural, and 10% (134km) is classified urban.

Figure 2



Council owns and manages over 240 high value bridging assets, dispersed throughout its network, as illustrated in Figure 3 and Figure 4 below. These graphs show the number of assets by construction date, grouped into 10-year intervals.

Figure 3

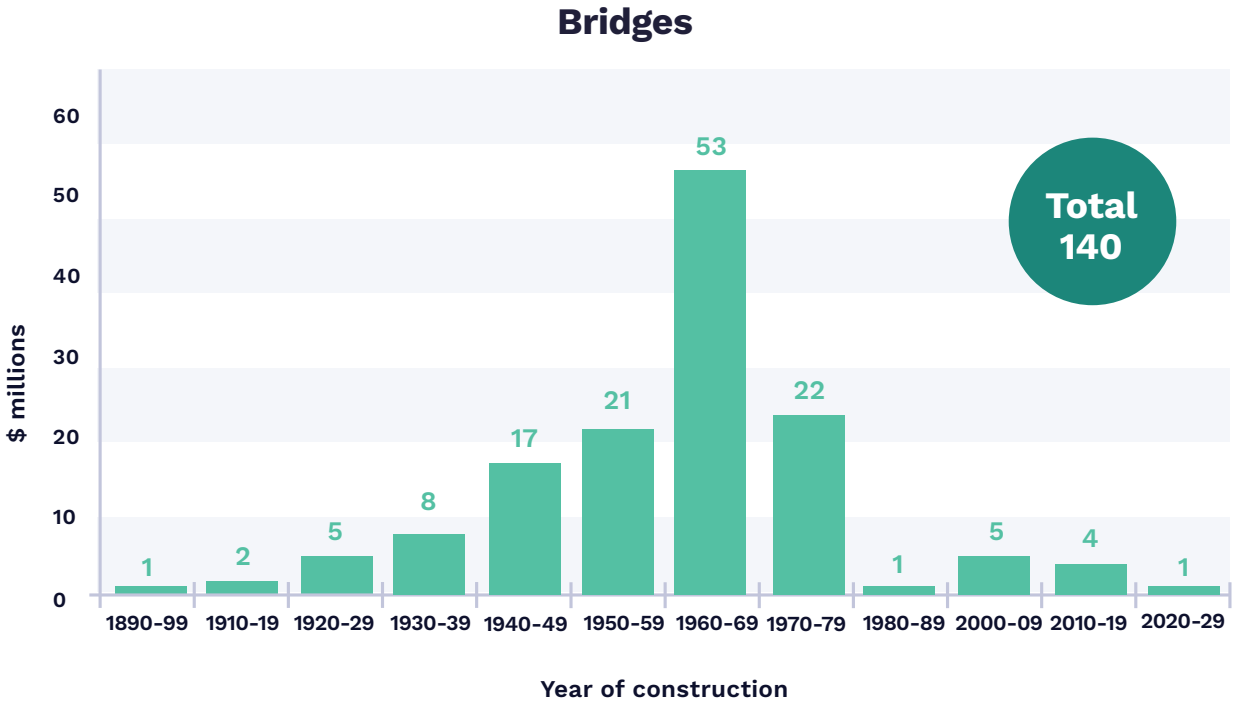
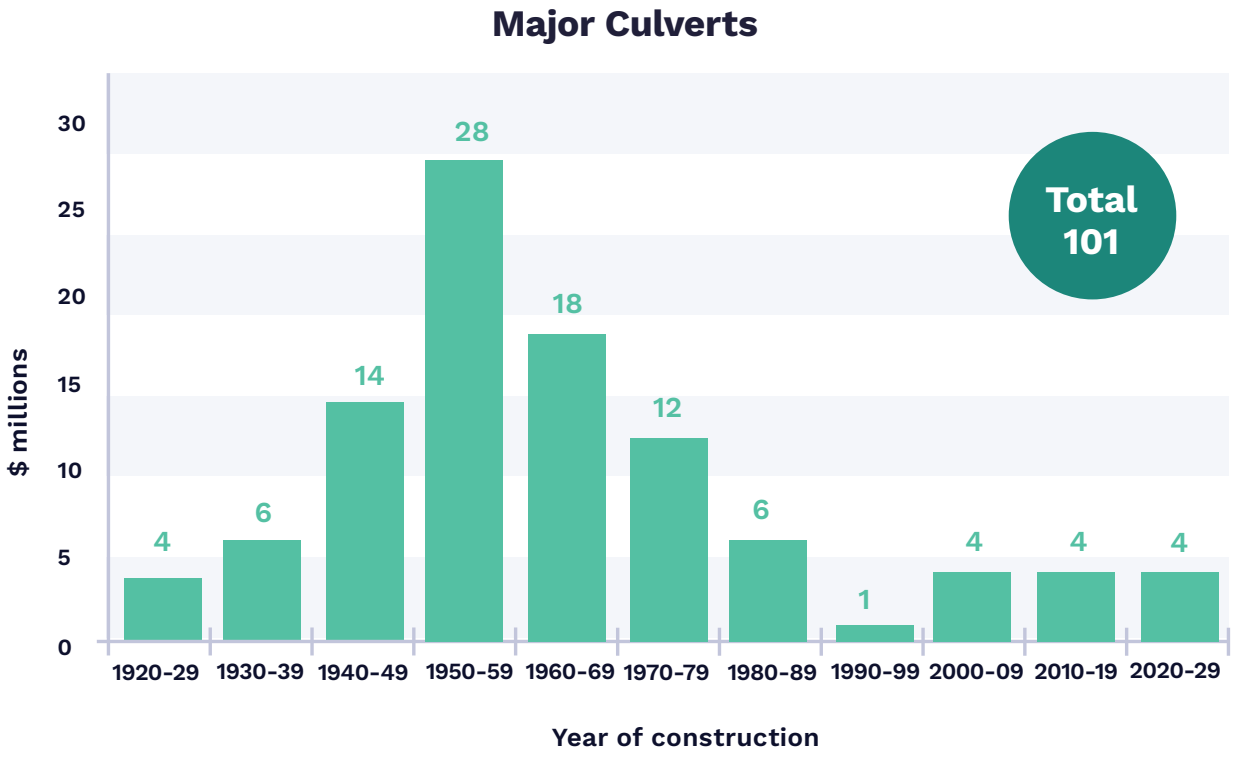


Figure 4



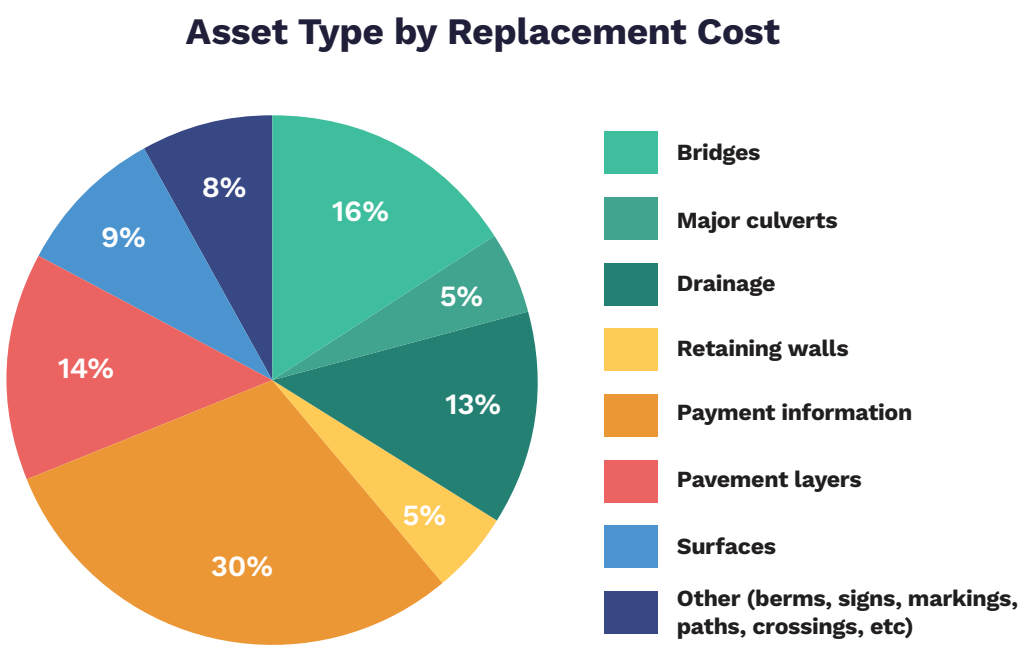
Network Value

The latest valuation of transportation assets in July 2023 calculates the Optimised Replacement Cost at approximately $1.16 billion dollars. This represents the cost of replacing Council's roading asset portfolio today and demonstrates the importance of continuously managing our existing transport assets efficiently and effectively.

The 2023 total Optimised Replacement Cost for Council's Roading Assets is a 14.4% increase on the previous valuation of these assets (valued on 1 July 2022 at approximately $1.01 Billion).

Figure 5 below illustrates asset type by replacement cost, using the 2023 valuation data.

Figure 5



Demand

The district's total traffic volume has increased by 22% between 2018 and 2022, with rural road traffic increasing by 23%, and urban road traffic 16%. Furthermore, traffic demand associated with forestry activities on the network is predicted to continue at peak levels until 2029.

The roading and infrastructure investments associated with Te Utanganui (developing the Manawatū as a multi-modal freight hub) will increase freight movements.

In order to respond to future traffic demand, Council will maintain condition of the network by concentrating on core corridor related maintenance and renewal activities.

Asset Condition and Performance

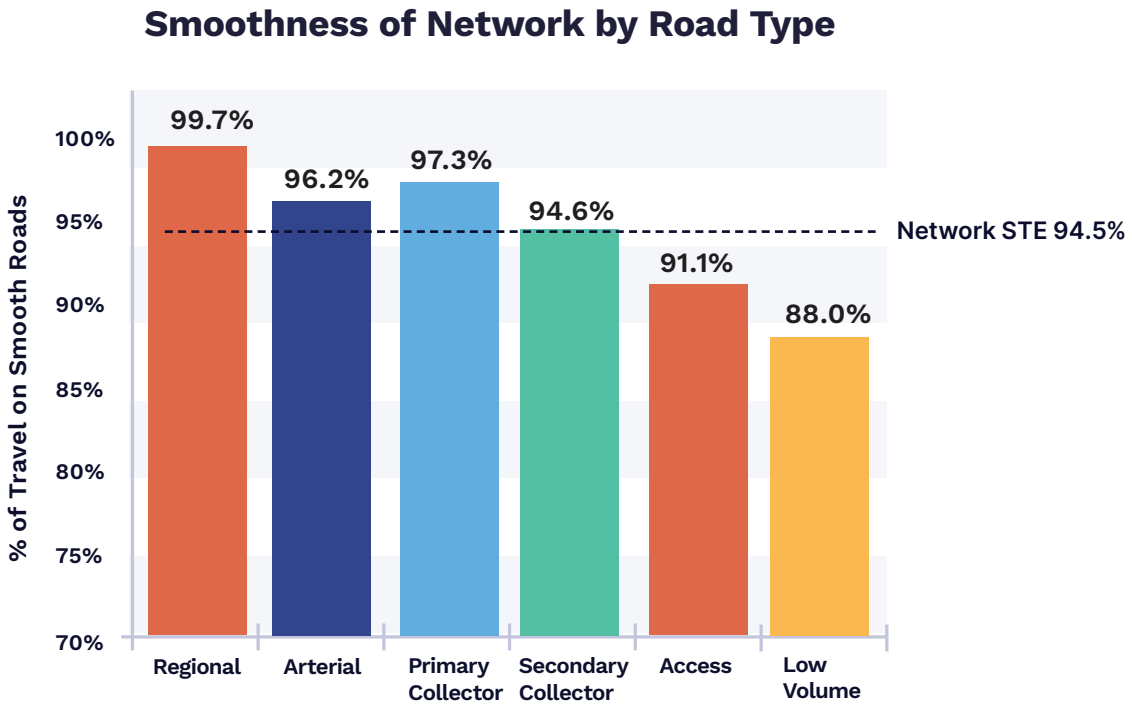
There are five mandatory level of service requirements that Council must measure the performance of its roading network against. The Roading Activity Statement in the Long-term Plan identifies five performance measures that Council uses to measure achievement of these level of service measures and targets to meet for each financial year over the life of the Long-term Plan. The proposed measures and targets are unchanged from the 2021 Long-term Plan.

In the 2022/23 financial year, Council achieved all of its performance targets for the roading network, except in relation to the safety of the road network. Council had a target of a reduction in the number of service injury crashes on the local road network from the previous financial year. The number of crashes in the 2022/23 financial year equated to 0.00074 fatalities/serious injuries per capita, compared to 0.00064 the previous financial year.

The road network currently performs at an acceptable level. The primary measure – how smooth the roads are – shows that Council performs well in relation to New Zealand's other Road Controlling Authorities (ranked 15 out of 67 Local Road Controlling Authorities in New Zealand, and highest out of the councils in the Manawatū-Whanganui Region).

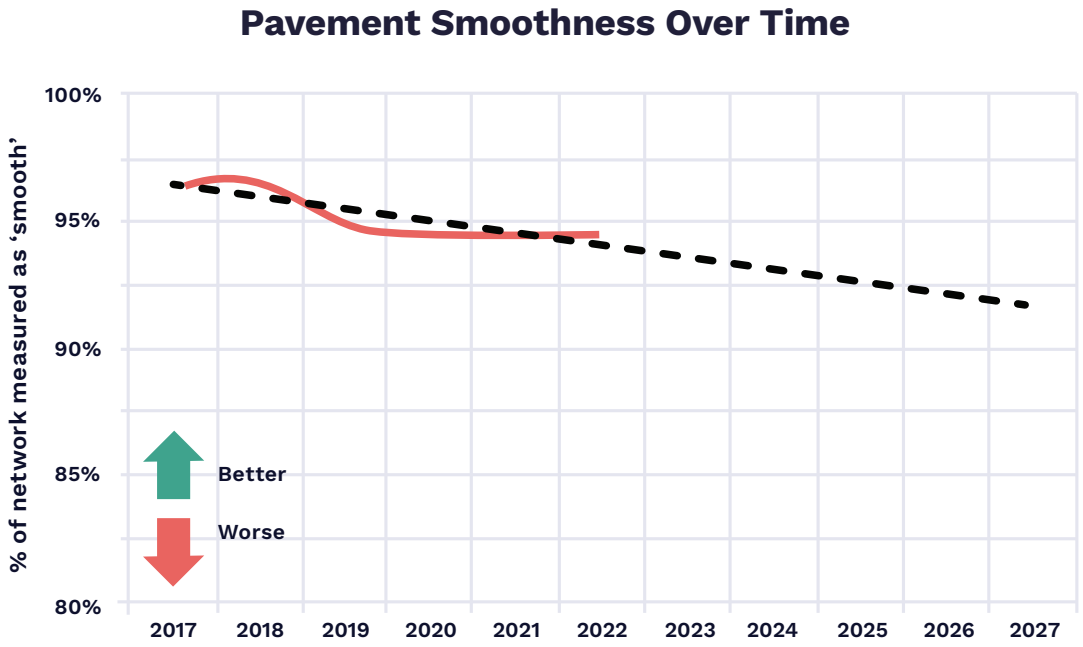
Smoothness of the sealed network also reduces as you step down the road classification hierarchy, aligning with the expectation of a lesser Level(s) of Service to roads carrying lower traffic volumes (Figure 6):

Figure 6



However, ride quality has been deteriorating gradually over time, as seen in Figure 7 below:

Figure 7



It is evident that the condition of the roading network is beginning to deteriorate. Due to inflationary pressures, less work can be delivered for the same amount of money. Current funding levels for roading maintenance and renewals have been insufficient to maintain current performance of the roading network. If Council continues to invest in maintenance and renewals at the current level, we can expect longer term deterioration of the network and increased likelihood of network failure. Structures are longer lived assets and deteriorate more slowly in general than other roading assets.

Data Confidence

Data used and maintained in available databases can include degrees of error or uncertainty, mostly due to the origin of some data being from less robust, often historic data sources. Council produces an annual report that measures the accuracy, completeness, and timeliness of data using nationally consistent data confidence measures. The results of this assessment are contained in the Transport Insights Asset Management Data Quality Report.

The latest report gives Council a data confidence score of 93 out of 100, up from last year's score of 88. This result shows that Council's data used to assess the overall condition of the network can be used with a **high degree of confidence.**

A key information source used to assess conditions and trends are High Speed Data Surveys (HSDs), undertaken at regular intervals. The level of detail collected is related to the road classification. This data is used to assess core data on Council's sealed road network, such as roughness, and further metrics such as rutting, texture depth, and skid resistance to corridors with higher One Road Network Classification (ONRC) status.

Lifecycle Management

As outlined in section 4 of the Roading 2024-27 Activity Management Plan, Council uses a programme prioritisation and optimisation method to rank capital and maintenance projects for the roading network. Prioritisation is a method of putting proposals on a priority list indicating which are to be funded first. Optimisation involves allocating resources to gain the most benefit or return possible in the given context. The focus of the evaluation is on minimising total lifecycle costs while meeting community expectations.

The option that minimises Council and road user costs, in a lifecycle context, is considered to be optimal. In addition to minimising lifecycle costs, the process of prioritising and optimising includes consideration of strategic network requirements and the cumulative benefits of strategic corridor improvements.

Issues for Roading Infrastructure

Using the investment logic mapping (ILM) framework, in combination with existing evidence, Council has identified the following key issues for the roading network (Table 6):

Table 6

Issue	Issue description	Key focus of Council	Desired end state(s)
Legacy network	Council's maintenance spending has been insufficient to maintain pavement performance. Deteriorating condition and changing demands on Access, Low Volume and Secondary Collector roads are resulting in decreased Levels of Service and increasing reactive interventions. Reasons for the deterioration include ongoing forestry harvest, growth in freight movements, increasing traffic volumes due to population growth, and inflationary pressures. Future growth in freight movements is expected over the life of the Long-term Plan due to planned transport and infrastructure investment (Te Utanganui).	Further investment in maintenance and renewal activities is necessary to combat further pavement deterioration, particularly to Low Volume, Access and Secondary Collector level roads. Council will work closely with neighbouring councils and central government agencies to address potential impacts of increased freight movements as a result of Te Utanganui.	A network that is fit for purpose
Network resilience	The Manawatū District is susceptible to increasingly severe weather events. Storm events result in flooding, landslips and damage to assets such as bridges and culverts. Severe weather events result in significant reactive maintenance expenditure, disruption to the network and increased road safety risks.	Further investment in maintenance and renewal activities is needed to improve network resilience, reducing the risk of closure due to landslides or storm events and minimising the duration of future road closures.	A network that provides reliable journeys
Safety	While implementation of Council's road safety programme has resulted in an overall downward trend in fatal and serious crashes on the network over the past five years, the incident rate of crashes remains high. This has a significant social and economic cost to the district and country as a whole.	Continued investment in Council's programme of safety-related activities is necessary to improve safety of the network and the 'Road 2 Zero' target of 'a 40% reduction on 2018 Fatal & Serious crashes'. The programme focuses on improvements to: • Curve signage, skid resistance, and guardrails to address loss of control on curves. • Delineation, and parapet upgrades to address loss of control on straights; and • Intersection signage, and delineation; to address intersection related crashes.	Minimise the risk and consequence of crashes and enable growth in Manawatū

The Manawatū road network is critical in sustaining the growth and the economy of the district. Without adequate funding for maintenance, road assets will exponentially deteriorate, negatively impacting user access safety and experience within the community.

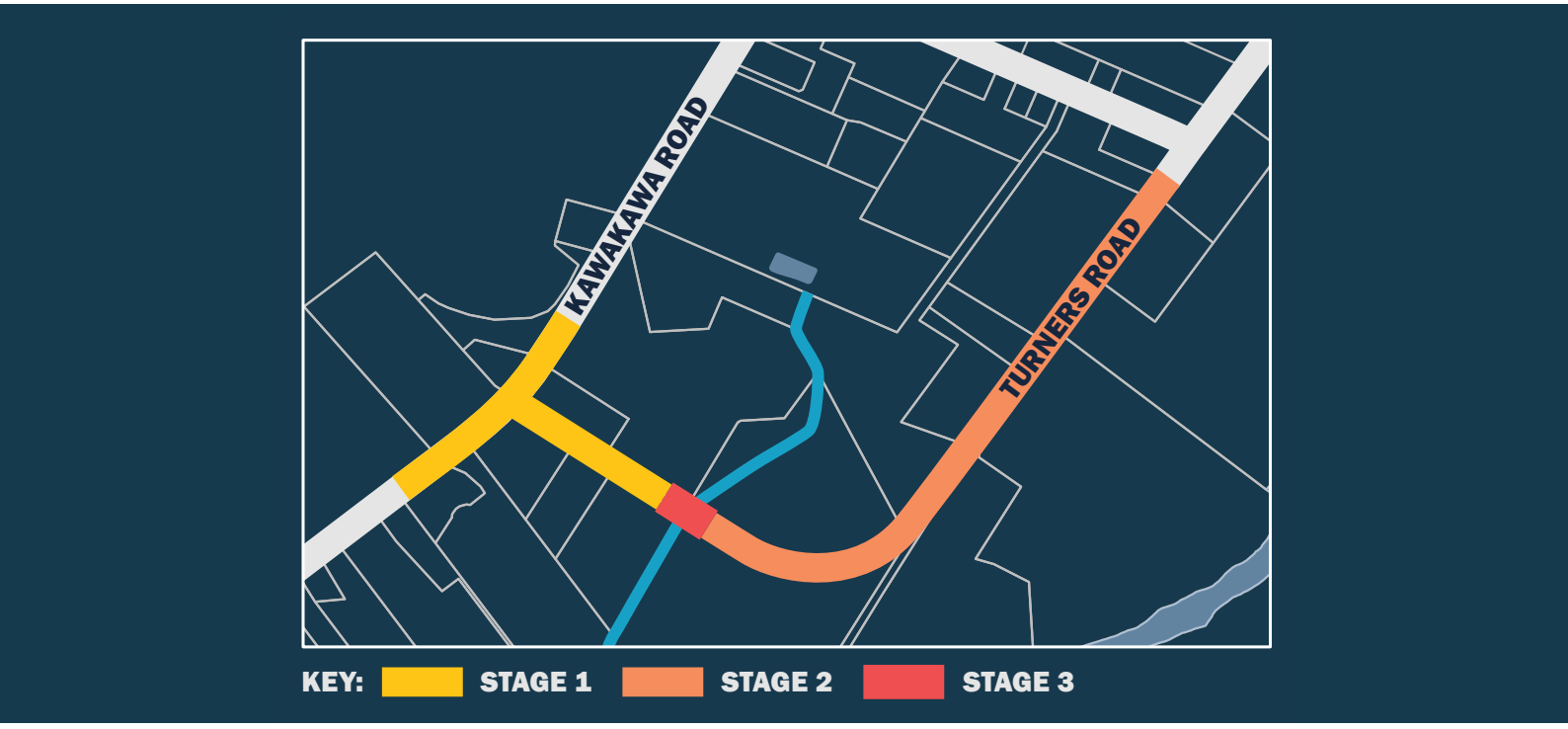
Recent climate change events have also impacted the distribution of limited Council funds, with money originally allocated to maintenance, rehabilitation or reseals being used for emergency works. New Zealand Transport Agency's Emergency Fund has a lengthy turnaround period, forcing the Council to put planned work on the hold to prioritise remedial work in order to reinstate access to residents.

Key Projects for the Roading Activity

Turners Road Extension stages 2 and 3

In the 2018-28 Long-term Plan, Council committed to the Turners Road extension, which will link the existing Turners Road to Kawakawa Road, to help facilitate the development of 24 hectares of high-quality industrial zoned land in this area (Precinct 5). The Turners Road extension is anticipated to bring economic benefits to Feilding and the wider district by attracting new industrial development. The project will also provide a pathway for a trade waste line between key industrial areas and the Manawatū Wastewater Treatment Plant. As such, this project is considered lead infrastructure to enable commercial and industrial growth and development on the southern end of Feilding.

Figure 8



Council began construction of Stage One of the Turners Road extension in early 2023 and it was completed in the 2023/24 financial year. This stage included installation of a right-turn bay on Kawakawa Road, and construction of the new Turners Road from the Kawakawa Road intersection to the stormwater culvert.

This is a continuation of a project that was committed to in the 2018-28 Long-term Plan and remains a strategic priority. Council only evaluated options around the phasing and timing of the works, not whether the project should proceed or not. Timing and phasing of the project considers the budgetary constraints, particularly Council's debt cap and forecast growth in demand for commercial and industrial property. Council has taken a conservative and financially prudent approach to not get too far ahead of development and in doing so overcommitting to our debt capacity that would incur significant interest costs ahead of industrial and commercial development that would offset these lead infrastructure costs.

Stage Two includes roading growth works, Feilding wastewater and stormwater growth works and Feilding water supply growth. Stage Three involves the construction of a culvert over the stormwater drain that runs through Precinct 5. Council considered the option of proceeding with planned capital works in Year 1. However, this option was not affordable as Council would have breached its dept cap and over-committed its capital works programme. The most prudent option was to make Year 1 of the Long-term Plan a holding year. That means no new growth is budgeted for in Maewa or Precinct 5 in 2024/25, which will enable the completion of all current works and provide a buffer period to complete those projects. Construction of the Turners Road Extension Stages Two and Three is scheduled for Years 2 and 3 of the Long-term Plan, as detailed below.

Budgeted Expenditure

Financial Year	Inflated Amount ($)
2025/26	1,311,975
2026/27	3,999,607
Grand Total	**5,311,582**

In addition to the roading budget above, the following table sets out the three waters growth works to support the Turners Road extension:

Financial Year	Stormwater ($)	Water Supply ($)	Wastewater ($)	Total Inflated Amount ($)
2025/26	1,873,532	438,291	332,852	2,644,675
2026/27	2,288,728	726,738	1,300,877	4,316,343
			Grand Total	**6,961,018**

Maewa Growth Works

Council is taking a corridor approach to provision of infrastructure. The costs of providing roading infrastructure are included with the costs for utility infrastructure on pages 103-104 of this Infrastructure Strategy.

Three Waters Services (Water Supply, Wastewater and Stormwater)

Strategic Alignment

As noted in the Activity Statements for the Water Supply Group (Section 5.8), Wastewater Group (Section 5.9), and Stormwater Group (Section 5.10), Council's three waters services contribute to the following community outcomes (Table 7):

Table 7

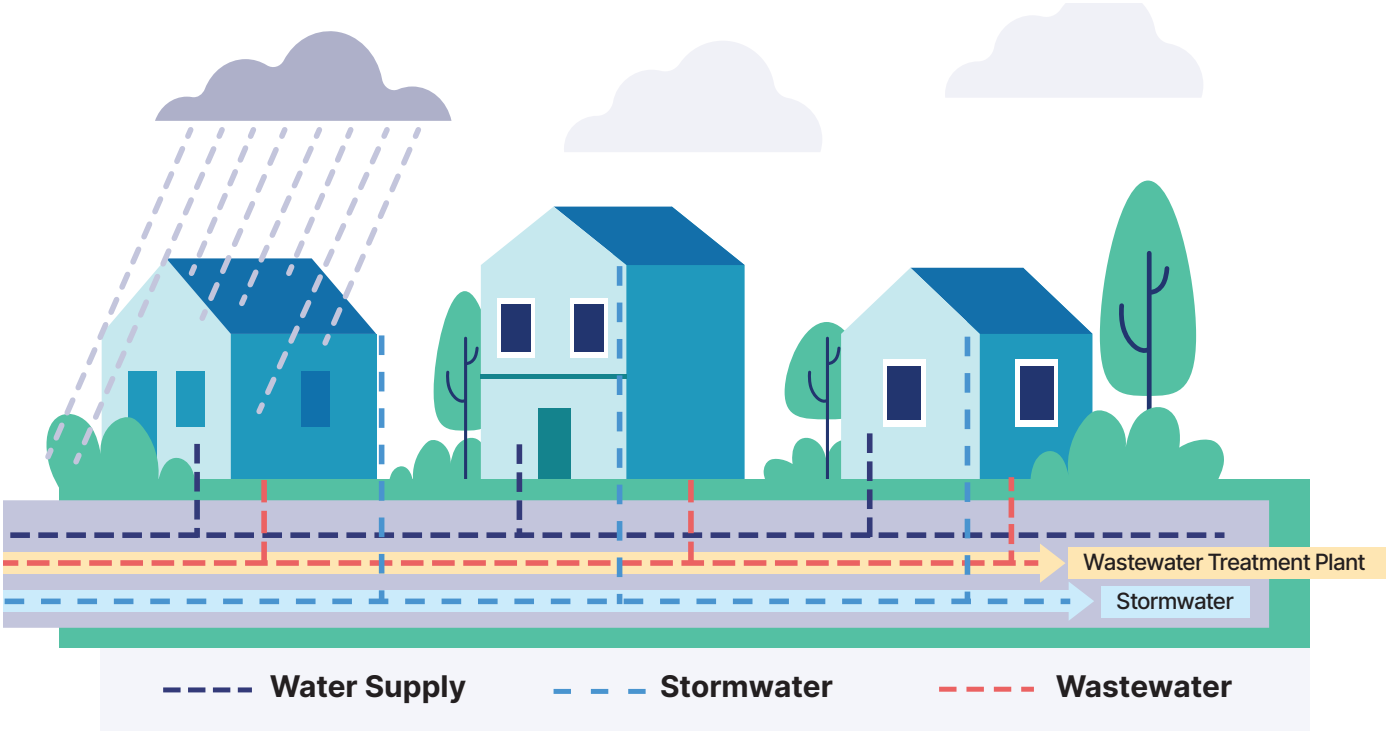
	Water Supply Group	Wastewater Group	Stormwater Group
A place to belong and grow	✓	✓	✓
A future planned together	✓	✓	✓
An environment to be proud of	✓	✓	✓
Infrastructure fit for the future	✓	✓	✓
A prosperous, resilient economy	✓	✓	
Value for money and excellence in local government	✓	✓	

Council has also developed the following strategic priorities for Three Waters Services that it will use to help guide decision-making and prioritisation of Three Waters Projects for this Long-term Plan:

1. Three waters services ensure the Manawatū District remains open for business, whilst maintaining public health, enhancing the environment (freshwater) and providing capacity and cost certainty into the future.
2. Council enhances stormwater networks to protect the community and property within our district.
3. Council enables residential, commercial and industrial growth across our district through well planned three waters infrastructure investment.
4. The community are connected to our rivers and other water bodies, which are enhanced by our actions wherever possible.
5. Council will continue to engage with mana whenua with a long-term goal of eliminating all direct discharge of treated wastewater to the Ōroua River.

Also relevant to the delivery of Council's three waters services are Council's broader strategic priorities in the areas of Environment and Waste, which are to:

1. Embrace innovation and be responsive to emerging opportunities to improve environmental outcomes for our community now and into the future.
2. Our infrastructure networks and planning incorporate and promote environmental sustainability and resilience.
3. Actively seek to understand and get strategic about the environmental impact of Council activities.



Three Waters Assets

Assets are defined and grouped by their physical assets into the following types:

- Points (any asset that has a single place that defines it)
  - Valves, hydrants and tobies
  - Pumps
  - Sewer Pump Stations
  - Sumps and Cess Pits
  - Buildings (can also be represented by polygons)
  - Plant items
- Lines
  - Pipes – mains and laterals
  - Open Drains in Rural Drainage Schemes and within Urban boundaries
  - Culverts
  - Polygons
  - Reservoirs
  - Treatment Plants
  - Irrigated areas
  - Sediment ponds
  - Buildings

Intangible assets such as Resource Consents are also recorded and depreciated over the life span of the consent. Table 9 summarises the asset components recorded in AssetFinda, with the units of measurement for this table described in Table 8.

Table 8: Legend for Asset Quantity Table

Unit of Measurement	Meaning
Each	1 or a single confined asset / component
m	length in metres
m^2	length * width (or diameter) in metres

Table 9: Three Waters Asset Quantity

Asset Class		Unit of Measurement	Quantity/ Length	Number of Asset Records
Stormwater	Drainage Earthworks	m^2	54	4
	Open Drains	m	126,209	185
	Storm Pump Stations	Each, m	68	20
	Stormwater Line	m	124,815	4,381
	Stormwater Point	Each	2,158	2,158
Wastewater	Sewer Pump Stations	Each, m	6,056	1,100
	Wastewater Line	m	249,135	6,462
	Wastewater Plant	Each, m, m^2	171,063	870
	Wastewater Point	Each	3,012	3,012
	Wastewater Buildings		24	24
Water	Water Line	m	487,395	11,768
	Water Metres	Each	539	539
	Water Plant	Each, m, m^2	36,119	780
	Water Point	Each	12,818	12,818
	Water Buildings		11	11
Grand Total				**44,132**

Network Value

The following table sets out the replacement value, depreciated replacement value and annual depreciation for Council's three waters infrastructure (as of 30 June 2023):

Table 7

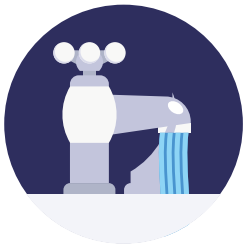
Class Group	Replacement Value ($)	Depreciated Replacement Value ($)	Annual Depreciation Value ($)
Water	207,727,172	109,109,105	2,525,997
Wastewater	195,123,961	119,263,366	3,224,612
Stormwater	108,497,275	75,259,446	708,109
Total	**511,348,409**	**303,631,918**	**6,458,719**

Asset Condition and Performance

There are several drivers behind the Levels of Service that Council provides for water supply, wastewater and stormwater within the Manawatū District, including:

- Customer service expectations;
- Community Outcomes for the Council, as stated in the Long-term Plan;
- Legislative requirements, including the Department of Internal Affairs mandatory performance measures; and
- Resource consent performance conditions.

The Activity Statements for Water Supply, Wastewater and Stormwater set out the level of service statements, the performance measures that Council uses to measure performance, and the expected performance based on current budget, as set in targets for Years 1-3 and 4-10.



Water Supply

Council has five urban drinking water schemes to meet residential and industrial/commercial needs in Feilding, Hīmatangi Beach, Sanson, Rongotea and Ōhakea. The plant at Ōhakea was commissioned in late July 2022.

No changes are proposed to the mandatory level of service measures for Council's water supplies. However, Council is proposing to add some new targets for some levels of service to reflect new water supply schemes commissioned since the last Long-term Plan.

Feilding Water Supply

The Feilding water supply scheme has multiple sources of water to increase the reliability of the scheme (Ōroua River, Campbell Road and Newbury Line). Water from the Ōroua River is treated at the Almadale Water Treatment Plant. Drinking water from Almadale is fully compliant with the New Zealand Drinking Water Standards for both bacteria and protozoa.

The reservoir at the Almadale Water Treatment Plant and the trunk water main into town are nearing the end of their useful lives. Following completion of the planned upgrades that are detailed in the Feilding Water Resilience Project (page 87), Council will confirm the future of the Almadale Water Treatment Plant with options including reduced reliance or complete decommissioning.

Water from the Campbell Road and Newbury Line bores is treated at the Awa Street Water Treatment Plant. The Awa Street Water Treatment Plant does not currently have UV treatment installed and the water sources do not achieve the required chlorine contact time. This means that drinking water from the Feilding Awa Street Water Treatment Plant does not comply with the NZ Drinking Water Standards for bacteria compliance or the new Drinking Water Quality Assurance Rules 2022 (DWQAR) that came into effect from 1 January 2023. The Awa Street supply therefore failed to meet the water quality targets for those performance measures relating to the provision of a safe water supply in the 2022/23 financial year. The Awa Street Water Treatment Plant will remain in place until the upgrades at the Campbell Road bore are completed as part of the Feilding Water Resilience Project (page 87) in 2028/29.

Rural Water Schemes

Council provides rural water schemes in Stanway-Halcombe and Waituna West to meet residential and agricultural needs. Council also administers two rural water supply schemes that are community operated (Kiwitea and Ōroua No. 1).

The Stanway-Halcombe rural water scheme was non-compliant with the NZ Drinking Water Standards for bacteria in 2022/23 due to high turbidity in the treated water. This turbidity is as a result of erosion of the riverbank near the intake structure caused by Cyclone Gabrielle. Council has prioritised investment in turbidity control in year 1 of the Long-term Plan (2024/25).

The Stanway-Halcombe rural water scheme currently does not comply with the NZ Drinking Water Standards for protozoa. This is being addressed through planned investment in Year 1 of the Long-term Plan (2024/25), in accordance with a direction set by Taumata Arowai.

Real Water Loss

Council measures water loss from Council's networked reticulation system. Council is currently meeting its target of keeping estimated real water loss at below 35% per water supply scheme. Water loss in Feilding and the rural villages was calculated to be 22% in 2021-22. Water losses in Hīmatangi Beach could not be measured accurately due to seasonal fluctuations in population.

Responding to faults and service interruptions

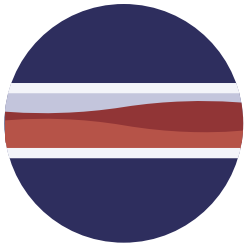
Council is meeting its targets for responding to and resolving faults or interruptions to its reticulated water supply network. In 2023/2024 Council's average response time to urgent requests was 0.74 hours, compared to a target of less than 2 hours. Resolution of urgent requests averaged 3.02 hours, compared to the target of less that 9 hours. For non-urgent requests, the time to attend was 24 hours (compared to a target of 5 working days) and to resolve was 24 hours after attendance (against a target of a further 5 days).

Quality of the water service

Council monitors the total number of complaints received about drinking water clarity, taste, odour, water pressure or flow, and continuity of supply. Council consistently achieves its target of receiving less than 20 complaints per 1000 connections (8.73/1000 in 2022/23).

Managing demand for domestic water supply

Council sets targets around the average consumption of drinking water. The target is set at <300 litres per resident per day for urban drinking water schemes and <1000 litres per resident per day for rural drinking water schemes (to reflect stock use). Council met its targets for the 2022/23 financial year, with the exception of Waituna West (average of 1,370 litres per resident per day).



Wastewater

Council collects, treats and disposes of wastewater, including domestic, commercial and industrial waste. Council maintains reticulated wastewater systems in Feilding, Awahuri, Cheltenham, Halcombe, Kimbolton, Rongotea, Sanson and Hīmatangi Beach.

In the 2022/23 financial year, Council complied with all of its level of service performance measures and targets, as set out in the 2021-31 Long-term Plan, in relation to:

- The number of dry water sewage overflows from Council's sewerage system;
- Compliance with resource consents for discharge from its treated wastewater system;
- Response and resolution of faults and blockages; and
- Satisfaction with our service.

Council has already invested substantially in the Manawatū Wastewater Treatment Plant in Feilding. This treatment plant is functioning well, and Council has not planned any substantial additional capital upgrades. However, funding has been allocated in years 1 and 2 (2024/25 and 2025/26) of the

Long-term Plan for working with stakeholders to develop a revised discharge consent framework for discharge from the Manawatū Wastewater Treatment Plant. This reconsenting includes stage 2 of the wetland construction, with a goal of removing all direct discharge to the Ōroua River (with the exception of emergency weather events).

Council is leveraging off its existing investment at the Manawatū Wastewater Treatment Plant in Feilding through its Wastewater Centralisation Project. This project involves the piping of wastewater from Sanson, Rongotea and Halcombe to the Manawatū Wastewater Treatment Plant for treatment and discharge. In addition, Council has worked closely with the New Zealand Defence Force to provide a permanent wastewater solution for the Ōhakea Base that involves piping wastewater to the Manawatū Wastewater Treatment Plant via the Sanson pipeline. This will be commissioned in Year 1 of the Long-term Plan (2024/25).

The original plan for the Wastewater Centralisation Project (as set out in the 2018-28 Long-term Plan) included the piping of wastewater from Kimbolton and Cheltenham to the Manawatū Wastewater Treatment Plant in Feilding. Due to high infrastructure costs, Council has made the decision to re-consent both the Kimbolton and Cheltenham Wastewater Treatment Plants as standalone treatment plants. Provision has been made in years 6 and 7 of this Long-term Plan for this reconsenting process. Notwithstanding this, the centralisation of the villages in the south of the District will result in over 100km of waterways being free of any treated wastewater discharge permanently.

Stormwater

Council maintains stormwater systems in Feilding, Rongotea and Sanson, including inlets, pipes, open drains and outlets. Council maintains shared stormwater assets in Hīmatangi Beach, Halcombe, Āpiti, Kimbolton, Pōhangina, Rangiwāhia and Cheltenham. Council also carries out maintenance on the rural drainage schemes in Bainesse, Maire, Makowhai and Ōroua.

There was one flooding event that occurred in February 2023 which meant that Council did not meet its 2022/23 Annual Plan level of service target of having no flood events (defined as an overflow of the urban stormwater system that enters a habitable floor). However, Council did meet its target of having less than 10 habitable floors per 1000 properties connected to Council's stormwater system affected during this flood event (achieved 0.35). Council also complied with its level of service targets for compliance with its resource consent conditions for stormwater discharges, and satisfaction with the performance of Council's reticulated stormwater system. However, Council failed to meet its level of service target for timely response to flooding events (an average response time of 2.65 hours with a target of <2).

Despite general compliance with the level of service performance framework for stormwater in the 2022/23 financial year, the flood events in November and December 2022 highlighted a number of deficiencies in the urban stormwater network across Feilding. In response to this, Council has approved a $20 million stormwater upgrade programme with detailed design and consenting processes being carried out over the first three years of the Long-term Plan, with the capital investment commencing in year 6 of the Long-term Plan. Council would have liked to have initiated the investment earlier, but budget constraints and competing priorities meant that the budget was not available until year 5 onwards.

Council is also aware of ongoing stormwater overland flow and ponding issues in many of the rural villages. Council committed to a village stormwater upgrade programme in the 2018-28 Long-term Plan, allocating $500,000 per year over the life of the Long-term Plan. Many projects have been completed since then, however, with the increasing cost of investing in new infrastructure and the scale of investment required across the villages, Council has committed to increasing that investment to $1 million per year for the duration of the 2024-34 Long-term Plan. This investment will see substantial improvement in stormwater services across the villages throughout the district.

Data Confidence

The asset register for three waters has known data completeness and integrity limitations, which include (but are not limited to) those issues described in Table 10 below.

Table 10

Issue	Comment
Missing or inadequately classified treatment plant components	Water and wastewater treatment plant assets are recorded at component level with unit rates and total useful life depending on the component. It is a known issue that some treatment plant assets are recorded in the wrong community and some items of plant are not recorded.
Missing or inadequately classified reticulation assets	While the majority of the reticulation assets (line and point classes) are known to be complete, there are occasions where unrecorded assets are found in the field. These records are updated as and when this occurs.
Missing spatial data for schemes other than Feilding	It is a known issue that a number of reticulation assets in the villages in Manawatū lack geospatial information. This primarily affects the reliability of the GIS and has no impact on the valuation.
Inaccurate attribute age data	Construction date information pre-2000 is understood to have been estimated solely from pipe material information rather than from as-builts or other Council records. Many of the older reticulation assets with missing contract or as built documents have been given a construction date of 1931. A condition assessment programme is being prepared to inspect and plan for the replacement of the '1931' assets as their condition deteriorates.

The above are recognised limitations, and in some cases, action is already being undertaken to address the issues. Asset data confidence is estimated in Table 12 using the NZIAVDG guidelines on recording data confidence grades (Table 11).

Table 11: Legend for Data Confidence Ratings

Confidence Grade	General Meaning
A	**Highly Reliable.** Data based on sound records, procedure, investigations and analysis that is properly documented and recognised as the best method of assessment.
B	**Reliable.** Data based on sound records, procedure, investigations and analysis that is properly documented but has minor shortcomings; for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.
C	**Uncertain.** Data based on sound records, procedure, investigations and analysis that is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available.
D	**Very Uncertain.** Data based on unconfirmed verbal reports and/or cursory inspection and analysis.

Table 12: Data Confidence for Three Waters Assets

Asset Class	Water	Wastewater	Stormwater	Comments
Pipelines	10% A	20% A	10% A	Assets constructed since 2010: High accuracy in terms of quantities, descriptions, location and initial recognition of costs
	80% B	80% B	70% B	Constructed 2000-2010: Good accuracy in terms of quantities, descriptions and location
	10% C		20% C	Constructed pre-2000: Good accuracy in terms of location and quantities but average descriptions
Points	40% A	40% A	20% A	Assets constructed since 2010: High accuracy in terms of quantities, descriptions, location and initial recognition of costs
	60% B	60% B	70% B	
			10% C	
Plant & Equipment	20% B	10% B		Since 2010: Average accuracy. Components described at a high level only
	60% C	60% C		2000-2010: Good accuracy. Adequate component descriptions, but initial purchase costs not recorded
	20% D	30% D		Pre 2000: Average accuracy, little supporting documentation
Pump Stations		30% A	60% A	
		60% B	40% B	
		10% C		
Three Waters Overall Confidence	**B**	**C**	**B**	
	Reliable	**Uncertain**	**Reliable**	

Data confidence and quality improve as time passes as all new data is entered (by Council staff) and is subject to minimum requirements to ensure adequate asset information is captured.

Council has a number of legacy wastewater treatment plants that will be superseded as the Wastewater Centralisation programme progresses. Residual uncertainty around this legacy plant and equipment will be replaced with a high level of data confidence around the new wastewater assets. Given the scale and significance of this investment programme, it was determined there was limited value in gaining a high level of data quality across the range of soon-to-be redundant plant and equipment assets.

Lifecycle Management

As outlined in the Three Waters Asset Management Plan 2024-34, the lifecycle management plan for three waters assets details how Council plans to manage and operate the assets at the agreed levels of service, while managing lifecycle costs.

Assets requiring renewal are identified from either the asset register or an alternative method. The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal. Alternatively, an estimate of renewal lifecycle costs is projected from the external condition modelling systems and may be supplemented with, or based on, expert knowledge.

Not withstanding the life cycle management approach there is always an underlying risk of unexpected asset failure. Such a failure would result in additional or unbudgeted maintenance expenditure as well as potentially additional or reprioritised renewal expenditure, depending on the size and severity of the asset failure. Any asset failure has the potential to impact on continuity of service delivery, consequently, an unexpected failure would increase this potential impact (i.e. planned versus unplanned water shutdown).

Issues for Three Waters Infrastructure

Identifying issues facing our infrastructure helps us to prioritise investment across our activities. The following issues have been identified for three waters infrastructure (Table 13):

Table 13

Issue	Issue description	Key focus of Council	Desired end state(s)
Uncertainty around the future of the Water Services Reform	The uncertainty around the future of three waters services provision affects Council's planning, funding decisions and work prioritisation.	Council keeps a watching brief on government direction on the water services reform as well as guidance coming from Local Government member organisations including Taituarā – Local Government Professionals Aotearoa, and Local Government New Zealand (LGNZ). Council has included plans for three waters services in its budget and asset management plans for the next 30 years to ensure that the needs of the Manawatū community will be provided for, regardless of any future changes to the delivery or funding model for three waters services.	Three waters services that comply with regulatory and consenting requirements, meet agreed levels of service targets (as set in the Long-term Plan), and are managed in a financially sustainable way.
Extreme Weather Events	More frequent and intense extreme weather events will impact on Council's infrastructure capacity and ability to meet levels of service expectations.	When carrying out the renewal of existing three waters infrastructure, or installing new infrastructure to support growth, Council will ensure there is sufficient capacity of this infrastructure to cope with more frequent extreme weather events. Council will improve the resilience of the threewaters networks through new works and renewals by using resilient design materials and pipe-laying techniques. Council is improving the resilience of Feilding's water supply (refer to the Feilding Water Resilience Project).	The resilience of Council's three waters infrastructure to extreme weather events will increase over time. Current assets will be maintained so as to meet agreed levels of service and Council will provide for the replacement of critical assets at the end of their useful life.

Issue	Issue description	Key focus of Council	Desired end state(s)
Growing expectations from the community	Higher community expectations in relation to environmental impacts and health outcomes, especially in respect of water. Reduced tolerance to flooding of non-habitable floors. Increased service expectations in rural areas.	Greater communication with our community on what Council is doing to improve water quality and reduce the impact of Council activities such as the Wastewater Centralisation Project. Projects are included in the Long-term Plan to address known stormwater flooding issues within Feilding. Council is reviewing its levels of service, performance measures and funding splits as part of this Long-term Plan. Any requests for increased levels of service will be evaluated against affordability.	The provision of a good quality, safe and reliable water supply to the district and adequate supply for firefighting in some areas of the district. Matching desired levels of service, service risks and consequences with the customer's ability and willingness to pay for the service. We will be innovative in our application of technology and other methods to meet increased community expectations.
Impact of growth on the network	Increasing demand for services, including due to population change, generates a requirement for the development of additional infrastructure or to increase the capacity of existing infrastructure.	Council has adopted growth projections based on the Infometrics high projections (May 2023). Council regularly reviews population growth and development trends through the following processes: • Monitoring and reporting under the National Policy Statement – Urban Development; • Annual Estimated Resident Population (ERP) data from Statistics New Zealand; and • Long-term Plan processes. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.	Maintaining and developing the three waters infrastructure to meet the current and future needs, including growth. Council will ensure growth is accommodated without impacting existing levels of service.

Issue	Issue description	Key focus of Council	Desired end state(s)
Increasing compliance requirements	Changes in legislation and national direction introduce new environmental and legislative requirements, including through the National Policy Statement for Freshwater Management (NPS-FM), Horizons One Plan and NZ Drinking Water standards.	All of Council's water supplies are already chlorinated and all surface water takes have UV treatment. Hence, we are well placed under the DWSNZv2018 and can easily implement minor additional changes to achieve compliance if required. Additional budget has been included in Asset Management Plans to offset the increased costs for consent renewals and to ensure compliance with new consent conditions. Council continually monitors its performance against its performance management framework. Changes required by national direction for freshwater will introduce new requirements about managing stormwater quality. To date the focus for infrastructure has been on stormwater quantity.	Mandatory compliance with the New Zealand Drinking Water Standards, including meeting minimum residual chlorine levels for all water sources. Planned changes to pressure (LoS) to promote greater water efficiency and meet consent obligations. Water supply, wastewater, and stormwater services meet service levels and performance measures and targets set by Council in the Long-term Plan. Compliance with consent conditions.
Funding	Cost escalations due to inflationary pressure affect the ability to carry out necessary work and stay within budgets. There is limited appetite to address cost escalations through increases to development contributions or rates.	Cost escalation adjustments are regularly applied to contract rates and prices. The maintenance budgets for each year are adjusted to reflect the previous year's inflation in that particular part of the industry. Major projects and significant changes to levels of service are assessed against affordability through the Long-term Plan and Annual Plan Processes.	We will optimise our investment and apply asset management practices to our planning. We will smooth our costs where possible over time.

Key Projects

Wastewater Centralisation

The Wastewater Centralisation Project was confirmed in the 2018-28 Long-term Plan. It involves the piping of wastewater from Sanson, Rongotea and Halcombe to the Manawatū Wastewater Treatment Plant (WWTP) for treatment and discharge. The pipeline from Sanson to Feilding has already been completed. Year 1 of the Long-term Plan included the infrastructure to support the transport of wastewater from the New Zealand Defence Force Base Ōhakea to the Manawatū WWTP via the Sanson pipeline. The Rongotea connection to Feilding is the next stage to complete. Approximately 13km of wastewater pipeline has already been installed, and the construction of wastewater pump stations and final stage of pipeline is scheduled for 2024/25.

This project remains a strategic priority of Council, so Council is committed to continuing investment in centralisation. However, for affordability reasons, Council has made the decision not to proceed with piping wastewater from Kimbolton and Cheltenham to the Manawatū WWTP in the term of the 2024-34 Long-term Plan. Provision has been made in years 6 and 7 of the Long-term Plan 2024-34 to renew the existing discharge consents for the Kimbolton and Cheltenham WWTP's and for the management of these as standalone WWTPs.

Budget Expenditure

Financial Year	Inflated Amount ($)
Year 1 2024/2025	4,418,600
Year 2 2025/2026	5,216,712
Year 3 2026/2027	2,040,156
Year 4 2027/2028	2,118,357
Year 5 2028/2029	2,417,856
Year 6 2029/2030	2,213,157
Year 7 2030/2031	327,212
Year 8 2031/2032	86,035
Year 9 2032/2033	88,013
Year 10 2033/2034	90,038
Total Budgeted Expenditure over years 1 – 10 (Uninflated)	**19,016,136**

Feilding WWTP reconsenting and associated works

Since January 2015, Council has invested significantly in the Manawatū WWTP, including investing in new land and assets, including infrastructure to support the irrigation of treated wastewater to land. Council has also worked closely with Ngāti Kauwhata to construct and plant a native plant wetland to improve the quality of the proportion of the treated wastewater that eventually flows into the Ōroua River. Stage 1 of the wetland was completed in June 2024.

Council must apply for a new resource consent from Horizons Regional Council for discharges to water from the Manawatū WWTP by May 2026. Funding has been allocated in years 1 and 2 of the Long-term Plan for this reconsenting project, which includes a second stage wetland with the goal of removing all direct discharge of treated wastewater to the Ōroua River, with the exception of emergency weather events.

Key stakeholders during this process are Ngāti Kauwhata, other local iwi groups, neighbours of the Manawatū Wastewater Treatment Plant, environmental interest groups, and the wider Manawatū community. Council direction on wastewater management is guided by the National Policy Statement for Freshwater Management, the Horizons Regional Council One Plan, the overarching concept of Te Mana o Te Wai, the Ōroua Declaration, which was co-signed by Ngāti Kauwhata and Council in December 2015, as well as critical success factors such as affordability and achievability.

Council is not expecting that significant upgrades to the Manawatū WWTP will be required to satisfy the requirements of the new discharge consent. However, if significant upgrades are required above what is budgeted for in this Long-term Plan, Council would identify and cost the principal options as part of the Annual Plans and/or the 2027-37 Long-term Plan.

Budget Expenditure

Financial Year	Budget Expenditure (Inflated $)		
	Reconsenting and Capital Improvements ($)	Pivot Irrigation ($)	Land Purchase for Application of Treated Wastewater ($)
Year 1 2024/2025	2,107,799		
Year 2 2025/2026	1,282,944		
Year 3 2026/2027	1,101,194		
Year 4 2027/2028			
Year 5 2028/2029			
Year 6 2029/2030			
Year 7 2030/2031			3,053,600
Year 8 2031/2032		1,384,222	3,126,893
Year 9 2032/2033		1,416,059	
Year 10 2033/2034			
Total over Years 1 - 10	**4,491,937**	**2,800,281**	**6,180,493**
		Grand Total	**13,472,711**

Note – Council has made an allowance for limited land purchase and establishing the irrigation infrastructure, which is subject to re-consenting requirements. If this budget is not be required, it will not be spent.

Feilding Water Resilience

The Feilding Water Resilience project is about future proofing Feilding's potable water supply via a coordinated approach to capital works, renewals, resource consenting and land acquisition.

Feilding's reservoir at Almadale and the trunk water main are nearing the end of their useful life. Council committed to undertake investigations into the renewal or replacement of the Almadale Water Treatment Plant in Year 2 of the 2015-2025 LTP. Council evaluated options as part of a "Strategic Water Assessment," the findings of which informed the Feilding Water Strategy project in the 2018-28 LTP. This project is a continuation of past investment to increase the resilience of Feilding's Water Supply.

One of the key drivers of this project is to improve natural disaster resilience of the Feilding potable water network. Improving Feilding's water resilience entails reducing reliance on Ōroua River abstraction for the supply of potable water to Feilding. Reducing reliance on Ōroua River abstraction for Feilding's potable water supply is also consistent with Council's commitments under the Ōroua Declaration and the National Policy Statement for Freshwater Management.

Completed works to date include the strengthening of the existing water reservoir and the construction of a second water reservoir at Fraser Drive, the construction of a new production bore at Roots Street West in Feilding and the purchase of additional land adjacent to the Campbell Road bore.

To ensure compliance with the Drinking Water Quality Assurance Rules (2022) from Taumata Arowai, Council has committed to commissioning the new Roots Street Bore in year 1 which includes the construction of a

new water treatment plant at the Roots Street West site, and the construction of a new water treatment plant and reservoir at Campbell Road. The additional land purchased at the Campbell Road bore site will accommodate the new infrastructure that will provide for the chlorination, fluoridation and storage of drinking water. The existing treatment at Awa Street will stay in place until the new treatment facilities have been commissioned.

In summary, Council has already invested significantly in the Feilding Water Resilience Programme, and further investment is planned, including:

- Commissioning of a new water supply bore at Roots Street, Feilding in year 1 (2024/25);
- Construction of a new water treatment plant at Campbell Road to meet new regulations in 2028/29;
- UV treatment at Awa Street Water Treatment Plant (as part of the Campbell Road upgrades) in 2028/29;
- Chlorine contact upgrades at Awa Steet 2028/29; and
- Network resilience and flow optimisation investments in years 4 and 5 (2027/28 and 2028/29).

Following this investment, the future of the Almadale water treatment plant will be confirmed with options including reduced reliance or complete decommissioning. This will be confirmed around the middle of the Long-term Plan period.

Increasing Feilding's water resilience contributes positively towards ensuring water quality compliance, as well as enabling population growth in Feilding. Additional benefits arise out of having a high level of supply security for industrial and commercial water users in Feilding, which is set to help meeting economic development aspirations.

As this is the continuation of a previously committed project, and remains a priority for Council, the option of doing nothing is not supported. If Council chose, for reasons of affordability, to delay any of the planned upgrades, this would prolong the time taken to ensure full compliance of Feilding's water supply with the Drinking Water Quality Assurance Rules (2022). The planned budget therefore includes all of the planned upgrades outlined above.

Budget Expenditure

Financial Year	Budgeted Expenditure (Inflated $)
Year 1 2024/2025	2,613,160
Year 2 2025/2026	534,560
Year 3 2026/2027	0
Year 4 2027/2028	5,014,091
Year 5 2028/2029	5,149,470
Total over years 1 - 5	**13,311,281**

Stanway-Halcombe Rural Water Scheme Upgrade

The Stanway-Halcombe rural water scheme was non-compliant with the NZ Drinking Water Standards for bacteria in 2022/23 due to high turbidity in the treated water. This turbidity is as a result of erosion of the riverbank near the intake structure caused by Cyclone Gabrielle. Council has prioritised investment in turbidity control in year 1 of the Long-term Plan (2024/25).

The Stanway-Halcombe rural water scheme currently does not comply with the NZ Drinking Water Standards for protozoa. This is being addressed through planned investment in year 1 of the Long-term Plan (2024/25), in accordance with a direction set by Taumata Arowai.

Council has no other option but to invest in the planned upgrades to resolve the current non-compliances with the Stanway-Halcombe rural water scheme. To do nothing would result in enforcement action by Taumata Arowai, which is unacceptable to Council.

Budget Expenditure

Financial Year	Budgeted Expenditure (Inflated $)
Year 1 2024/2025	3,180,513

Feilding Stormwater Upgrades

The flood events from November and December 2022 highlighted a number of deficiencies in the urban stormwater network across Feilding.

In response to community demand for increased levels of service following these flood events, Council identified four major risk areas within Feilding and prepared preliminary engineer estimates for the stormwater upgrades required to protect those houses that flooded in the December 2021 from future events.

The planned budget includes a $20 million+ stormwater upgrade programme that will address flooding issues within all four of the major risk areas. Detailed design and consenting processes are scheduled for the first three years of the Long-term Plan. Physical works will commence in year 6 due to competing priorities and budget constraints.

Other options that Council could choose to reduce costs are to do nothing, or to only address stormwater flooding issues in some of the identified major risk areas. However, by phasing the project as proposed in the planned budget, Council is satisfied that an appropriate balance has been achieved between affordability and meeting community demand for increased levels of service.

Budget Expenditure

Financial Year	Budgeted Expenditure (inflated $)
Year 1 2024/2025	894,108
Year 2 2025/2026	651,601
Year 3 2026/2027	671,149
Year 4 2027/2028	690,707
Year 5 2028/2029	2,804,056
Year 6 2029/2030	4,901,942
Year 7 2030/2031	4,983,873
Year 8 2031/2032	3,352,437
Year 9 2032/2033	3,301,592
Year 10 2033/2034	105,143
Total over years 1 - 10	**22,356,608**

Village stormwater upgrades

Council is aware of ongoing stormwater overland flow and ponding issues in many of the rural villages. Council committed to a village stormwater upgrade programme in the 2018-28 Long-term Plan, allocating $500,000 per year over the life of the Long-term Plan. Many projects have been completed since then, however, with the increasing cost of investing in new infrastructure and the scale of investment required across the villages, the planned budget proposes to increase that investment to $1 million per year for the duration of the 2024-34 Long-term Plan. This investment will see substantial improvement in stormwater services across the villages throughout the district.

If Council chose to reduce the budget for this project, this would mean it would take longer for known stormwater overland flow and ponding issues in the rural villages to be addressed. As Council expects the frequency and intensity of storm events to increase over time, choosing not to invest in stormwater upgrades in the rural villages we likely result in declining levels of service for stormwater (i.e. increase incidence of stormwater flooding) over time.

Budget Expenditure

Financial Year	Budgeted Expenditure (inflated $)
Year 1 2024/2025	1,040,000
Year 2 2025/2026	1,069,120
Year 3 2026/2027	1,101,194
Year 4 2027/2028	1,133,128
Year 5 2028/2029	1,163,722
Year 6 2029/2030	1,192,815
Year 7 2030/2031	1,221,440
Year 8 2031/2032	1,250,757
Year 9 2032/2033	1,279,525
Year 10 2033/2034	1,308,954
Total over years 1 - 10	**11,760,655**

Maewa Growth Works

Maewa is Council's primary residential growth area, located at the northern end of Feilding. This area was identified as one of the seven growth precincts for Feilding in the Feilding Framework Plan 2013. Following its incorporation into the District Plan ahead of the 2015-25 Long-term Plan, Council has continued to invest, through subsequent LTPs, in lead infrastructure to support residential growth.

In the past year, a substantial portion of Maewa was purchased by a single land development entity. Council has now configured the growth investment programme to align with the anticipated subdivision and construction timetable of that land development entity. This has been done to ensure that lead infrastructure is installed at the right time, without Council over-investing ahead of demand, which would have implications for Council's debt cap and interest incurred on loans.

The Long-term Plan includes detailed plans for the next 10 years of growth infrastructure in Maewa, as a continuation of Council's prior commitment to facilitate residential growth in this area.

Infrastructural investment to support growth for years 10 to 20 have been costed for inclusion in the Council's Development Contributions Policy and schedule. The Manawatū Growth Strategy will inform Council's growth-related infrastructure planning for years 20 to 30. As the Manawatū Growth Strategy is not yet completed, an indicative plan for growth works in years 20 to 30 has been included in this Infrastructure Strategy and will be refined through the next Long-term Plan (2027-37).

Should any significant decisions for future growth investment come out of the Manawatū Growth Strategy work, these will be costed and evaluated as part of the 2027-37 LTP.

Budget Expenditure

Financial Year	Roading ($)	Water Supply ($)	Wastewater ($)	Stormwater ($)	Total Budgeted Expenditure (inflated $)
Year 1 2024/2025	0	520,000	0	0	520,000
Year 2 2025/2026	104,958	231,891	337,330	827,882	1,502,061
Year 3 2026/2027	1,519,186	311,823	367,497	468,903	2,667,409
Year 4 2027/2028	1,096,945	178,856	253,752	370,724	1,900,277
Year 5 2028/2029	2,519,709	0	0	0	2,519,709
Year 6 2029/2030	0	189,658	380,689	715,689	1,286,036
Year 7 2030/2031	2,276,115	198,888	587,737	615,357	3,678,097
Year 8 2031/2032	2,321,639	203,662	1,003,095	630,126	4,158,522
Year 9 2032/2033	2,721,249	240,657	1,267,814	600,562	4,830,282
Year 10 2033/2034	2,958,634	226,804	363,930	3,493,606	7,042,974
			Grand Total Years 1 – 10 (Inflated $)		**30,105,367**

As Council's inflation adjuster assumptions are only valid for years 1 to 10 of the Long-term Plan, Council's 30-year budget beyond year 10 is uninflated.

Uninflated Budgeted Expenditure Beyond year 10

Financial Year	Roading ($)	Water Supply ($)	Wastewater ($)	Stormwater ($)	Total Budgeted Expenditure (uninflated $)
Years 11-15	6,824,399	631,815	2,917,036	4,652,920	15,026,170
Years 16-20	240,099	192,081	192,081	192,081	816,342
Years 20-25	10,495,110	2,008,739	5,553,938	3,838,901	21,896,688
Years 25-30	2,465,080	2,955,413	3,872,479	1,077,565	10,370,537
				Grand Total	**48,109,737**

Most Likely Scenario

This strategy provides the overview of Council's most likely scenario (our "planned budget") for the management of its infrastructure. Note that the most likely scenario assumes all identified projects will proceed and funding will be confirmed and retained through future Long-term Plan and annual planning processes.

This scenario has been determined by:

1. Including the funded capital and operating budget forecasts from the Long-term Plan 2024-34. The timing of projects and budget provisions have been informed by the asset and activity management plans.
2. Using the assumptions for levels of service, demand and renewals as outlined in the Three Waters Asset Management Plan and the Roading Activity Management Plan.
3. The preferred options for the key projects discussed in this strategy are those that are included in the Long-term Plan budget.

Assumptions on which the most likely scenario is based

Council has assumed that the planned budget is sufficient to continue providing existing roading and three waters services at current levels of service over the life of the Long-term Plan. However, some key projects, such as Feilding urban stormwater upgrades, have been moved out to later years in order to balance the funding required, particularly for years 1 to 10.

Assumptions about growth in demand for infrastructure services are based on the population and household growth projections (high scenario) prepared by Infometrics (May 2023). Council's Asset and Activity Management Plans have utilised the same growth projections. Council has also considered projected changes in demographics when making decisions around demand for certain services, including implications for the community's ability to pay.

Changes in demand that are as a result of changes in legislation and central government direction have also been considered (refer to Table 5). Community needs and preferences, as expressed through the Customer Satisfaction Survey, early engagement feedback and through customer feedback and complaints have informed Council's decisions regarding levels of service and prioritisation of key projects.

Council has based its renewals budget on the assumption that assets will deliver the required level of service over their documented useful life. There is little evidence to indicate that large scale asset failures are imminent. Council's targeted renewals programme is based on a combination of age, material type and criticality. As noted in discussion about increasing the resilience of Council's infrastructure to climate events, Council prioritises the renewal and repair of damaged critical infrastructure over other assets of a similar age. Where possible, Council improves the resilience of the network through carrying out new works and renewals using resilient design materials and pipelaying techniques.

Tables 2 to 5 outline those significant forecasting assumptions that are relevant to the key challenges that Council is facing in relation to roading and three waters infrastructure. Section 7.1 of the Long-term Plan 2024-34 contains all of the significant forecasting assumptions that Council has used in preparing this plan.

The planned budget

The main service consequences of the planned budget are:

- Residual consenting and compliance risks of a delay in provision of the required budget for the Village Wastewater Centralisation projects in Halcombe, Cheltenham and Kimbolton based on funding constraints.
- Extension of the duration of use of an impaired asset, Almadale Water Treatment Plant due to a delay in provision of the required budget for the Feilding Water Resilience project based on funding constraints.
- The ability to complete Feilding stormwater improvement works in a timely manner to protect the community and properties from future weather events.

The plans and forecasts for the first three years (2024/2025 – 2026/2027) have the most detail and the highest degree of confidence. The plans and forecasts for years four to ten (2027/28 – 2033/34) have a reasonable degree of confidence. The forecasts beyond year 10 are more indicative estimates only given the level of uncertainty associated with Council's assumptions and external influences that Council has little to no control over.

Major projects and significant changes to levels of service are assessed annually through the Annual Plan process. Council's forecasting assumptions are monitored on an ongoing basis and are updated as part of the three-yearly Long-term Plan cycle.

Forecast expenditure required in the Local Government Act 2002 is:

Roading

Uninflated	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Operating	7,749,059	7,928,641	8,122,473	8,411,602	8,504,037	9,064,333	9,171,640	9,520,009	9,908,383	10,218,544
New Level of Service	2,217,400	2,140,879	1,673,025	4,687,332	4,399,196	3,948,219	4,715,820	4,240,130	5,019,932	4,272,986
Growth	0	1,350,000	5,139,881	998,661	2,244,568	0	1,946,932	1,946,932	2,237,301	2,387,114
Renewal	13,287,609	8,600,918	6,813,894	9,166,706	9,428,344	9,600,572	9,319,227	9,343,644	9,465,041	9,068,573

Uninflated	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
Operating	10,484,227	10,484,227	10,484,227	10,756,816	10,756,816	10,756,816	11,036,494	11,036,494	11,036,494	11,323,442
New Level of Service	2,702,963	2,704,032	3,177,072	2,528,198	2,529,353	2,588,455	5,089,681	2,590,919	2,580,887	2,530,371
Growth	1,233,653	1,234,696	1,706,312	1,324,306	1,325,432	45,587	46,772	47,988	49,236	50,516
Renewal	9,301,216	10,412,822	9,636,343	7,798,069	8,373,532	7,928,910	7,437,699	7,260,244	7,375,840	8,797,378

Uninflated	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
Operating	11,323,442	11,323,442	11,617,852	11,617,852	11,617,852	11,919,916	11,919,916	11,919,916	12,229,834	12,229,834
New Level of Service	2,530,371	2,505,371	2,505,371	2,505,371	2,580,006	2,580,006	2,580,006	2,551,362	2,551,362	2,551,362
Growth	1,853,031	1,853,031	2,263,016	2,263,016	2,263,016	2,263,016	50,516	50,516	50,516	50,516
Renewal	6,919,237	8,982,853	7,353,683	7,781,896	6,567,272	6,058,329	7,116,850	6,559,452	6,559,452	6,559,452

Figure 9

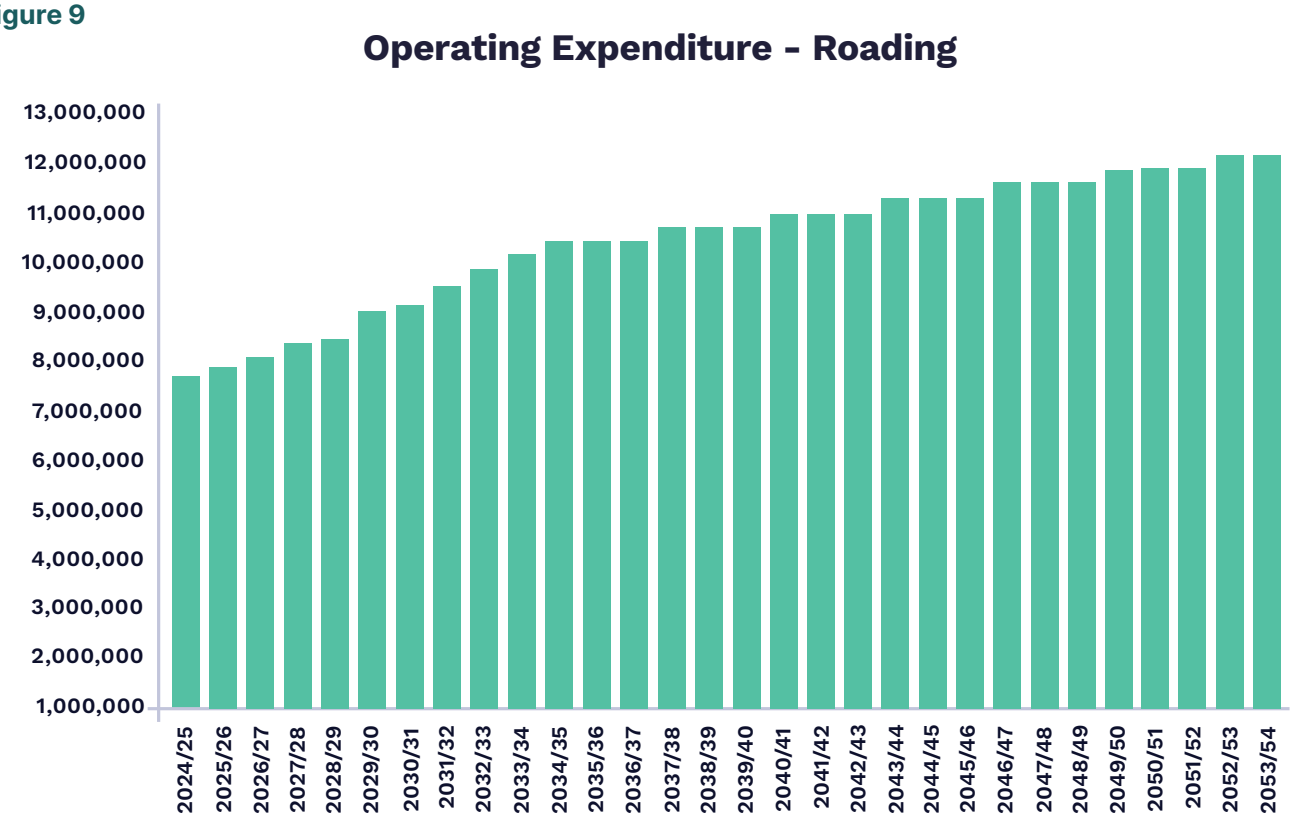
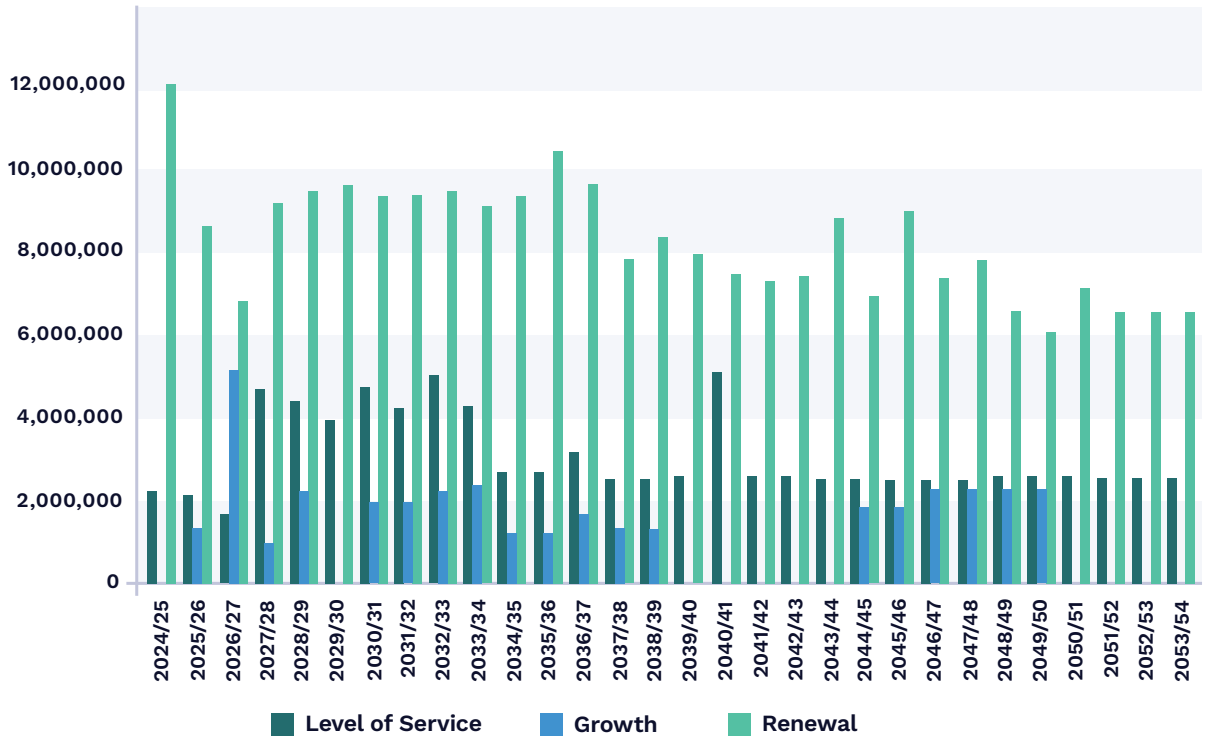


Figure 10

Capital Expenditure Forecast by Type - Roading



Water Supply

Uninflated	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Operating	4,287,047	4,672,735	5,020,805	5,269,058	5,001,572	5,738,286	6,079,411	6,210,070	6,407,771	6,506,990
New Level of Service	4,795,281	858,251	2,088,251	1,034,067	4,016,507	3,288,251	296,235	296,235	666,235	296,235
Growth	500,000	626,854	943,123	157,843	0	159,000	162,831	162,831	188,083	173,271
Renewal	2,970,853	1,492,905	1,282,905	6,290,905	6,290,905	1,865,905	1,865,905	1,615,905	1,615,905	1,615,905

Uninflated	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
Operating	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000
New Level of Service	1,858,710	1,858,710	1,858,710	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960
Growth	149,339	150,173	262,114	34,645	35,545	36,470	37,418	38,391	39,389	40,413
Renewal	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633

Uninflated	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
Operating	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000	7,100,000
New Level of Service	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960	1,023,960
Growth	171,250	171,250	555,413	555,413	555,413	555,413	600,000	600,000	600,000	600,000
Renewal	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633	1,578,633

Figure 11

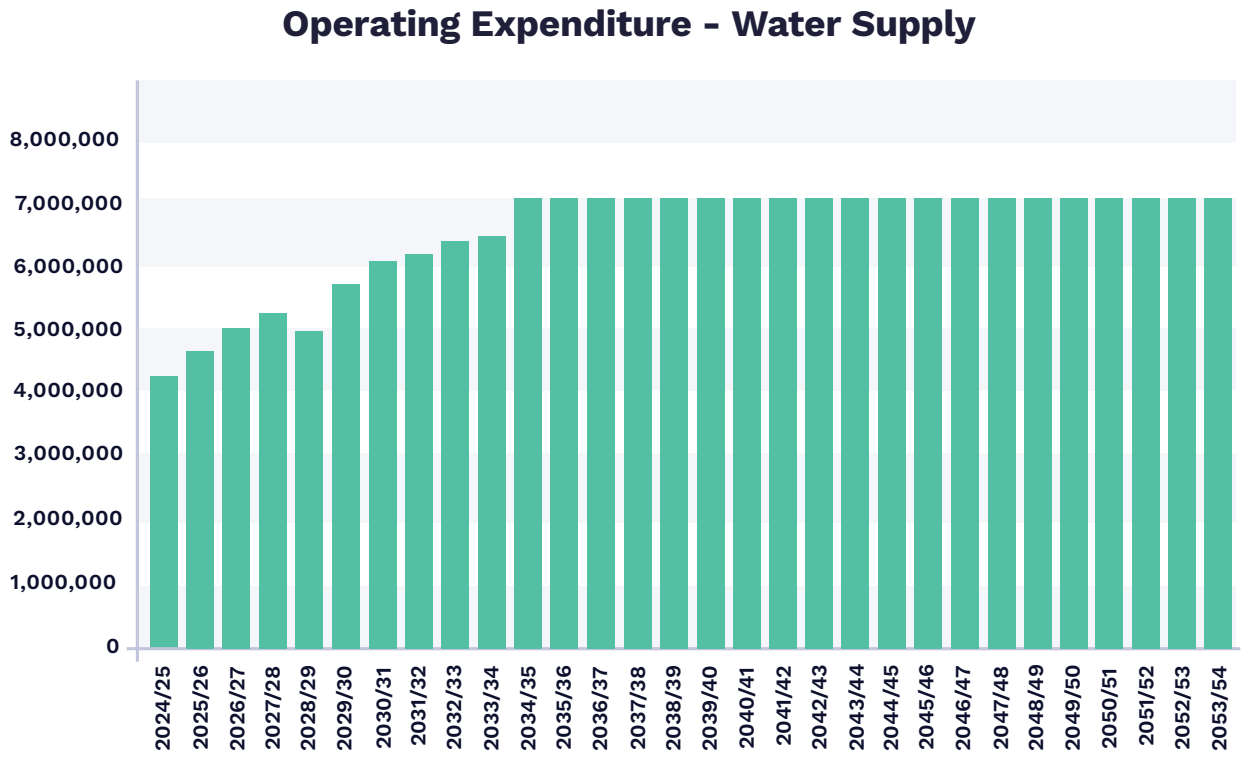
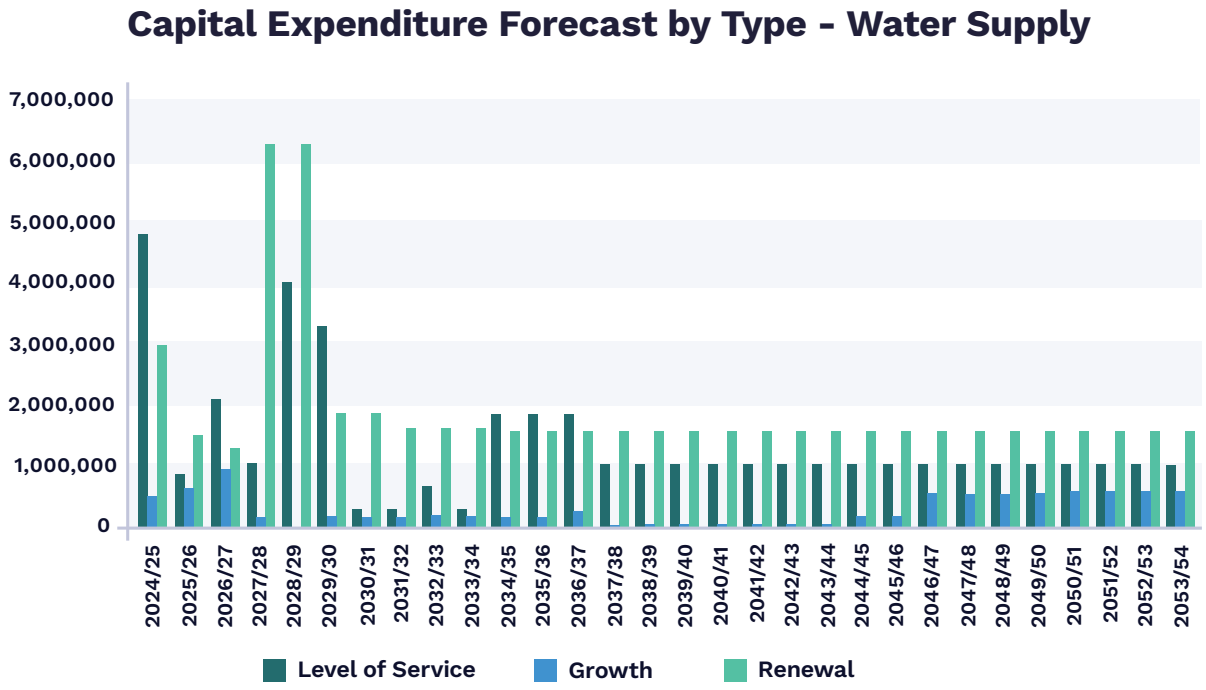


Figure 12



Wastewater

Uninflated	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Operating	7,767,099	7,902,826	8,431,941	9,280,595	8,805,029	9,392,356	9,661,061	10,093,043	10,757,072	11,029,411
New Level of Service	1,543,507	3,450,380	880,835	3,332,218	1,808,803	614,987	3,127,755	3,883,434	1,161,707	411,707
Growth	0	626,854	1,515,059	223,939	0	319,152	481,184	801,990	990,847	278,031
Renewal	7,223,361	7,282,340	6,240,571	5,310,372	4,518,587	4,096,302	2,538,785	2,309,681	2,309,681	4,299,681

Uninflated	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
Operating	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000
New Level of Service	5,403,615	228,165	1,174,215	1,396,815	61,215	61,215	61,215	5,403,615	228,165	1,174,215
Growth	536,495	537,329	659,764	614,747	568,702	36,470	37,418	38,391	39,389	40,413
Renewal	1,835,374	7,244,753	1,835,374	8,468,993	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374

Uninflated	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
Operating	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000	12,900,000
New Level of Service	61,215	61,215	61,215	61,215	61,215	61,215	61,215	5,403,615	228,165	1,174,215
Growth	813,784	905,501	1,348,607	1,362,593	1,123,453	1,208,688	1,151,162	483,537	545,554	483,538
Renewal	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374	1,835,374

Figure 13

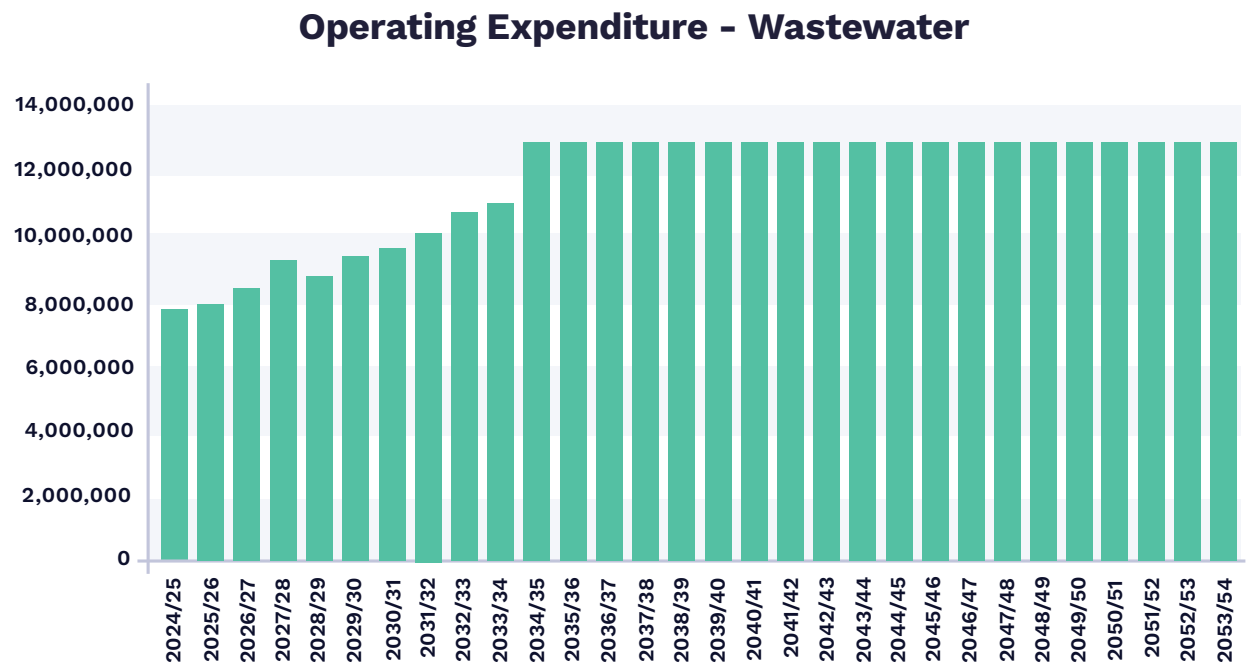
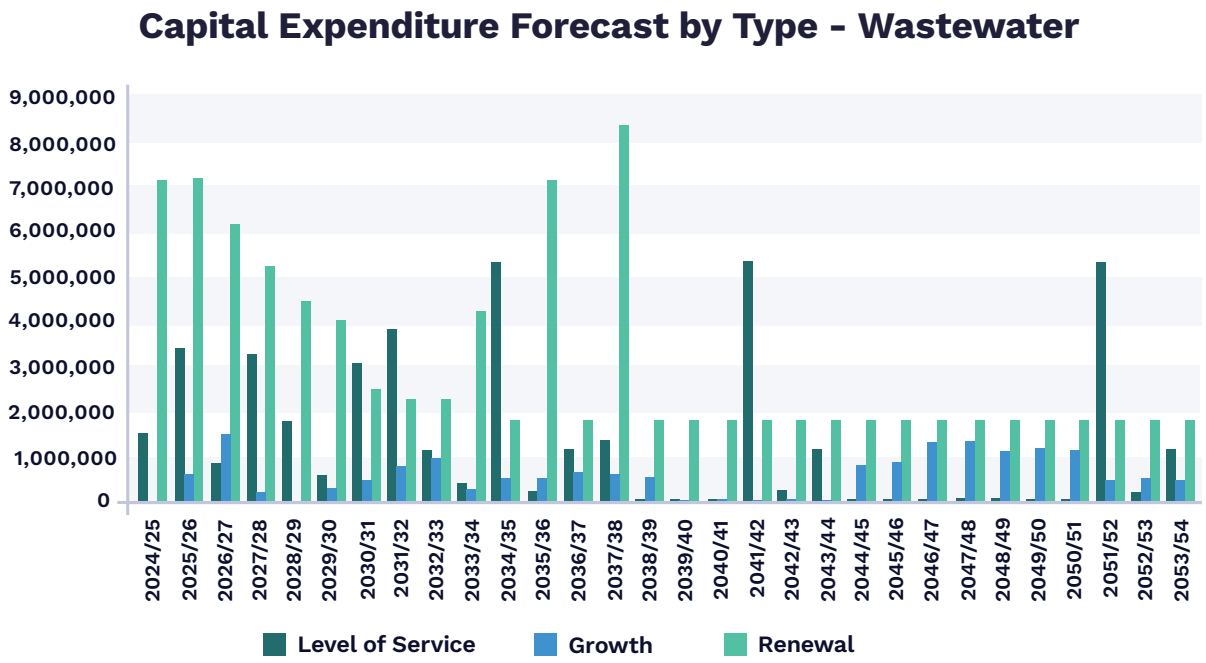


Figure 14



Stormwater

Uninflated	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Operating	1,779,161	1,874,611	2,141,935	2,367,173	2,426,077	2,700,764	3,033,068	3,360,906	3,649,043	3,935,080
New Level of Service	2,845,516	1,609,474	1,609,474	2,357,558	3,409,558	5,109,558	5,080,326	3,680,326	3,580,326	1,080,326
Growth	0	2,526,764	2,504,219	327,169	0	600,000	503,796	503,796	469,363	2,669,006
Renewal	155,526	105,526	105,526	105,442	115,442	105,442	134,674	134,674	134,674	134,674

Uninflated	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
Operating	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000
New Level of Service	612,150	612,150	612,150	612,150	612,150	612,150	612,150	612,150	612,150	612,150
Growth	1,405,662	1,406,496	1,293,366	511,852	35,545	36,470	37,418	38,391	39,389	40,413
Renewal	205,629	205,629	205,629	205,629	205,629	205,629	205,629	205,629	205,629	205,629

Uninflated	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
Operating	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000
New Level of Service	612,150	612,150	612,150	612,150	612,150	612,150	612,150	612,150	612,150	612,150
Growth	545,581	545,581	915,913	915,913	915,913	915,913	40,413	40,413	40,413	40,413
Renewal	205,629	205,629	205,629	205,629	205,629	205,629	1,000,000	1,000,000	1,000,000	1,000,000

Figure 15

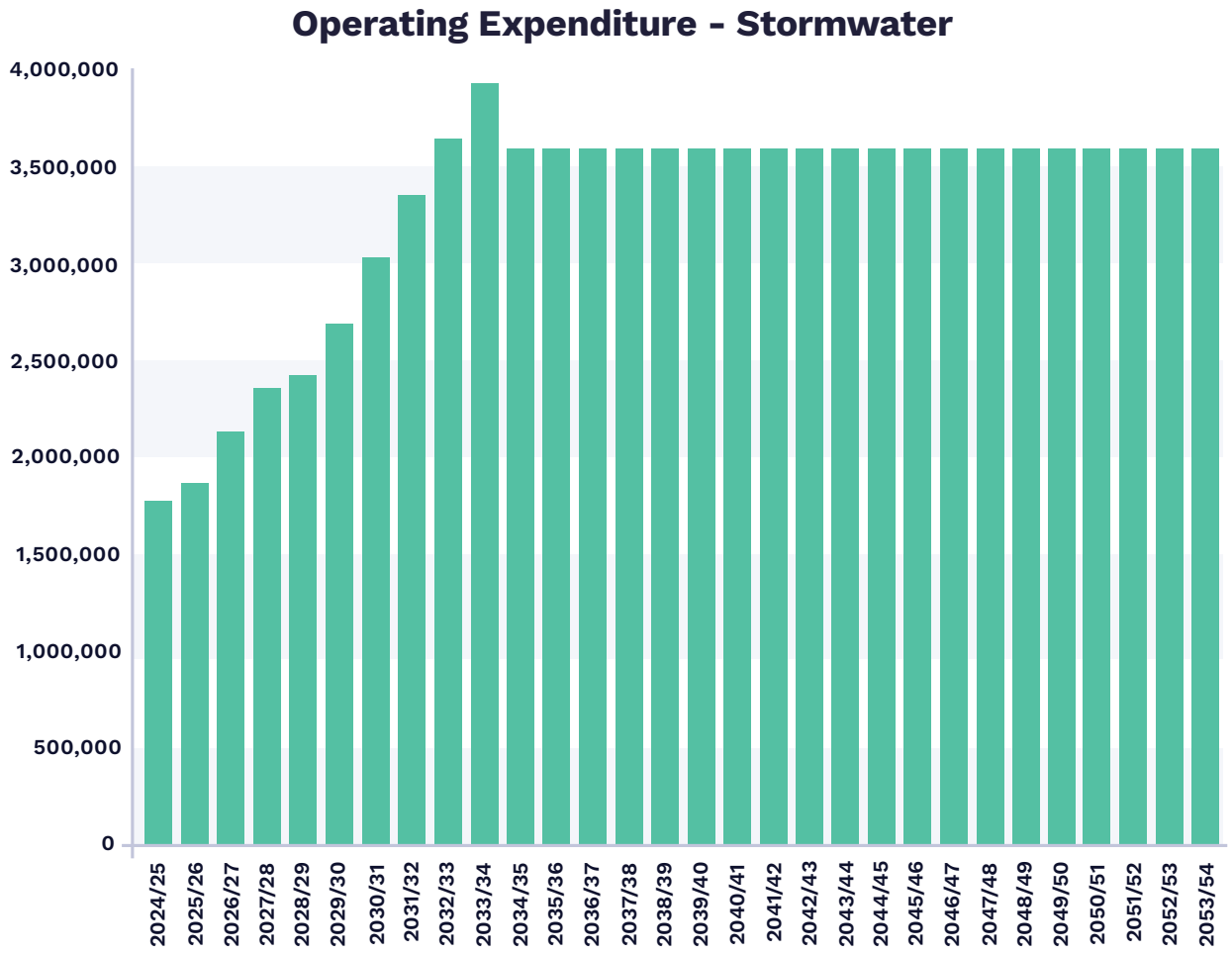
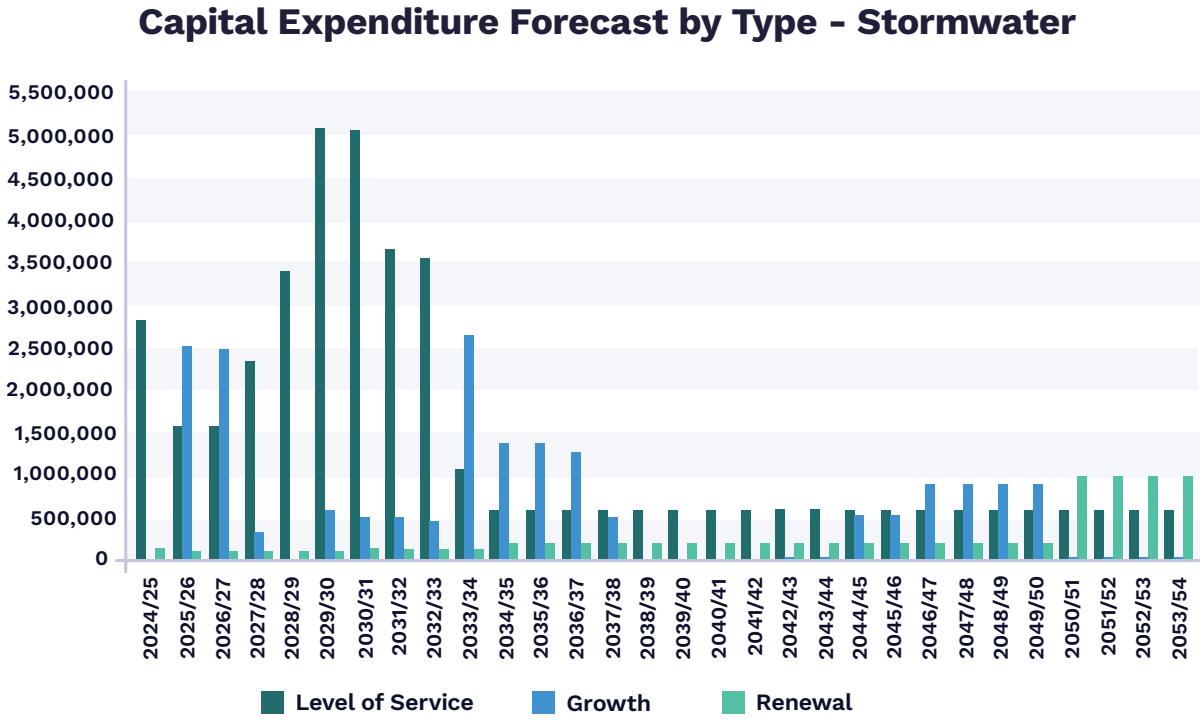


Figure 16



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