



Rautaki Tūāhanga
**Infrastructure
Strategy**



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Executive Summary

The Infrastructure Strategy for Tararua District Council (TDC) 2024-2054 sets out Council's strategic direction for delivery of our key services and the infrastructure assets that support them, over the next 30 years.

Infrastructure delivery for the Tararua District requires a broad view supported by many narrow ones to ensure the strategic drivers and big picture outcomes of the district are achieved by the individual decisions that are made. Infrastructure is not noticed when it is working well. The public have a basic expectation that the services they use will just work and that it won't impact their day to day lives. There is not a conscious thought about whether their tap will supply water or that their toilet will flush or that they can drive to their workplace or walk their children to school on a footpath.

As managers of the infrastructure that our community expects to just be there, it is our role to ensure it meets certain minimum standards (Levels of Service) in a way that has the least impact on them – it is reliable and delivered in a way that is resilient to external forces climate change and natural hazards, is safe for all, that looks after our environment while planning for district growth and is delivered in an affordable manner. The team making those decisions on how best to utilise the resources available to them do so with many challenges, constraints and assumptions.

Affordability of the delivery of our infrastructure is an overarching constraint. The maintenance and renewals decisions need to be timed and made in a way that maximises the life of the assets and therefore results in a sustainable level of investment to supply the service. For example, if we have a weather board house we know at some point it will need to be repainted – if we paint it too early we'll be effectively be wasting some of the remaining life the original paint still had but if we leave it too late we'll have repairs we'll have to do first costing us more than it should have and the only way we can know where that sweet spot is, is by monitoring it. Our assets require the same attention and decision

making through proper Lifecycle Management. By collecting data on our assets and their condition we can work to get the timing right – do we do a bit of minor maintenance now to save having to do a full renewal for a bit longer or has it been left too long, and we're forced to replace it. Though we know more about some assets than others, our overall picture is one of highly aged assets with a significant number in poor condition and so a considered strategy is required to ensure we look after our existing assets through demand management (e.g. leak minimisation) as well as just repairing issues.

Alongside this core asset management approach, adaptability to changes in external factors is required. A change in government and subsequent water reform change along with the introduction of a new waters regulator (Taumata Arowai) has resulted in legislative change and new targets to be compliant which alongside existing consent conditions creates a challenging operating environment. It is therefore important that risk management occurs, and prioritisation is performed to optimise the work done to focus on areas that are the most important.

All of this is performed with a level of uncertainty. The change of central government and the subsequent modifications underway of the direction for transport through the Government Policy Statement on Land Transport (GPS) and Water through Local Water Done Well makes some strategic direction making a moving target until it is finalised well after this document is written. With Waka Kotahi NZTA's National Land Transport Programme not finalised at the time of writing, this means there is a level of uncertainty around Council's Roading subsidy it will receive for the next three years. This has driven some assumptions into this Infrastructure Strategy and into the decision-making processes the team are currently using.

A key assumption is related to the Waka Kotahi NZTA three year funding block allocation. The application to Waka Kotahi NZTA for the three year funding for \$72m for the three years but based on informal feedback from them we have adjusted the number



to the \$60m amount used in this document and the Long Term Plan to reflect what we're likely to have approved and once that number is confirmed we will adjust the Roding Asset Management Plan, the Infrastructure Strategy and Long Term Plans to show that. The other main assumption is that there will be no change to the delivery mechanism for the three waters. While "Local Water Done Well" encourages Councils to set up regional organisations to deliver three waters across multiple councils, there has not been any progress on this at the time of writing and to ensure consistency the planning done on this activity has been based on the status quo.

Our Vision

We thrive together. Vibrant, connected communities where our land and our people are nurtured and our people flourish.

Mā te whenua, mā te waiora tātou e ora ai hei hapori ngāhau hei hapori honohono hoki.

Our Infrastructure Objectives

- To ensure a reliable supply of safe drinking water to our communities.
- To ensure efficient and reliable wastewater treatment that meets environmental outcomes.
- To ensure efficient stormwater network capacity that protects from flood events.
- To ensure public roads and footpaths are safe, reliable and resilient.

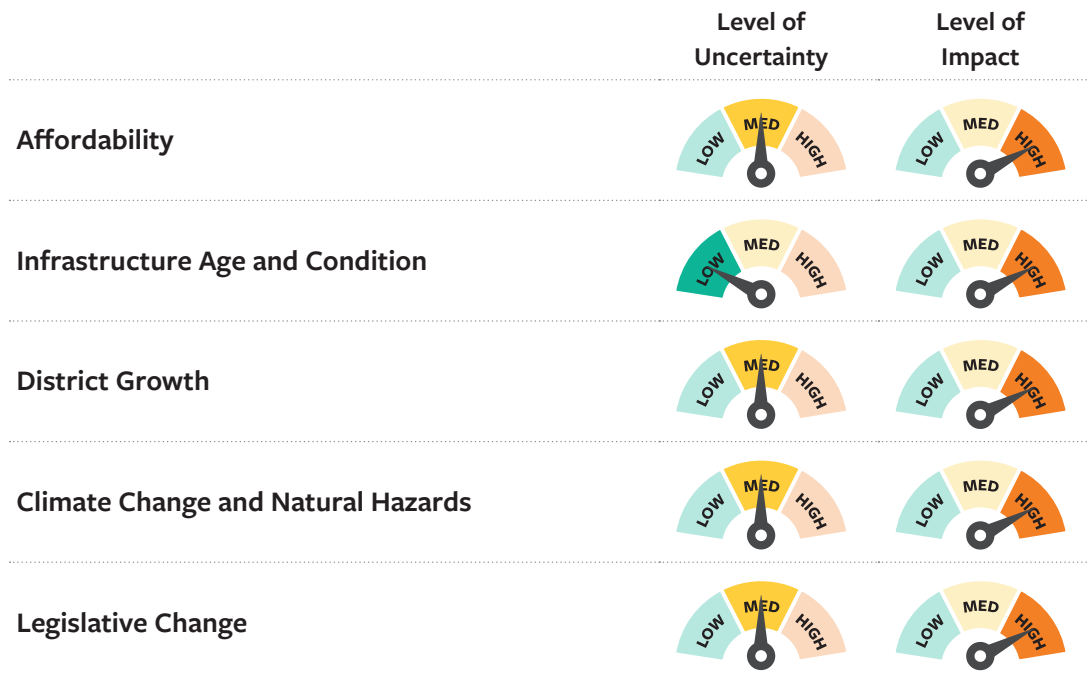
Strategic Enabler

Reliable infrastructure that is fit for purpose and future proofs our thriving district for tomorrow.





Our Big Picture Issues



Our Key Principles

Lifecycle Management	Evidenced Based Decision Making
	Proactive Management
Demand Management	Investment in Resilient and Sustainable Infrastructure
	Manage within Existing Boundaries
Levels of Service Management	Aim to Deliver Existing Service Levels
Risk Management	Improve Asset Criticality Understanding
	Decreased pollution in the rivers and streams



Our Priorities & Areas of Focus



Improving asset information and infrastructure asset management maturity.



Delivering ongoing maintenance and renewals programmes to meet current renewal levels and with a view to preserving asset life and levels of service.



Meeting levels of service concurrently with reactive maintenance, while developing and implementing capital and renewal programs to meet current and future demand.



Addressing key level of service deficiencies



Addressing key network performance issues



Improving service delivery and asset resilience to natural hazards and the effects of climate change



Network extensions to enable sustainable urban growth and infill in our townships.



Ensure compliance with resource consents and statutory requirements.



Ensure infrastructure and services are developed with environmental protection as a key consideration including through the reduction of emissions.



Introduction

The Infrastructure Strategy for Tararua District Council (TDC) 2024-2054 sets out Council's strategic direction for delivery of our key services and the infrastructure assets that support them, over the next 30 years.

Infrastructure plays an important part in our everyday lives, providing a platform for safe, thriving communities and allowing our business community to deliver goods and services to customers. 'Infrastructure' refers to physical and organisational structures and facilities (e.g. treatment plants, water pipes, roads, footpaths etc).

Based on the strategic direction set out in this document Council will develop a schedule of intended capital works for the next 30 years. Council will prioritise these projects based on the needs of the community and funding available. The projects identified will be discussed in more detail in the respective Activity Management Plans.

It is also important to acknowledge the opportunities that lie ahead for our district. With the ongoing growth we are currently experiencing, we can anticipate even more development in the future, particularly when the new Te Ahu a Tūranga Manawatū-Tararua Highway is completed in 2025. While such opportunities are great for our district, they also require proactive planning to address the mounting pressure on our infrastructure and housing. This Strategy and the Finance Strategy, working alongside the Growth Strategy and District Plan reviews, will set out how we can grow in a sustainable way while protecting the things that make Tararua unique. In the first 10 years of the Strategy Council plans to partly meet requirements for forecast growth as it improves its understanding of three waters networks and improves demand management to meet growth in future years.

Climate change impacts are already being felt and climate forecasts are for an increase in events that bring heavy rain, strong winds, and longer dry periods. There is significant uncertainty in forecasting climate change over the period of this plan and the life of

infrastructure assets. Decisions made by Council now will directly impact on the future climate resilience of communities and the environment. The capacity of assets will be impacted by both increased rainfall intensity and climate challenges like drought. Decisions about roading drainage, stormwater, water sources and storage are priorities for this strategy.

The District continues to recover from the effects of Cyclone Gabrielle and there will need to be increasing expenditure on 'building back better' to help ensure infrastructure resilience. This poses an affordability challenge due to Waka Kotahi/NZTA funding constraints, Council debt levels, and the increasing rates burden on the community.

There are long-term funding and affordability challenges for Council to deliver the projects set out in the Activity management Plans, how we plan for and provide infrastructure and how we manage the impact of peak demand on our assets and levels of service.

The new government has legislated new three waters reform Local Water Done Well. The responsibility for the delivery of three waters will remain with Council with potential for regional collaboration that is discussed in more detail later. Infrastructure challenges such as renewal, resilience and reliability, service standards, and changes in growth and demand will continue to be Council's responsibility and how Council will deliver these is set out in this strategy.

Through all these challenges and opportunities ahead across the infrastructure portfolios, we want our infrastructure, our whenua (land) and our people of Tararua to thrive together - Ka huri ngatahi Tararua! We thrive together. Vibrant, connected communities where our land and waters are nurtured, and our people flourish. Mā te whenua, mā te waiora tātou e ora ai hei hāpori ngangahau hei hāpori honohono hoki.



Purpose of the Infrastructure Strategy

This Infrastructure Strategy purpose is to provide reliable infrastructure that is fit for purpose and future proofs our thriving district for tomorrow.

It has been prepared to meet the requirements of section 101B of the Local Government Act 2002 (LGA). Section 101B requires Councils to prepare an infrastructure strategy that identifies:

- Significant infrastructure issues facing Tararua District over the next 30 years
- The principal options for managing these issues and the implications of these options.
- The Act also requires Council to consider and set out in this strategy how, in managing its infrastructure assets:
- It will respond to growth or decline in demand for services reliant on those assets;
- It will manage the renewal or replacement of existing assets over their lifetime;
- Planned increases or decreases in levels of service will be allowed for;
- Public health and environmental outcomes will be maintained or improved; and
- Natural hazard risks will be addressed in terms of infrastructure resilience and financial planning.

Developing this strategy assists Council to look at what is likely to be required over the next 30 years; balancing the ratepayer's ability to pay and future ratepayers having well maintained and functioning infrastructure.

The Infrastructure Strategy, in conjunction with other strategies of Tararua District Council i.e., Growth Strategy, District Strategy, Finance Strategy and the relevant Asset and Activity management Plans tell the story about where of Tararua District Council is currently, expect to be, and how it intends to get there. It explores policy considerations, aspirations for growth, and provides an overview of the key constraints. This includes funding, physical restrictions and data availability and accuracy. An understanding of the age, condition, and performance of critical

assets, as well as future demand, is important in assessing actual and planned expenditure to sustainably maintaining assets.

Scope of the Infrastructure Strategy

Overview of Services

The scope of the Strategy is primarily defined by the Local Government Act 2002. Section 101B of the LGA requires Council's infrastructure strategy to cover infrastructure assets used to provide services by or on behalf of Council in relation to the following activities:

- Water supply
- Sewage and the treatment and disposal of sewage (wastewater)
- Stormwater drainage
- Roads and footpaths
- Flood protection and control works
- Any other assets that the local authority, in its discretion, wishes to include in the strategy.

This Infrastructure Strategy includes TDC's infrastructure activities under the portfolio categories included in the following table.



TABLE 1: INFRASTRUCTURE PORTFOLIOS INCLUDED IN OUR INFRASTRUCTURE STRATEGY

Portfolio	Activities	Key Infrastructure Assets
Waters	Water	<ul style="list-style-type: none">• 8 water intakes including 2 bores;• 7 water treatment plants• 1 pump stations, 14 reservoirs;• 267 kilometres of water supply pipelines• 47 kilometres of laterals
	Wastewater	<ul style="list-style-type: none">• 7 treatment plants• 21 sewer pump stations• 95 kilometres of wastewater pipeline• 1100 maintenance chambers
	Stormwater	<ul style="list-style-type: none">• 28 kilometres of stormwater pipelines• 26 kilometres of open channel drains and streams• 1160 maintenance chambers and sumps
Transportation	Roads and footpaths	<ul style="list-style-type: none">• 1,191km sealed roads• 767km unsealed roads• 405 bridges and 149 high-capacity culverts 1,842km drains and channels• 120km footpath

This strategy does not cover:

- State highways, as these are the responsibility of Waka Kotahi NZ Transport Agency
- Flood protection and control assets, as these are the responsibility of the Horizons Regional Council
- Other Infrastructure Portfolios e.g. buildings and facilities

In future Council will consider the inclusion of a wider range of infrastructure portfolios to ensure more holistic planning for sustainable service delivery over the 2027/30 period. This is likely to include:

- Parks, reserves, and recreation facilities;
- Solid Waste and landfill facilities; and
- Property and community buildings.



Infrastructure Strategy Structure

The layout of this document and the corresponding LGA section are shown below.

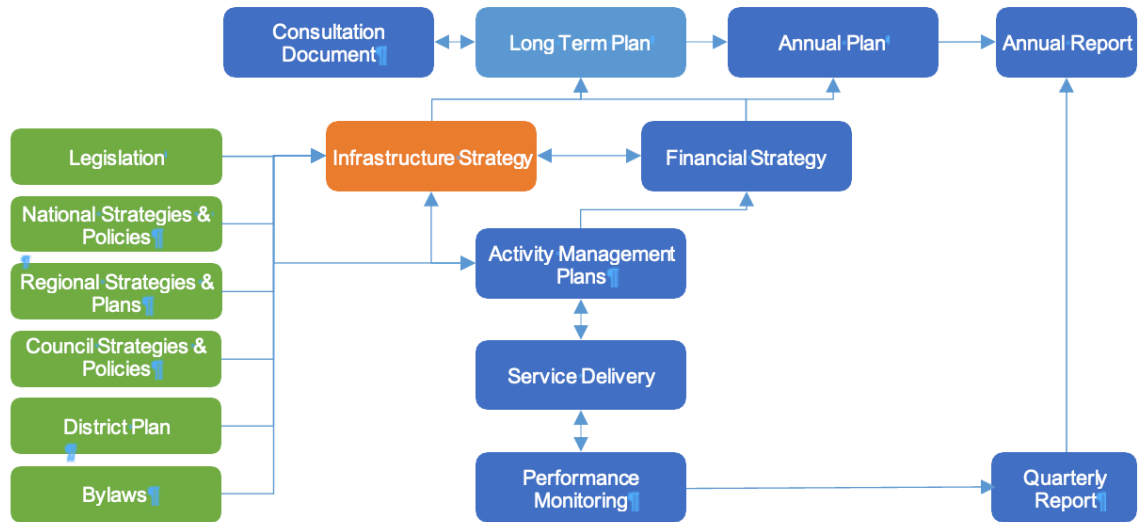
TABLE 2: INFRASTRUCTURE STRATEGY STRUCTURE

Section	Purpose	LGA 2002 (Section 101B)
Executive Summary	Provides a summary of the document.	
Introduction	Identifies the purpose, scope, and structure of the strategy, as well as its relationship to other documents.	6
Strategic Context	Provides context through an overview of the district, and the Council. Identifies our objectives for infrastructure and how infrastructure contributes to our community's wellbeing.	2(a)
Our Infrastructure Management Approach	Summarises our key principles used to manage infrastructure in a way that maximises value for money. Outlines assumptions made as part of the strategic planning process and the uncertainty related to these.	3(a) to 3(e), 4(c), 4 (d)
Our Infrastructure	Provides a summary of the current state of our core infrastructure.	6
Key Infrastructure Challenges	Identifies the internal and external factors influencing the management of Council's infrastructure.	2(a)
Principal Options for Addressing Challenges	Summarises our significant decisions. Outlines the principal options for managing key risks and challenges identified for each activity.	2(b), 4(b)
Infrastructure Investment Forecasts	Summarises our most-likely scenario and expected investment.	4(a)
Improvement Plan	Outlines the areas we will be focussing on for future improvement of the Infrastructure Strategy	



Relationship to Other Documents

This strategy provides a link between several important Council documents such as the District Plan, Financial Strategy, and Activity Management Plans. The image below shows the relationship between the Infrastructure Strategy with other Council Plans and Policies interlinking with this document.



Planning Horizons

Our planning has several different time horizons as shown in Figure 2. Table 3 outlines the intent of key Council Plans and their level of accuracy.

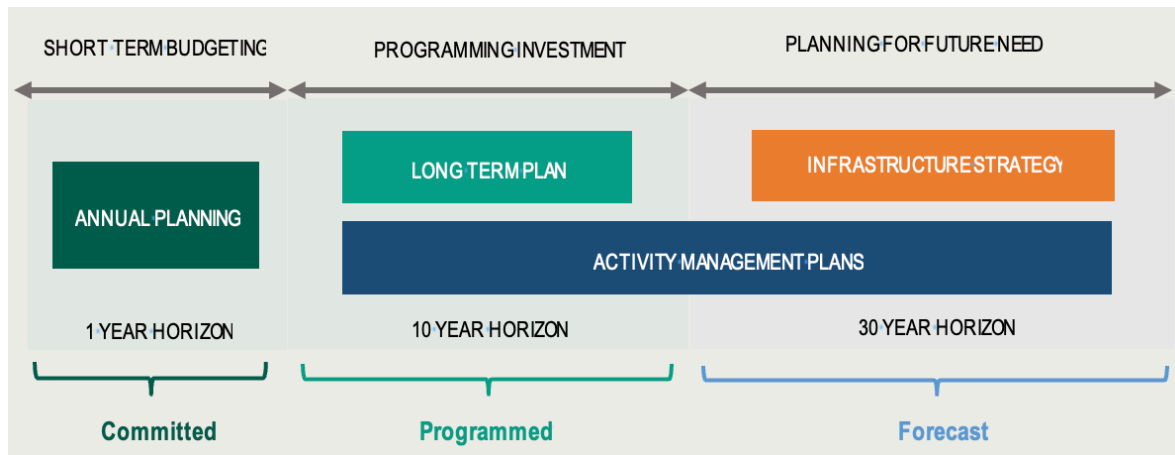







TABLE 3 PLANNING INTENT AND ACCURACY

Planning Horizon	Council Plans	Intent	Level of Accuracy
30+ years	2024 – 2054 Infrastructure Strategy	<p>Forecasting Future Need</p> <p>The Infrastructure Strategy guides policy decisions, goal setting and long-term capital investment. It helps establish the sustainable level of funding required to deliver service and accommodate future demand.</p> <p>We update our Infrastructure Strategy every 3 years.</p>	 <p>(depending on assumptions and data accuracy)</p>
10-30+ years	Activity Management Plans	<p>Programming Investment</p> <p>The key documents underpinning the Infrastructure Strategy are the Transportation Asset Management Plan and 3-Waters Asset Management Plan. These plans combine management, financial, engineering, and technical practices to ensure that the level of service required by customers is provided effectively and efficiently. This requires taking a whole-of-life approach to asset investment planning.</p> <p>Areas of specific focus for the updates included; ensuring relevant levels of service and service performance measures, assessing performance, identifying new key risks and significant issues. This work has led to the identification of the current and future asset requirements and the financial forecast for capital (renewals and new capital projects) and operational expenditure for each asset group.</p> <p>These documents should be referred to if tactical and/or operational detail related to this strategy and the respective assets is sought.</p> <p>Our Activity Management Planning is updated on an ongoing basis, but plans are formally adopted by Council every three years.</p>	 <p>(depending on data accuracy)</p>
10+ years	2024 – 2031 Long Term Plan	<p>Committing Budgets</p> <p>These plans allow for consultation with the community around the services we provide. They are made publicly available once finalised.</p> <p>Areas of specific focus for the updates include; ensuring relevant levels of service and sustainable cost of service. The Plan outlines how our services are performing and investment in capital projects and operational required to provide our services over the next 10 years.</p> <p>We update our Long Term Plan every 3 years.</p>	 <p>(depending on data and cost estimate accuracy)</p>



Planning Horizon	Council Plans	Intent	Level of Accuracy
1-3 years	Annual Plan	This detailed level planning prioritises the capital projects and operating budget for the next 1-3 years. Where capital project prioritisation is completed using a business case and optioneering process. This is particularly the case for Transportation, where investment planning must meet Waka Kotahi investment decision making requirements.	 <p>(depending on cost estimate accuracy)</p>

Financial Strategy

The programme of works in the Financial Strategy is essential to build resilience, increase our levels of service, provide for growth, and maintain our current asset base.

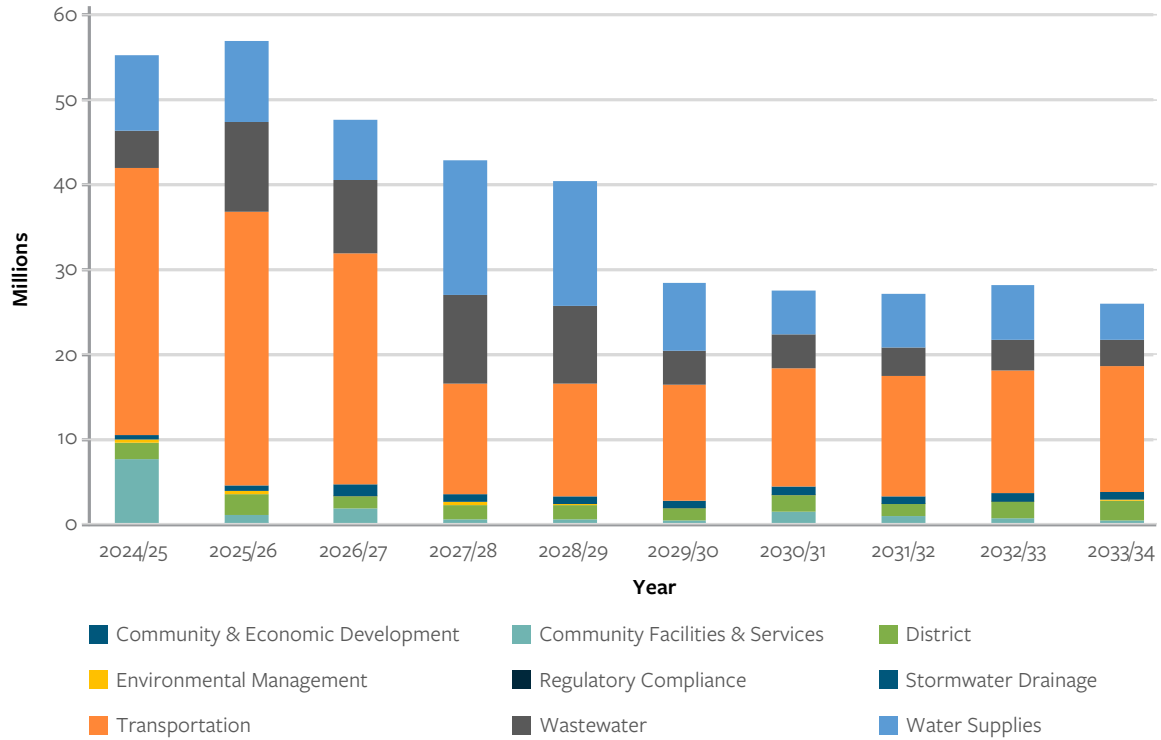
Over half Council’s planned Capex over the next 10 years in this roading space. Our communities expect clean water, safe roads and suitable recreational facilities that contribute to making Tararua place where the people are thriving, happy, safe and well.

Affordability is a key consideration within the Financial Strategy. We explain affordable as something is inexpensive or reasonably priced, Council aims to deliver its services in an affordable way but faces challenges in spreading the cost over a small number of ratepayers. We continue to experience significant cost increases as has every house and business in New Zealand due to the much higher inflation than what was planned for. Significant cost increases have occurred, in the three waters and roading activities due in part to legislative requirements as well as recovering from devastating effects of Cyclone Gabrielle and previous weather-related events. As signalled previously, keeping up with the cost increases means that rates increase are needing to be higher.

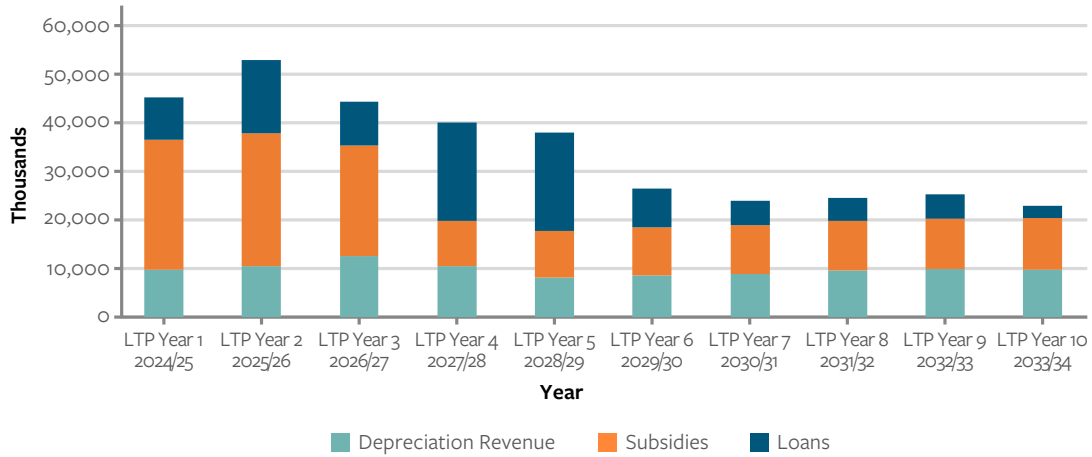
When assessing affordability, we visit our regular environmental scans that look at local and political items that could impact our district, we consider our spend before going ahead and where a budget has been provided for not going ahead and spending if it is not necessary to do so. In trying to maintain affordability and provide essential services to our community we are constantly trying to find the happy medium between these things. We revisit our budgets annually, weighing up necessities and nice to haves and this plan as with the previous annual plan have paired back to the minimum and what is necessary across the board.



2024-2034 Capital Programme



Infrastructure Capital Program Funding





Strategic Context

District Overview

Tamaki-nui-a-Rua

Rangitāne o Tamaki nui-ā-Rua and Ngāti Kahungunu ki Tāmaki nui-a-Rua, who represent their many hapū with their own whenua and awa tributaries, have both signed deeds of settlement with the New Zealand Government and have partnership agreements with Tararua District Council. These memoranda of partnership recognise the relationship and responsibility of Council to support iwi aspirations and hopes for the future of their whānau.

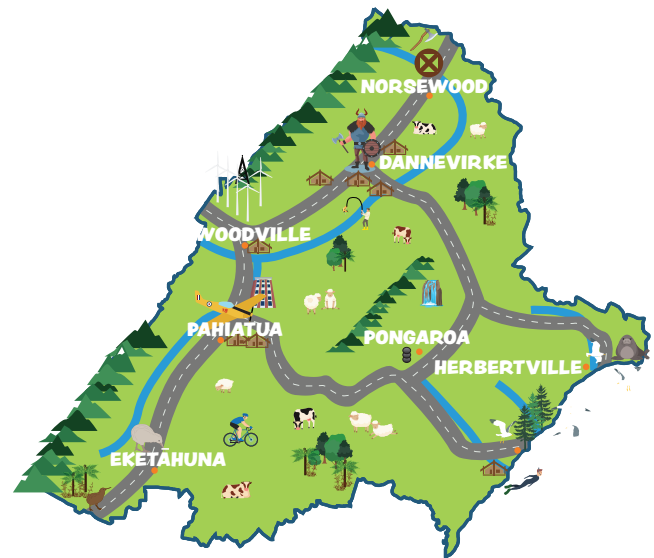
While the Council has obligations to all Māori, it has a further responsibility to act in good faith and in a manner of mutual respect with its iwi partners. This includes acknowledging and respecting iwi priorities, their traditions, particularly ancestral land, water, sites, wāhi tapu, valued flora and fauna as well as other taonga.

To give effect to the relationships, all necessary information must be shared for iwi and Māori to make informed contributions to Council decision-making. This will not only allow for open and transparent engagement, but the foundation to build enduring trust and opportunity, for Council to iwi and iwi to Council.

Together with Council, Rangitāne o Tamaki nui-ā-Rua and Ngāti Kahungunu ki Tāmaki nui-a-Rua share a vision for a prosperous and healthy district that supports its people and their cultural values. These are the principles of kotahitanga and kaitiakitanga that encompass sustainability, are for the environment and appropriate management of natural and physical resources is achieved through working together.

Geographic Context

The Tararua district is located within the Manawatu-Whanganui region, situated on the southeast coast of the North Island, bound to the west by the Ruahine and Tararua Ranges. Covering an area of



4,364.65km² near the south-east corner of New Zealand's North Island, comprised of a resident population of approximately 19,050. It has several urban settlements with the largest being Dannevirke, Eketāhuna, Pahiatua and Woodville.

The 2020 National Climate Change Risk Assessment and the 2021 Manawātū-Whanganui Regional Climate Risk Assessment form the basis of Council's climate change forecasts. The forecasts are through to 2040 and 2090 and project an increase in events that bring heavy rain, strong winds, and longer dry periods, as well as sea level rise.

"Climate change is one of humanity's greatest challenges. The impacts of climate change are already being felt within the communities, businesses, native ecosystems, and infrastructure within the region. Climate change, and its associated impacts will have significant social, economic, environmental, and cultural implications for the region's communities." 2021 Manawātū-Whanganui Regional Climate Risk Assessment

There remains a high level of uncertainty in forecasting climate change especially at a local level and the science continues to rapidly develop. Council overlays the long-term changes with an expectation



there will be short-term climatic variations where change will occur with more intensity and variability, potentially in a non-linear way i.e. in step changes.

Council faces funding pressure to build infrastructure that is climate resilient over the life of the asset, is safe, and meets community needs. Climate change risk is expected to impact to the way Council allocate resources and the type of proactive projects undertaken.

For example:

Transport – More intense and frequent rainfall causes landslides and soil erosion resulting in damage to roads. Improved drainage is required to reduce long-term maintenance costs.

Drinking water - Longer dry periods increase demand at a time when the amount of water available from rivers is reduced. Intense rainfall creates high turbidity and makes treatment more difficult. Infrastructure that is more resilient to long dry periods and high intensity rainfall will be required to ensure reliable water supplies.

Wastewater - More intense and frequent rainfall means more wastewater to treat due to infiltration from stormwater. Managing methane emissions from wastewater treatment may require new investment.

Stormwater - More intense and frequent rainfall may overwhelm stormwater systems. Investment in increasing capacity and coverage is required to ensure stormwater systems are safe and resilient.

Our People

More people are choosing Tararua as a place to live, work and play.

Over the past decade, Tararua has seen a surge in growth, especially in urban areas like Pahiatua and

Woodville, with increases of 11%, and Dannevirke growing by 8% from the 2018 census.

Council has projected that over the life of this plan, the district population will increase by 5.7% with the total population in June 2034 at 20,357, compared to 19,261 forecast for June 2024 in the previous Long Term Plan.

The total number of households is predicted to increase by 7.5% to 8,520 (increase of 594 households). These additional households are anticipated to be split 70% urban & 30% rural.

Council has been working on it's district plan review over the previous three years and as a result of this has produced a Growth Strategy for the district which it has recently consulted on. Council predicts that urban development will drive this growth, despite a recent dip in housebuilding due to economic pressures.

The forecasts are based on Informetrics data and factor in historic growth forecasts and the anticipated positive impact of the Te Ahu a Tūrangā Highway. Although the population is an ageing demographic shifting towards an older population, with the number of older residents in the district increasing significantly over the long term, this will lead to changes in the way Council delivers services. The number of residents aged over sixty-five increased by 17.3% (583 people) from June 2018 to June 2023. Older people at June 2023 made up 20.6% of the estimated resident population (up from 19% in the March 2018 census). Council forecasts this to increase to 26.2% of the population in 2034.

This is an increase of 1,231 people aged over sixty-five to 5,333 residents for the 10 years, against a total population forecast increase of 1,096 residents to 20,357.





To accommodate this growth and anticipated changes to our population, Council is exploring funding options like development contributions to manage the infrastructure demands without overburdening current ratepayers. This is part of a broader strategy to prepare for growth, ensuring community facilities meet future needs and keeping rates affordable. The rising population is also putting pressure on the rental market, complicating housing and employment attraction. Employment in Tararua is expected to grow by 1,367 FTEs over 30 years, with rural areas and Dannevirke seeing the most significant increases.

Our Economy

Tararua is home to four primary towns: Dannevirke, Woodville, Pahiatua, and Eketāhuna, along with several smaller communities throughout the district. It boasts strong connectivity to both the south and north, positioning Wellington and Hawkes Bay within a manageable driving distance. Additionally, Palmerston North, a significant provincial city, is close enough for daily commuting, allowing Tararua residents to enjoy the district's lifestyle without compromising on career opportunities. The introduction of the Te Ahu a Tūrangā (Manawatū Tararua Highway) is set to further enhance accessibility, promising shorter travel times and more attractive living options in Tararua, especially in Woodville.

Council's growth strategy highlights the district's strategic location as an ideal spot for creating industrial and potential satellite distribution hubs, facilitating the transport of goods in and out of the area.

By 2053, Tararua's GDP is expected to reach \$1.208 billion, marking a \$378 million increase from 2022 and averaging an annual growth rate of 1.2% over the next three decades. Of this growth, rural Tararua is projected to contribute \$188 million, with the urban centres adding another \$190 million.

Currently, the primary sector is the region's dominant force, contributing 36% to the GDP, with manufacturing also playing a significant role at about 20%. This dynamic is expected to remain stable for the next 30 years. Nevertheless, forecasts indicate an increasing need for industrial and commercial real estate, as highlighted in the land use overview.

Tararua Strategic Context

Tararua District Council is the local territorial authority for the district. Several different borough councils established the assets of Council prior to the merger and establishment of Tararua District Council in 1989.

The delivery of services such as transportation, water supply, wastewater and stormwater are a core function of Council, with provision and management of associated infrastructure accounting for the largest portion of its annual operating and capital expenditure.

These services and associated infrastructure provided by the Council protects public health by providing clean drinking water and treating and disposing of wastewater appropriately. It enables goods and people to move around the district, contributing to the economy and facilitating social interaction. It ensures that homes and businesses are protected from the effects of flooding, and it is at the heart of the recovery following a natural disaster.

Vision and Objectives

Council's Vision, Focus Areas, Desired Outcomes, and Strategic Objectives were developed and adopted in the District Strategy. Infrastructure and services touch the lives of most people everyday, from roads and footpaths to water, libraries and parks. The Council Outcomes are the 10 year goals for the Council as part of working towards the longer term Vision. The Focus Areas, Desired Outcomes, and Strategic Objectives are the link between the Vision and the Council activities, providing the focus for the groups of activities and measures in the Long-Term Plan.

Council has four focus areas, Thriving District, Improving Our Environment, Connected Communities, and Interactive Council and following Desired Outcomes:

- The people are thriving, happy, safe, and well
- Partnerships with iwi are honoured
- The natural environment is improved while still producing a diverse range of primary industry food and products
- Quality community facilities and infrastructure is provided to meet the needs of future generations and support our long-term prosperity



- We are nimble; ensuring we have the capacity, innovation, and adaptability to improve community well-being, while promoting balanced & sustainable growth
- We work collaboratively, gaining strength from each other as challenges and opportunities arise, to make great things happen

The Strategic Objectives relating to infrastructure are:

- Infrastructure and services are developed with environmental protection as a key consideration.
- To protect the environment through reducing emissions
- To ensure our towns are designed in a way that consider future resident and environmental needs
- To adapt and respond to changes in Tararua's environmental landscape, including agricultural opportunities and reforestation activities
- To ensure our towns have outstanding facilities for all to enjoy
- To ensure all residents have access to services that enhance their ability to engage safely with their communities
- We have resilient and reliable infrastructure that connects our communities

The strategic enablers of the District Strategy vision and outcomes are the Infrastructure Strategy "Reliable infrastructure that is fit for purpose and future proofs our thriving district for tomorrow" and the Financial Strategy "Building a sustainable footing to increase the resilience of our assets and services, plan for the future".

Community Wellbeing

Council in 2024 will be implementing the new District Strategy vision. These are the outcomes council have adopted so that the vision of thriving together can be embodied into the council strategic frameworks and strategies.

Post Cyclone Gabrielle work has been undertaken the impacts on community wellbeing throughout the district. It is clear that farmers, growers and lifestyle block owners throughout the district have been

heavily impacted. It is evident that mental health and wellbeing has been negatively affected since the cyclone. This is in part due to property/farm damage, financial issues, and lack of insurance and overworking. The infrastructure strategic impacts to wellbeing have been highlighted in longer travel routes due to road closures and a need for a longer-term focus area "included roading and bridge repairs, river management, climate change resilience and continuity of telecommunications."

Focus areas

The focus areas of the strategic vision are in place to enable the desired outcomes. For infrastructure the outcomes of infrastructure that meets the future needs of the communities and promoting balanced and sustainable growth is a key aspects in these outcomes.

The strategic infrastructure enabler is "Reliable infrastructure that is fit for purpose and future proofs our thriving district for tomorrow".

Partnerships and stakeholders

The parties to the Treaty start from a position of mutual respect. Tararua District Council is committed to its role as Tangata Tiriti, to maintain and improve opportunities for Māori to contribute to local government.

The Council acknowledges its relationship with both iwi in the Tararua District, Ngāti Kahungunu ki Tāmaki nui-a-Rua and Rangitāne o Tamaki Nui-ā-Rua and will continue to act respectfully and reasonably as a Treaty partner for iwi and Māori alike. This will be enacted through the actioning of specific principles and requirements for local authorities that facilitate participation by iwi and Māori in local authority decision-making processes. This is considered at a council activity level while Iwi partners aspire to progress the outcomes now made possible by their respective recent treaty settlements.

Ngāti Kahungunu ki Tāmaki nui-a-Rua and Rangitāne o Tamaki Nui-ā-Rua meet formally with Council elected members and staff at regular governance and operational meetings to consider the Long-Term Plan, Annual Plan, regulatory changes as well as other areas of interest. Iwi representatives are invited to attend



council workshops on a range of subjects for their input on the matters being discussed.

This has seen positive changes in regulatory matters to benefit Māori – e.g., the review of the District Plan with relevance to urban growth, papakāinga development and other strategic initiatives of mutual interest. Council staff also meet with Rūnanga representatives on transport and water matters on a regular basis, on an individual basis, specific to Council operations and individual Rūnanga aspirations.

While dealing with the Cyclone Gabrielle events Iwi were a key part of the emergency response as well as the Roothing Recovery Group. This allowed for continued involvement and ease of decision making throughout the process of response and recovery.

Council also maintains strategic and operational relations with various other agencies like Waka Kotahi NZTA, Downer NZ, LGNZ, Taituara and regional relationships like Horizons, RLTC and MWCDEM.

Strategic Alignment

The quality of life in the Tararua District is reliant on infrastructure. The impact of infrastructure failure and associated loss of service can significantly impact community wellbeing and district outcomes. One of Council's largest challenges is investing in the resilience of its infrastructure while still maintaining affordability, to ensure community wellbeing is enhanced. Resilience has been a major focus in recent times following events such as the Kaikoura earthquake and recently Cyclone Gabrielle.

Table 6 Linking Infrastructure Services to Community Wellbeing, summarises our core infrastructure related services, the associated assets, the respective strategic objectives, and the contribution to community wellbeing.



TABLE 6: LINKING INFRASTRUCTURE SERVICES TO COMMUNITY WELLBEING

Water

The infrastructure assets we must provide the service

Source, treatment plants, reservoirs, reticulation

Delivering Resilient Infrastructure priorities

To ensure a reliable supply of safe drinking water to our communities.

Our contribution to wellbeing



Wastewater

The infrastructure assets we must provide the service

Reticulation, treatment plants

Delivering Resilient Infrastructure priorities

To ensure efficient and reliable wastewater treatment that meets environmental outcomes.

Our contribution to wellbeing



Stormwater

The infrastructure assets we must provide the service

Open drains, underground pipes

Delivering Resilient Infrastructure priorities

To ensure efficient stormwater network capacity that protects from flood events.

Our contribution to wellbeing



Transportation

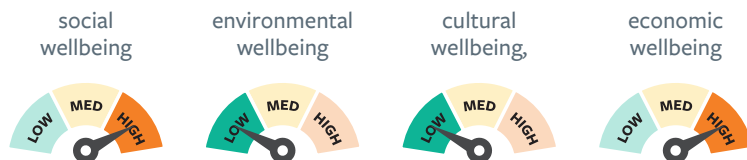
The infrastructure assets we must provide the service

Roads, footpaths, bridges, drainage, signs, rails, markings

Delivering Resilient Infrastructure priorities

To ensure public roads and footpaths are safe, reliable, and resilient.

Our contribution to wellbeing





Regional Strategic Context

Tararua District Council is part of Horizons Region which extends over 22,200km² - from Ruapehu in the north and Horowhenua in the south, to Whanganui in the west and Tararua in the east. Horizons provide services for Tararua, Manawatu, Horowhenua, Rangitikei, Wanganui and Ruapehu districts, Palmerston North City, and part of the Waitomo, Taupo, and Stratford districts. There are several regional initiatives which impact on 3 waters activities.

The Horizons One Plan is the 'one-stop-shop' resource management planning document for the Horizons Region. It combines the Regional Policy Statement, Regional Plan and Coastal Plan. This identifies the challenges facing the region, identifying the need to strike the ideal balance between using natural resources for economic and social wellbeing, while keeping the environment in good health. Likewise, the Regional Land Transport Plan (RLTP) sets out the strategic direction for land transport in the region over the next 10 years and outlines the activities proposed to deliver the strategic direction.

Water Supply Review

In February 2024, the new National-led government revoked the water services legislation implemented by the previous government. In its place, Government is developing a new approach called "Local Water Done Well". This has a significantly different approach than the previous government. It does not require establishing new national water service entities or undergoing a similar level of central government resource allocation. It places importance on local decision-making and allows for local communities and councils to have a say in how their water services will work in the future, while making sure there is a strong focus on maintaining good water quality and investing in infrastructure.

Government policy changes will influence our planning processes into the future. Also, there is no new funding source indicated in the Government's "Waters Done Right" programme. This means debt and users pays (rates and Fees & Charges) will still be the main sources of funding.

Council is also having to build upfront for the growth in population and climate related events which are pushing our assets beyond their engineering design. Resilience and planning for more growth are now essential. The cost is now significant, and it is becoming increasingly unaffordable to our small communities, where we have no options to scale up to reduce cost.

However, as a Council we are committed to viewing such changes as opportunities to improve our environment and mitigate long-term implications. As a district we are committed to tackling the challenge of keeping our infrastructure up to regulatory standards and maintaining reliable and safe water sources. Planning is underway to ensure we have a greater understanding of our assets and the required investment, ensuring evidence-based decisions are made for now and into the future.

The One Plan

The One Plan is the resource management planning document for the Horizons Region. The One Plan defines how the natural and physical resources of the Region, including fresh water, air, productive land, and natural ecosystems, will be cared for and managed by the Regional Council in partnership with Territorial Authorities and the community.

This document details the overall policies for managing the environment in the region. It includes policies that relate directly to stormwater, waterways, and land use in general.

In this respect the plan manages the effects that water runoff has on waterways and surrounding land. Horizons Regional Council hold considerable information on river flood levels and land subject to flooding. This data can be used in the flood maps contained in the Tararua District Council District Plan to control safe floor levels of new construction.

The One Plan, plan amendment 2 (2022) took effect on 14 December 2022. The focus of Proposed Plan Change 2 is to clarify and amend the nutrient management framework so it effectively works towards achieving the strategies for surface water quality set out in the One Plan updating the cumulative nitrogen leaching maximums. This would only be an effect on wastewater irrigation to land schemes.



Collaboration projects

Horizons' freshwater work is vital to aquatic indigenous biodiversity, which is in a state of degradation. This degradation includes reduced native fish populations, poor habitat (loss of riparian margins in most areas, and the introduction of exotic fish and pest plants), and many barriers between coastal wetlands, streams, and headwaters. Horizons has several work programmes dedicated to sustainable land management, improving water quality, and protecting habitats, such as the Sustainable Land Use Initiative (SLUI).

Horizons works collaboratively with iwi, community groups, councils, industry partners, and landowners and is an active founding member of the Manawatū River Leaders' Accord and the Lake Horowhenua Accord. The goal of the Manawatū River Leaders' Accord is to improve the Manawatū River, the mauri (lifeforce) of the Manawatū River Catchment such that it sustains fish species and is suitable for contact recreation, in balance with the social, cultural, and economic activities of the catchment community.



National Strategic Context

Fresh water NPS

As it stands, the National Policy Statement for Freshwater Management (Freshwater NPS) and legislation is also being reviewed by the new Government. Once determined, this may reduce some of the requirements placed on councils at the same time the regional councils are trying to move to ensure compliance. Currently the Freshwater NPS provides national direction on how fresh water should be managed by directing the content of regional plans and providing clarification around the assessment of resource consent applications. A fundamental requirement of the Freshwater NPS is the requirement for councils to set freshwater objectives or aspirational future states for fresh water, and limits on resource use to work towards these. These objectives and limits must be set to manage both freshwater quality and quantity. They must also reflect the values and interests of local communities.

Other key requirements of the Freshwater NPS include:

- taking an integrated approach to managing land and water, and considering the impacts on downstream receiving environments when making management decisions in a catchment,
- iwi/hapū be involved in freshwater management and their values reflected in decisions about the management of fresh water, and
- water quality must be maintained or improved within a region.

Transportation

Central Government is responsible for overseeing all Transportation Activities across New Zealand. The Land Transport Management Act 2003 (LTMA), Transport Outcomes Framework and the Government Policy Statement (GPS) on Land Transport Funding provide strategic direction. The LTMA states that Local Authorities across New Zealand have statutory obligations to maintain a Rooding network within their respective districts and in support of the GPS. The One Network Framework

(ONF) evolves the One Network Road Classification (ONRC) to a two-dimensional classification framework focused on movement and place. The ONF was approved by the Waka Kotahi Board in February 2021.

Ministry of Transport – Transport Outcomes Framework

The Transport Outcomes Framework establishes the groundwork for a strategic approach to Transportation for New Zealand, by identifying what the Government is aiming to achieve through the transport system. It defines mode neutrality as a guiding principle for transport planning, investing, and regulating.

The framework itself is designed to highlight the intention behind the transport system rather than specify how. In the transportation context, Waka Kotahi NZ Transport Agency (NZTA) use this framework along with the Government Policy Statement (GPS) on Land Transport which they use to guide Road Controlling Authorities towards a consistent strategic approach.

Transport Government Policy Statement (GPS)

The Government Policy Statement on Land Transport 2024 builds on the direction set in GPS 2021 and sets the new the Government's commitment to safety within the transport system. This is highlighted in the Transport Outcomes Framework. It sets out the Government's strategic direction for the land transport system over the next 10 years and is updated every 3 years.

The Government has four Strategic Priorities which this GPS will deliver against:

- Economic Growth and Productivity
- Increased maintenance and resilience
- Safety
- Value for money

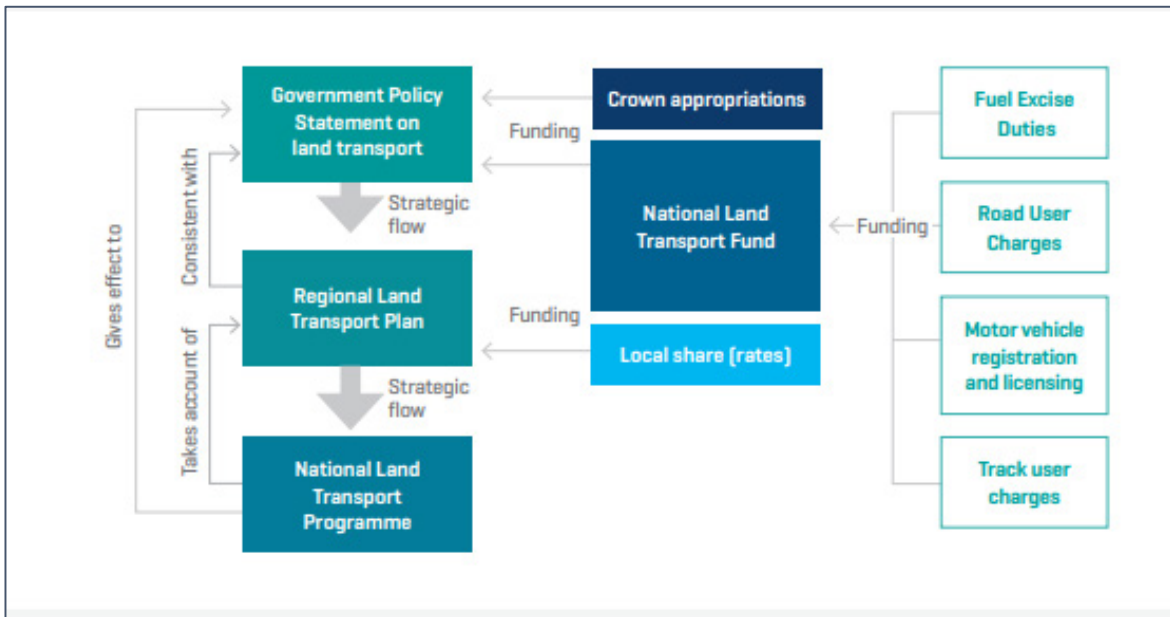
NZTA uses the GPS to provide guidance on how the National Land Transport Fund (NLTF) is invested and how the Regional Land Transport Plans (RLTPs) and the National Land Transport Plan (NLTP) are assessed, and activities prioritised.



In this way the GPS influences decisions on how funding from the NLTF is invested (see Figure 3). It also provides direction to local government, KiwiRail and NZTA on the type of activities that should be included in Regional Land Transport Plans (RLTP), the Rail Network Investment Programme (RNIP) and the National Land Transport Programme (NLTP) respectively.

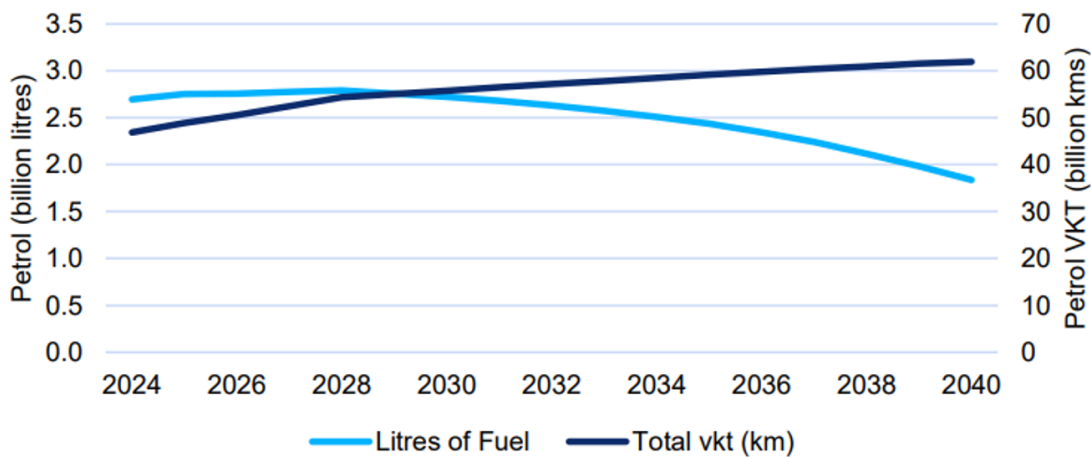
The transport sector is facing significant cost increases resulting in the affordability of maintenance and new infrastructure projects becoming more challenging through the traditional funding models.

The role of the GPS in the land transport planning and funding system



From the Draft Government Policy Statement on land transport 2024/25-2033/34

Vehicle Kilometres Travelled vs. fuel consumption





One Network Framework

The One Network Road Classification (ONRC) provided a framework for the standardisation of the classification of roads in New Zealand. The One Network Framework (ONF) evolves the One Network Road Classification (ONRC) to a two-dimensional classification framework focused on movement and place. The ONF was approved by the Waka Kotahi Board in February 2021.

Some of the key benefits associated with ONF include “Improved investment planning and decision making ... [and] consistency in measuring current and future network performance and levels of service.” In line with this, a higher priority and level of investment per km is given to “Rural Connectors” and “Activity Streets”. However, with such a large proportion of roads in the “Rural Roads” category (77%) managing the network using these categories becomes difficult.

The new ONF allows for the consideration of future aspirations for corridors and networks within wider spatial and growth planning strategies. It helps establish the intended function of a corridor or road and plan for levels of investment and service. It does not dictate the final form or built design.



Our Infrastructure Management Approach

Planning and delivering infrastructure are a balance between providing for growth in demand and the levels of service the community desires, and affordability for ratepayers. Most infrastructure assets have long lives, that extend well beyond the 30 years of this strategy, and once in place, these assets incur operating, maintenance and renewal costs that communities are committed to fund for many years to come. Planning for future infrastructure needs to be considered with a long-term view in mind.

Responding to growth (or decline) in demand for services reliant on those assets is approached through:

- greater resilience in water supply (greater storage) and leak reduction (lessen demand)
- Reduction in inflow and infiltration (I&I) of the water system (lessen demand)
- Greater linkages and capacity in stormwater (decrease demand) and managed growth areas (decrease impact of growth)
- Review intervention strategies in transport (match demand to use)

We will manage the renewal or replacement of existing assets over their lifetime through;

- Targeted priority renewals to reduce leakage in water reticulation.
- Targeted priority renewals to reduce I&I in wastewater with progressive treatment upgrades (based on I&I percentages achievable)
- Stormwater and drainage capacity upgrades
- Meeting asset renewal frequencies in transport (e.g. 1:17 or 6% reseal rates)
- Planned increases or decreases in levels of service will be allowed for
- The investment strategy will maintain our current assets, enhance service levels for our communities, and support the growth

- Public health and environmental outcomes will be maintained or improved
- Natural hazard risks will be addressed in terms of infrastructure resilience and financial planning.
 - Cyclone Gabrielle funding and upgrades in capacity are matched with planned renewals in connecting associated assets (whole of system approach)
 - Integrating alternate routes/supplies into planning to deliver resilience through varied options

Transportation Management Approach

In transportation the strategic approach is to preserve the current assets by increasing the funding and attempting to halt the decline in asset condition and to maintain the existing level of service. Building a strong programme to rehabilitate a declining network is the overarching theme of the strategy for Transport; in association with targeted investment in improving the safety, access, and resilience of the network. The maintenance and renewal programme of works is data driven which shows the optimal timeframes for work to be completed. The works programme has been planned to address the problems highlighted by recent recommendations raised in a technical audit and recent Cyclone Gabrielle Audit. Carrying out these recommendations will reduce the risk of significant future costs to our community, which have been exacerbated by restrained investment in capital renewals.



3-Waters the management approach

Within 3-Waters the management approach is one of concurrent activities and being agile in the development of asset renewal and the development of the capital works programmes. The approach is to focus on:

- Reactive maintenance for more inspections, unplanned interruptions (breaks, leaks).
- Optimal performance of existing assets (plants and pipes)
- Maintaining customer service levels
- Preventive tasks such as i.e., reduction via Inflow and infiltration
- Predictive tasks such as thermal imaging, vibration analysis on pumps
- Scope the viability of water metering to reduce demand.

Management Principles

Investment in core infrastructure is, by far, the most significant of all Council's activities. The cost of developing, maintaining, and renewing our assets needs to be affordable for current and future ratepayers. Our approach to ensuring that we manage existing infrastructure assets efficiently and effectively and invest in new infrastructure assets wisely will be based on the following management principals.

Lifecycle Management

Initial asset renewal/replacement strategies are age and condition based; depending on when the existing asset was constructed, what its expected useful life is and information regarding its inspection or maintenance. Age is especially relevant for underground water reticulation infrastructure, where minimal condition information exists due to the cost and complexity to collect. Underground CCTV inspection has been useful for gravity-based pipe networks.

Programmes will then be developed from this based on condition and performance. Deficiencies are identified by the monitoring of asset condition, reliability, capacity and efficiency during inspections and operational activity. Indicators of the key deficiencies which inform the renewals programmes include:

- Condition; i.e. the asset has or is about to fail
- Reliability; i.e. repeated asset failure
- Economics; i.e. annual cost of repairs and/or the annual operating cost exceeds (or is predicted to exceed) the annualised cost of its renewal
- Performance; i.e. the asset is no longer capable of delivering expected service levels
- Risk; i.e. the consequence and probability of failure justifies proactive action.

Efficiency benefits will also be assessed, i.e. combining asset renewal with other construction activities to reduce cost and disruption to customers (e.g. replacing reticulation infrastructure in conjunction with a road rehabilitation project).

Predictive pavement deterioration modelling is utilised for roads, enabling network level assessment and prioritisation. Similar tools are being assessed for reticulation infrastructure. With the development of Waters consents, new capital projects and reticulation maintenance and renewals concurrent activities, are strategically carried out in parallel. These items require a broad focus and concentration on associated activity achievements. E.g. Greater water supply (storage/production) or reduction in water leaks reduce demand and renewals reduce leaks and increase asset lifecycle. This enables the Levels of service to be maintained while upgrading and renewing as well as meeting consent requirements concurrently.

When renewing assets, Council will take the opportunity to achieve increased environmental standards, public health and provide greater asset resilience, where this can be achieved as an augmentation to the asset renewal programme.

The uneconomic roading policy under NZTA guidelines shows how NZTA will continue to provide funding assistance for the cost-effective maintenance of an asset, however at end of life if the cost of



renewal, reinstatement or structural upgrading is determined to be uneconomic, such works will not be eligible for funding assistance as a rule.

Key Principles

Evidence Based Decision Making

In recent years Council has invested in improving the accuracy of data that drives infrastructure investment decision making. This provides Council with increased confidence that these assets can continue to deliver the agreed levels of service for the least lifecycle cost without increasing the risk of failure.

Whilst a substantial amount of work has been completed, there are still significant gaps in the asset data required to have a high degree of confidence. This is especially relevant to water reticulation assets. Improvements will continue to be made in this area.

Proactive Management

Whilst historic asset investment was reactive (i.e. waiting for customer complaints to arrive before intervening), Council is, over time, transitioning to a far more planned and proactive approach. This includes ongoing investment in preventive maintenance and a focus on root cause analysis, understanding and treating the cause of issues rather than just the symptoms.

Over time, we expect this will extend the expected useful lives of many assets and improve Council's ability to deliver agreed levels of service for the least whole-of-life cost without increasing the risk of failure.

Demand Management

Council's approach to managing demand has historically been relatively reactive and ad-hoc. This is largely due to the past nature of changes in demand, where population 'growth' has been negative or static.

The development of the Growth Strategy as well as the revision of the District Plan and Engineering Standards is informing the Infrastructure Strategy and the activity and asset management plans. Budget

contingencies have been developed to accommodate this, where service extension is required to meet expected service levels the Annual plans can be amended as Council's focus is to invest in resilient and sustainable infrastructure, while managing with existing network boundaries and planning for future development. Areas identified within the district growth strategy will be a focus insure future development and sustainable infrastructure. The growth strategy provides recommendations for how council can meet these demands, the activity management plans and the infrastructure strategy are the tools to enable this development and growth.

Investment in Resilient and Sustainable Infrastructure

We know many of our asset networks are vulnerable to external impacts, especially related to environmental and legislative changes. We will target investment to increase the resilience and sustainability of our infrastructure, ensuring we have future proof but still fit-for-purpose assets that met both current and predicted demands.

Manage within Existing Boundaries

We need to ensure that our water, wastewater, and stormwater networks remain affordable and sustainable for current and future generations. To ensure the continued affordability of our infrastructure networks, our approach to the growth pressure is:

- Improve capacity and performance modelling of our 3-Waters networks to ensure that our assets are not placed under too much stress during peak periods or in years where our climatic conditions place constraints on our ability to meet demand for services
- To encourage utilisation of existing infrastructure where existing capacity allows.
- Allow connections inside our current boundaries as of right.
- Ensure existing networks meet legislative requirements.



- Not provide for new reticulation beyond the urban areas until the reticulation inside the boundaries has been upgraded and the District Plan has confirmed the new service areas, unless paid for by developers.

The urban growth strategy has identified areas which are best suited for growth as well as intensification. It is also aspirational in land requirements where it is anticipated that growth will occur. This aspirational growth also covers areas of rural land for which industrial development is proposed and of satellite growth to be developed.

Council plans to partly cater for forecast growth in the first 10 years of this strategy and use the above approach to prepare to fully cater for forecast growth in later years.

Level of Service Management

Increasing service levels typically increases the cost of operating and maintaining assets. Assumptions are that while the number of households in the Tararua District is expected to increase over the next 30 years, while levels of service will remain the same.

This is facilitated through the asset retention strategy in transport retaining the assets in the current condition with targeted renewals. This is done through regular inspections as well as good data on the assets and their age/condition. Within the three waters the level of services is maintained through just in time management of faults and the development of capital works facilitate supply in the future with new consents.

While the overall levels of service are met, areas of improvement are required in areas of stormwater management where increasing maintenance and the development and implementation of the urban growth strategy is expected to increase the levels of customer satisfaction. In transportation funding constraints associated with a very large road network, small ratepayer base and rising costs is resulting in reduced levels of service compared to our peers, low customer satisfaction and possible asset consumption. The focus on asset preservation and increased drainage for resilience it is expected to resolve the customer satisfaction issues over they are coming three-year.

Aim to deliver existing service levels

On a transport network basis, Council has not identified any significant gaps between the levels of service people expect from core infrastructure and the levels of service Council is able to deliver, now and over the next thirty years. This does assume continued

external funding for transportation, at least at the current levels, to continue for the long term. The increase in the funding assistance right from 69% to 73% will assist council in the funding of its transport programme. Where levels of service gaps exist currently, projects and changes in management techniques have been identified or are underway to address these, as detailed in the Activity Management Plans.

Within the areas of 3-Waters, growth in population, user behaviour and adaptation to climate will change how and where we will deliver the existing levels of service. Climate change increases vulnerability creating political, social, and cultural challenges to managing growth, and has cascading risks, including access to resources and supply chain.

Risk Management

The Risk Management Framework follows the principles of AS/NZS ISO31000:2009 and uses a matrix with five step risk likelihood and severity scale that reflects the relatively simple asset base that exists in the Tararua District.

In terms of risks the strategic risk register considers the likelihood, consequences, and a risk assessment for as the following risks relating to infrastructure:

- Population growth is significantly different to forecast.
- Business interruption events such as unexpected critical asset failure.
- Staff and supply chain resourcing constraints
- Infrastructure decision making will not adequately account climate change impacts.
- Natural disaster
- Delivery of the capital works programme



- Waka Kotahi funding is different to that forecast and impacts on ability to deliver on strategic objectives.
- Government reform or direction changes such as the Government Policy Statement and three waters reform.
- Not adequately engaging with Māori or meeting the objectives of iwi partnership agreements.
- Not maintaining strong relationships with key stakeholder or not effectively engaging with the community.
- Not meeting environmental or compliance standards



Improving our Infrastructure Management Approach

Improving our long-term Infrastructure Strategy is crucial for enabling the council vision and goals as shown in the Vision and Objectives and improving the evidenced based decision making.

Anticipating Challenges

As global temperatures rise, we must adapt to longer, hotter periods that can impact infrastructure performance. Rising temperatures can lead to water scarcity, affect farming, and cause more frequent and violent storms. Having a long-term strategy allows us to anticipate and address these challenges.

As the communities change and grow the infrastructure service needs to meet the future needs of the people. Better data reliability and use for confidence in decision making is required.

Holistic Approach

The strategy needs to bring together various interconnected issues that are/were previously discussed in isolation. It should consider social, economic, environmental, and cultural outcomes for communities across the district. By addressing these holistically, we can create a better place for the communities withing the Tararua District.

Certainty and Planning

Having a clear long-term vision provides certainty for the infrastructure needs. It enables planning for appropriate resources, supply chains, and funding decisions. An independent priority list for key projects ensures consensus and effective decision-making. Council will develop clear priorities in its infrastructure needs and include the other assets of council within the strategy to develop the priorities of investment across all functions of council.

Skills Development

The strategy recommends an infrastructure skills plan. This ensures that we have the right people with the necessary skills to plan and manage our assets as well as build and maintain our infrastructure for the communities of the future.



Reliability of Information

Council has developed this Infrastructure Strategy based on information with varying levels of reliability across the activities covered in this strategy. The reliability of data and information used as inputs into this Strategy varies.

Part of the Strategy is to improve decision-making by addressing gaps in asset data. While we have made improvements to our data quality and completeness for roads in recent years, Council is now targeting further collection, validation, and analysis of the data for other activities. This will fill the gaps to inform the 2027 -2057 strategy, by providing better primary evidence for infrastructure decisions. Especially within the three waters components where their data is also required in critical capital infrastructure design decisions.

The increased data quality trend has improved over time, particularly in asset management metrics however the greater use of the data (Via IDS) is an area for improvement into the future.

We have rated the confidence of our data for each activity in our Infrastructure Summary, using the ratings included in Appendix A. More information on data reliability is available in the AMPs for the respective activities.



Asset Management Maturity

Council wants to ensure the levels of service and cost of service is appropriate for our community. So, it is important that these outputs are being delivered in an economic and sustainable manner. To do this requires a more in-depth understanding of the decisions, information, and processes that we use for the lifecycle management of our assets.

Data Driven Decisions

Asset Management Data Driven decisions is a focus going forward. Better asset data will give a foundation for Tararua District Council to better plan. Tararua District Council will;

- Maximize the value of data we have and treat it as a strategic asset—using it for innovation and critical decisions. A key example is the interdependency of roads and stormwater systems.
- Develop a strong data foundation, optimization and an insights-driven culture including;
- Automated capture of design and as-constructed data
- Standardised methodologies of sharing design and existing asset data
- Data quality assessment and benchmarking
- Large scale analysis of economic life of pipes
- Analysis of pipe performance versus ground and operational conditions
- Risk of failure analysis
- Develop an enterprise-wide data strategy
- increase data quality to produce transparent, trusted, and integrated data that is accessible at response.

These actions will develop our Asset Management capabilities to appropriate levels of maturity which are fit for purpose to meet the current and future needs of its stakeholders.

Asset Management

Council has not formally adopted a target practice level for Asset Management; however, we seek to meet a ‘Core’ level of Asset Management practice that meets custodial responsibilities identified in the International Infrastructure Management Manual (IIMM) to carry out the following activities:

- Record and report on the state of all assets to the community;
- Meet current statutory reporting requirements;
- Ensure community safety; and
- Provide management information to guide decisions by Council on the impact of decisions.

We acknowledge that Asset Management maturity is different across the different asset classes e.g. Transport vs Water. Transport is well above ‘Core’ and 3 Waters making good progress towards a ‘Core’ rating.

Asset Management Capacity (practice level)	Advanced				
	Intermediate				
	Core				
	Basic				
		Aware	Developing	Competent	Effective
		Asset Management Capability (organisational maturity)			



Our Infrastructure

This section provides a summary 'state of infrastructure' for the four activities covered by this plan. The detailed asset information sits within the activity management plan of each activity. These plans cover the value and quality of assets, their condition and criticality. Each of the activities also has the data confidence and the reliability within these plans.

Water Supply

Service

The water supply activity involves the management, operation, and maintenance of the district's water supply network. Council is responsible for providing safe, clean drinking water to domestic, commercial, and industrial customers connected to its water supply networks as a matter of public health.

Aim

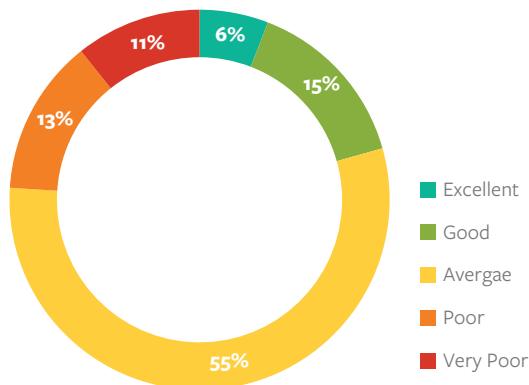
To ensure a resilient and reliable supply of safe drinking water to our communities

Goals

The water supply goals are:

- water provided is safe to drink
- maintenance of reticulation network is effective
- issues relating to water supplies are responded to
- customers are satisfied with supplied water
- demand is managed effectively

Water Supply Below Ground Asset Condition



Assets

Tararua DC manages several Water Supplies (WS) schemes throughout the district, supplying water to the towns of Dannevirke, Pahiatua, Woodville, Eketāhuna, Norsewood, Ākitio and Pongaroa. Treatment varies between schemes, from chlorine, microfiltration, UV, and combinations of these. Over 5000 residential properties are served through the following individual water supplies:

- 8 water intakes including 2 bores;
- 7 water treatment plants
- 1 pump stations, 14 reservoirs;
- 267 kilometres of water supply pipelines
- 47 kilometres of laterals

The combined value of the water supply assets is \$80 million consisting of treatment plant and facilities pipe networks and other reticulation assets. The aged base condition for these assets is as below.

Critical Assets	Critical Assess Risk	Consequence of Failure
Water Supply Intake		No water for treatment plant means no water available to customers
Water Supply Treatment Plant		Failed treatment plant would mean no water available or only non-potable water available
Water Supply Trunk Main Supply and Pipeline		Failure prevents water reaching the reticulation and customers
Water Supply Storage Tanks/ Reservoirs		Insufficient storage reduces resilience of system
Water Supply Reticulation		Failure of reticulation means some customers do not get water



Wastewater

Service

The wastewater activity includes four wastewater schemes serving our urban communities. Council collects, treats, and disposes of treated wastewater from domestic, commercial, and industrial premises.

Aim

To ensure resilient and reliable wastewater treatment that meets agreed environmental outcomes.

Goals

The Wastewater goals are

- Risks to public health and our natural environment are minimised.
- The wastewater systems are adequate to meet the needs of their communities

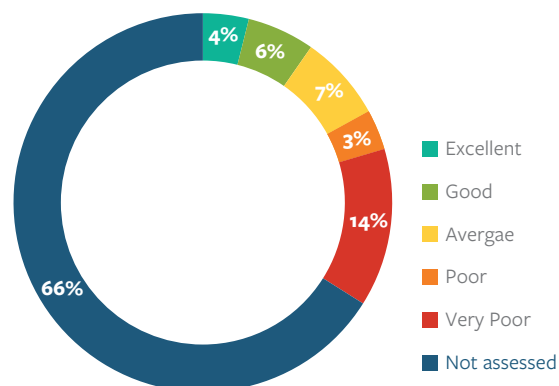
Assets

Wastewater reticulation systems are provided in the urban areas of Dannevirke, Pahiatua, Woodville, Eketāhuna, Norsewood, Pongaroa and Ormondville. Rural houses manage their own effluent. Primary treatment is done onsite by industries to comply with trade waste discharge limits set by Council before discharging to the public wastewater system, where it is treated and discharged to land and/or water ultimately discharging to the ocean. Tararua District Council's Wastewater network includes:

- 7 treatment plants
- 21 sewer pump stations
- 95 kilometres of wastewater pipeline
- 1100 maintenance chambers

The combined value of the wastewater assets is \$80 million consisting of treatment plant and facilities pipe networks and other reticulation assets. The aged base condition for these assets is as below.

Wastewater Below Ground Asset Condition



Critical Assets	Critical Assess Risk	Consequence of Failure
Wastewater Treatment Plants		Failure of the treatment plant will lead to a build-up of wastewater in the ponds and possible discharge over the emergency spillway without full treatment and outside permitted hours
Wastewater Disposal System (planned)		Failure of the disposal systems may breach consents, damage receiving environments and cause cultural offence
Wastewater Underground Network		Failure of these means some waste cannot be transferred to the treatment plant
Wastewater Pump Stations		Failure of reticulation means some customers do not get water



Stormwater Service

Service

Stormwater is the runoff of rainwater which requires management and disposal using various drainage systems. Council has stormwater reticulation with associated manholes and sumps, as well as open stormwater channels drains.

Aim

To ensure efficient stormwater network capacity that protects built assets and people from flood events.

Goals

The stormwater goals are;

- The stormwater system is adequate
- Risks to public health and our natural environment are minimised

- Issues relating to the stormwater system are responded to
- Customers are satisfied with stormwater systems

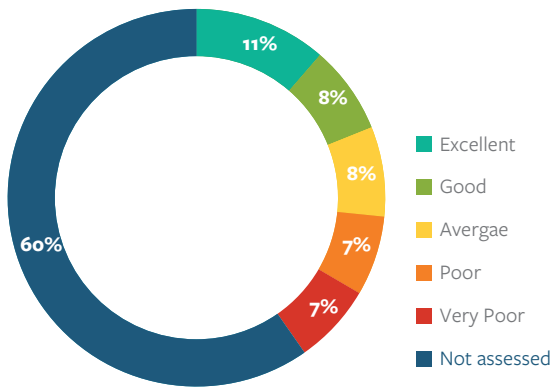
Assets

Tararua DC manages and maintains an urban network of pipes and open channel drains to safely direct stormwater (SW) to inland streams and to the ocean. Stormwater reticulation infrastructure is provided in the urban townships of Dannevirke, Pahiatua, Woodville and Eketāhuna. Tararua District Council’s stormwater network includes:

- 28 kilometres of stormwater pipelines
- 26 kilometres of open channel drains and streams
- 1160 maintenance chambers and sumps

The combined value of the water supply assets is \$24 million consisting of pipe networks and drains assets. The aged base condition for these assets is as below.

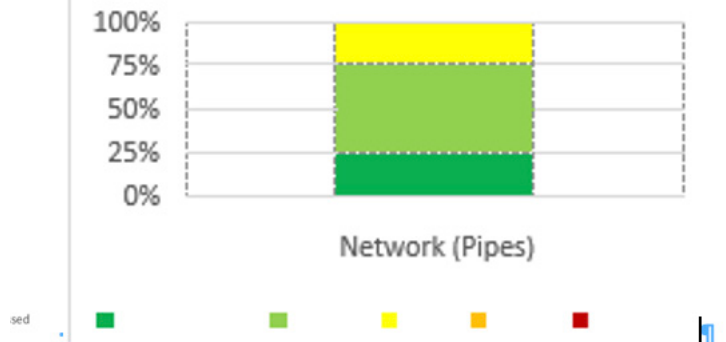
Stormwater Below Ground Asset Condition



Although a formalised criticality assessment has not been undertaken, the following assets have been identified as critical:

- Dannevirke culvert – this is a large diameter brick culvert that runs under buildings and the State Highway and through private property and there are limited entry points.
- Pahiatua, Town Creek culverts – in various places along the channel’s route it runs under buildings and through private properties and there are limited entry points to maintain.

Age Based Condition:



In both cases, access is either reliant on private landowners or safe access is not practical to arrange. They are therefore difficult to inspect, and the condition is unknown and would also be difficult to access in the event of a failure with potential for considerable damage to surrounding infrastructure.



Transportation

Service

Council provides a safe resilient and reliable road and footpath network that enables the movement of people and products, both within and through the district.

Aim

Provide a safe and resilient and reliable roading network that meets the needs of the district and is operated and enhanced in a sustainable manner at the lowest overall whole of life cost.

To provide safe spaces for “non-vehicular” modes of transport to operate.

Goals

The transport goals are;

- Our roading network is safe
- Our roads are maintained to an appropriate standard
- Our transportation network is being maintained effectively
- Our customers are responded to in a timely manner

Assets

The council owns and manages:

- A vehicular network comprised of 1,191km of sealed roads, 767km of unsealed roads and 405 bridges and 149 high-capacity culverts.
- A pedestrian network comprised of 120 km (317,500) m2 of footpaths.
- 1,842km of stormwater channels and drains (mainly shallow, unlined surface water channels and kerb and channel)
- 9,265 culverts (108 km) and 1,647 other drainage assets including sumps and manholes.
- 1,414 retaining walls.
- Safety infrastructure comprised of 1,667 streetlights, 9,560 road signs, and 12,176m of rails and barriers.

The depreciated replacement value of Council’s roads and associated assets is approximately \$790 million.

Management of the transportation activity, including the maintenance and renewal of associated assets is the highest of the Council’s major activities and due to the low ratepayer base the Council is heavily reliant upon subsidies received from the NZ Transport Agency (NZTA). The change of the Base FAR from 69% to 73% is an excellent result for council increasing the affordability of its road maintenance and renewals.

Asset Groups (work Categories WC's)

To allow for the effective management of the Tararua Transportation Network, its assets or activities across the network are separated into various groupings. These groups are defined by the type of asset they are, function they serve, or the type of activities undertaken to maintain the network in general.

Groups are split into various Work Categories (WC), which are separated into the specific activities undertaken in the group (e.g. Maintenance / Renewals), e.g. sealed pavement maintenance and sealed pavement renewals., traffic services (signs) maintenance and traffic services (signs) renewals.

Each category is modelled against condition and age to produce the optimal renewal programmes. The process of renewal is the replacement and rehabilitation of assets to restore them to their original level of service (i.e., capacity or condition) as required to achieve the least whole-of-life cost. Renewal strategies are designed to provide for the progressive replacement of individual assets (or components) that have reached the end of their useful life.

Using sound strategic planning has built a long-term programme that is both fiscally responsible and addresses the key issues over the life of the AMP and a strong Cyclone Gabrielle recovery programme. Details of the individual asset categories are contained within the Transport Activity Management Plan.



Impact of The North Island Weather Events

Cyclone Gabrielle and the rainfall events preceding, and post have had a marked effect on the transport network. The Tararua District Council received \$45M for the initial response granted at 100% funding assistance rate, with a pending submission for a further \$45M for the recovery component of the event. The outcome of the FAR rate for the recovery component is yet unknown, however if this is funded at the 93% of an enhanced FAR the \$1M per annum required in council funding will have a major effect on the overall affordability of the transport programme.






Applications will be made with NZTA Waka Kotahi for bespoke funding arrangements into the new LTP period. Beyond this there will be a requirement to review levels of service and the period of the recovery works i.e., scaling the works over a 6–9-year recovery period to reduce the funding required of between \$333K to \$500K annually.

The incorporation of renewal projects with that of capital projects such as route 52 is expected to produce efficiencies in the renewal and capital programmes. The focus on drainage assets is incorporated into the Cyclone Gabrielle recovery and essential in providing whole of route resilience.



Our Key Infrastructure Challenges

There are numerous challenges that could impact the Tararua District’s infrastructure, service delivery, and investment planning over the next 30 years. This in turn impacts on Council’s ability to achieve its vision of **We thrive together. Vibrant, connected communities where our land and waters are nurtured, and our people flourish.** The following section discusses the main challenges for our infrastructure and service delivery. These have been categorised into the following overarching themes:

-  **Affordability**
-  **Infrastructure Age and Condition**
-  **District Growth**
-  **Climate Change and Natural Hazards**
-  **Legislative Change**

Key challenges are detailed in the tables below, including the associated level of service impact, timing of this impact, level of uncertainty, and the infrastructure activity(s) impacted.



Water



Wastewater



Stormwater








Roading

Affordability

TABLE 7: AFFORDABILITY CHALLENGES

Funding Depreciation

<i>Description</i>	Roads, footpaths, bridges, drainage, signs, rails, markings		
<i>Impact</i>	To ensure public roads and footpaths are safe, reliable, and resilient.		
<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Long Term Next 30 years		   



Small and Ageing Population

Description

The Tararua district is geographically large but has a small and dispersed population. Our District includes a large rural road network and multiple small towns each with their own water and/or wastewater schemes.

Our population is also ageing over the next 30 years.

Impact

The low number of ratepayers relative to the number of schemes creates challenges in terms of delivering a safe and reliable service that meets regulatory requirements and is affordable to our ratepayers.

We will have more residents with fixed incomes who may be less able to absorb the costs of increased service levels.

LoS Change

Potential Decrease

Timing

Medium Term
Next 10 years

Uncertainty



Activity



Access to Funding Subsidies

Description

Subsidies and grant funding received from central government departments are crucial to Council delivering expected service levels.

Due to our small local rate payer base relative to the size of our large road network, Council are reliant on National Land Transport Fund subsidies to fund the transportation activity. This is currently set at 73%.

Impact

A reduction in this funding would have significant financial impacts. This could result in increased rates and/or loan funding, on the feasibility and/or timing of works, and/or a reduction of service levels.

It is expected there will be no further government subsidies for three waters investment.

LoS Change

Potential Decrease

Timing

Medium Term
Next 10 years

Uncertainty



Activity





Infrastructure Age and Condition

TABLE 8: INFRASTRUCTURE AGE AND CONDITION CHALLENGES

Asset Form / Design

Description The historic design of our core infrastructure networks has resulted in a form and/or capacity that has vulnerabilities and is unlikely to meet future demands.

Impact This results in high operating and maintenance costs, as well as significant capital investment needs to bring the infrastructure in line with modern day standards.

For roads, the inconsistency of road form and safety provisions leads safety issues and crashes.

LoS Change

Timing

Uncertainty

Activity

Probable Decrease

Short Term
(next 3 years)



Description

Large ageing bridge stock designed to lower capacity than current standards.

Impact

We are at risk of being unable to allow passage to the new high productivity vehicles.

LoS Change

Timing

Uncertainty

Activity

Probable Decrease

Short Term
(next 3 years)



Description

Tararua's road network has developed over time with inconsistent road form. Investment in safety improvements have been reactive and make-shift, stemming from customer requests, leading to further inconsistencies on the road network.

Impact

The inconsistency of road safety provisions results in an unintuitive road network for motorists, which can become confusing and lead to crashes.

LoS Change

Timing

Uncertainty

Activity

Potential Decrease



Short Term
(next 3 years)





Description Our urban stormwater networks are basic, with issues of underperformance due to unfit form, high volumes of water entering the townships from surrounding rural areas, historic combined systems, and identified weak points.

Impact Results in flooding as well as potential public health and safety issues. Significant investment would be required to improve the infrastructure to level that meets our community’s expectations, which is currently seen as not being affordable.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Probable Decrease	Short Term (next 3 years)		



Description Footpath ownership has driveway portions of footpaths under property owner maintenance and renewal.

Impact Results in inconsistent footpath length and hazardous sections where not maintained by the owners the impact is;

Owners forced to upgrade sections, resulting in enforcement and unhappy customers.

Council ownership and repairs resulting in cost to ratepayers.

Not addressed and a safety hazard.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Probable Decrease	Short Term (next 3 years)		

Asset Age Data

Description Many assets (especially reticulation) have little age information, so robust financial planning is difficult.

Impact If assumptions are incorrect, there may be a shortfall in depreciation reserves resulting in increases to rates and/or loan funding, and reduced service levels.


<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		  



Asset Condition & Performance Data

Description For some asset types there is currently limited robust condition and/or performance information, and so assumptions and age-based condition models are used to predict required investment needs.

Impact If asset condition is poorer than assumed, increased investment may be required to ensure delivery of expected service levels, resulting in impacts on rates and/or loan funding.



<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		

Condition of Critical Assets

Description Water Supply and wastewater infrastructure networks include critical assets that are in poor condition, are under performing, and/or are not well understood. Whilst our approach to identification and management of critical assets is still maturing, progress is needed to ensure the risk to service levels and affordability are appropriately managed.

Impact As our assets age, they are more likely to fail which will result in service interruptions. These unplanned water outages will become increasingly unacceptable for our residents and businesses. There may also be increased operational costs with responding to the breakages as well as major leakages.

Significant renewal investment will be required over the next 30 years to prevent impacts on service levels.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		



<i>Description</i>	Full network inspection of 100% of culverts has determined a considerable number in very poor condition		
<i>Impact</i>	Renewal investment will be required to ensure network resilience.		
<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		

District Growth

TABLE 9: DISTRICT GROWTH CHALLENGES

Projected Population Growth



<i>Description</i>	Post decades of minimal growth nz stats' shows a 14% population increase projected. Council has determined that the Most Likely Scenario is a medium growth scenario, based on forecasts prepared for the Long-Term Plan. Growth would be seen with a population of 20,650 in 2038 (8,300 households).		
<i>Impact</i>	Increased growth will increase demand on our existing infrastructure networks, particularly in urban areas. This will put more strain on the historically designed systems and create demand for additional infrastructure and/or improved service levels. Mitigating these impacts is likely to place considerable pressure on already constrained funds.		
<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		



Urban Development

Description Increasing urban (and fringe urban) development, including infill housing and new subdivisions, is expected because of population growth, requiring additional infrastructure capacity.



Impact This can also result in pressure on Council to extend existing networks so that these developments can connect to town water supply and wastewater networks.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		

Rural Land Use Change

Description Increasing land use change is increasing demand on core infrastructure, especially rural roads. Heavy vehicle movements are planned to increase significantly because of forestry harvesting and the planned development of windfarms.

Impact This will increase safety risk and deterioration of pavements, requiring increasing maintenance investment needs and advancing renewal timeframes.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Decrease	Medium Term Next 10 years		



Climate Change and Natural Hazards

TABLE 10: CLIMATE CHANGE AND NATURAL HAZARDS CHALLENGES


Earthquakes

Description Our District is in a region with high earthquake risk. Our water supply and wastewater reticulation networks are vulnerable to damage from earthquakes. This may cause major disruption to the roading network due to loss of bridges or because of severe damage to roads.

Impact These events can cause severe damage to infrastructure and disruption of service.

The number and severity of these events in New Zealand would make insurance increasingly difficult to obtain at an affordable level.

LoS Change *Timing* *Uncertainty* *Activity*

Potential Decrease Long Term
Next 30 years 




Increased Heavy Rain Events

Description During wet weather events significant amounts of stormwater enters our stormwater system or infiltrates our wastewater systems, increasing the volume of water that needs to be treated and, in some cases, overloads of our networks. Due to the current form and performance of our stormwater networks, however, we are limited in our remedial options.

Impact These events can cause severe damage to infrastructure and disruption of service.

Without planned and targeted improvements, it is expected that this will become more of an issue as climate change increases the frequency and intensity of wet weather events.

LoS Change *Timing* *Uncertainty* *Activity*

Probable Decrease Medium Term
Next 10 years   



Description Council has numerous roads that are located on unstable land that is prone to landslides or land movement in wet conditions

Impact This can result in damage to our road network affecting reliability and resilience of service.

LoS Change *Timing* *Uncertainty* *Activity*

Probable Decrease

Medium Term
Next 10 years



Drought Conditions

Description Increases in long dry periods will put significant pressure on our already stretched summer water supplies.

Impact This pressure is already causing restrictions to be enforced during the summer periods.

LoS Change *Timing* *Uncertainty* *Activity*

Probable Decrease

Short Term
(next 3 years)



Sea Level Rise

Description Sea level rise along our coastal environment presents a risk to infrastructure. Council owns one reticulated system that services a coastal settlement - Ākitio.

Impact It may be impacted with water inundation as it is located on low lying land.

LoS Change *Timing* *Uncertainty* *Activity*

Potential Decrease

Long Term
Next 30 years






Decision making

Description There is a high level of uncertainty in forecasting climate change especially at the local level and the science continues to rapidly develop. Council must make decisions now about infrastructure that will be subject to this uncertain climate change

Impact Decision making that does not adequately account for climate change impacts will contribute to worsening environmental and community resilience.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Probable Decrease	Decisions now – Impact Long Term		

Legislative Changes

TABLE 11: LEGISLATIVE CHANGES CHALLENGES

Water Reform

Description Taumata Arowai is Aotearoa’s dedicated potable water services regulator to oversee and enforce a new drinking water regulatory framework, with a future oversight role for wastewater and stormwater networks. This will put more focus on compliance with drinking water and environmental

Impact It will result in water and wastewater treatment plants requiring upgrades and increased operational, reporting and compliance costs.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Increase	Short Term (next 3 years)		



Freshwater Management

Description Legislative changes are increasing required standards and compliance, especially regarding impacts on freshwater. The National Policy Statement for Freshwater Management and Horizon’s Regional Council One Plan are impacting consents for water take and wastewater discharge.

Planned reform of the Resource Management Act is also likely to have impacts in terms of planning and consenting of core infrastructure activities, however this is currently unknown.

Impact Conditions of resource consents may be altered significantly resulting in major investments to meet conditions. Council may have to consider alternative systems such as combining existing schemes through piping wastewater to another treatment plant.

This could also impact operating costs of the schemes by potentially requiring treatment / filtration of discharges.

The length of consent renewals could be reduced to 10 years or less. This would result in the need to budget for many more renewal processes.

Changing regulations and compliance could also result in some forms of intensive farming becoming un-profitable in Tararua, and a general reduction in farming income. This could have a major impact on the district economy, and the ability to pay rates over time.

LoS Change

Timing

Uncertainty

Activity

Potential Increase

Short Term
(next 3 years)



Drinking Water Standards

Description Some of our water supply schemes do not currently comply with the NZ Drinking Water Standards, particularly with the more recently introduced requirements.

Impact Without significant investment we will continue to not comply with the NZ Drinking Water Standards and will not achieve our service level expectations.

LoS Change

Timing

Uncertainty

Activity

Potential Increase

Short Term
(next 3 years)







Government Policy Statement on Land Transport

Description Maintaining the road network is a priority in GPS 2024. To fix the increasing number of potholes on our roads that has occurred in recent years, and to prevent further deterioration in roading quality, GPS 2024 increases road maintenance funding by \$640 million, compared to the draft GPS released by the previous Government in August 2023.



Impact Changes in government can result in significant changes to the priorities in the Government Policy Statement, this in turn impacts on Waka Kotahi's investment prioritisation and application processes. If our programme no longer aligns with the GPS, Waka Kotahi may limit subsidy funding. A focus on renewals and maintenance may benefit TDC, due to the alignment with the new GPS as there are limited other programmes e.g. walking and cycling

LoS Change	Timing	Uncertainty	Activity
Potential Increase	Short Term (next 3 years)		

One Network Framework

Description Waka Kotahi NZ Transport Agency and Local Government New Zealand have implemented the One Framework (ONF) system so that road users will have consistent customer levels of service across the country. The One Network Framework project has now commenced to reflect role transport corridors play in the movement of people and goods across all land transport modes, as well as place through the social spaces they provide and their role in providing access to adjacent land.

Impact Like other Road Controlling Authorities, we are still in the process of fully understanding the implications on our District. The proposed new road classification may result in lower customer levels of service in the future (for example, road roughness) for some of our extensive road network.



LoS Change	Timing	Uncertainty	Activity
Potential Decrease	Short Term (next 3 years)		



Freight Allowances

Description The Ministry of Transport is steadily increasing the amount of weight allowed to be carried by trucks on all networks. This includes initiatives such as 50 Max (50 tonnes); HPMV (62 tonnes) and 46 tonnes as of right.



Impact Weight restriction changes have the potential to increase the deterioration rate on our bridge network and/or require additional investment for infrastructure improvements.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Increase	Short Term (next 3 years)		

Road Safety

Description There is an increased focus on road safety nationally and the Government has removed the new road safety strategy, Road to Zero. Future road safety programmes will be funded via maintenance and renewals.

Impact The focus areas that will have the greatest impact include investing in infrastructure improvements and speed management, vehicle safety, work related road safety, road user choices and system management.

<i>LoS Change</i>	<i>Timing</i>	<i>Uncertainty</i>	<i>Activity</i>
Potential Increase	Short Term (next 3 years)		



Our Approach to Addressing Challenges

With any planning around infrastructure there is a level of uncertainty with multiple options to deliver the service standards current and future generations will want and are willing to pay for. To develop options to address the challenges we have identified; we have utilised data analysis and management approaches detailed in our Activity Management Plans.

Our principal options in managing the challenges we face are summarised in the tables below. This includes the implications of the options and alignment to both asset type, our key challenges, and to our management principles.

Symbols used in the following table to represent the linkages:

 Water	 Wastewater	 Stormwater	 Roading
 Affordability	 Evidence based decision making		
 Infrastructure Age and Condition	 Proactive Management		
 District Growth	 Investment in Resilient and Sustainable Infrastructure		
 Climate Change and Natural Hazards	 Manage within Existing Boundaries		
 Legislative Change	 Aim to deliver existing service levels		

Ongoing asset maintenance and renewal

Implications of Option

Enabling sustainable delivery of service levels for the least whole of life cost

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

Average of \$10M per year

Linkage to

Asset Type



Key Challenge



Management Principle





Business continuity improvements

Implications of Option

The planning of continuity improvements is a mitigation for natural disaster (and other sudden events). Business continuity planning will allow Council to better prepare for, respond to, and recovery from business interruptions to critical services.

Indicative Timeframe

Ongoing from Year 1

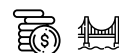
Indicative Cost

TBC

Asset Type



Key Challenge



Management Principle



Linkage to

Increased investment and focus on asset data improvements

Implications of Option

Improvements to our asset understanding will enable more robust investment planning and decision making, ensuring an optimal long-term balance between service levels, cost of service and risk.

Indicative Timeframe

Ongoing from Year 1

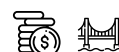
Indicative Cost

TBC

Asset Type



Key Challenge



Management Principle



Linkage to

Improvements to infrastructure asset management maturity

Implications of Option

Improvements to our asset management practices and processes, combined with increased evidenced based decisions, will support robust funding applications and ensure rigour is applied to long term waters capital expenditure in line with the Growth Strategy and District Plan reviews.

Indicative Timeframe

Ongoing from Year 1

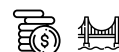
Indicative Cost

TBC

Asset Type



Key Challenge



Management Principle



Linkage to



Asset performance assessment, modelling, and master planning

Implications of Option

Understanding the performance of our infrastructure assets/ networks and development master plans will support more robust and effective evidenced based decisions when planning our long-term infrastructure needs, priorities, and investment.

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

TBC

Linkage to

Asset Type



Key Challenge



Management Principle



Wastewater Treatment Plant Upgrades

Implications of Option

Upgrades required to meet resource consent requirements. Projects will be focused around improving treatment processes to improve discharge quality.

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

Average of \$1.65M per year

Linkage to

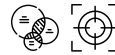
Asset Type



Key Challenge



Management Principle



Resource Consent Renewals

Implications of Option

Renewal of water take and wastewater discharge consents, required to ensure ongoing delivery of water and wastewater activities.

Indicative Timeframe

Periodically from Year 1

Indicative Cost

Average of \$180K per year

Linkage to

Asset Type



Key Challenge



Management Principle





Water Treatment Plant Upgrades

Implications of Option

Upgrades required to meet NZ Drinking Water Standards requirements. Projects will be focused around improving treatment processes and monitoring.

Indicative Timeframe

Years 1-4

Indicative Cost

\$1.17M

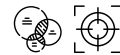
Asset Type



Key Challenge



Management Principle



Linkage to

Route 52 Upgrade

Implications of Option

Upgrade Weber to Pongaroa (Years 1-3) and Weber to Dannevirke (Years 6-10) to addressing changing function and use, improving safety, resilience, and reliability. If funding is not gained, a significant portion of our Sealed Pavement Maintenance and Renewals budgets will need to be invested in the route.

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

Average of \$ M per year

Asset Type



Key Challenge



Management Principle



Linkage to

Inflow and infiltration minimisation

Implications of Option

Development and implementation of strategy to address current inflow and infiltration issues using the information gathered in the Master Plan project.

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

Average of \$310K per year

Asset Type



Key Challenge



Management Principle



Linkage to



Water backflow prevention improvements

Implications of Option

Assessment and rectification of properties requiring water backflow prevention, addressing potential health risks, and meeting our obligations as a water supplier.

Indicative Timeframe

Years 1-5

Indicative Cost

\$250K

Linkage to

Asset Type



Key Challenge



Management Principle



Water storage increase

Implications of Option

Increase water storage capacity to 3-days at Ākitio and Pongaroa.

Indicative Timeframe

Years 1-4

Indicative Cost

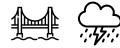
\$340K

Linkage to

Asset Type



Key Challenge



Management Principle



Minor infrastructure network extensions

Implications of Option

Minor extension of water, wastewater and/or stormwater networks where required to enable growth within existing service zones.

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

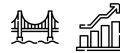
Average of \$550K per year

Linkage to

Asset Type



Key Challenge



Management Principle





Treatment plant telemetry improvements

Implications of Option

Continue with the upgrade of our water and wastewater treatment telemetry to enable resource consent and NZ Drinking Water Standards requirements to be met.

Indicative Timeframe

Ongoing from Year 1

Indicative Cost

Average of \$70K per year

Asset Type



Key Challenge



Management Principle



Linkage to

Treatment plant telemetry improvements

Implications of Option

Development and implementation of strategy to address current water supply and demand management challenges, improving the resilience and reliability of the water service.

Indicative Timeframe

Year 1, then ongoing

Indicative Cost

\$150K, then staff time

Asset Type



Key Challenge



Management Principle



Linkage to



Infrastructure Investment Forecasts

Most Likely Scenario

The provision of fit for purpose, affordable infrastructure is key to delivering on the Council's Vision. Many of the infrastructure renewal projects of Council are small, have relatively little impact on the delivery of agreed levels of service, and are therefore "business as usual" for Council. Our most likely scenario is to deliver to current day standards while remaining affordable for our community.

The assessment projects in three waters to address areas such as inflow, infiltration or leak reduction in waters will have flow on effects in the investment in future projects. The success of the reduction in these areas will determine future requirements for investment and the added capacity gained in the existing infrastructure.

Confidence in 3-Waters asset data is medium-low, with known gaps and inaccuracies needing to be rectified before reliance on modelling. With increased recent transport data e.g., bridge asset information, modelling of investment scenarios has a higher confidence. Missing or incorrect data influences the accuracy of projected renewals needs and effects on maintenance of under investment.

To achieve this scenario over the next 30 years we will focus on:

- Improving asset information and infrastructure asset management maturity
- Delivering ongoing maintenance and renewals programmes to meet current service levels and with a view to preventing asset consumption and preserving the assets.
- Addressing key level of service deficiencies, including:
 - Compliance with the New Zealand Drinking Water Standards Compliance with wastewater discharge resource consents

- Minor road safety improvements
- Adherence/compliance to resource consents and conditions
- Addressing key network performance issues, including:
 - Inflow and infiltration
 - Addressing water backflow risks
 - Leakage
- Improving service delivery resilience, including:
 - Upgrades drainage
 - Increasing water storage
- Minor network extensions to enable some growth in our larger townships in line with the urban growth strategy.
- Increased systematic use of systems and data to produce timely and accurate information.



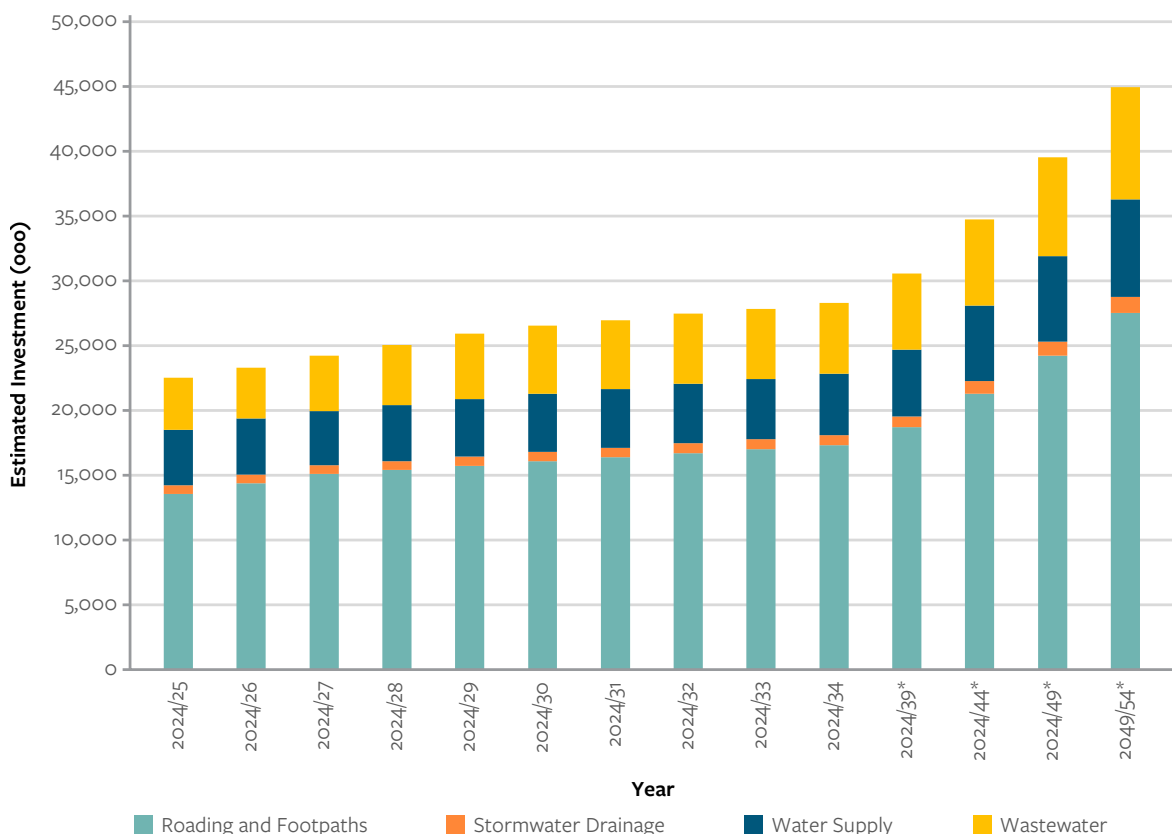
Financial Projections

Council’s operating expenditure on infrastructure assets is forecast to steadily rise over the 30-year period because of the operating impact of investments and inflation. Transportation makes up most of the expenditure, consistent with the historical expenditure pattern of this Council, however, expenditure on the three waters is increasing proportionally as Council renews the urban piped networks.

The recovery from Cyclone Gabrielle and the deliverability of the work programme being unaffected by other events will have an effect on subsequent years as will the efficiencies gained in the concurrent delivery of renewal programmes in conjunction with the recovery programme.

Infrastructure Expenditures

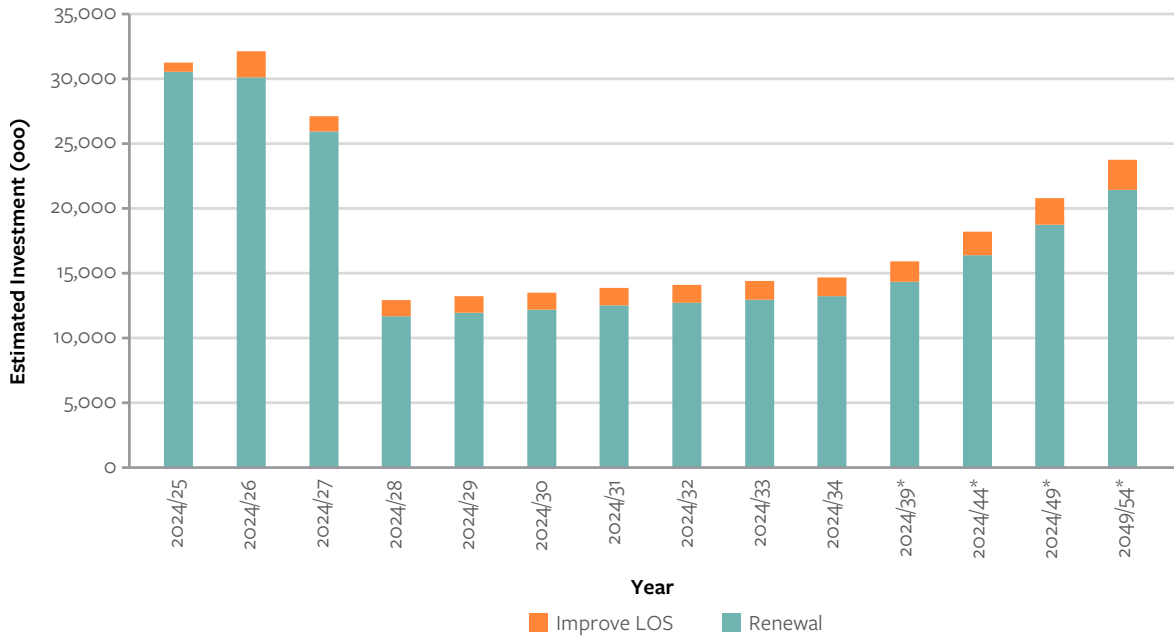
OPERATING & MAINTENANCE INVESTMENT



* Average annual Operating & Maintenance Investment per five year period



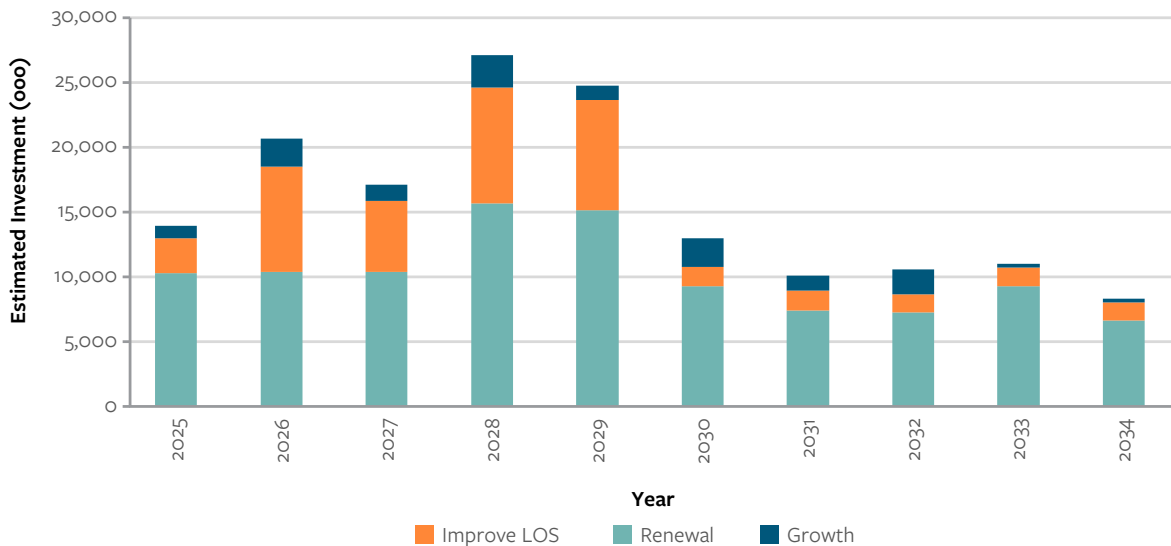
ROADING CAPITAL INVESTMENT



	2024/25	2024/26	2024/27	2024/28	2024/29	2024/30	2024/31	2024/32	2024/33	2024/34	2034-2039*	2039-2044*	2044-2049*	2049-2054*
Renewal	30,686	30,256	26,062	11,771	12,028	12,293	12,610	12,813	13,067	13,327	14,446	16,504	18,856	21,543
Improve LOS	734	2,024	1,212	1,246	1,280	1,315	1,350	1,385	1,421	1,457	1,579	1,804	2,061	2,355

* Average annual Operating & Maintenance Investment per five year period

THREE WATERS CAPITAL INVESTMENT



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Renewals	10,298	10,392	10,389	15,687	15,200	9,296	7,402	7,271	9,287	6,651
LOS	2,695	8,135	5,494	9,001	8,511	1,516	1,566	1,394	1,481	1,424
Growth	1,005	2,201	1,277	2,494	1,100	2,205	1,170	1,917	253	258



Infrastructure Growth Projects (3 years)

Major Infrastructure Growth Projects

Sewerage

Development and extension of Wastewater Network	2,299,000
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Stormwater Drainage

District Stormwater Network Development	787,000
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Wastewater

Dannevirke wastewater network development (extension)	1,132,000
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Pahiatua Wastewater Network Development (extension)	306,000
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Woodville Wastewater Network Development (extension)	707,000
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Water Supplies

Dannevirke Water Network Development (extension)	2,030,000
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Eketāhuna Water Network Development (extension)	1,357,000
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Norsewood Pressure Management for upper and lower network	16,000
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Pahiatua Water Network Development (extension)	2,955,000
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Woodville Water Network Development (extension)	2,269,000
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Major Infrastructure Level of Service Projects

Major Infrastructure LOS Projects

Sewerage

Dannevirke land purchase	3,679,000
Dannevirke Wastewater Treatment Plant Upgrade (Syphon, pipes alt route)	5,591,000
DVK Waste Water Treatment Plant Upgrade	5,585,000
Eketāhuna Wastewater Treatment Plant Upgrade	2,097,000
Pahiatua Wastewater Treatment Plant Upgrade	2,401,000
Sludge Disposal Facility	1,835,000
WDV Waste Water Treatment Plant Upgrade	1,206,000
Woodville Wetland Development	1,206,000

Water Supplies

Renewable Energy Systems for Treatment Plant	1,329,000
Universal Metering Strategy and Implementation	5,002,000
Water - Three Waters Generators & Emergency	542,000
Woodville Alternate Water Source Resource Consent	1,331,000

Transport

Minor Safety Improvements	10,597,000
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Infrastructure Renewals

Infrastructure Renewals

Water Supplies	61,285,000
Wastewater	30,103,000
Transport	195,272,000
Stormwater	8,269,000



Improvement Plan

The development of this Infrastructure Strategy is based on the existing levels of service, the best available current information, and the knowledge of Council staff. It currently provides our best estimate of expected changes over the term of the Strategy.



This Strategy is subject to periodic review and updating to improve the quality of our planning and accuracy of the financial projections. This process involves using improved knowledge of future trends and customer expectations, as well as enhanced asset management systems and data to optimise decision-making and activities, review outputs, develop strategies, introduce risk management, and extend the planning horizon.

The purpose of the Improvement Plan is to:





- Identify and develop implementation of planning processes
- Identify and prioritise ways to cost-effectively improve the quality of the Infrastructure Strategy
- Identify indicative timescales, priorities, and resources required to achieve planning objectives.

A summary of the improvement initiatives identified throughout this document are included in Table 12 Improvement Programme.


TABLE 12: IMPROVEMENT PROGRAMME

Improvement Area	Improvement Actions	Activity	Indicative Timeframe	Priority	Responsibility
Growth Strategy and District Plan review	With predicted growth now expected to have significant impacts on our infrastructure and expected levels of service, asset planning to incorporate the Growth Strategy and District Plan review into asset plans is required to enable a holistic assessment of core infrastructure and identify key infrastructure deficiencies, supporting effective prioritisation of investment.	All	2024-2027		
Asset Criticality Framework	Using the Risk Management Framework we will develop an asset criticality framework that can be consistently applied across all activities. A “criticality rating” will then be assigned to all assets. Formal criticality rating system to be developed by end 2025 and criticality list to be reviewed and updated by end 2026 for use in the 2027-2030 LTP	All	2025		



Improvement Area	Improvement Actions	Activity	Indicative Timeframe	Priority	Responsibility
Risk Identification	A full review of all infrastructure risks is to be completed in mid-LTP. These risks will be updated in the Risk Register, with mitigation initiatives identified and implemented for each risk. These will then be added to the next AMP's and Infrastructure Strategy.	All	2026		
Infrastructure Assets Data	Part of the Strategy is to improve decision-making by addressing gaps in asset data. While we have made improvements to our data quality and completeness for roads in recent years, Council is now targeting further collection, validation, and analysis of the data for other activities. This will fill the gaps to inform the 2027 -2057 strategy, by providing primary evidence for infrastructure decisions.	All	2024 - 2027		
Roles & Responsibilities	Resourcing is one of the specific challenges we face, particularly to ensure that the current day-to-day activity focus is paired with the necessary long-term focus. A review of key roles and responsibilities for Infrastructure Management will be completed to ensure Council has the right levels of resourcing and capability.	All	2024 - 2027		
Waters resourcing	With the Repeal of the Water Service Reform legislation, a review of the structure and roles within the Alliance and council is required to ensure the structure is fit for purpose to meet the legislation revocation.	3-waters	2024 - 2027		



Improvement Area	Improvement Actions	Activity	Indicative Timeframe	Priority	Responsibility
Options Identification and Investment Decision Making	With improvement of input data and risk management approaches, we will also be reviewing our options identification, analysis, and prioritisation approach. This will ensure that decision making processes and criteria are consistent across all activities and will ensure all appropriate options are considered.	All	2024		



Appendix A

Data Reliability Ratings

Water

Treatment Plant and Facilities

Sound records currently exist for asset inventory data. These will be further improved as part of the data migration to RAMM, alignment to the Land Information NZ metadata standard, and 3-Waters stimulus fund project to improve 3-Waters asset inventory.

Age vs expected useful life is typically used as a proxy to determine asset condition. This is validated with visual condition assessments being completed every three years, and with informal day-to-day checks from staff.

Sound records exist for asset age information. There are a disproportionate number of assets recorded as being constructed in 1980. Whilst this is immaterial, verification will be completed as part of the 3-Waters asset inventory improvements project over the next twelve months.

Network and Other Assets

Sound records currently exist for asset inventory data. These will be further improved as part of the data migration to RAMM, alignment to the LINZ metadata standard, and 3-Waters stimulus fund project to improve 3-Waters asset inventory.

Age vs expected useful life is used as a proxy to determine asset condition and to estimate remaining useful life. This is validated using standard industry practice and expected life assumptions are reviewed independently as part of the asset valuation process. Through the 3-Waters stimulus fund, we will be completing condition assessment of our underground water pipe assets. This will enable further verification of our life assumptions and enable more effective long term renewal investment planning.

Sound records exist for asset age information of pipe assets. Minimal age information exists for point assets such as hydrants and valves, however this is considered immaterial due to the low cost and risk associated with these assets.

Data Confidence	Inventory	Condition	Age
Treatment Plant and Facilities	B – Reliable	B – Reliable	C – Uncertain
Network and Other Assets	B – Reliable	C – Uncertain	C – Uncertain



Wastewater

Treatment Plant and Facilities

Sound records currently exist for asset inventory data, due to the quantum of new assets. These will be further improved as part of the data migration to RAMM, alignment to the LINZ metadata standard, and 3-Waters stimulus fund project to improve 3-Waters asset inventory.

Age vs expected useful life is typically used as a proxy to determine asset condition. This is validated with visual condition assessments being completed every three years, and with informal day-to-day checks from staff.

Sound records exist for asset age information.

Network and Other Assets

Sound records currently exist for asset inventory data. These will be further improved as part of the data migration to RAMM, alignment to the LINZ metadata standard, and 3-Waters stimulus fund project to improve 3-Waters asset inventory.

Age vs expected useful life is used as a proxy to determine asset condition and to estimate remaining useful life. This is validated with visual asset inspections using Council’s in-house CCTV unit.

Sound records exist for many assets age information of pipe assets, although data gaps do exist. The risk of this is considered immaterial, due to our ability to complete physical inspection of assets and estimate remaining useful life.

Data Confidence	Inventory	Condition	Age
Treatment Plant and Facilities	B – Reliable	B – Reliable	B – Reliable
Network and Other Assets	B – Reliable	B – Reliable	C – Uncertain

Stormwater

Sound records currently exist for asset inventory data, following increased focus in recent years. These will be further improved as part of the data migration to RAMM, alignment to the LINZ (Land Information New Zealand) metadata standard, and 3-Waters stimulus fund project to improve 3-Waters asset inventory.

Asset condition is based on visual inspection by staff for above ground assets (e.g. open drains), and by

using Council’s in-house CCTV unit for underground pipe assets. This is not entirely complete, although is not considered a material risk due to our ability to easily complete reactive inspections and the low cost of intervention.

Some asset age data exists although there are significant gaps. The risk of this is considered immaterial, due to our ability to complete physical inspection of assets and estimate remaining useful life.

Data Confidence	Inventory	Condition	Age
Systems	B – Reliable	C – Uncertain	C – Uncertain



Rating	Description
A – Highly reliable	Data based on sound records, procedure, investigations, and analysis, documented properly, and recognized as the best method of assessment.
B – Reliable	Data based on sound records, procedures, investigations, and analysis, documented properly but has minor shortcomings, for example the data are old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.
C – Uncertain	Data based on sound records, procedures, investigations, and analysis which is incomplete or unsupported, or extrapolated 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.
E – Very unreliable	No data exists



Appendix B

Local Government Act 2002 Requirements

101B Infrastructure strategy

- (1) A local authority must, as part of its long-term plan, prepare and adopt an infrastructure strategy for a period of at least 30 consecutive financial years.
- (2) The purpose of the infrastructure strategy is to—
 - (a) identify significant infrastructure issues for the local authority over the period covered by the strategy; and
 - (b) identify the principal options for managing those issues and the implications of those options.
- (3) The infrastructure strategy must outline how the local authority intends to manage its infrastructure assets, considering the need to—
 - (a) renew or replace existing assets; and
 - (b) respond to growth or decline in the demand for services reliant on those assets; and
 - (c) allow for planned increases or decreases in levels of service provided through those assets; and
 - (d) maintain or improve public health and environmental outcomes or mitigate adverse effects on them; and
 - (e) provide for the resilience of infrastructure assets by identifying and managing risks relating to natural hazards and by making appropriate financial provision for those risks.
- (4) The infrastructure strategy must outline the most likely scenario for the management of the local authority's infrastructure assets over the period of the strategy and, in that context, must—
 - (a) show indicative estimates of the projected capital and operating expenditure associated with the management of those assets—
 - (i) in each of the first 10 years covered by the strategy; and
 - (ii) in each subsequent period of 5 years covered by the strategy; and
 - (b) identify—
 - (i) the significant decisions about capital expenditure the local authority expects it will be required to make; and
 - (ii) when the local authority expects those decisions will be required; and
 - (iii) for each decision, the principal options the local authority expects to have to consider; and
 - (iv) the approximate scale or extent of the costs associated with each decision; and
 - (c) include the following assumptions on which the scenario is based:
 - (i) the assumptions of the local authority about the life cycle of significant infrastructure assets:



- (ii) the assumptions of the local authority about growth or decline in the demand for relevant services:
 - (iii) the assumptions of the local authority about increases or decreases in relevant levels of service; and
- (d) if assumptions referred to in paragraph (c) involve a high level of uncertainty, —
 - (i) identify the nature of that uncertainty; and
 - (ii) include an outline of the potential effects of that uncertainty.
- (5) In this section, infrastructure assets include—
 - (a) existing or proposed assets to be used to provide services by or on behalf of the local authority in relation to the following groups of activities:
 - (i) water supply:
 - (ii) sewerage and the treatment and disposal of sewage:
 - (iii) stormwater drainage:
 - (iv) flood protection and control works:
 - (v) the provision of roads and footpaths; and
 - (b) any other assets that the local authority, in its discretion, wishes to include in the strategy.