

A photograph of industrial water treatment infrastructure, featuring stainless steel pipes, valves, and a blue-handled valve in the foreground. The background shows a green landscape and a body of water. A semi-transparent white box with a blue border is overlaid on the top left, containing text in English and Māori.

Draft Infrastructure Strategy 2021-51

*Te tuhinga hukihuki mō
te Rautaki Tūāpapa 2021-51*

LONG TERM PLAN 2021-31
Te Mahere Pae Tawhiti 2021-31



WHAKATĀNE
District Council
Kia Whakatāne au i ahau

Draft Infrastructure Strategy 2021-51

Overview

The Whakatāne District faces a number of infrastructure challenges over the coming years. These include:

- replacing and upgrading our infrastructure assets to ensure they are secure and resilient;
- providing for increased population growth and planned development;
- managing the effects of climate change and natural hazards;
- reducing infrastructure impacts on our environment; and
- enhancing the health and safety of our community.

Addressing all of these challenges requires significant planning and investment decisions and action. Council will need to ensure that we balance affordability with the delivery of essential services and prioritisation of critical improvements that will enhance our District and help achieve our vision and communities' aspirations.

Introduction

The Infrastructure Strategy outlines how Council intends to manage infrastructure assets over the next 30 years. It outlines the Council's vision for our communities, identifies the significant infrastructure challenges and drivers in achieving that vision and how the Council intends to address these through our long term planning and investment.

Whakatāne District's Infrastructure Strategy focuses on the critical assets of drinking water supply; sewage treatment and disposal (wastewater); stormwater drainage (collectively known as "three waters"); and the provision of roads and footpaths. The Infrastructure Strategy has been developed as part of the Long Term Plan 2021-31.

Our Changing Context

Whakatāne is going through a time of great change which brings an increased level of uncertainty about the future of our District. In particular, three key areas of change are:

1. **Water reforms** are currently underway by central government, resulting in uncertainty about the future structure and operations of three waters management in our District. Given the early stages of this reform work, for the purpose of this Infrastructure Strategy, we have assumed that Council will continue to deliver our District's three waters services and maintain the associated assets.
2. **Substantial growth** in our District was not predicted when the Council previously prepared a 30 year Infrastructure Strategy in 2018. However, the last few years have seen a significant change in our District's growth predictions. Due to this, our Council's focus over the coming three years will be to ensure we are well prepared to manage that growth prudently for the benefit of current and future ratepayers.
3. **Climate Change** projections suggest potentially significant impacts on the Infrastructure in our District over the coming 50-100 years and beyond. Whilst we do not have all of the information currently to outline a detailed plan to address all the specific risks posed by climate change, the Council is proposing a project on Climate Change Adaptation, over the next three years, to enable us to develop a robust, community-led adaptation plan.

While we look to respond to these changes through projects included in this Strategy, a focus for the coming three years will be completing comprehensive planning to enable us to be responsive and proactive in preparing for these changes through the 2024-54 Infrastructure Strategy.

COVID-19

The emergence of the COVID-19 pandemic has had a profound effect on a local, national, and global scale. The Council must remain prepared to respond to any future outbreaks of COVID-19, or changes to the Ministry of Health's alert levels. A key focus during any COVID-19 related events (in addition to the Council's Civil Defence & Emergency Preparedness responsibilities) is the safe delivery of essential services and management of critical infrastructure and assets.

For the purposes of planning and budgeting, the assumption in the LTP 2021-31 is that the status of COVID-19 will not result in significant disruptions that would impact service delivery. However, if resurgences did eventuate, the Council's ability to provide a 'business-as-usual' level of service might be affected.

Following the initial emergence of COVID-19, the Council put in place a Crisis Management Plan, reviewed Business Continuity Plans, and developed 'Control Plans' for each alert level. In the case of a COVID-19 resurgence, or changes in alert levels, these documents and advice from the Ministry of Health guide the Council's response. The Council remains vigilant with COVID-19 continuing to be an ever-present threat.

Planning for the Long Term

Our District's context is changing rapidly and we know that significant effort and investment is needed to address some of the big challenges and opportunities facing our District and communities. Many of Council's infrastructure assets have a long life i.e. 80 - 100 years, requiring the Council to plan for, invest in, maintain and renew assets over a long term horizon and multiple planning periods.

The following Long Term Plan priorities and future focus areas have been identified to achieve our vision and communities' aspirations. For further detail on these, please see Council's Long Term Plan 2021-31.

Our vision: More life in life

Working together to make living better for our communities, now and in the future



Strong, resilient Council organisation focused on continuous improvement

Eight priorities for more life in life:



Preparing for population growth and housing demand



Enhancing the environmental outcomes of our activities



Improving the safety, security and resilience of infrastructure



Building climate change and natural hazard resilience



Enhancing the vibrancy of our communities



Facilitating economic regeneration and employment opportunities



Strengthening whānau, hapū and iwi partnerships



Ensuring Council is enabled and fit for the future

This is how our Long Term Plan is shaping up...

		<p>Checking in with you on the big decisions for this Long Term Plan</p>	<p>Preparing for major future changes</p>
<p>For many of our services it is business as usual</p> <p>The Council delivers a wide range of activities, services and facilities that people, families and businesses use and rely on every day. We intend to continue to deliver most of these at the current level, adding value and improvements where we can within the existing budgets.</p>	<p>Continuing commitments to key projects</p> <p>This Long Term Plan proposes to uphold existing commitments to improve specific services and outcomes for our communities. Examples include:</p> <ul style="list-style-type: none"> ▶ Developing a wastewater solution for Matatā ▶ Unlocking economic potential and supporting job creation through the Whakatāne Regeneration Programme ▶ Upgrading the Whakatāne War Memorial Hall ▶ Improving stormwater systems 	<p>Through this Long Term Plan, we'll reconfirm key areas of focus and propose a few changes to our work programme and budgets:</p> <ul style="list-style-type: none"> ▶ Increasing investment into three waters (water supply, sewerage, stormwater) ▶ Responding to demand for active transport and road sealing ▶ Managing waste more sustainably ▶ Resetting some aspects of the Whakatāne Town Centre and Riverfront Revitalisation Programme (Te Ara Hou) ▶ Enabling the Council to be fit for the future <p>Balancing the costs, rating impacts and debt</p>	<p>Some aspects of our future are uncertain. We don't have all the answers - but we're working on it. Over the coming 2-3 years we will develop the strategies and plans that chart the way ahead – informing major decisions for our next Long Term Plan 2024-34. Key areas of focus include:</p> <ul style="list-style-type: none"> ▶ Planning for how and where we grow in response to population growth and housing demand ▶ Understanding and reducing our vulnerability to climate change and natural hazard risks ▶ Building momentum on our Climate Change Strategy by making changes as a Council and supporting communities to make change ▶ Preparing for impacts of local government reform

SIGNIFICANT INFRASTRUCTURE CHALLENGES

This Strategy identifies five significant infrastructure challenges for the District over the next 30 years.

Challenge 1: Ensuring the security and resilience of our infrastructure	<p>A large number of the Council’s core infrastructure assets are coming to the end of their useful life and will need replacing within the 30 year period of this Strategy. There are also a number of source water supply issues and vulnerabilities that need to be addressed.</p>
Challenge 2: Providing infrastructure for our growing population	<p>Since 2013, Whakatāne District has experienced increased population growth. This growth is expected to continue over the next thirty years.</p>
Challenge 3: Responding to climate change and natural hazards	<p>Climate change and natural hazards are already affecting our communities, with impacts of climate change expected to increase in frequency and magnitude over time</p>
Challenge 4: Reducing the impact of our infrastructure on the environment	<p>The design and operation of the Council’s infrastructure is a key contributor to our environmental footprint.</p>
Challenge 5: Enhancing the health and safety of the community	<p>The community expects certain levels of service from Council provided infrastructure and services, many of which have a strong health and safety focus.</p>

Notes to this section

Cost Scale of Option Key	<p>Low Up to \$5.0 million Medium \$5.0 – \$20.0 million High Over \$20.0 million</p>
Financial Forecasts	<p>Projects proposed in the early years of the Infrastructure Strategy have a higher degree of financial and timing certainty, often due to the work being planned, scoped and estimated. Project estimates in the later years of the Infrastructure Strategy (years 11 – 30) are less certain both financially and in terms of timing.</p> <p>The cost and timings defined in this Strategy are the Council’s reasonable expectation of the capital investment required to maintain, grow and operate our critical infrastructure assets, based on best available information.</p>

CHALLENGE 1: ENSURING THE SECURITY AND RESILIENCE OF OUR INFRASTRUCTURE

A significant proportion of Council business is in the operation and maintenance of infrastructure. The Council manages over \$672 million of community assets. With much of the District’s infrastructure built in the 1950s to 1970s, a large number of the Council’s core infrastructure assets are coming to the end of their useful life and will need to be replaced within the 30 year period of this Strategy.

The Council has robust Asset Management Plans in place for our core infrastructure to ensure that they are well maintained, have a long term prioritised programme of works and that the ‘whole of life’ costs are balanced and

shared across multiple planning periods. The Council undertakes continuous monitoring of our assets including forecasting models to plan long-range renewal requirements and to ensure appropriate funding is in place.

Environmental standards continue to increase regarding the quality of water that we discharge around the District. Conforming to these higher standards will be a requirement within the term of the 2021-31 Long Term Plan for Three Waters (Water Supply, Stormwater and Wastewater), which will necessitate a significant amount of work, including upgrades to our wastewater treatment plants in order to gain consents from the Regional Council.

Three Water Reforms

In July 2020, the Government initiated the Three Waters Reform Programme to reform local government three waters service delivery arrangements. One of the possible outcomes of this reform is that the management and operation of the three water assets may move to another agency. The outcomes of this reform are not included in this Long Term Plan as there are currently a number of uncertainties around the final outcome. Council's 2024-34 Long Term Plan will include any planning and investment requirements associated with the final determinations from the reform.

Supporting Council Strategies and Plans

- **Asset Management Plans** provide an outline of the works required for each of the key asset activities in order to prudently manage infrastructure and deliver essential services to the community.
- **Comprehensive Stormwater Catchment Strategy** outlines the best options and techniques for the future management of stormwater. It also supports Council's Comprehensive Stormwater Consent processes with the Regional Council.

SIGNIFICANT INVESTMENT DECISIONS

1. New wastewater and stormwater consents required

The Council will need to obtain new wastewater consents for discharging treated wastewater, with existing consents expiring in 2026. Stormwater discharge consents will also need to be obtained over the ten year Long Term Plan period.

The extent of the works required for new consents to meet any new compliance requirements is currently unknown. Work scheduled through the Long Term Plan 2021-31 will identify consent conditions and upgrade requirements to our infrastructure.

Date Decisions required: 2025/26 for wastewater consents; 2021/31 for stormwater consents

Key Options for Decisions:

Wastewater Treatment Plant Upgrades

Option	Implications	Cost Scale of Option
Retain and upgrade current infrastructure i.e. oxidation ponds	<ul style="list-style-type: none"> • Large land footprint to undertake operations. • Difficulty capturing methane emissions. • Ongoing challenges to meet odour control requirements. 	Med - High
Construct new package treatment plants and decommission existing infrastructure.	<ul style="list-style-type: none"> • Significant investment required that could be potentially unaffordable for the District. • Improved environmental standards and operations. • Allows partial methane capture. 	High

Option	Implications	Cost Scale of Option
	<ul style="list-style-type: none"> May release land for other uses. 	
Combine various schemes into fewer systems.	<ul style="list-style-type: none"> Adds complexity to the current system. Possible cultural sensitivity in terms of the movement of wastewater. May be more 'efficient'. Potential delays to decision making due to multiple schemes and affected communities. 	High
<p>The determination of a preferred option is subject to further scientific analysis, engagement and consultation with Council, iwi and the community. For this Long Term Plan the 'Retain and upgrade current infrastructure i.e. oxidation ponds' option has been included in the draft budget.</p>		

Significant Projects and Programmes

Further planning and investment will be required to meet resource consent conditions including relevant upgrades. These will inform future Long Term Plans and supporting Infrastructure Strategies. Wastewater Treatment Plant upgrades are based on the best available information at the time of this strategy development.

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Wastewater Discharge Resource Consents Process <ul style="list-style-type: none"> Whakatāne Edgecumbe Murupara Taneatua 	<ul style="list-style-type: none"> Level of Service Renewal 	\$850,000	\$2.5 million		
Wastewater Resource Consent Upgrades	<ul style="list-style-type: none"> Level of Service 		\$270,000	\$7.4 million	
Stormwater Resource Consents Process <ul style="list-style-type: none"> Edgecumbe Matatā Murupara Tāneatua Te Teko Te Mahoe 	<ul style="list-style-type: none"> Level of Service 	\$70,000	\$610,000		
Stormwater Study	<ul style="list-style-type: none"> Level of Service 	\$100,000		\$5.6 million	
Wastewater Treatment Plant Upgrades <ul style="list-style-type: none"> Whakatāne Edgecumbe Murupara Te Mahoe Ohope 	<ul style="list-style-type: none"> Level of Service Renewal 	\$1.4 million	\$6.2 million	\$27.1 million	\$12.1 million

2. Renewing our ageing assets

Council has an ongoing programme of renewals for its infrastructure assets. During each Long Term Plan, Council is required to reconfirm the level of funding for these.

Date Decision required: Every 3 years, within the Long Term Plan.

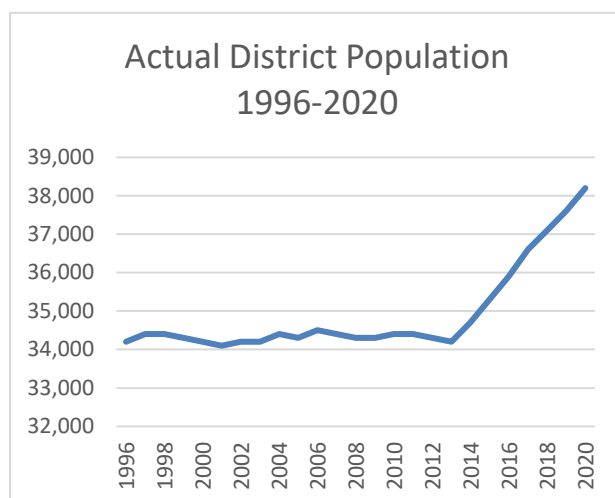
Key Options for Decisions:

Option	Implications	Cost Scale of Option
Lower scale implementation of renewals programme. i.e. lower investment than that described in the significant projects table below.	<ul style="list-style-type: none"> • LOS decreases water – DWS compliance and water losses. • LOS decreases wastewater – Satisfaction, dry weather overflows and RC breaches. • Lower system and infrastructure standards achieved. • Increased risk of failure with operations and maintenance implications. 	Medium
Medium scale implementation of renewals programme. i.e. investment described in the significant projects table below. This option is the preferred and most likely scenario)	<ul style="list-style-type: none"> • No change to LOS • Bring system and infrastructure up to a higher standard at a quicker pace. • Decreased risk of failure. 	High
Higher scale implementation of renewals programme. i.e. higher investment than that described in the significant projects table below.	<ul style="list-style-type: none"> • LOS increases water. • LOS increases wastewater – Satisfaction, dry weather overflows and RC breaches. • Deliver robust fit-for purpose system and infrastructure. • Decreased operational and maintenance costs over time. • Significant investment required that could be potentially unaffordable for the District. 	High

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Transport Renewals <ul style="list-style-type: none"> • Roads • Structures • Drainage • Traffic • Footpaths and Parking 	• Renewal	\$17.3 million	\$48 million	\$109 million	\$121 million
Wastewater Mains and Network Renewals <ul style="list-style-type: none"> • Whakatāne • Equalised • Ohope 	• Renewal	\$620,000	\$9.0 million	\$26.8 million	\$21 million
Water Network Renewals	• Renewal	\$1.9 million	\$7.5 million	\$12.2 million	\$16.2 million

CHALLENGE 2: PROVIDING INFRASTRUCTURE FOR OUR GROWING POPULATION



The District's population trend over the past two decades was a static and/or reducing population. This differed geographically. This trend has dramatically reversed in the past seven years with the District seeing significant lifts in property values, high property demand, and consistent annual increases in the District's population.

Analysis suggests the District is experiencing a housing shortage and will need approximately 1,200 new dwellings within the next ten years. A total of 3,600 new dwellings will be required over the next thirty years.

While the Council has most of the infrastructure necessary to service a stable population base, pressure for new and improved assets and services

has come from population growth.

Planning for this future development will require investment in upgrades and extensions to existing infrastructure as well as the provision of new infrastructure to service new development areas.

Additionally, new investment in drinking water supply and wastewater (sewage) treatment, along with improvements to the quality of stormwater and wastewater outfalls/discharges is required over the next ten year period. Furthermore, renewal of wastewater consents in 2026 will likely result in the need to comply with increased standards regarding wastewater treatment and discharge.

There is some capacity within the Council's current infrastructure system to manage increased service demand in the short term. However timely planning and implementation of growth related projects are required throughout the Long Term Plan ten-year period to manage ongoing and increased demand.

Currently the Whakatāne / Ōhope drinking water is supplied from one river source with capacity available for just over 24 hours worth of water storage. These current constraints pose a risk to service levels, should the projected future growth and development materialise, increasing the demands on this service. To reduce this risk, Council is investigating significant investment in an alternative water supply in 2031-39 at a cost of \$150 million (including inflation).

The National Policy Statement on Urban Development (NPS-UD) requires Councils to provide sufficient land for residential and business development that is zoned appropriately and has the necessary infrastructure in place. This has financial implications for the Council due to new infrastructure needing to be constructed before costs can be recouped either through rates or development and/or financial contributions.

Council is yet to identify specific locations for future development. However, the Council is currently working with our regional partners on a Future Development Strategy and Eastern Bay of Plenty Spatial Plan which will identify locations within the District and wider Eastern Bay to be considered for future development. This work will be completed in 2021/22.

Supporting Council Strategies and Plans

- **Whakatāne District Plan** provide an outline for each of the key asset activities of the works required to prudently manage infrastructure and deliver essential services to the community.
- **Future Development Strategy (in development)** will set out how sufficient development capacity will be provided for across the Whakatāne District in the medium and longer terms.
- **Eastern Bay of Plenty Spatial Plan (in development)** will set out a comprehensive long term strategy for Whakatāne's future growth and development.

- **Whakatāne Access Strategy (in development)** will guide future decisions regarding vehicular movement into and around the Whakatāne township with an intent to reduce single occupancy vehicle use.

SIGNIFICANT INVESTMENT DECISIONS

1. Upgrade Three Waters infrastructure to meet higher standards and create new assets to provide for growth

Higher quality standards are required for each of the three water classes in the term of the 2021-31 Long Term Plan. Further, many of the assets are either nearing the end of their life or require capacity upgrades and/or expansions in order to manage the forecast growth and development in some communities.

To respond to these pressures, Council is investigating significant investment in an alternative water supply in 2031-39 at a cost of \$150 million.

Date Decisions required: from 2023/24

Key Options for Decisions:

New Equalised Water Source and Treatment Plant

Option	Implications	Cost Scale of Option
Retain and upgrade current infrastructure	<ul style="list-style-type: none"> • Vulnerability to seismic risk not resolved • Significant upgrade required to existing aged plant 	Med - High
Construct new treatment plants and decommission existing infrastructure.	<ul style="list-style-type: none"> • New plant able to accommodate future drink water standards • Meet new environmental discharge standards • Significant investment required that could be potentially unaffordable for the District. 	High
Interlink various existing schemes	<ul style="list-style-type: none"> • Increased resilience of multiple drinking water sources • High cost of interlinking trunk mains • Significant investment required that could be potentially unaffordable for the District. 	High
The determination of a preferred option is subject to further scientific analysis, engagement and consultation with Council, iwi and the community. For this Long Term Plan the 'Construct new treatment plants and decommission existing infrastructure' option has been included in the draft budget.		

New Equalised Wastewater Treatment Plants

Option	Implications	Cost Scale of Option
Retain and upgrade current infrastructure i.e. oxidation ponds	<ul style="list-style-type: none"> • Large land footprint to undertake operations. • Difficulty capturing methane emissions. • Ongoing challenges to meet odour control requirements. 	Med - High

Option	Implications	Cost Scale of Option
Construct new package treatment plants and decommission existing infrastructure.	<ul style="list-style-type: none"> Significant investment required that could be potentially unaffordable for the District. Improved environmental standards and operations. Allows partial methane capture. May release land for other uses. 	High
Combine various schemes into fewer systems.	<ul style="list-style-type: none"> Adds complexity to the current system. Possible cultural sensitivity in terms of the movement of wastewater. May be more 'efficient'. Potential delays to decision making due to multiple schemes and affected communities. 	High
The determination of a preferred option is subject to further scientific analysis, engagement and consultation with Council, iwi and the community. For this Long Term Plan the 'Retain and upgrade current infrastructure i.e. oxidation ponds' option has been included in the draft budget.		

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
New Equalised Water Source and Treatment Plant	<ul style="list-style-type: none"> Level of Service Growth 		\$3.3 mill	\$146.5million	
New Equalised Wastewater Treatment Plants	<ul style="list-style-type: none"> Level of Service Growth 		\$38.6 million	\$26.9 million	

2. Upgrade Landing Road and Keepa Road

Landing Road is the key arterial into and through Whakatāne town centre and surrounding urban areas. It is a key connector to Whakatāne's surrounding communities and neighbouring districts. Landing Road requires investment as the District grows to ensure that the route remains efficient in the movement of people and goods. The Access Whakatāne Strategy may identify other improvement opportunities in response to traffic congestion around the Whakatāne Bridge.

The bridge into Whakatāne town continues to be of high community interest because of peak congestion and vulnerability to natural hazards. The bridge is a central government asset as part of the state highway network but is not a high priority for Waka Kotahi – New Zealand Transport Agency amongst other transport challenges facing our country. This means funding for a solution would have to come from our ratepayers. For this reason we have not included budget for a new or improved bridge into our Long Term Plan - it is simply unaffordable. However as a key priority for our community, we will continue to strongly advocate our concerns to Waka Kotahi – New Zealand Transport Agency around resilience and growth.

Keepa Road is located on the edge of the Whakatāne urban area and is the main access to the business and residential growth areas of Coastlands and Piripai. It will also support the new Boat Harbour Development on the Whakatāne riverfront. Keepa Road requires investment to upgrade the road's overall network function and capacity to support the District's growth.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Continue with current levels of service for maintenance and operations programme on strategically identified transport corridors.	<ul style="list-style-type: none"> Decreased level of service as use increases resulting in increased congestion and efficiency issues. Increased impacts on operations and maintenance of key strategic routes. Does not plan or cater for projected growth. 	Low
Increase levels of service including improvements, maintenance and operations on strategically identified transport corridors. (This options is preferred as the most likely scenario)	<ul style="list-style-type: none"> Caters to and plans for projected growth. Ensures efficient movement of people and goods within and through Whakatāne. Meets Waka Kotahi classification standards and customer levels of service. 	Medium

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Landing Road Roundabout Upgrade	<ul style="list-style-type: none"> Level of Service Growth 	\$2.1 million			
Urban Arterial Route and Intersection Improvements	<ul style="list-style-type: none"> Level of Service Growth 	\$2.2 million			
Keapa Road Upgrade	<ul style="list-style-type: none"> Growth 	\$390,000	\$3.6 million		

CHALLENGE 3: RESPONDING TO CLIMATE CHANGE AND NATURAL HAZARDS

Climate change is already affecting our communities with impacts expected to increase in magnitude and extent over time. Climate change risks are likely to be significant in parts of the District, such as inundation and erosion risk to our coastal areas. Large parts of the District are low lying and susceptible to flooding, while periods of drought and extreme temperatures are also impacting our three waters operations.

In addition to climate change, natural disasters and events also pose a serious challenge for the Whakatāne District and often result in significant ongoing costs. Council needs to ensure our infrastructure networks can withstand these events and don't fail.

As much of the Rangitāiki Plains is low-lying, changes to groundwater levels could have a significant impact on Council's transport and three waters infrastructure and assets. Within the next two years, Council will identify potential effects of climate change on our infrastructure, for example coastal inundation and groundwater levels in the District.

Through the development of the Comprehensive Stormwater Catchment Strategy, Council has been investigating options to manage stormwater including increasing capacity of our network to manage more severe and more frequent events.

Supporting Council Strategies and Plans

- **Climate Change Strategy** provides clear direction including a range of action plans that identify initial actions the Council is committed to undertaking over the short, medium and long term to increase the resilience of our transport and three waters infrastructure against the potential impacts of climate change.
- **Climate Change Adaptation Plan (proposed)** will build on the Climate Change Strategy and identify communities and Council infrastructure at highest risk from climate change, prioritise risk and identify appropriate community-led adaptation plans and works required to Council's infrastructure. This will inform the Infrastructure Strategy 2024-54.
- **Comprehensive Stormwater Catchment Strategy** outlines the best options and techniques for the future management of stormwater. It also supports Council's Comprehensive Stormwater Consent processes with the Regional Council.

SIGNIFICANT INVESTMENT DECISIONS

1. Manage security of reservoirs against natural hazards

Council's water reservoirs are coming to the end of the asset life cycle and are susceptible to natural hazard events such as earthquakes.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Current levels of service maintained with no intervention.	<ul style="list-style-type: none"> • Relatively frequent outages – 'no water' events. • Frequent 'low pressure' events. • Inability to plan for and cater for growth. • Decreased resilience in the system as more intervention is required. 	Low
Moderate increase to storage levels. (Moderate option is preferred as the most likely scenario).	<ul style="list-style-type: none"> • Caters for and plans for projected growth. • Increased resilience in the system for efficient use and access to drinking water. • Fewer no water and low pressure events. 	Medium
High increase to storage levels.	<ul style="list-style-type: none"> • Water resource available at all times. • Increased storage not required at this level to plan for or cater for growth. • Increased costs possibly unaffordable for the District. 	High

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Water Storage Schemes and Renewals	<ul style="list-style-type: none"> • Level of Service • Renewal • Growth 	\$8.0 million	\$9.1 million	\$8.5 million	\$10.2 million
<ul style="list-style-type: none"> • Equalised Scheme • Murupara • Plains • Otumahi 					

2. Increase stormwater levels of service in high risk areas

In the future, the Whakatāne District is projected to have longer dry periods as well as increased events of extreme rainfall. Increased flooding events across the District requires upgrades to existing infrastructure to ensure resilience and security of service.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Current levels of service maintained with no interventions.	<ul style="list-style-type: none"> Increased flooding events as land use intensifies and more severe and more frequent events occur. Little resilience in the system as low cost interventions not pursued. 	Low
Moderate increases to levels of service. (This option is the preferred and most likely scenario)	<ul style="list-style-type: none"> Fewer and less severe flooding events. Caters for and plans for projected growth. Increased resilience in the system for efficient collection, treatment and discharge of stormwater. 	Medium
High increases to levels of service.	<ul style="list-style-type: none"> Minimal flooding events at all times. Increased costs, possibly unaffordable for the District. 	High

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Whakatane Western Catchment Stormwater Upgrade	<ul style="list-style-type: none"> Renewal Level of Service Growth 	\$4.5 million			
Whakatāne Stormwater Pipe and Pump Upgrades	<ul style="list-style-type: none"> Level of Service Renewal 	\$850,000	\$980,000	\$2.6 million	\$2.3 million
Riverside Drive Stormwater Pump Station Upgrade	<ul style="list-style-type: none"> Level of Service Renewal 			\$2.2 million	
Apanui Linear Park Stormwater Upgrades	<ul style="list-style-type: none"> Level of Service 	\$1.5 million	\$80,000		

CHALLENGE 4: REDUCING THE IMPACT OF OUR INFRASTRUCTURE ON THE ENVIRONMENT

The design and operation of our existing and future infrastructure has a major impact on our environmental footprint. Council needs to minimise these impacts in the future through our infrastructure provision and operations.

Environmental standards continue to increase regarding the quality of water that we discharge into our waterways or the ocean. Council is investigating options to upgrade treatment plants to ensure that water is at or above the appropriate standard before it reaches our waterways. These upgrades are required for the Council to gain new consents from the Regional Council. In addition there is a strong need to provide

wastewater networks for communities who are not currently serviced by a reticulated wastewater scheme, due to environmental concerns.

The largest source of emissions for the Council comes from wastewater treatment plants. Over the next 5-10 years, the Council will need to undertake significant upgrades of the sewage treatment facilities across the District to meet more stringent environmental standards. This presents an opportunity to look at how the Council can reduce emissions from the wastewater treatment plants.

Transportation represents 14% of the Council’s emissions and the third largest emissions sector for the district overall. The majority of transport emissions result from petrol and diesel consumed by road transport. The Council has set ambitious targets for the organisation and the wider District to reduce environmental impacts through the reduction of harmful greenhouse gas emissions.

Supporting Council Strategies and Plans

- **Active Whakatāne Strategy** encourages all active modes of transport from public transport to cyclists to pedestrians. The Strategy aims to make it easier and safer for residents to travel without needing to use a car.
- **Climate Change Strategy and Action Plans** provide clear, ambitious targets including to become a carbon zero organisation by 2030¹. The Action Plans defines specific actions to help Council achieve this target

SIGNIFICANT INVESTMENT DECISIONS

1. New wastewater scheme

The Council has been investigating options to implement a new reticulated wastewater scheme for the Matatā community over a number of years. The scheme will help mitigate health and environmental risks from current practices, support iwi aspirations for environmental protection and increase the security and resilience of the system. Recently, further work has been undertaken to consider options that are fit for purpose.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Continue with the current wastewater system operations and practices in Matatā i.e. septic tanks.	<ul style="list-style-type: none"> • Increased public health and environmental risks. • Won't meet Regional Council regulations and compliance. • Cultural sensitivities with the operations and management of wastewater. 	Low
Implement a new solution to manage and dispose of wastewater in Matatā. (This option is the preferred and most likely scenario)	<ul style="list-style-type: none"> • Increased resilience in the system, • Decreased environmental and public health incidents and risks. • Cultural sensitivities with the operations and management of wastewater. • Meet Regional Council new standards and regulations. 	High

¹ Excluding biogenic methane

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Matatā Wastewater Scheme	<ul style="list-style-type: none"> Level of Service 	\$4.4 million	\$14.6 million		

2. Disposal of Filtration residues

Council is reviewing its current practices of disposing of drinking water filtration residues to meet increased standards and reduce environmental impacts.

Date Decisions required: 2022/23

Key Options for Decisions Include:

Option	Implications	Cost Scale of Option
Do nothing	<ul style="list-style-type: none"> Continuing discharge of filtration residues to the Whakatāne river Unlikely to be consented. 	Low
Progress Sludge Treatment project (This option is the preferred and most likely scenario)	<ul style="list-style-type: none"> Meet appropriate standards and practices. 	Medium

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Whakatāne Sludge Treatment	<ul style="list-style-type: none"> Level of Service 	\$1.9 million	\$1.1 million		

3. Improving mode shift in our urban areas

As Whakatane grows, moving people differently via alternative modes to private vehicles (public transport, cycling, walking, micro-mobility) has become increasingly important for the District, especially within and connecting our town centre and communities.

Implementing the Active Whakatāne Strategy is a key Council priority to help create a healthier more active community, achieve our climate change targets, and increase the safety of non-vehicle users getting around our District.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Continue with primarily roading improvement related interventions that prioritises vehicles.	<ul style="list-style-type: none">• Not aligned with central government direction and priorities around mode shift, emission reduction and alternative transport choice.• Increased congestion on key transport corridors as more people drive.• Increased costs to operate and maintain the transport system overtime.	Medium
Increase transport options and choice within Whakatāne to move people and goods. (This options is the preferred and most likely scenario)	<ul style="list-style-type: none">• Aligns with central government direction and priorities.• Supports and plans for growth related travel.• Increases community's choice and options to access and be able to live, learn, work and play.	Medium

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Active Whakatāne Implementation	<ul style="list-style-type: none">• Level of Service• Growth	\$3.1 million	\$8.3 million	\$7 million	

4. Road Sealing Programme

Environmental impacts from unsealed roads i.e. dust, noise and vibration has ongoing harmful effects on people and the environment. Previous Long Term Plans have not included a reseal programme for the District's unsealed roading network. Council is looking to re-establish this programme.

Date Decision required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Continue with no road seal extension programme.	<ul style="list-style-type: none">• Increased noise, dust and vibration impacts to community and business.• No additional cost to current transportation programme.	Low
Re-establish a road seal extension programme within Council's transportation programme (This option is the preferred and most likely scenario)	<ul style="list-style-type: none">• Decreased noise, dust and vibration impacts to community and business, resulting in increased community wellbeing.• Moderate additional cost to current transportation programme.	Medium

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Road Sealing Programme	<ul style="list-style-type: none">Level of Service	\$1.5 million	\$4.2 million	\$7.4 million	\$9.5 million

CHALLENGE 5: ENHANCING THE HEALTH AND SAFETY OF THE COMMUNITY

The community expects certain levels of service from Council provided services, many of which have a strong health and safety focus. Protecting public health and keeping people safe is a high priority for the Council.

We recognise that new processes and procedures will need to be developed to fully deal with known issues such as saline source water, arsenic contamination and possible cyanobacterial contamination. The Council's storage of treated drinking water is considered to be less than desirable in terms of volume, offering less than 24hours supply.

Improving the safety of road users is a Council priority. Some of the Council's main arterial roads are poorly aligned, have out of context curves and widths that are no longer appropriate for the amount of traffic they carry.

Together with poor driver behaviour, these factors have resulted in an increase in the District's predicted and actual crash risk. Regular road safety inspections are undertaken on all the District's roads, with identified safety deficiencies assessed, costed and prioritised.

Supporting Council Strategies and Plans

- **Transportation Activity Management Plan 2021-31** - Transportation Activity Management Plan details the investment proposal for the next 10 year period. The plan supports the Council's Long Term Plan and this Strategy, as well as Waka Kotahi's National Land Transport Plan.
- **Water Supply Asset Management Plan 2021** – Water Supply Asset Management Plan helps the Council to provide and maintain efficient, reliable, safe, and sustainable water supply services.

SIGNIFICANT INVESTMENT DECISIONS

1. Road to Zero Safety Improvements

Waka Kotahi NZ Transport Agency has a national road safety strategy 'Road to Zero' that supports implementation of the safe systems approach. We work with Waka Kotahi to identify and deliver infrastructure and programme improvements to our roading network that present the highest level of risk to our communities. Safety improvements are an ongoing component of our Long Term Plans and work programmes.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
No additional road safety investment.	<ul style="list-style-type: none">Increased risk of death and serious injuries on the District's transport system.	Low
Increase investment in the road safety programme, prioritised to high risk transport corridors. (This option is the preferred and most likely scenario)	<ul style="list-style-type: none">Decreased risk of death and serious injuries on the District's transport system.Partnership opportunity with Waka Kotahi to co-fund in safety improvements.	Medium

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Road to Zero Safety Improvements Programme	<ul style="list-style-type: none">Level of Service	\$1.8 million			
Blueberry Curves Safety Improvements	<ul style="list-style-type: none">Level of ServiceGrowth	\$3.9 million			

2. Improve risk and resilience of drinking water

Improving drinking water quality is an important community issue. New infrastructure will need to be developed to address known issues.

Two of Council's important water supplies have source water issues and vulnerabilities. These include arsenic contamination, salinity and potentially cyanobacterial contamination. Council wishes to address these matters. Further, drinking water storage is affected by a volumetric storage deficit and the poor condition of some storage reservoirs.

Date Decisions required: 2021/22

Key Options for Decisions:

Option	Implications	Cost Scale of Option
Continue with current level of service and infrastructure.	<ul style="list-style-type: none">Continuing contamination issues.Increased risk to public health.Increasing difficulty supplying drinking water each summer.	Low
Moderate increase to levels of service. (This option is the preferred and most likely scenario)	<ul style="list-style-type: none">Reduced risk of contamination.Reduced risk to public health.Ability to supply drinking water more readily each summer.	Low
High increase to levels of service.	<ul style="list-style-type: none">Minimal to no risk of contaminants.Increased investment that is potentially unaffordable to the District.Increased intervention and operations are not required at this level.	Medium

Significant Projects and Programmes

Project / Programme	Project Type	Years 1-3	Years 4-10	Years 11-20	Years 21-30
Water Treatment Plant Upgrades <ul style="list-style-type: none">• Whakatāne• Equalised• Murupara• Plains	<ul style="list-style-type: none">• Level of Service• Renewal	\$6.6 million	\$1.6 million	\$2.7 million	

THE OVERALL PLAN

This section summarises the total capital and operational expenditure forecast for each infrastructure activity over the next 30 years, as proposed through this strategy. Council has included the four infrastructure activities that require significant investment and delivery including water supply, wastewater, stormwater and roads and footpaths. This strategy is based on best information available at this time, however the strategy will be updated in three years alongside the 2024-34 Long Term Plan, and decisions regarding major infrastructure projects will be considered in line with the 'dates decisions required' information within this strategy.

Expenditure Summary

This Strategy provides the overview of Council's most likely scenario for the management of its core infrastructure, which includes spending over \$1,009 million on capital projects and over \$1,705 million on operational costs over the next 30 years.

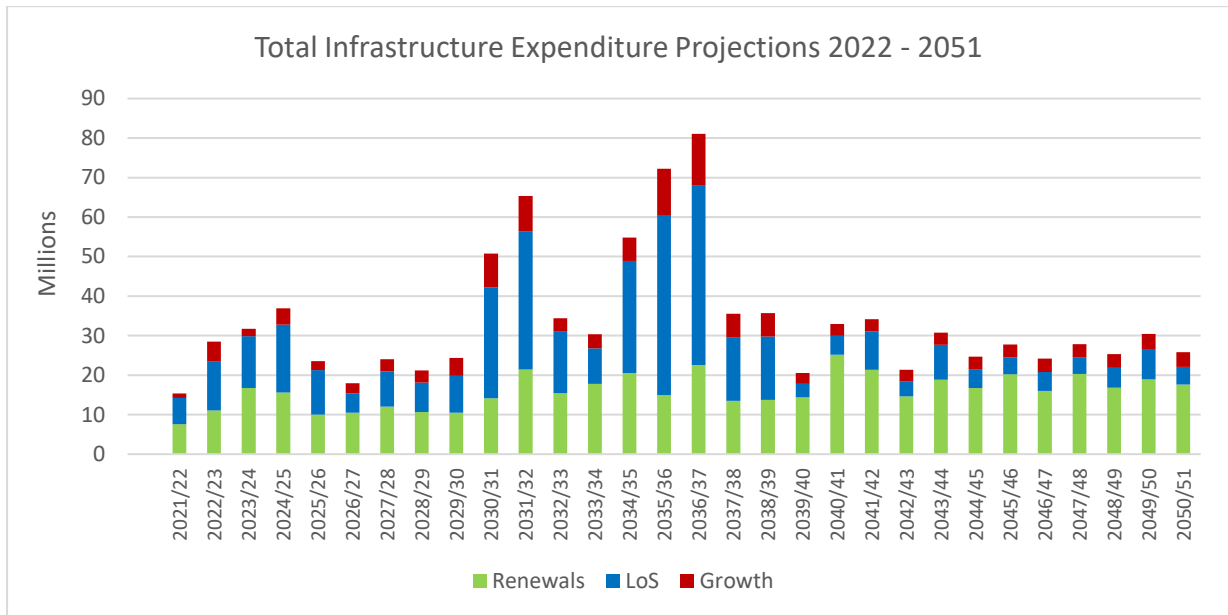
The Strategy has a focus on investment in three waters infrastructure, predominantly wastewater and drinking water activities to ensure Council delivers security and resilience of networks, meets agreed levels of service and standards, plans for increased demand through population growth and development and reduces Council's impact on our environment.

Over the next 30 years, there are a number of significant challenges and decisions required to deliver the overall plan. Addressing all of these challenges will require significant planning and investment. Council will need to ensure that they balance affordability with the delivery of essential services and prioritisation of critical improvements that will enhance our District and help achieve our vision and communities' aspirations.

Ensure that Council is able to deliver on the programme of works is another key consideration and the Council has taken the following steps to try and ensure the development of an achievable work programme; prioritising our work programme, sequencing projects, building capacity within Council, managing our project pipeline, having a long term view of rates and debt, and staying flexible. More information about this approach is available in Council's Long Term Plan Consultation Document, available on the Council website.

Figure 1: Whakatāne District Total Infrastructure Expenditure Projections 2021-2051

Figure 1 shows the expected expenditure year on year up to 2051 by driver (asset renewal, level of service change or growth)



Figures 2 and 3 show the expected infrastructure expenditure year on year up to 2051 by infrastructure activity area classification, and expenditure type (capital and operational).

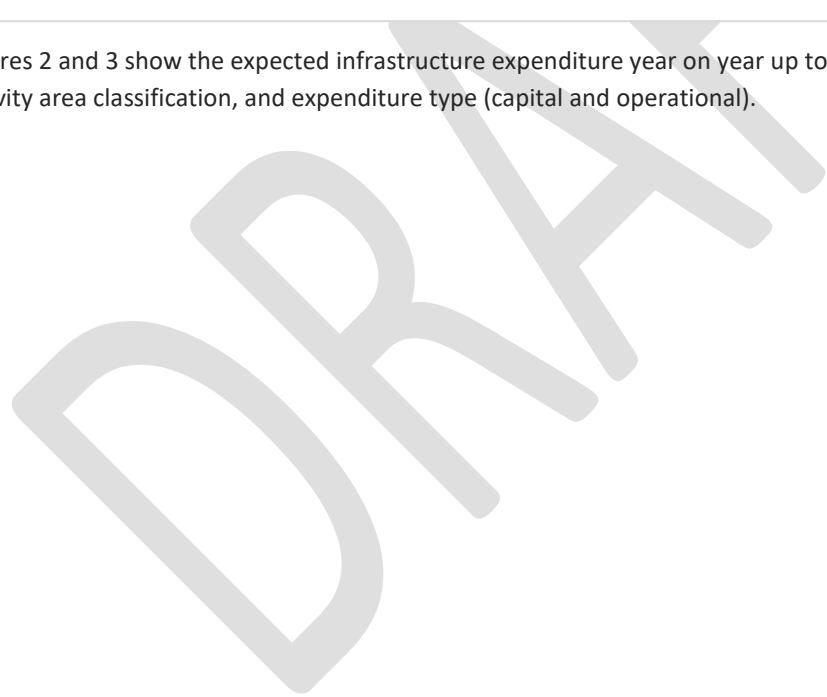


Figure 2: Whakatāne District Projected Infrastructure Capital Expenditure 2021-2051 by Activity Area Classification

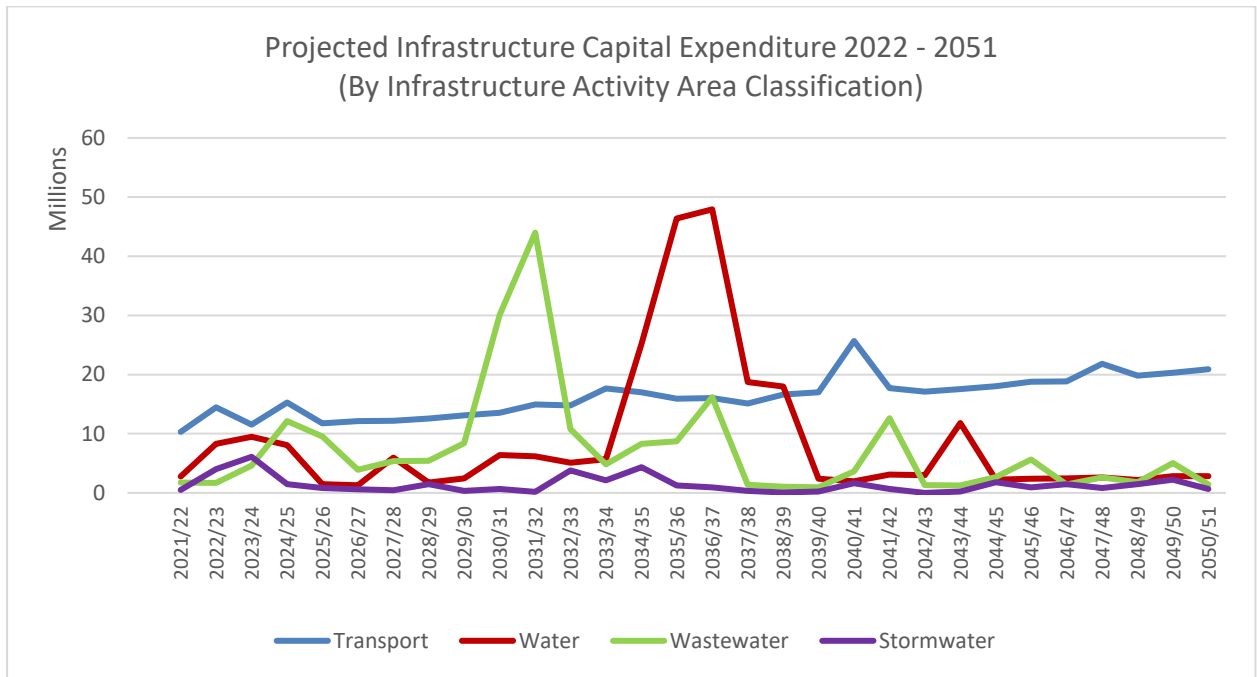
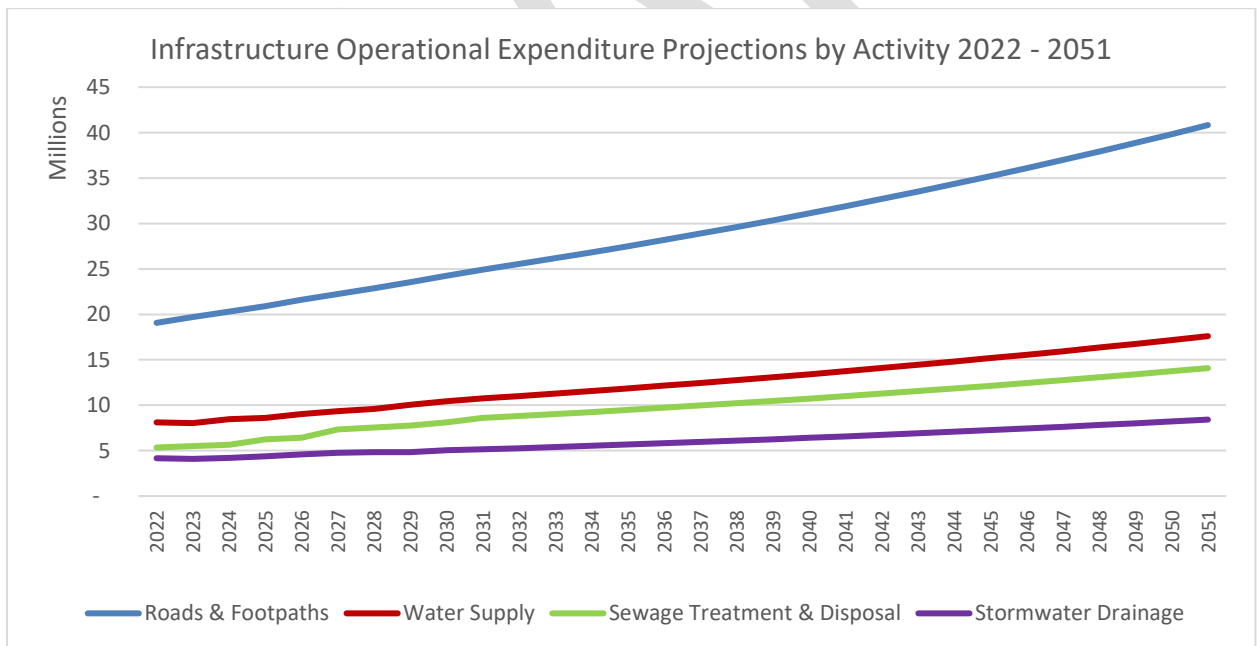


Figure 3: Whakatāne District Infrastructure Operational Expenditure Projections by Activity 2021-2051



INFRASTRUCTURE ACTIVITIES

WATER SUPPLY

Council is responsible for the treatment, storage, distribution and management of the District's water supply where a community drinking water supply scheme exists.

This Group of Activities provides safe, reliable and sustainable water supplies to our District. This currently includes provision to over 12,500 properties for domestic, industrial, commercial and agricultural use. With large areas of our District being rural and in some cases isolated, many households have independent systems supplying their own needs. Water is also provided for urban firefighting requirements.

Further information about this Group of Activities, including level of service performance measures can be found in the Group of Activity supporting document available on Council's website.

Key Focus

Increasing the resilience of our water supply and, where necessary, increasing the quality of water provided.

Summary Context

The water supply system is made up of:

- 10 water supply schemes throughout the District (Whakatāne, Ōhope, Otumahi, Rangitāiki Plains, Tāneatua, Murupara, Matatā, Waimana, Rūātoki and Te Mahoe)
- 29 treatment plants
- 17 pump stations
- 38 reservoirs
- 118 km of trunk mains
- 421 km of mains
- 70 km of service lines
- 2,864 valves

Asset Condition

The condition of the overall drinking water supply network is assessed as being of a reasonable standard. Only 13% has been assessed as being in poor or very poor condition. Inspection of this non-gravity asset is more difficult, hence there is a lower degree of confidence in this condition assessment. Only a small proportion of the overall asset is in the 60+ age bracket. This is relatively young by New Zealand standards.

As it is a pressure network its performance is less forgiving compared to the gravity assets. A renewal program is deployed year on year to renew aged or inferior assets and to cope with the demands placed on the system. A peculiarity of the system is that while the quality of the asset itself may be adequate, there are difficulties with the water sources at times. These are primarily arsenic contamination and saline intrusion in source waters. Interventions are proposed to address these issues.

In 2020 the Council carried out a condition assessment and seismic assessment of all the critical reservoirs in the district including four timber reservoirs. The visual condition assessment was undertaken in accordance with the Visual Assessment Manual guidelines provided by the New Zealand Water and Wastes Association and the seismic resilience assessment was undertaken in accordance with NZS 3106:2009 – Design of Liquid Storage Structures.

In 2020 the Council also carried out a desktop condition assessment of water, wastewater and stormwater piped assets (mains only) based on the remaining useful life and pipe material. The assessment was based on actual pipe sample data from both the Council pipe network and within the region as well as deterioration

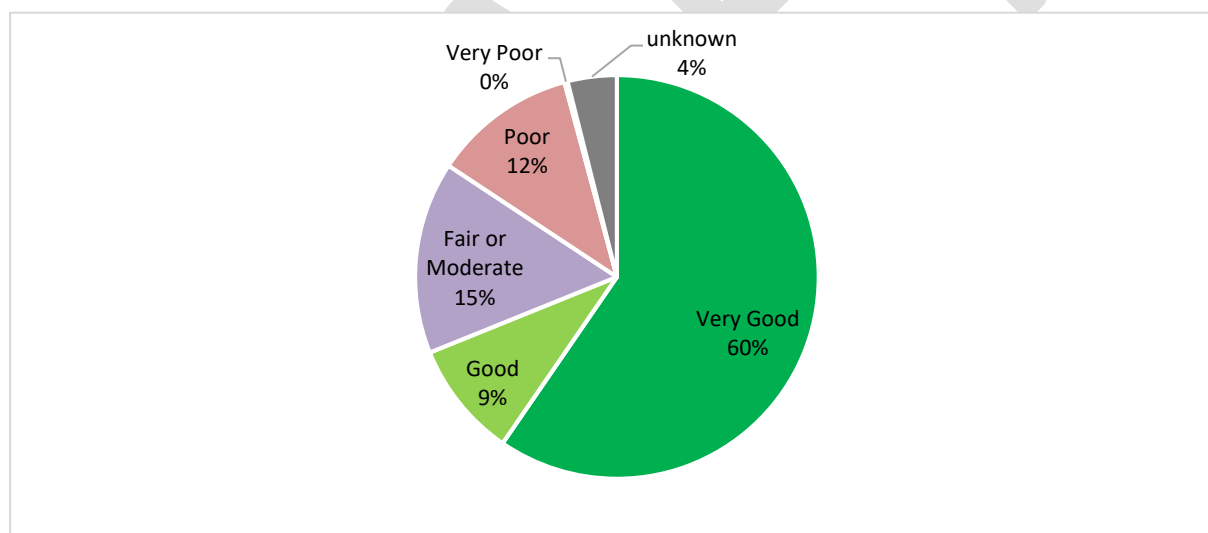
modelling. The desktop assessment is being used to prepare asset condition assessment programs for piped assets.

The results of the desktop exercise are reflected on the tables below (note that the reservoir assessment results are not reflected at this time).

Water Supply Asset Condition profile

Asset Type	Unit	Very Good	Good	Fair or Moderate	Poor	Very Poor	Unknown To be verified
Trunk mains	m	43,561	14,865	42,705	16,120	27	1,172
Mains	m	266,420	37,436	48,305	51,519	1,486	16,318
Service lines	m	53,457	4,466	2,994	2,581	44	6,517
Pump stations	Each	0	0	0	0	0	17
Reservoirs	Each	0	0	0	0	0	38
Treatment plants	Each	0	0	0	0	0	10

Piped Water Supply Assets Condition Profile



Critical Assets

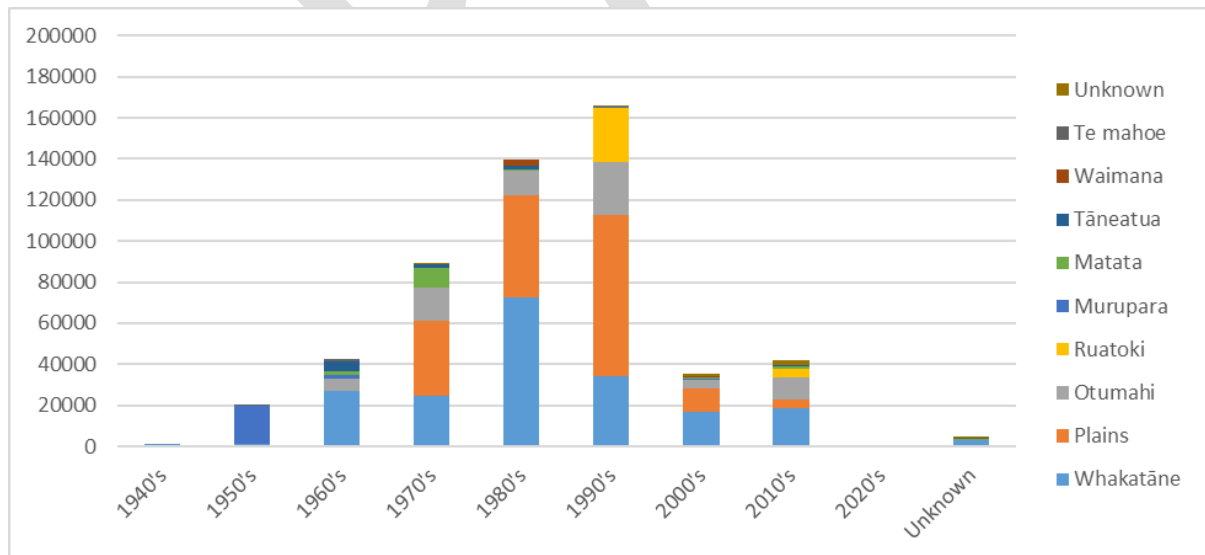
The selection criteria for water supply critical assets include size and functionality of assets as set out in the table below. Further work in developing site specific criticality is required and Council is in the process of improving the criticality criteria assessment of assets with most appropriate industry practices and will include assets located in areas where disruptions would have a high economic impact, assets supplying customers including critical users, and assets that will have a significant environmental impact in case of failure.

Critical Asset Selection Criteria

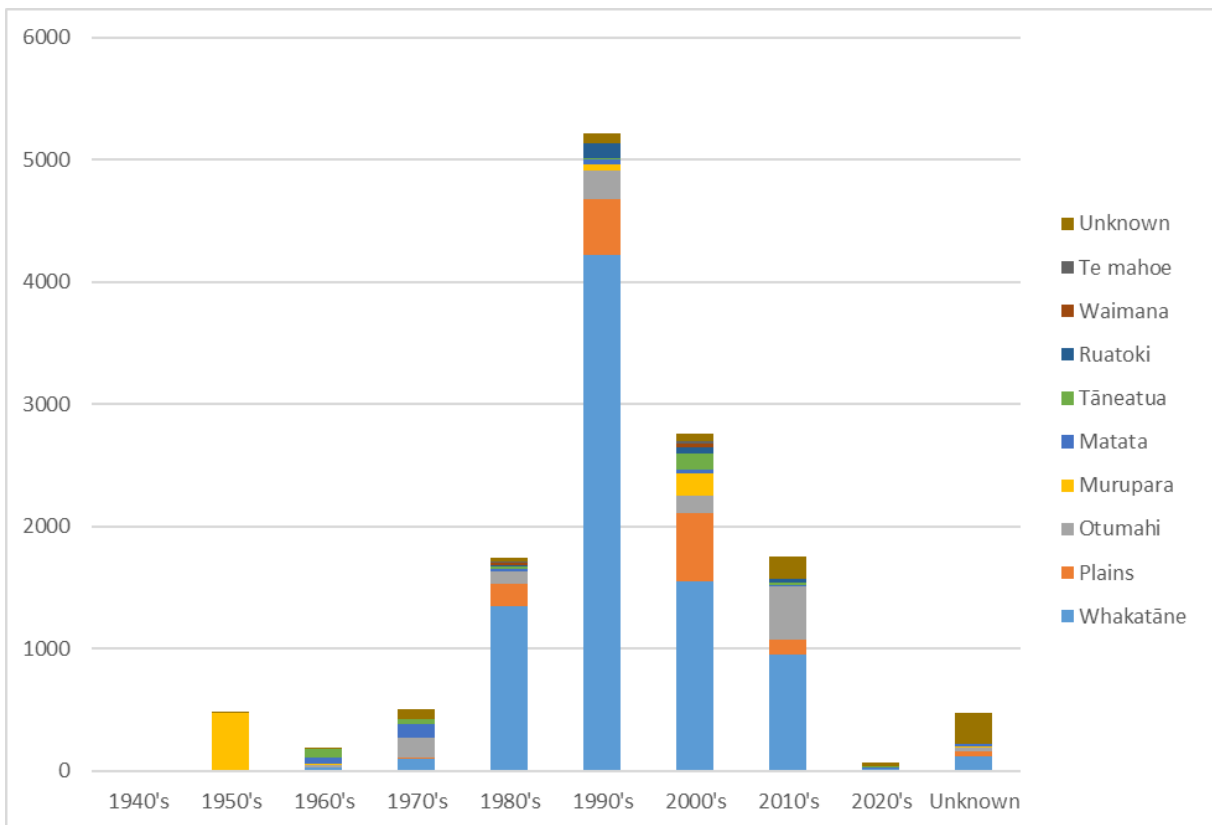
Asset type	Description of criteria	Base approach rating
Pipes	<ul style="list-style-type: none"> ✓ Less than 100mmØ ✓ 100mmØ to 300mmØ ✓ Greater than 300mmØ ✓ All falling and rising mains to and from sources, reservoirs and pump stations ✓ Pipes that are important to supply critical customers ✓ Single pipes serving more than 1,000 customers ✓ Potential pipe failures which may cause significant social, environmental or economic impact 	<p>Low (1)</p> <p>Medium (3)</p> <p>High (5)</p> <p>High (5)</p> <p>High (5)</p> <p>High (5)</p> <p>High (5)</p>
Valves	<p>Valves located along the critical water pipes</p> <p>All other valves</p>	<p>High (5)</p> <p>Low (1)</p>
Water pump stations	<p>Water pump stations without resilience (i.e. backup alternative power supply)</p> <p>Water pump stations with resilience (i.e. backup alternative power supply)</p>	<p>High (5)</p> <p>Medium (3)</p>
Water treatment plants	All water treatment plants	High (5)

Asset Summary

Pipe Length and Installation Year for Each Scheme



Water Connection Numbers, Installed Year of Each Scheme










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 Above average performance

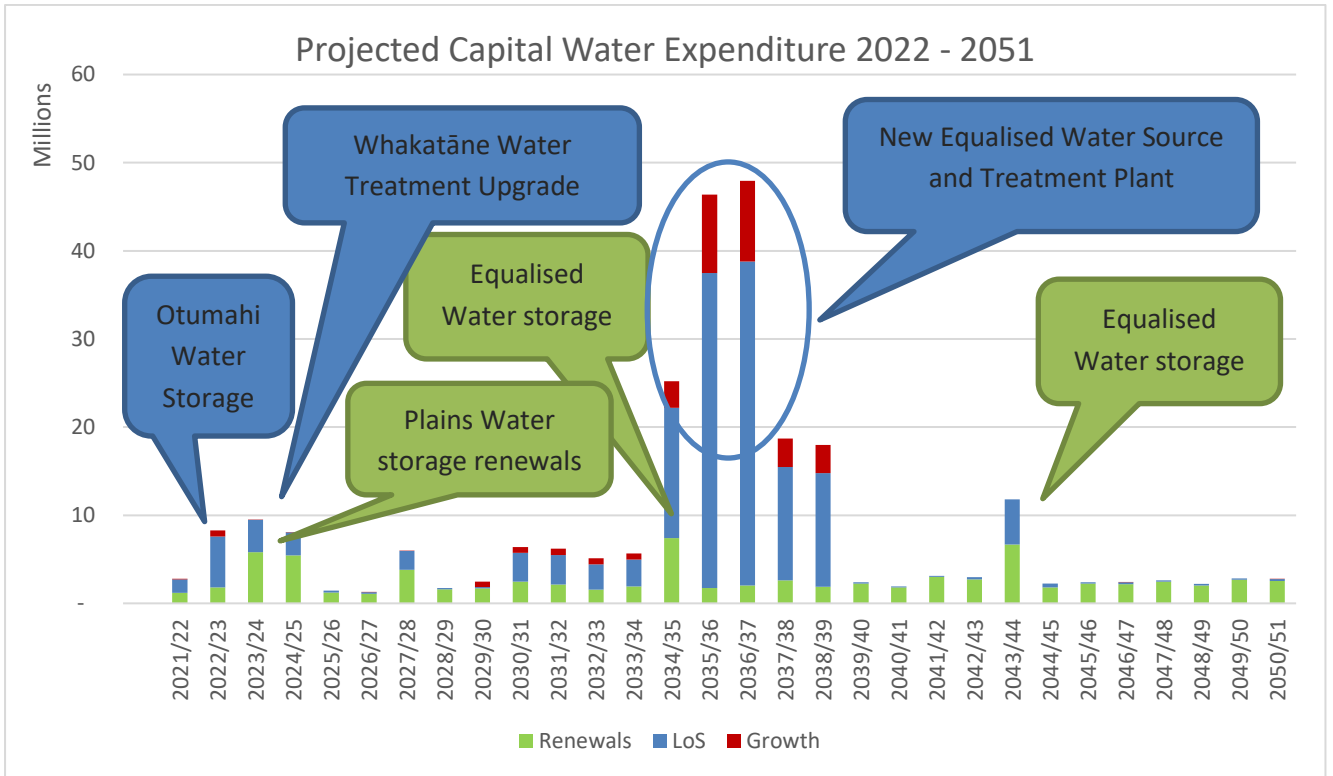
 Average performance

 Below average performance

Infrastructure Level of service (LoS): Water Supply

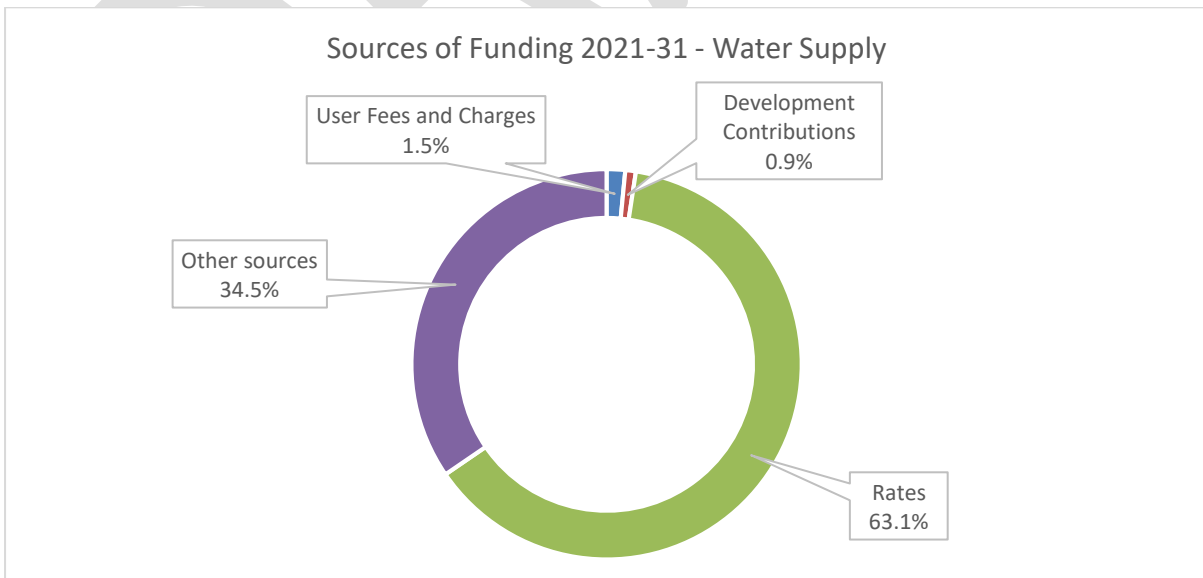
Customer Outcome		Current performance	Indicator	Comments
Safety, Quality and Resilience	Number of connections to Council water supply in the Whakatāne District	13,200 connections across nine public schemes (Whakatāne/Ōhope, Otumahi, Rangitāiki Plains, Tāneatua, Murupara, Matatā, Waimana, Rūātoki, Te Mahoe)		Scale of service expected to increase in line with future population growth and associated development.
	Satisfaction with quality of drinking water	71% in 2020		Project included in the Long Term Plan for new water source and trial currently underway for removal of arsenic from the Braemar supply. LOS increase.
	Compliance with drinking water standards part 4 (bacteria compliance criteria)	8 out of nine schemes compliant in 2020		Further investment is included in the Long Term Plan to address this outcomes. LOS increase.
	Compliance with drinking water standards part 5 (protozoal compliance criteria)	6 out of nine schemes compliant in 2020		Further investment is included in the Long Term Plan to address this outcomes. LOS increase.
	Appropriate treatment systems are maintained including infection	Appropriate treatment systems are available for all schemes except Murupara		Community has indicated strong opposition to the treatment options put forward for Murupara. LOS will change if disinfection implemented. The disinfect/don't disinfect decision has nothing to do with investment decisions.
	Percentage of real water loss from Council networked reticulation system for metered schemes	20% in 2020		Renewals programme set out in the Long Term Plan will progressively reduce water loss. LOS increase.
	Percentage of real water loss from Council networked reticulation system for unmetered schemes	59% in 2020		Council's programme to continue to install water meters will help to address water loss from private assets. LOS increase.

Capital Expenditure



Funding Sources

The chart below shows how the Council is proposing to fund the Water Supply group of activities during the ten years 2021-31. The 'other sources' category is made up of sundry income (including internal recoveries/overheads), internal interest, development contribution reserves, depreciation reserves, loans raised, and operational reserves. The 'rates' category represents targeted rates, as general rates are not a funding source for the Water Supply group of activities.



STORMWATER

Council is responsible for the collection, conveyance, treatment and disposal of the District's stormwater, where a community stormwater scheme exists.

This Group of Activities helps protect people and property from the impacts of flooding as well as protects public health from the potentially adverse effects of stormwater run-off. While we do not treat stormwater run-off, we monitor stormwater discharge to ensure it meets required standards.

Further information about this Group of Activities, including level of service performance measures can be found in the Group of Activity supporting document available on Council's website.

Key Focus

Focus on enhancing the quality of water we are discharging into waterways and increasing capacity of our network to deal with increased extreme weather events.

Summary Context

The stormwater system is made up of:

- 8 stormwater schemes
- 96 km of pipes
- 21 pump stations
- 21.1 km open channels/streams
- 21 storage ponds/retention dams

Asset Condition

The condition of the overall stormwater network is assessed as being of a reasonable standard. Only 10% has been assessed as being in poor or very poor condition. A CCTV inspection program is underway to verify the condition of the gravity drainage elements of the network. While relatively young by New Zealand standards, portions of the network are now "mature" - in the 45 to 55 years old age bracket.

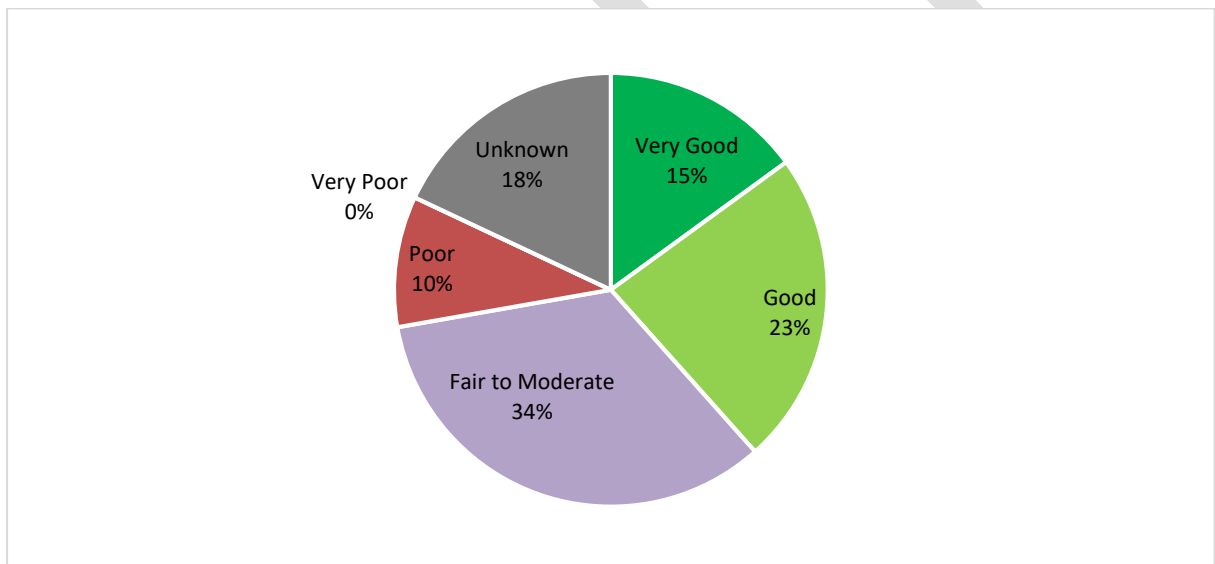
The network generally delivers as per expectations – it accepts stormwater and conveys it away. A characteristic of the stormwater system for the towns of Whakatāne and Edgecumbe is that they are protected by stopbanks from the Whakatāne and Rangitāiki rivers. The stopbanks incorporate a series of floodgates and pumps. The tables below shows the condition profile for piped assets following a desktop exercise into asset condition. Note that in 2019 the Council carried out a condition assessment and capacity assessment of all the critical stormwater pump stations in the district. The results of that assessment are not reflected on the table at this time.

Stormwater Asset Condition profile

Asset Type	Unit	Very Good	Good	Fair or Moderate	Poor	Very Poor	Unknown To be verified
Gravity mains	m	13,876	22,304	32,072	9,392	0	17,352
Rising Mains	m	572	287	540	28	0	0
Open channels	m	87	0	0	102	0	20,906
Pump Stations	Each	1	0	0	0	0	20
Storage Ponds/Retention Dams	Each	0	0	0	0	0	21
Manholes	Each	0	0	0	0	0	1,692
Floodgates	Each	0	0	0	0	0	62

*Quantities as per Xivic database as at 28 February 2021

Piped Stormwater Assets Condition Profile



Critical Assets

The selection criteria for stormwater critical assets include size and functionality of assets as set out in Table 10 below. Further work in developing site specific criticality is required and Council is in the process of improving the criticality criteria assessment of assets with most appropriate industry practices and will include assets located in areas where disruptions would have a high economic impact, assets supplying customers including critical users, and assets that will have a significant environmental impact in case of failure.

Critical Asset Selection Criteria

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

Asset Summary – Age and remaining life of pipes and manholes

Figure 1: Pipe Average Pipe Age and Remaining Life of Each Scheme*



* The unknown and Plains data are not included in these figure

Figure 2: Manhole Average Pipe Age and Remain Life of Each Scheme*








* The unassigned and Plains data are not included in these figures

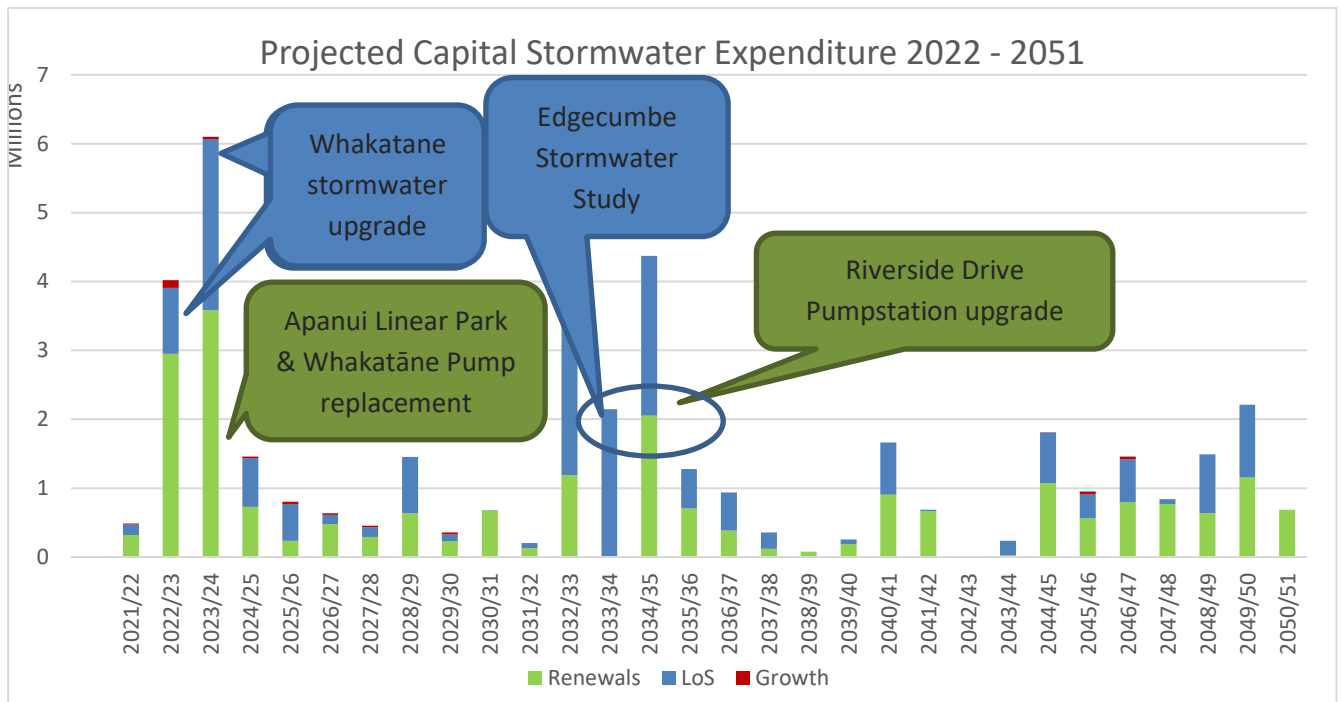
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- Above average performance
- Average performance
- Below average performance

Infrastructure Levels of Service (LoS): Stormwater Drainage

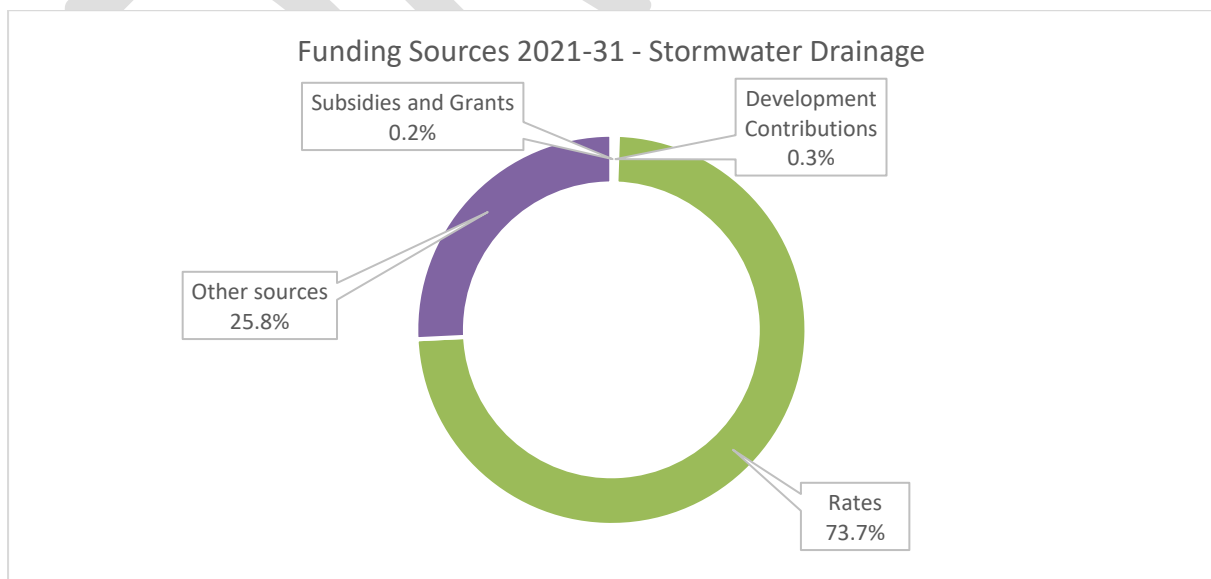
Customer Outcome		Current performance	Indicator	Comments
Safety, Quality and Resilience	Scale of service	Eight urban stormwater schemes (Whakatāne, Ōhope, Edgumbe, Matatā, Tāneatua, Murupara, Te Teko, Te Mahoe)		Scale of service expected to increase in line with future population growth and associated development.
	Satisfaction with the overall effectiveness of the stormwater systems	67% in 2020		Programme of improvements for Council stormwater systems will impact on satisfaction but is acknowledged this is also subject to intensity of weather events. LOS increase.
	Number of complaints received about the performance of the stormwater systems per 1000 properties	5.56 in 2020		--Primarily weather dependent.
	Environmental impact as measured through compliance with resource consents for discharge from our stormwater systems (Number of abatements notices, infringement notices, enforcement orders or convictions against Council in relation to the resource consents)	Zero in 2020		-
	For each flooding event, the number of habitable floors affected (per 1,000 properties connected to the Council's stormwater system)	Zero habitable floors affected in 2020.		-Primarily weather dependent.

Capital Expenditure



Funding Sources

The chart below shows how the Council is proposing to fund the Stormwater Drainage group of activities during the ten years 2021-31. The 'other sources' category is made up of sundry income (including internal recoveries/ overheads), internal interest, development contribution reserves, depreciation reserves, loans raised, and operational reserves. The 'rates' category includes both targeted and general rates.



WASTEWATER

Council is responsible for the collection, conveyance, treatment and disposal of wastewater, where a community wastewater scheme exists.

This Group of Activities provides our district with reliable and sustainable sewerage treatment and disposal services. We aim to provide services to collect, treat and dispose of wastewater in a safe and sustainable way that protects public health and doesn't compromise ecosystems.

Further information about this Group of Activities, including level of service performance measures can be found in the Group of Activity supporting document available on Council's website.

Key Focus

Improving environmental impacts through upgrades to existing schemes, expanding schemes to other communities and renewing resource consents.

Summary Context

The wastewater system is made up of:

- 6 sewerage schemes
- 6 treatment plants
- 57 pump stations
- 9,297 sewer connections
- 149km of gravity pipelines across the network
- 37.2km of rising main across the network
- 2,890 manholes

Asset Condition

The condition of the overall wastewater network is assessed as being of a reasonable standard. Only 12% has been assessed as being in poor or very poor condition. A CCTV inspection program continues to verify the condition of the gravity drainage elements of the network. Relining has been carried out in the past and will be in the future. While relatively young by New Zealand standards, portions of the network are now "mature" - in the 45 to 55 years old age bracket. The network generally delivers as per expectations – it accepts wastewater and conveys it away. Treatment plants are variants of simple oxidation ponds, have not been condition assessed and are nearing the end of their consented lives. Substantial investment in this area is anticipated during the Infrastructure Strategy period.

An asset register including condition has been developed in the asset management system to enable the Council to understand future expenditure patterns and management decisions regarding maintenance and renewals.

In 2020 the Council also carried out a desktop condition assessment of wastewater piped assets (mains only) based on the remaining useful life and pipe material. The assessment was based on actual pipe sample data from both Council pipe network and within the region as well as deterioration modelling. The desktop assessment is being used by the Council to prepare asset condition assessment programs for piped assets.

An initial desk top exercise defining condition based on asset age was incorporated into the asset management system where applicable, with the current condition profile shown on the table below.

Wastewater Asset Condition profile

Asset Types	unit	Total	Very Good	Good	Fair or Moderate	Poor	Very Poor
Gravity Mains	m	205537	42346	58105	72934	23856	109
Rising Mains	m	36168	18167	9748	5194	835	0
Outfalls	m	5698	30	2199	2664	800	0
Pump Stations	Each	55	0	0	0	0	0
Treatment Plants	Each	6	0	0	0	0	0
Manholes	Each	2878	8	33	1	0	0

Critical Assets

The selection criteria for wastewater critical assets include size and functionality of assets as set out on the table below. Further work in developing site specific criticality is required and Council is in the process of improving the criticality criteria assessment of assets with most appropriate industry practices and will include assets located in areas where disruptions would have a high economic impact, assets supplying customers including critical users, and assets that will have a significant environmental impact in case of failure.

Critical Asset Selection Criteria

Asset type	Description of criteria	Base approach rating
Pipes	<ul style="list-style-type: none"> ✓ Less than 250mmØ ✓ 250mmØ to 375mmØ ✓ Greater than 375mmØ ✓ All rising mains ✓ Outfall mains ✓ Potential pipe failures which may cause significant social, environmental or economic impact 	<p>Low (1)</p> <p>Medium (3)</p> <p>High (5)</p> <p>High (5)</p> <p>High (5)</p> <p>High (5)</p>
Treatment plants / Oxidation Pond	All	High (5)
Manholes	<p>Manholes on critical pipes (pipes greater than 375mmØ)</p> <p>All other manholes</p>	<p>High (5)</p> <p>Low (1)</p>
Pump stations	<p>Water pump stations without resilience (i.e. backup alternative power supply, by-pass pumping arrangement)</p> <p>Water pump stations with resilience (i.e. backup alternative power supply, by-pass pumping arrangement)</p>	<p>High (5)</p> <p>Medium (3)</p>

Asset summary - condition

Figure 1: Pipe material and age for each Scheme

[Note a more community friendly representation of this information is being developed]

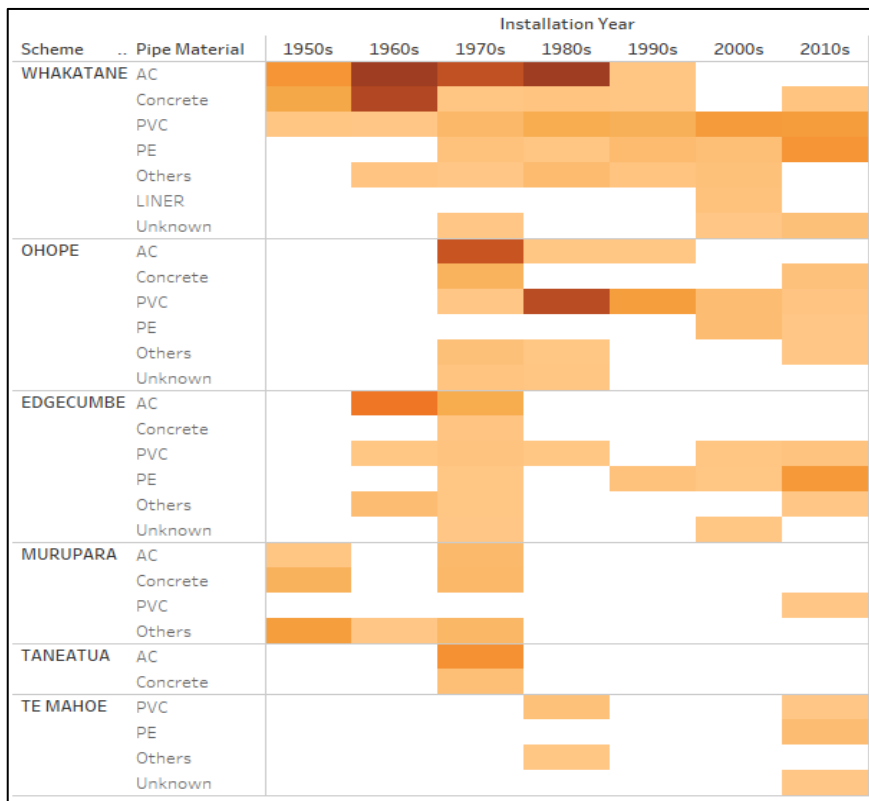
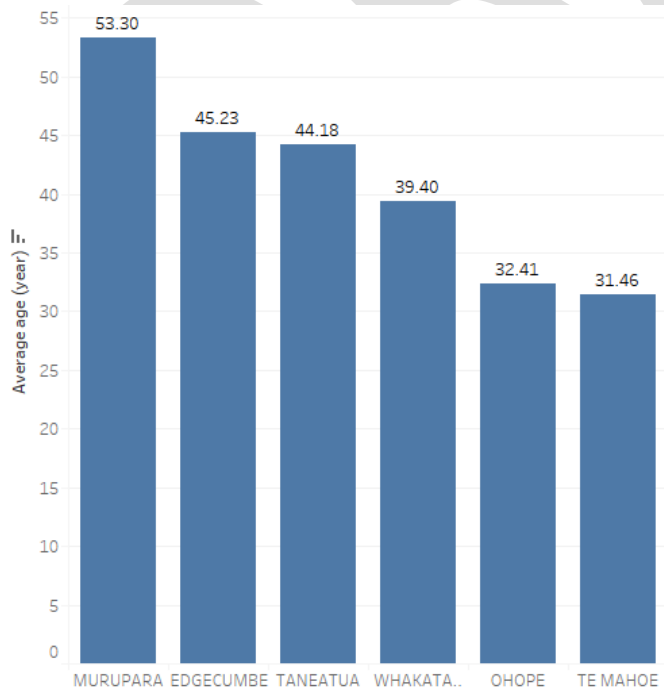
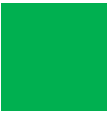

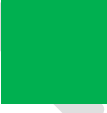



Figure 2: Average Manhole Age for Each Scheme

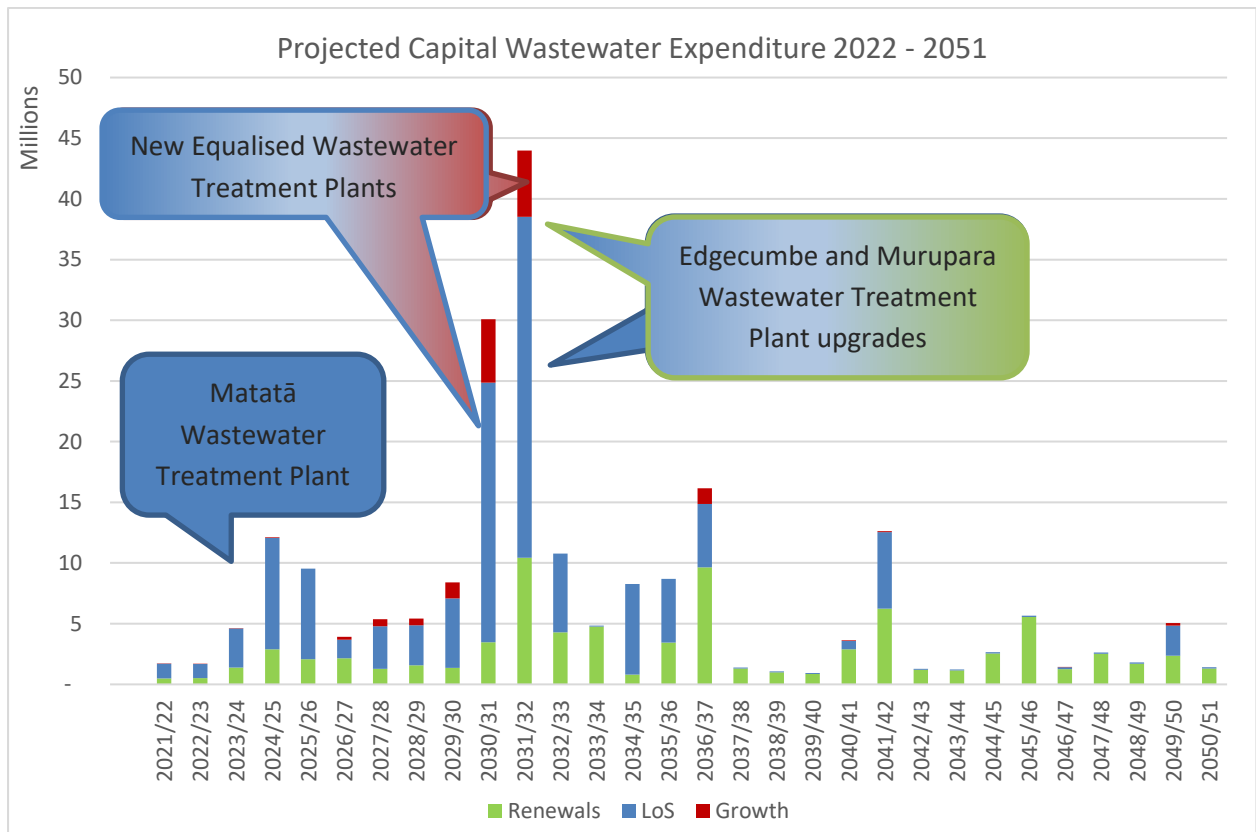


- Above average performance
- Average performance
- Below average performance

Infrastructure Levels of service (LOS): Sewerage Treatment and Disposal

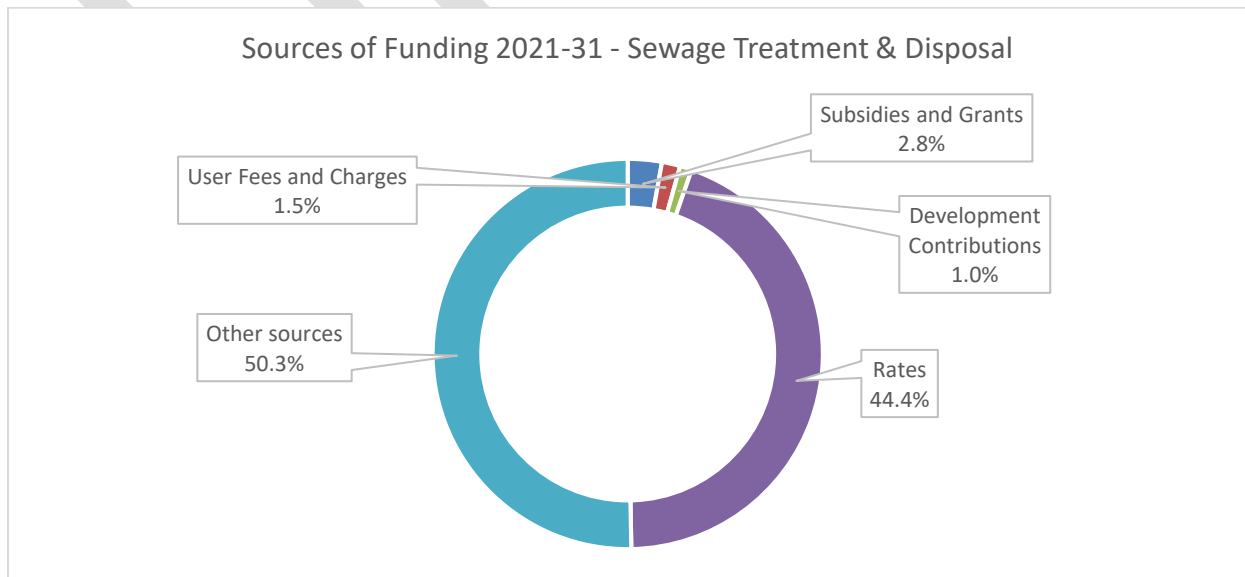
Customer Outcome		Current performance	Indicator	Comments
Safety, Quality and Resilience	Number of connections to Council wastewater systems in the Whakatāne District	9,297 connections across six public schemes (Whakatāne, Ōhope, Edgecumbe, Tāneatua, Te Mahoe, Murupara)		Scale of service expected to increase as a new scheme comes on line for Matatā and in line with future population growth and associated development
	Satisfaction with the sewerage system for areas supplied by Council	76% in 2020		A significant programme of investment is included over the coming 30 years to improve the service and to address enhanced environmental standards. LOS increase.
	Number of dry weather sewage overflows from the Council's sewerage system per 1,000 connections	1.4 in 2020		-No change forecast
	Environmental impact as measured through compliance with resource consents for discharge from our sewerage systems (Number of abatements notices, infringement notices, enforcement orders or convictions against Council in relation to the resource consents)	Zero in 2020		-No change forecast

Capital Expenditure



Funding Sources

The chart below shows how the Council is proposing to fund the Sewage Treatment and Disposal group of activities during the ten years 2021-31. The 'other sources' category is made up of sundry income (including internal recoveries/ overheads), internal interest, development contribution reserves, depreciation reserves, loans raised, and operational reserves. The 'rates' category includes both targeted and general rates.



ROADS AND FOOTPATHS

Council provides and manages a safe, integrated and efficient transport system for Whakatāne including provision for private vehicles, freight, public transport, walking, cycling and pedestrians. Council also manages on-street and off-street parking facilities.

This Group of Activities aims to provide a safe, reliable and sustainable transport system that is accessible to everyone and caters to a variety of transport choices including increasingly for pedestrians, cyclists, and the mobility impaired. We aim to deliver a well-functioning transport system that keeps people and places connected, supports a vibrant economy, and allows for the efficient day-to-day running of communities.

The transport maintenance and renewals programme also gives Council the opportunity to optimise assets, where appropriate, and to support Council's environmental protection and climate change initiatives.

Council works closely with Waka Kotahi NZ Transport Agency on the future planning and investment of the transport system, including the continued monitoring of population growth and development demands.

Further information about this Group of Activities, including level of service performance measures can be found in the Group of Activity supporting document available on Council's website.

Key Focus

Continue to manage and operate the transport network while focusing on alternative modes of transport and road safety (Road to Zero) in line with Waka Kotahi NZ Transport Agency priorities.

Summary Context

The transport system is made up of:

- 905km roads (702km sealed, 203km unsealed)
- 177 bridges
- 170km guard railing
- 18 bus shelters
- 7,261 signs
- 3,453 streetlights
- 260km kerb and channel
- 2,165 stormwater catchpits
- 9.8km off-road cyclepaths
- 196km footpaths
- 405 traffic islands
- 4,085 culverts
- 258 retaining walls

Critical Assets

Council's transport system is classified using Waka Kotahi's One Network Road Classification (ONRC) Framework in terms of the function specific roads need to deliver within the District's transport system. The ONRC also has clear performance measures for each classification that the Council takes into account through asset management planning and investment. Examples being Landing Road, Gorge Road, Commerce Street and supporting state highways.

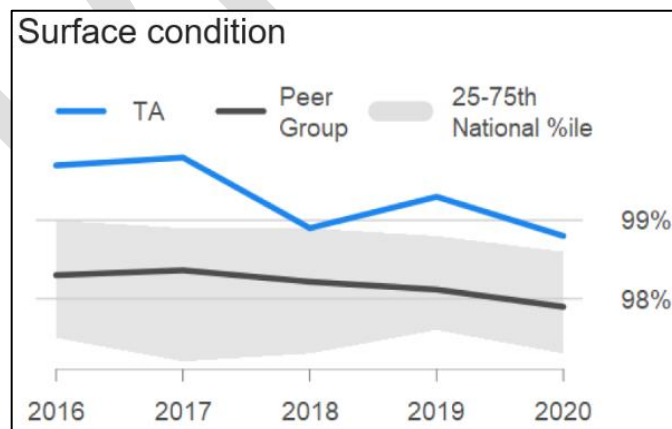
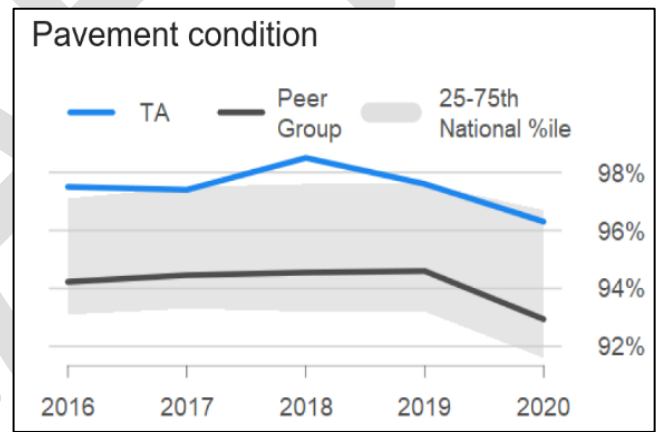
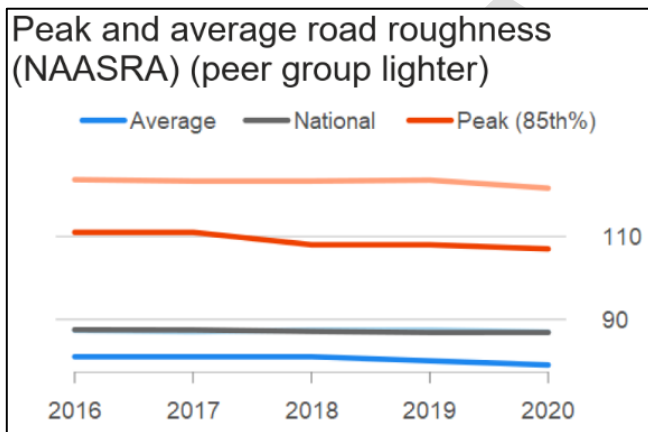
Risk management is a section that has been identified in the Transport Asset Management Plan as needing further work, so critical assets will be further explored through that process.

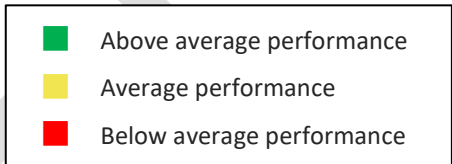
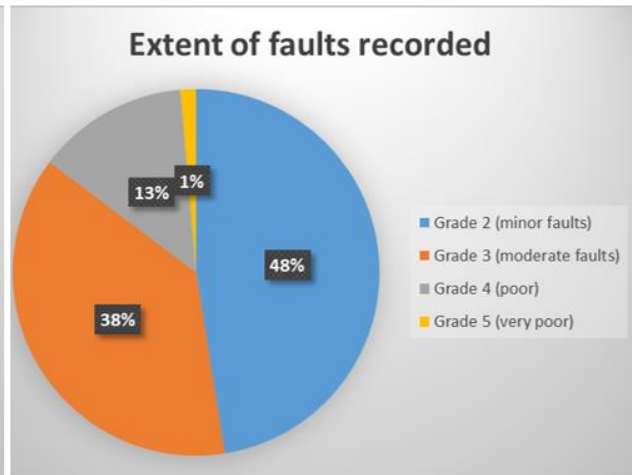
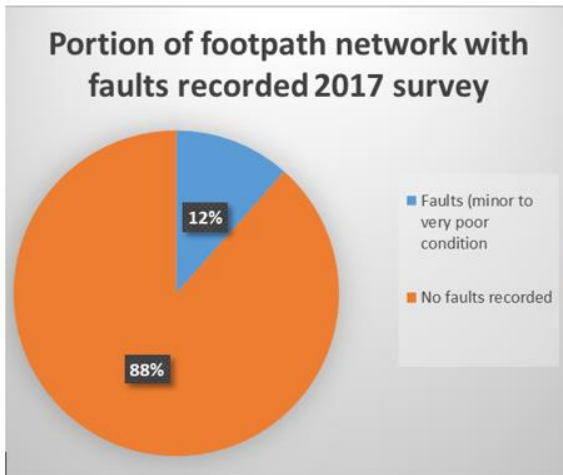
Asset Condition

Overall Whakatane District Council’s Transportation assets are in good condition, owing in part to the relatively young age of the network and it’s assets. Key pavement and surface condition indicators are within the top 25%ile nationally. Over time, as the network matures, it is expected that these indicators will move closer to the Peer Group mean.

Condition by major asset group:

- Pavements and Surfacing. Above average. Pavement Condition Index 96%, Peer Group 93%. Surface Condition Index 99%, Peer Group 98%.
- Footpaths and Cycleways. Good. 88% of footpath sections record no faults. Only 1.6% of footpath sections record grade 4 or 5 faults.
- Bridges and Structures. Good. Three bridges (out of 177 total) posted below class 1 or 50MAX affecting 1% of the network. Seven bridges require replacing in the ten year programme. Three retaining walls (258 total) require replacing in ten year programme.
- Drainage. Good. Kerb and channel 98% grade 3 or better. Culverts 88% grade 3 or better.
- Traffic Services. Good. Signs 99% grade 3 or better. Rails 95% grade 3 or better. Streetlights not recorded but just completed LED replacement programme for 100% of the network.





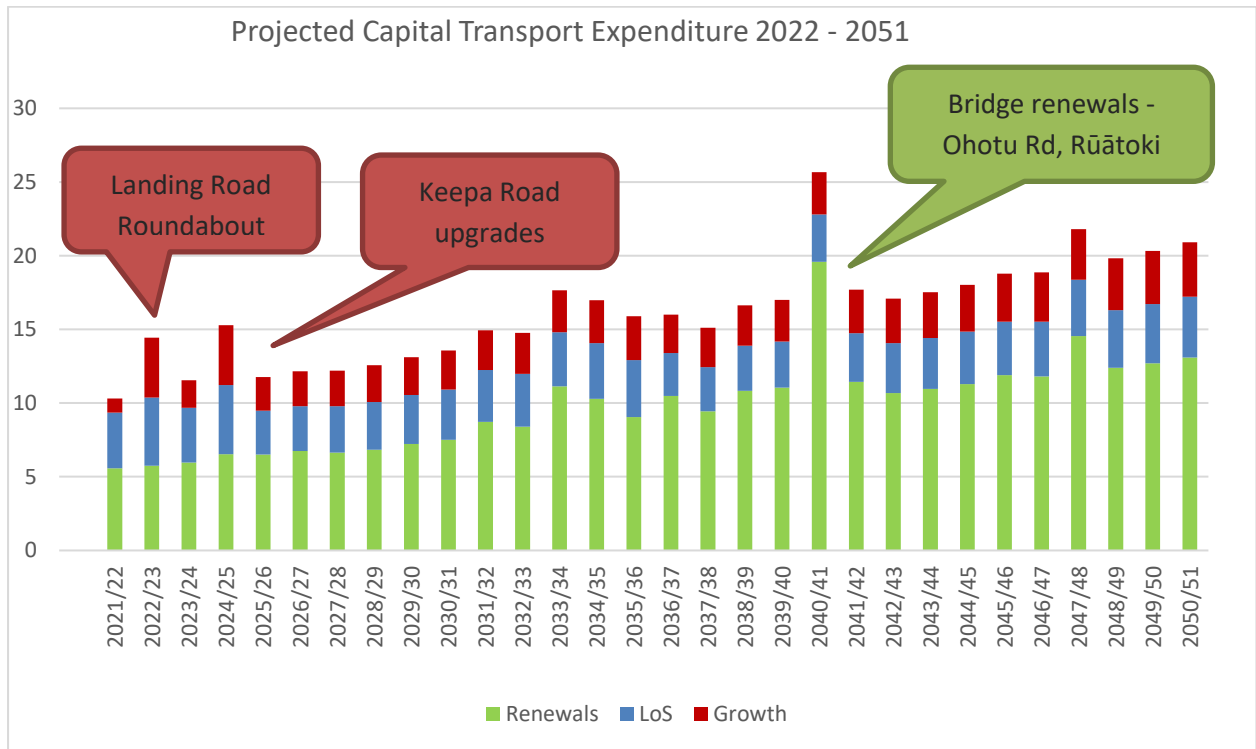
Customer Levels of Service (LoS): Transportation

Customer Outcome		Indication of current performance					Future Planning and Investment (key examples)
		Arterial	Primary Collector	Secondary Collector	Access	Low Volume	
Safety	1: Number of serious injuries and fatalities (DSI)	Red	Red	Red	Yellow	Red	<ul style="list-style-type: none"> Road to Zero Improvements Programme Road Safety Programme Blueberry Curves Safety Improvements
	2: Collective risk	Red	Yellow	Green	Yellow	Yellow	<ul style="list-style-type: none"> Road to Zero Improvements Programme Road Safety Programme Blueberry Curves Safety Improvements
	3: Personal risk	Yellow	Yellow	Red	Red	Red	<ul style="list-style-type: none"> Road to Zero Improvements Programme Road Safety Programme Blueberry Curves Safety Improvements
Amenity	1 - Smooth Travel Exposure (STE)	Yellow	Green	Green	Green	Green	<ul style="list-style-type: none"> Transport Asset Management Plan implementation. Roading Renewals Programme.

Customer Outcome		Indication of current performance					Future Planning and Investment (key examples)
		Arterial	Primary Collector	Secondary Collector	Access	Low Volume	
	2 - Peak Roughness – urban sealed roads						<ul style="list-style-type: none"> Transport Asset Management Plan implementation. Roading Renewals Programme.
	2 - Peak Roughness – rural sealed roads						<ul style="list-style-type: none"> Transport Asset Management Plan implementation. Roading Renewals Programme.
Accessibility	1 – Portion of network not available to class 1 heavy vehicles						Continue with current approach as HVs primarily access arterials, primary and secondary collectors.
	1 – Portion of network not available to 50MAX						Continue with current approach given HPMV vehicles primarily access high volume corridors.
Travel Time Reliability	1 – Throughput at indicator sites						<ul style="list-style-type: none"> Reflects urban arterial access. This is being addressed through a separate business case.

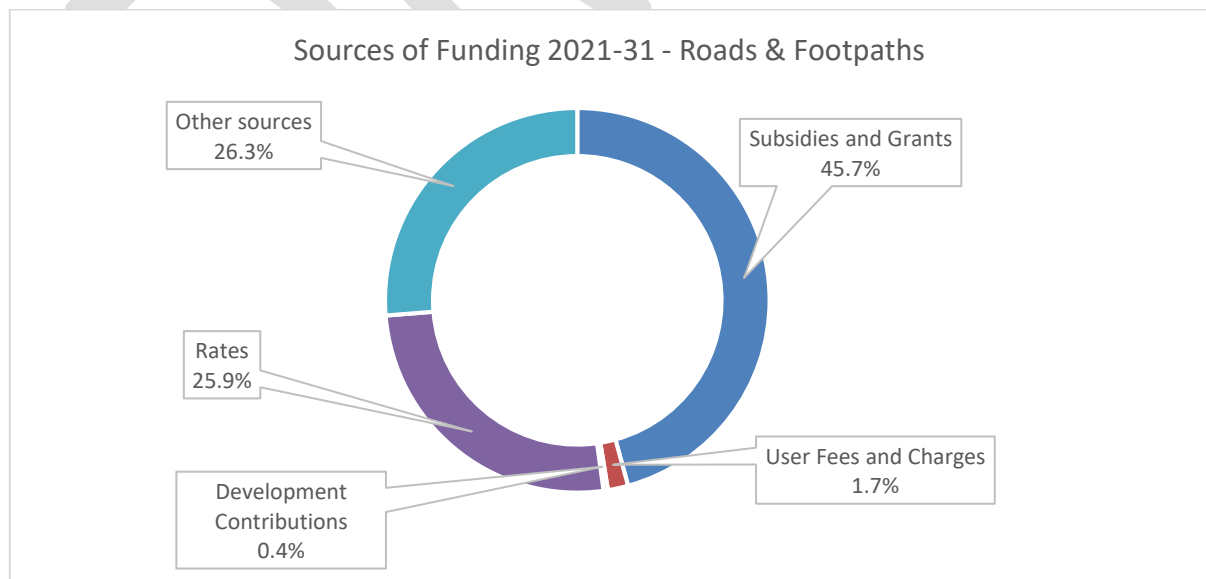
Customer Outcome		Indication of current performance					Future Planning and Investment (key examples)
		Arterial	Primary Collector	Secondary Collector	Access	Low Volume	
Cost Efficiency	Percentage of network renewed annually	Surface	Pavement				<ul style="list-style-type: none"> Continue with planned roading renewals programme.
	Sealed road maintenance: 3 year average annual costs per kilometre		Maintenance	Resurfacing	Rehabilitation		<ul style="list-style-type: none"> Continue with planned roading renewals programme.
	Unsealed road maintenance: 3 year average annual costs per kilometre		Maintenance	Metalling			<ul style="list-style-type: none"> Reflects high portion of unsealed primary collector roads with high maintenance costs. Road-resealing programme.

Capital Expenditure



Funding Sources

The chart below shows how the Council is proposing to fund the Roads and Footpaths group of activities during the ten years 2021-31. The 'other sources' category is made up of sundry income (including internal recoveries/ overheads), internal interest, development contribution reserves, depreciation reserves, loans raised, and operational reserves. The 'rates' category includes both targeted and general rates.



SIGNIFICANT ASSUMPTIONS

The Infrastructure Strategy has been prepared using the following assumptions, which are consistent with the significant forecasting assumptions for the Long Term Plan 2021-31.

For the full list of assumptions used for the Long Term Plan 2021-31 (including further detail about some of the assumptions below), refer to the *Significant Forecasting Assumptions 2021-31* document.

Assumption	Level of uncertainty	Potential impact	Mitigating risks of this assumption
<p>All financial information in this Strategy includes inflation unless stated otherwise.</p> <p>Inflation is assumed to be in line with BERL's 'mid' scenario, in the BERL Local Government Cost Adjustor Forecasts.</p>	Medium	Medium	<p>BERL price change estimates are an industry recognised measure. These are updated annually and Council will review its financial strategy accordingly, particularly noting the impact of any upward movement on affordability.</p> <p>Uncertainty around inflation levels is currently elevated. This is reflected in BERL releasing more than one scenario for the first time.</p>
<p>The population of the Whakatāne District will grow to about 41,800 people by 2043. Over the ten years of the LTP, that is an average increase of approximately 0.5% per annum.</p>	Medium	High	<p>As updated data is made available from StatsNZ, this will inform future planning. We will also review this assumption three-yearly through future Long Term Plans, or Annual Plans if required.</p> <p>The Council's Future Development Strategy (FDS - currently being progressed) will update growth assumptions and is likely to indicate an alternative scenario than that set out by this assumption. Implementation of the FDS will seek to remain agile in relation to actual growth to ensure long-term sustainable delivery of services.</p>
<p>Population settlement will not be substantially different to the status quo for 2021-31.</p>	Medium	Medium	<p>The FDS will likely identify new areas for development. Investment into these will be funded through future LTPs, based on FDS timeframes.</p>
<p>The rating base will increase by 120 new dwellings in the Whakatāne District each year.</p>	Medium	Medium	<p>Assumptions about the rating base will be updated as any new information becomes available, and implementation of the FDS will seek to remain agile in relation to actual growth to ensure long-term sustainable delivery of services.</p>
<p>External funding/subsidies will be secured where these have been budgeted for.</p> <p>Example being Council's Financial Assistance Rate via Waka Kotahi NZ Transport Agency.</p>	Medium	High	<p>Central government subsidy regimes are generally changed only through consultation with the local government sector and with a period of transition. The Council will have lead in time where subsidy changes are being made and would be able to review and adjust work programmes where necessary.</p> <p>The Council will continue to seek subsidies for projects where available. Where funding becomes unavailable or is less than expected, the viability of the project will be re-assessed before progressing.</p>

Assumption	Level of uncertainty	Potential impact	Mitigating risks of this assumption
<p>Current national, regional and local policies, strategies and Levels of Service requirements will remain in place.</p> <p>Accordingly, there will be no significant changes to legislation that would impact on the need for or nature of infrastructure, or costs associated with compliance.</p>	Medium	High	<p>The potential impact of future changes could be high if legislation results in additional required expenditure to comply with new standards, offers new funding opportunities, or requires the Council to increase levels of service.</p> <p>The Council will continue to set the work programme to take into account the expected outcome of legislative change where possible. Legislative change is often progressed with a long lead in time, allowing Council to respond accordingly.</p>
<p>The resource management framework and associated costs are as per the current Resource Management Act (RMA) standards for budgeting.</p>	High	Low	<p>There is elevated uncertainty that resource consent costs will be as projected, due to reform of the Resource Management Act. However, we can only plan based on the current framework.</p> <p>Current standards already require significant upgrades to our expiring consents. Even more stringent consent conditions may be required through the gaining of consents over the term of the LTP. However, due to the level of uncertainty associated with RMA reform, LTP work programmes and budgets are developed in accordance with current standards.</p>
<p>All three waters services will remain in Council control for the period of the LTP.</p>	High	High	<p>The Council has signed up to a Memorandum of Understanding with the Department of Internal Affairs, and is taking an active part in all Three Waters Reform initiatives.</p>
<p>Technology will evolve and have an impact on our service delivery. However, prudent aversion to risk will mean that the Council is generally not an early adopter.</p>	Medium	Low	<p>Local government is generally risk averse where investment into new technologies is concerned. Generally these need to be established and proven for Council to make the investment. Major strategies and projects will explore technology based solutions as part of the contextual and options analysis. Of note this will include the upgrades that will be required to waste water treatment systems over the coming ten years and beyond.</p>
<p>The lifecycle of assets is as stated in the Statement of Accounting Policies in the LTP.</p>	Low	High	<p>Condition assessments continue to be undertaken by the Council with condition information updated based on actual rather than theoretical expectations.</p>
<p>Depreciation is based on correct values, and revaluations will be in line with projections.</p>	Medium	Medium	<p>Asset revaluation - impairment reviews will be undertaken in the intervening years between revaluations to reduce the risk of significant shifts in value between scheduled valuation cycles, particularly that the Level of Services has not been recognised and assets are overvalued.</p>

Assumption	Level of uncertainty	Potential impact	Mitigating risks of this assumption
Assets will be replaced with a 'like-for-like' except where noted.	Medium	Medium	The Council reviews its work plan annually and the Revenue and Financing Policy every three years, alongside the LTP. If funding is not available through the principle specified source, Council would need to reconsider priorities or consider alternative funding sources that are available, i.e. borrowing.
Costs of projects and replacements have been accurately budgeted where not like-for-like.	Medium	Medium	Cost estimates are updated annually through the Annual Plan process, and when detailed design has been completed, providing further accuracy to expected costs. Should costs change substantially from initial estimates, the viability of the project will be reviewed before progressing further.
The cost of land will increase at the same rate as the capital inflation used for capital projects.	High	Medium	There is a high degree of uncertainty on the likely inflation of land costs. The potential impact is medium. Changes to budgets would need to be made through future Annual Plans and Long Term Plans if required.
The District will continue to face frequent minor storm and flood events, and sporadic high impact events. These may require damage or remedial work to infrastructure.	Medium	High	<p>The Council has reserve funds to limit the impact of natural hazard events by building up funds to pay for storm damage to roading and general disaster response and recovery.</p> <p>The District Plan includes provisions to protect against coastal hazards, and our underground assets are covered through insurance.</p> <p>Central government also has a role in disaster recovery and restoration works following natural disasters.</p> <p>The Council will continue to monitor natural hazard research, with budget for this included in the LTP.</p>
Climate change will occur in line with the Intergovernmental Panel on Climate Change (IPCC) 'RCP 8.5 scenario.'	High	High	<p>The Council will continue to review this assumption as data and scenarios are updated.</p> <p>As further climate change work is undertaken globally and nationally, including a national risk assessment, any new guidance will inform our assumptions.</p>
<p>The Council will continue to be able to attract staff and contractors.</p> <p>Accordingly, there will be sufficient capacity to undertake the capital programme to agreed standards and specifications.</p>	Medium	Medium	<p>Consideration has been given to the forward work plan and nationwide competition for resource and economic context.</p> <p>The Council recruitment process focuses on the lifestyle offered by Whakatāne District and ensures that remuneration reflects the current market.</p> <p>The Council has a procurement manual which ensures robust contractors, and Council contracts outline the expectation of contractors. Legal/contractual rights can be exercised if work is not completed to the agreed standards and specifications.</p>
Existing service delivery methods and levels of service will continue unless specified.	Medium	Low	While it is likely that some of our service delivery may look different over the period of the Long Term Plan, we can only budget for known changes.

Assumption	Level of uncertainty	Potential impact	Mitigating risks of this assumption
			<p>For cases of disruption to services necessitated by natural disasters or other unplanned events, Business Continuity Plans have been developed for core asset departments as part of individual Asset Management Plans.</p> <p>The Council will pursue shared service options through BOPLASS and other methods, such as Public/Private Partnerships.</p>

DRAFT



Kōrero mai Let's talk

Tell us what you think by
5pm Sunday, 23 May 2021

whakatane.govt.nz/1tp



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