SOUTH WAIRARAPA DISTRICT COUNCIL

Kia Reretahi Tātau

Infrastructure Strategy

Te Whakapaparanga

2021–2051

Date of Approval	30 June 2021
Next Review	30 June 2024

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Te Whakapaparanga

Introduction

South Wairarapa District Council (SWDC) is the steward of approximately $388m of infrastructure assets, accounting for 56% of Council's annual operating expenditure and 77% of capital expenditure.[1] These assets include drinking water, wastewater, stormwater, land transport and other key community infrastructure and are the foundations on which Council provides key services to our community. The management of these assets is long-term and inter-generational.

It is therefore essential that Council invests effectively and efficiently in those assets to meet the needs of our ratepayers and promote the health, wellbeing and prosperity of our District.

The Local Government Act (LGA) requires all local authorities to prepare and adopt an Infrastructure Strategy that identifies:

- The key issues faced by Council in managing these assets over the next 30 years (2021–2051),
- A summary of the options identified to address these issues,
- Council's strategic response and preferred options scenario, and
- The cost and service delivery implications of the options.

This Infrastructure Strategy is developed in conjunction with Council asset planning and will be revised every three years as part of the LTP process.

Summary

In previous LTPs and Infrastructure Strategies, SWDC has focused on:

- Maintaining current levels of service across all assets,
- Meeting statutory requirements, and
- Keeping cost increases to a minimum.[2]

While this approach has largely achieved these goals our infrastructure assets are beginning to show signs of deterioration, which, if not addressed now, will require significantly higher investment in the future to repair or replace. If our infrastructure assets are not appropriately invested in now the service levels provided by Council will also reduce.

As part of the 2020/21 Annual Plan, Council increased its investment in water, roading and amenity infrastructure, but the demands placed on our ageing assets continues to grow. To deliver on the services levels provided by

[1] As valued at 30 June 2018
[2] SWDC 2018—2028 Infrastructure Strategy

these assets, enhance the wellbeing of our community and enable economic growth in our District, a further increase in investment is required over the LTP period.

As such, the areas of focus for this strategy are to:

- Increase investment in asset renewal to progressively reduce the need for reactive repair,
- Meet levels of service for ratepayers by increasing budgets for maintenance and operations,
- Develop clear strategies for future upgrades or new infrastructure investment,
- Identify, plan and deliver capacity upgrades to cater for growth within the District, and
- Continue to enhance our asset knowledge and analytics to refine investment decisions.

This investment, and its phasing, requires Council to balance and consider:

- Current asset condition, performance, and remaining or projected asset life,
- Asset criticality,
- An evolving Local Government environment, which includes the ongoing Three Waters Reform Programme,
- Levels of Service provided to our community,
- Affordability for South Wairarapa ratepayers,
- Demographics, projected growth and its infrastructure impact,
- Sound asset management decisions based on best available data, and
- The probable impact of climate change on our Infrastructure.

In addition, this Infrastructure Strategy has also considered:

- the multiple impacts of the Covid-19 pandemic on our local community and beyond
- Community feedback through ongoing engagement and from consultation on the 2021 Annual Plan
- A constrained supply market for project delivery (e.g. contractor capacity, availability of materials), and
- Emerging innovation and technical advancements

SWDC Community Outcomes and Wellbeings

Council infrastructure is integral to meeting the needs, and ensuring the wellbeing, of our ratepayers. As such, the key issues or projects in this Infrastructure Strategy are considered in the context of the four Wellbeings and Community Outcomes:

- **Social wellbeing** - residents are active, healthy, safe, resilient, optimistic and connected,
- **Economic wellbeing** - new business, jobs that give people independence and opportunity, diverse transport modes and a place of destination,
- **Environmental wellbeing** - sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced, and
- **Cultural wellbeing** - strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage.

The impact of investment decisions on these Community Outcomes will vary. Capital upgrades to wastewater treatment facilities will help improve the environmental wellbeing in the District, but so too will increased maintenance resources to rapidly respond to wastewater network leaks.

Meeting these needs across multiple asset types, and balancing them with affordability, requires appropriate phasing and compromise, where possible and appropriate. However, large parts of our infrastructure require greater investment now or service levels will not be met and any deferred costs are likely to be significantly higher.

Geographic context for the strategy

The South Wairarapa District is at the southern-most point of the North Island and comprises approximately 248,455 hectares. The Council covers a large land area that includes Lake Wairarapa, significant ranges, a long coastline and significant rural areas. There are three main centres in the District: Featherston, Greytown and Martinborough and a number of smaller rural and coastal settlements.

Figure 1 - SWDC Geographic Context Map

Population Growth

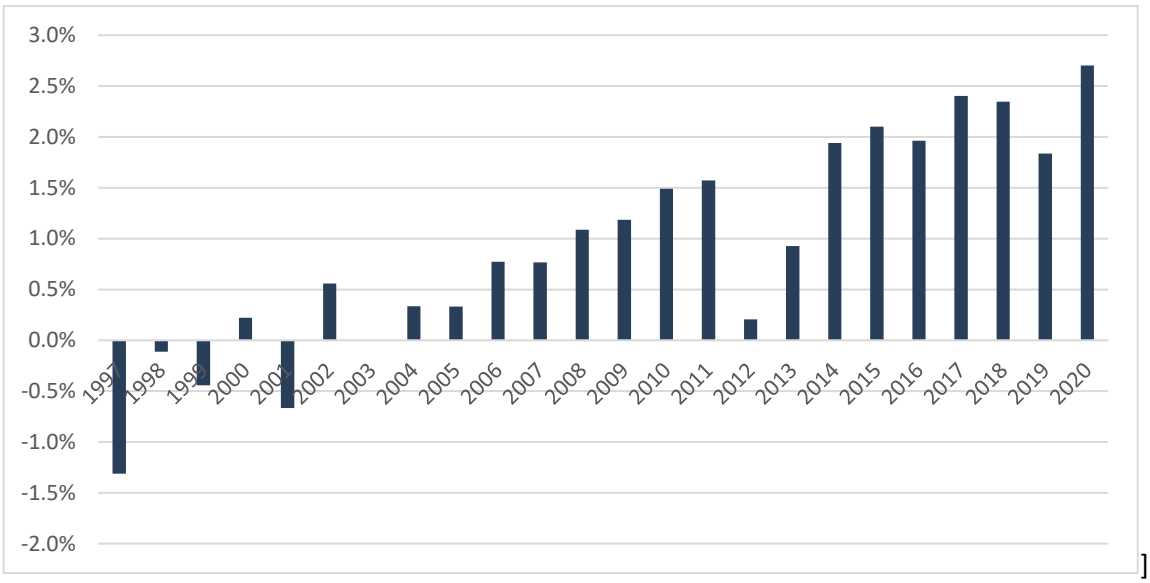
Census data shows that the population in the South Wairarapa district increased by 11% from 9,800 in 2013 to 10,900 in 2018. This represents an average annual change over the 5-year period of 2.2%. We have obtained population projections for the period 2019 to 2051 from Infometrics. South Wairarapa's population is projected to grow from 11,512 in 2021 to 12,696 in 2031 and 14,476 by 2051.

Growth in the South Wairarapa has historically been split evenly between urban and rural areas but future growth is projected to be concentrated in urban centres. Based on improvements in rail connectivity for commuters and the intent of the Regional Growth Framework, growth is expected to be concentrated largely around the Featherston and Greytown urban centres.

The strongest growth is expected in Greytown (1,001 people) followed by Featherston (796 people) and Martinborough (603 people). Tauherenikau and Aorangi Forest are expected to experience moderate growth (around 236 and 164 people respectively). The growth in Tauherenikau is expected based on development around the existing village and growth in Aorangi Forest is expected due to the development of lifestyle blocks on the fringes of Martinborough.[3]

Population data from Infometrics notes that growth has been strong over the last decade, aided by significant net migration flows in the past five years. In 2020, the South Wairarapa experienced an annual population growth of 2.7 percent, an increase of 300 people. This is up from prior years where population growth had previously peaked in 2017 at 2.4 percent. Of the annual population growth experienced in 2020, 17% was from a natural increase (births exceeding deaths), 47% was due to net internal migration and the remaining 37% from net international migration.

Figure 2: South Wairarapa Annual Population Change



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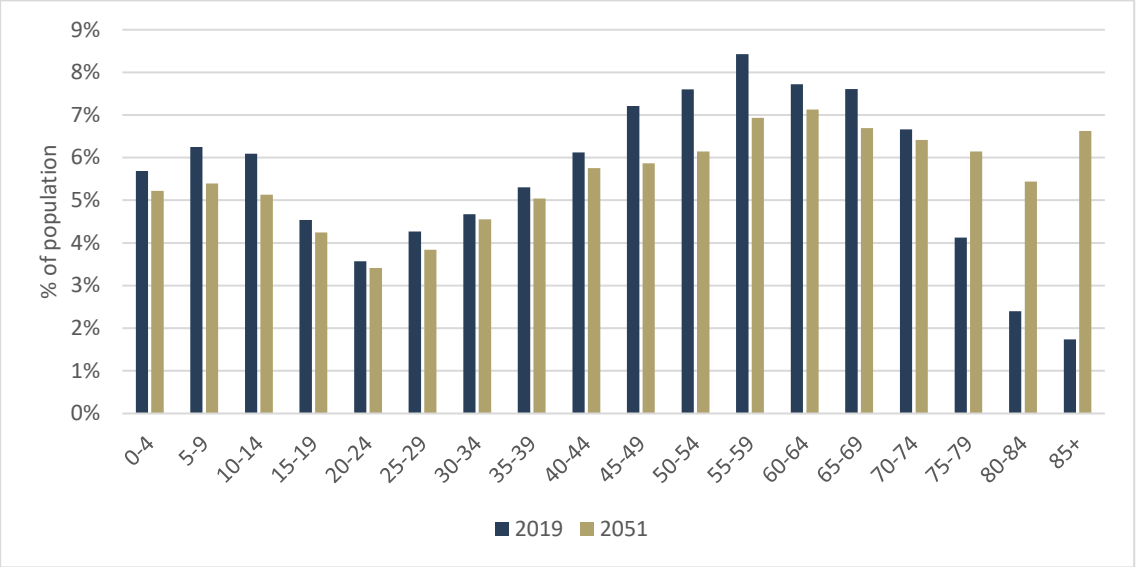
As is the case for most of New Zealand, the population in South Wairarapa is projected to see an aging population over the next 30 years. The population aged 65 years and older is projected to grow by 77% between 2019 and 2051 (from around one in four to around one in three of the district population). As a result, the average age is projected to rise from 44 in 2019 to 49 in 2051.

The under 15 years and working age population (15 – 64 years) groups are projected to grow modestly. The number of young people under 15 years is projected to grow by 12% between 2019 and 2051 and the working age population is projected to grow by 14%.

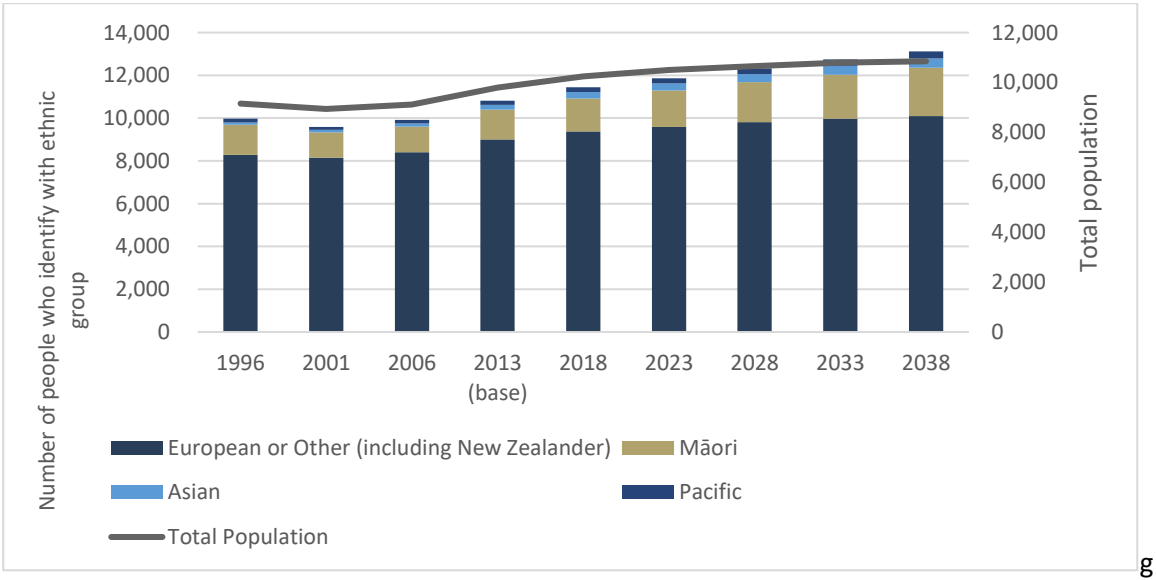
[3] Population and age projections are sourced from Infometrics Population Projections 2019 – 2051.

Figure 3: South Wairarapa Age Projections, 2019 to 2051



The ethnic mix of South Wairarapa's population is projected to continue to change in line with historical trends, with the largest change being an increase in the proportion of the population identifying as Māori – up from 15% of the South Wairarapa population in 2018 to 21% by 2038.[4]

Figure 4: South Wairarapa Ethnic Population Projections, 1996 to 2038



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Note: The sum of all ethnic groups exceeds the total population because people can identify with more than one ethnicity.

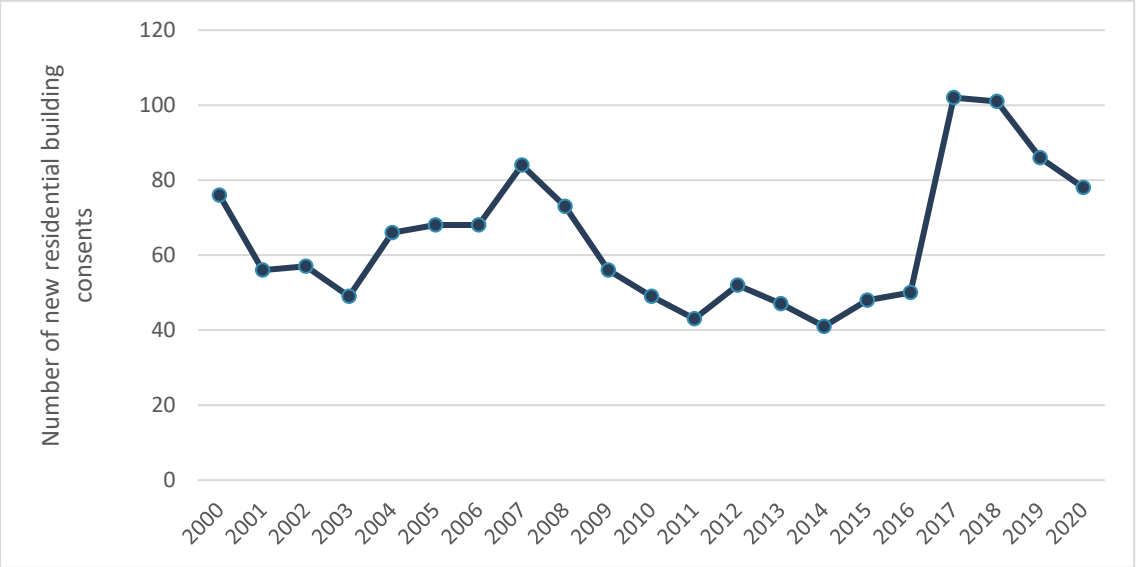
[4] Ethnicity projections from Stats NZ: https://www.stats.govt.nz/information-releases/subnational-ethnic-population-projections-2013base2038-update

Household Growth

The district has recently been experiencing a new period of building growth. There was steady growth in the number of new building consents issued from 1999 to 2007, followed by a period of decline in numbers to 2011 after the global financial crisis. Numbers then stayed steady until 2017 with a doubling of the number of consents issued for new dwellings compared to the previous year (from 50 to 102). Numbers decreased slightly to 86 in 2019 and 78 in 2020.

Consenting remains strong following COVID-19 with 30 new dwelling consents issued in the first quarter of the 2020/21 financial year and 25 in the second quarter, which is consistent with the number of consents in the high growth period 2017-2018 (25 for the first quarter and 26 for the second quarter in 2017; and 30 for the first quarter and 34 for the second quarter in 2018).

Figure 5: South Wairarapa District Residential Building Consents, 2000 to 2020 (June)



In terms of future projections, Infometrics projects that the number of households in the district will increase from 4,946 in 2021 to 5,498 in 2031 and 6,371 in 2051. Infometrics notes that the growth in the number of households is due to the growing population and decreasing average household size. It is projected the average household size will reduce from 2.29 persons per household in 2021 to 2.19 by 2051.

Over the period from 2016/17 to 2020/21 there was a 5% increase in the number of rateable properties in the district. The largest growth occurred in residential properties in Greytown and Martinborough, both with a 9% increase. Commercial property numbers have remained largely unchanged and there was a 4% increase in rural properties.

Table 1: Rateable Properties in the District

RATING UNITS		2016/17	2017/18	2018/19	2019/20	2020/21
Rural		3078	3114	3094	3135	3203
Featherston	Residential	1164	1169	1174	1178	1211
	Commercial	85	86	86	86	84
Greytown	Residential	1097	1111	1132	1167	1194
	Commercial	113	111	111	110	113
Martinborough	Residential	894	917	960	968	977
	Commercial	110	106	105	106	106
Total		**6541**	**6614**	**6662**	**6750**	**6888**

Regional growth framework

The Wellington Regional Growth Framework (the Framework) is a spatial plan that has been developed by local government, central government and iwi partners in the Wellington-Horowhenua region to deliver on the Urban Growth Agenda (UGA) objectives of the Government. The Framework also provides councils and iwi in the region an agreed regional direction for growth and investment.

The Framework identifies how the Wellington-Horowhenua region could accommodate a future population of 760,000 people and an additional 100,000 jobs over the next 30 years. This would represent an additional 200,000 people in the region. The scenario of 200,000 people has been developed to understand what would be required to accommodate this level of growth, and consider potential infrastructure needs beyond the 30-year growth scenario.

While there is no certainty about when, how or at what rate, the region's population might reach this size, the Framework has been developed based on this scenario to give a better understanding of what would be required to support this level of growth. It is important to note that this is not a policy target. The proposed changes to urban form for the region is a mix of development in both Urban Renewal Areas (brownfield) and in Future Urban Areas (greenfield). Both are expected to have higher density development than we see at present throughout the region and include improved access to bus and rail services, which are expected to increase in frequency, capacity and reach over time.

Our current understanding is that, regionally, 88% of housing growth in the Framework is expected to come from areas we have identified in the Framework and 12% is expected to be through 'business as usual' infill throughout the region, with just over half of this infill being in Wellington City.

Of the 88% housing growth from areas identified in the Framework:

- One-quarter is expected to be accommodated in Wellington City (excluding Tawa in the western corridor), including the Let's Get Wellington Moving corridor.
- Nearly one-third is expected to be accommodated in the eastern corridor from Lower Hutt to Masterton, with just over one third of this corridor's growth occurring in the Wairarapa.
- The remainder (just over 40%) is expected to be accommodated in the western corridor from Tawa to Levin.

The Framework identifies improving west-east connections as an opportunity to unlock growth, improve resilience and improve regional accessibility to economic and social opportunities. The potential housing and urban development capacity of any future west-east multi-modal corridor(s) has yet to be determined and will need consideration alongside potential transport interventions.

The Framework aligns with our work through the development of Council's Spatial Plan, Infrastructure and Financial Strategies.

Environmental

Greater Wellington Regional Council provided the Climate Change Assumptions for the Wellington region and Wairarapa combined. These projections depend on future greenhouse gas emissions. As these are uncertain, the below information includes projections based on scenarios ranging from low to high greenhouse gas concentrations.

The projected changes are calculated for 2031–2050 (referred to as 2040) and 2081–2100 (2090) compared to the climate of 1986–2005 (1995).

Table 2: Projected Environmental Changes (Temperature and Seasonality)

	RUAMĀHANGA WHAITUA 2040	WAIRARAPA COAST WHAITUA 2040	RUAMĀHANGA WHAITUA 2090	WAIRARAPA COAST WHAITUA 2090
Average annual T°C	+0.7 to +1°C above present	+0.5 to +1°C above present	+1.2 to +3°C above present	+1 to +3°C above present
Hot days (above 25°C)	Between 0 and 30 days increase	Between 5 and 30 days increase	Between 0 and 80 days increase	Between 15 and 60 days increase
Frost nights	Between 0 and 15 days reduction	Between 0 and 5 days reduction	Between 0 and 40 days reduction	Between 0 and 15 days reduction
Annual Growing Degree Days (GDD) base 10°C GDD = (T°Cmax + T°Cmin)/2) - T°Cbase *Measures potential for crop and pasture growth*	Increase of 0 to 300 GDD units	Increase of 0 to 300 GDD units	Increase of 200 to 1000 GDD units	Increase of 200 to 900 GDD units
Annual potential evapotranspiration deficit (mm) Measures drought intensity	+20 to +120 mm	+40 to +120 mm	+0 to +180 mm	+40 to +160 mm

Table 3: Projected Environmental Changes (Wind)

	RUAMĀHANGA WHAITUA 2040	WAIRARAPA COAST WHAITUA 2040	RUAMĀHANGA WHAITUA 2090	WAIRARAPA COAST WHAITUA 2090
Annual number of windy days	0 to 4 days increase	0 to 6 days increase	0 to 12 days increase	0 to 10 days increase
Intensity of wind during windy days (>99th percentile of daily mean)	0% to 3% increase	0% to 3% increase	1% to 4% increase	1% to 4% increase

Table 4: Projected Environmental Changes (Rainfall Patterns and Intensity)

	RUAMĀHANGA WHAITUA 2040	WAIRARAPA COAST WHAITUA 2040	RUAMĀHANGA WHAITUA 2090	WAIRARAPA COAST WHAITUA 2090
Average annual rainfall	5% decrease to 5% increase	5% decrease to 5% increase	0% to 10% decrease	10% decrease to 5% increase
Amount of rain falling during heavy rainfall days (>99th percentile of daily rainfall)	0% to 10% increase	0% to 15% increase	0% to 20% increase	0% to 30% increase
River mean annual low flow discharge (MAL) *Measures water shortage in the catchments*	Up to 60% decrease	Up to 60% decrease	Up to 80% decrease	Up to 80% decrease
River mean annual flood discharge (MAF) Measures flood potential in the catchments	20% decrease to 40% increase depending on catchment	20% decrease to 20% increase depending on catchment	20% decrease to 60% increase depending on catchment	20% decrease to 60% increase depending on catchment
Days of very high and extreme forest fire danger	100% to 150% increase	100% to 150% increase	100% to 150% increase	100% to 150% increase

Table 5: Projected Environmental Changes (Sea Level and Coastal Hazards)

	2040	2090
Permanent sea level rise	+0.12 m to +0.24 m above present	+0.68 m to +1.75 m above present

Table 6: Projected Environmental Changes (Oceanic Changes)

2040	2090
Acidification of the ocean	Acidification of the ocean
General temperature rise of sea water	General temperature rise of sea water
Marine heatwaves	Marine heatwaves

What this might mean for Wellington and Wairarapa

Table 7: Environmental Implications for Wellington and Wairarapa

Environmental Implications	
Coastal hazards	The region is particularly vulnerable to even a small rise in sea level because of its small tidal range. There may be an increased risk to coastal roads and infrastructure from coastal erosion and inundation, increased storminess and sea-level rise.
Heavy rain	The capacity of stormwater systems may be exceeded more frequently due to heavy rainfall events which could lead to surface flooding. River flooding may also become more frequent, particularly in low-lying areas. Floods are likely to become more intense.
Erosion and landslides	More frequent and intense heavy rainfall events are likely to lead to more erosion and landslides.
Droughts	More frequent droughts are likely to lead to water shortages, increased demand for irrigation and increased risk of wildfires.
Biosecurity	Climate change could lead to changes in pests and diseases over time. A likely increase in weed species and subtropical pests and diseases could require new pest management approaches. Regional biodiversity may be threatened by changing temperature and rainfall patterns, and sea level rise.
Agriculture	Warmer temperatures, a longer growing season and fewer frosts could provide opportunities to grow new crops. Farmers might benefit from faster growth of pasture and better crop growing conditions. However, these benefits may be limited by negative effects of climate change such as prolonged drought, water shortages and greater frequency and intensity of storms.

Coastal vulnerability

The Wellington Region Climate Change Working Group commissioned a report to assess the coastal vulnerability of the Wellington region to climate change, sea level rise and natural hazards.[5] The report is intended to assist Councils in working with affected communities to develop long-term strategies.

The coastal area of South Wairarapa was divided into three units – Onoke, Palliser and South Wairarapa Coast. Each unit was assessed against criteria grouped into the following areas: Community, Business, Three Waters, Lifelines Infrastructure, Māori and cultural, Ecological, Erosion, and Civil Defence and Emergency Management.

[5] https://www.gw.govt.nz/assets/Uploads/Wellington-Regional-Coastal-Vulnerability-AssessmentJune-2019Final.pdf

Table 8: South Wairarapa Coastal Units in Vulnerability Assessment

South Wairarapa Coastal Units in Vulnerability Assessment	
Onoke	Western point begins at Onoke beach and the Eastern point is the end of Onoke Beach It includes Lake Onoke and the Ruamahanga River Mouth The coast is characterised by a mix of sand and gravel beach and is primarily populated by baches There is 22.11km of coastline
Palliser	Western point is the end of Onoke beach where the coastline turns south and the Eastern point is Cape Palliser It includes Whatarangi, Ngawi and Mangatoetoe The coast has a mix of small communities facing various degrees of hazards. The geology struggles for vegetation There is 30.59km of coastline
South Wairarapa Coast	South Wairarapa Western point is Rocky Point and Eastern/Northern point is Honeycomb Rock It includes White Rock and Pahaoa The coast only a few small settlements (run holding stations) and limited road access There is 68.29km of coastline

Overall, this assessment identified Palliser as the most vulnerable coastal unit within the Wairarapa. This is due to its vulnerability in relation to erosion risk and roading (a combination of single access and priority roads at risk).

While Onoke and South Wairarapa Coast were assessed as moderately vulnerable overall, this is more based on high vulnerability when considering ecological indicators. The ecological indicators considered include environmental sites, significant bird sites and coastal biodiversity.

Particular environmental impacts are discussed further in each infrastructure area as the effects are different for each.

Political factors

Three waters reforms

The Three Waters Review[6] was initiated in mid-2017 as a cross-agency initiative led by the Department of Internal Affairs (DIA) to look into the challenges facing our drinking water, wastewater and stormwater ("three waters") and to develop recommendations for system-wide performance improvements.

Through this review, Government is seeking the following major outcomes:

- Safe, acceptable (taste, colour and smell) and reliable drinking water
- Better environmental performance
- Efficient, sustainable, resilience and accountable water services
- Achieving these aims in a way communities can afford

[6] https://www.dia.govt.nz/Three-waters-review

This has seen the development of new legislation and the creation of Taumata Arowai, the new Water Services Regulator, to oversee and enforce a new drinking water regulatory framework. It also includes an oversight role for wastewater and stormwater networks.

In July 2020, the Government announced a $761 million package to provide immediate post-COVID-19 stimulus to local authorities to maintain and improve three waters infrastructure, support reform of local government water services delivery arrangements, and support the operation of Taumata Arowai. South Wairarapa District Council signed a Memorandum of Understanding with the DIA in August 2020 to participate in the first stage of the reforms. The service delivery model will be informed by discussion with the local government sector taking into account the following design features:

- Water service delivery entities, that are:
    - Of significant scale (most likely multi-regional) to enable benefits from aggregation to be achieved over the medium to long-term;
    - Asset owning entities, with balance sheet separation to support improved access to capital, alternative funding instruments and improved balance sheet strength; and
    - Structured as statutory entities with appropriate and relevant commercial disciplines and competency-based boards;
- Delivery of drinking water and wastewater services as a priority, with the ability to extend to stormwater service provision only where effective and efficient to do so; and
- Water entities would be publicly owned entities, with a preference for collective council ownership.

Mechanisms for enabling communities to provide input in relation to the new entities.

The Government is expected to make substantive policy decisions relating to the reforms in April/May 2021 to enable legislation to be prepared for introduction. This includes decisions on the core design features of the new water services entities and the number and boundaries of these entities.

Councils will be asked to decide about participating in the new service delivery system in late 2021. This would take the form of an ‘opt out’ approach meaning all councils will be included in one of the new water service delivery entities by default but can decide not to continue to participation in consultation with their communities. Central government is expecting to provide councils with a package of supporting information including details on the entity design proposals (e.g. ownership and governance arrangements), financial and other implications of participating, and which entity each council would be part of to inform the decision-making process.

Introduction of legislation to create the new service delivery system is expected in late 2021, with enactment by mid-2022. For councils that participate in the reforms, any transfer of responsibilities and assets is expected in around 2023/24.

Regulation of drinking water

The Taumata Arowai–the Water Services Regulator Act 2020 received Royal Assent on 6 August 2020. The purpose of the act is to establish Taumata Arowai – the Water Services Regulator as a Crown Agent and provide for its objectives and general functions, including:

- administering and enforcing a new drinking water regulatory system (including the management of risks to sources of drinking water); and
- a number of complementary functions to improving the environmental performance of wastewater and stormwater networks.

In July 2020, a complementary Bill, the Water Services Bill, was introduced to Parliament to give effect to Government's decisions on reforming the drinking water regulatory framework and Taumata Arowai's wastewater and stormwater functions. Taumata Arowai will not become fully operational until the Water Services Bill is enacted which is expected to be in end-2021.[7]

Since the last Infrastructure strategy, SWDC has invested significantly in achieving compliance with the current NZ Drinking Water Standards. This has included multi-barrier treatment (i.e. chlorination and UV treatment) and improved monitoring and communication systems. As a result, SWDC are well positioned to comply with emerging regulatory framework, with the support of Wellington Water, and continued investment in water treatment is required through this strategy and includes the operational and maintenance costs of the improved systems.

National Environmental Standards for Freshwater

The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (Freshwater NES) regulates activities that pose risks to the health of freshwater and freshwater ecosystems.[8] The standards came into force on 3 September 2020 and are designed to:

- Protect existing inland and coastal wetlands
- Protect urban and rural streams from in-filling
- Ensure connectivity of fish habitat
- Set minimum requirements for feedlots and other stockholding areas
- Improve poor practice intensive winter grazing of forage crops
- Restrict further agricultural intensification through to the end of 2024
- Limit the discharge of synthetic nitrogen fertiliser to land, and require reporting of fertiliser use.

In many cases, people will need to apply for a resource consent from the regional council to continue carrying out regulated activities.

Resource Management Act 1991 Reforms

The Government is reforming the resource management system and intends to repeal and replace the Resource Management Act 1991 (RMA) which is the primary legislation governing the use of our land, water

[7] https://www.dia.govt.nz/Taumata-Arowai-Establishment-Unit

[8] https://www.mfe.govt.nz/fresh-water/freshwater-acts-and-regulations/national-environmental-standards-freshwater

and air resources. Its aim is for the RMA to support a more productive, sustainable an inclusive economy and be easier for New Zealanders to understand and engage with.[9]

The RMA is intended to be replaced with three new pieces of legislation – the Natural and Built Environments Act, Strategic Planning Act and Climate Change Adaption Act.

The Natural and Built Environments Act is the core piece of legislation to replace the RMA and is intended to enhance the quality of the environment to support the wellbeing of present and future generations. The Strategic Planning Act provides a long-term strategic approach to how we plan for using land and the coastal marine area while the Climate Change Adaption Act supports New Zealand's response to the effects of climate change and would address complex legal and technical issues associated with managed retreat and funding and financing adaptation.

Ministry for the Environment has set out the timeframes for the reform process as:

- **May – September 2021**: An exposure draft of the Natural and Built Environment Bill will be agreed by Cabinet and then referred to a special select committee inquiry. The Strategic Planning Bill and Climate Change Adaptation Bill will be developed in a parallel process with the latter managed out of the Minister for Climate Change office.
- **December 2021:** The Natural and Built Environments Bill and the Strategic Planning Bill will be introduced to Parliament in late 2021. A standard select committee process will consider them. The Climate Change Adaptation Act will be developed in a similar timeframe.
- **December 2022:** It is intended the three new pieces of legislation are passed by the end of 2022.

Government Policy Statement on Land Transport

The Government Policy Statement on Land Transport (GPS) outlines the government's priorities for expenditure over the next 10 years. It sets out how funding is allocated between activities such as road safety policing, state highway improvements, local and regional roads and public transport.

The current GPS took effect on 1 July 2018 and prioritised a safer transport system free of death and injury, accessible and affordable transport, reduced emissions and value for money.[10]

The Ministry of Transport has released its GPS for 2021/22–2030/31[11] which builds on the strategic direction of GPS 2018 by maintaining the priorities but updating them to align with recent policy work. The Government is proposing to prioritise safety, better transport options, improving freight connections, and climate change. The GPS 2021 will take effect from July 2021.

Regional Land Transport Plan 2021

The process to develop the Wellington Regional Land Transport Plan 2021 (RLTP 2021) is underway. The RLTP sets the strategic direction for the region's transport network for the next 10-30 year. It describes the long-term vision, identifies regional priorities and sets out the transport projects for investment over the next 10 years.

[9] https://www.mfe.govt.nz/rma/resource-management-system-reform

[10] https://www.transport.govt.nz/assets/Uploads/Our-Work/Documents/c6b0fea45a/Government-Policy-Statement-on-land-transport-2018.pdf

[11] https://www.transport.govt.nz//assets/Uploads/Paper/GPS2021.pdf

Investment in the region's transport system will be guided by the following priorities:

Table 9: Transport Investment Priorities

Transport Priorities	
Public Transport Capacity	Build capacity and reliability into the Wellington Region's rail network and into the Wellington City public transport network to accommodate future demand
Travel Choice	Make walking, cycling and public transport a safe, sustainable and attractive option for more trips throughout the region
Strategic Access	Improve access to key regional destinations such as ports, airports and hospitals for people and freight
Safety	Improve safety, particularly at high risk intersections and on high risk rural and urban roads
Resilience	Build resilience into the region's transport network by strengthening priority transport lifelines and improving the redundancy in the system

Road to Zero Strategy

In December 2019, the Government launched 'Road to Zero,' New Zealand's Road Safety Strategy 2020 – 2030.[12]

The strategy sets out the governments vision for a New Zealand where no one is killed or seriously injured in road crashes. As an intermediate target towards achieving its vision, the target is to reduce deaths and serious injuries on our roads by 40 percent by 2030 (from 2018 levels).

The strategy will be implemented through a series of separate action plans which focus on the following five key areas:

- Infrastructure improvements and speed management
- Vehicle safety – significantly improve the safety
- Work-related road safety
- Road user choices
- System management

Funding Strategy

South Wairarapa District Council is a small rural local authority, with a relatively high infrastructural asset base per capita, and a relatively small ratepayer base. Small local authorities generally have very little discretionary expenditure and are therefore required to focus heavily on maintaining current service levels and their infrastructural asset base.

[12] https://www.transport.govt.nz/multi-modal/keystrategiesandplans/road-safety-strategy/

This strategy reflects this focus, while concentrating on increasing network resilience. We are confident our asset planning, LTP and infrastructure strategy will ensure the longevity of the asset base and maintenance of service levels while retaining financial health.

Debt is generally only undertaken for new assets, with replacements of existing assets made from depreciation reserves built up for that purpose.

Financial sustainability is fundamental to the long-term sustainability of the district. The forecasts have been prepared on the basis that, as a minimum, existing levels of service will be maintained. Demand is assessed against existing capacity of the network and treatment plants. Increasing demands from population growth have informed these requirements. Further modelling work form part of the LTP to assess the impacts of growth.

What we've achieved

Since the last Infrastructure Strategy, SWDC has:

- Achieved full Drinking Water Standards compliance at all Water Treatment Plants, including the commissioning of the Manganese Reduction Plant in Martinborough to enable the chlorination of the town supply,
- Completed the upgrades for Greytown and Martinborough Wastewater Treatment plants and gained related long-term consents,
- Increased water supply resilience through the commissioning of a fourth bore and treated water reservoirs at the Waiohine water treatment plant,
- Improved the automation, operating practices and Health and Safety practices at our WWTPs to improve their compliance and overall performance,
- Enhanced compliance with Healthy Homes requirements for our Senior Housing,
- Started a trial of the ecoreef coastal erosion solution to improve resilience of the Cape Palliser Road,
- Completed the Waihinga Centre and Martinborough playground,
- Updated the notable trees register,
- Developed Climate Change and Positive Ageing Strategies, and established a Community Development function in Council, which will help inform our future infrastructure investment, and
- Wairarapa Solid Waste Management and Minimisation Bylaw 2021.

What has changed

How we manage our infrastructure assets has also changed (or is subject to review). Since the last LTP we have:

- Contracted for and implemented Ruamahanga Roads, a shared service for Roading with Carterton District Council (CDC) with Fulton Hogan as our contractor, from the 1st July 2019, and
- Become a shareholder in Wellington Water Limited, a council controlled organisation, and moved the management of our three waters infrastructure to it, from 1st October 2019.

Asset Management for SWDC Infrastructure

To deliver value for South Wairarapa ratepayers the Council, through this Infrastructure Strategy, is looking to optimise the investment in our assets to ensure we comply with our regulatory obligations and to meet the needs of our community, both now and in the future.

This involves having clear strategies, asset planning and activity schedules to ensure optimal performance through:

- Ongoing operation of assets – ensure SWDC assets are used and operated in such a manner so as to prolong the asset life,
- Preventative Maintenance – the undertaking of regular servicing of assets to minimise the likelihood of asset failure, particularly for critical infrastructure,
- Reactive Maintenance – responding to and repairing an asset failure (i.e., broken pipe, roadside slips),
- Renewals – the replacement or restoration of an existing asset to extend its economic life, and
- Upgrades – to meet an increase in demand (i.e. from growth, regulatory changes or service changes).

What the right mix of investment is for each asset is derived from multiple considerations:

- Current asset condition and projected life,
- Asset criticality,
- Data confidence – how sure are we that the data we have is accurate and up to date,
- Future demand forecasts and growth indicators, and
- Financial data – valuation and depreciation

Asset information and analytics

As part of our ongoing focus on improving our knowledge and understanding of our Infrastructure assets, we capture asset condition data through multiple sources:

- Visual inspection
- CCTV footage and data (most relevant for underground assets)
- User experience and reported issues
- Technical or expert analysis
- Extrapolation from other data sources (i.e. other Territorial Authorities' data for similar assets exposed to similar use and environmental impacts)
- Sampling and testing
- Emerging technology (i.e. use of drones to fly over Cape Palliser Road to assess coastal erosion changes)

This information is then analysed across multiple tools to inform our asset planning, which feed into this Infrastructure Strategy.

Asset Criticality

One of the key determinants for the best asset management approach to meet our service goals and comply with regulations is to proactively manage our critical assets so that the chance of failure is minimised. Critical

assets are those where the consequences of failure would be significant and this needs to be avoided (even if the likelihood of failure is low). These critical assets are prioritised for preventative maintenance activity and ongoing asset condition assessment and analysis. For SWDC, they include:

- Water Treatment Plants
- Wastewater Treatment Plants
- Road bridges

Council will continue to monitor the condition of these assets. Upgrades of our Water and Wastewater treatments plants have been undertaken over the last few years and preventative maintenance schedules and improved operating procedures have been designed and implemented to increase the life of the assets.

A full condition assessment for our road bridges is planned and budgeted for. Similarly, we will optimise the life of these assets through their lifecycle. Some bridges may require more than simple maintenance and this will be considered as part of the condition assessment and planning activity.

Three Waters

The Three Waters Reform programme is an ongoing process and this portion of the Infrastructure Strategy will be heavily impacted by the programme as it progresses. However, until the outcome of the review is known, Council will continue to develop the Three Waters strategy in conjunction with Wellington Water.

Similarly, the establishment of Taumata Arowai as the NZ Three Waters regulator from July 2021, is likely to see a fundamental shift in the regulation of waters services. From that time the regulator will:

- oversee and administer, and enforce a new, expanded and strengthened drinking-water regulatory system, to ensure all New Zealand communities have access to safe drinking water, and if need be we will hold suppliers to account, and
- provide oversight of the regulation, management, and environmental performance of wastewater and storm-water networks, including promoting public understanding of that performance.

In conjunction with WWL and their other shareholding Councils, SWDC will continue to engage with the Taumata Arowai establishment unit to ensure our activities are aligned with the emerging strategy of the new regulator.

Since the last Infrastructure Strategy, SWDC has completed a range of initiatives across the Three Waters infrastructure, including achieving compliance with the NZ Drinking Water Standards (NZ DWS), upgrades and consents for the Martinborough and Greytown Wastewater Treatment Plants (WWTPs) and improved network resilience through treated water storage and increased supply. With these improvements there is a greater need for operating and maintenance budgets to keep the new equipment operating effectively.

Resource consents have been established for our critical water assets, as shown below:

- Greytown and Featherston WTPs to Sept 2037
- Martinborough WTP to Sept 2037
- Pirinoa WTP to 2025Greytown WWTP to 2025 (upgrades required for next phase of consent and identified below)
- Martinborough to 2051 (ongoing investment required to irrigate to land)

With improvements made to these critical assets, investment (see Water Issue 3 and wastewater issue 3 below) is increasingly required in our Drinking and Wastewater networks. It is becoming apparent that our network assets are no longer performing at a level that consistently meets the needs of our community. The focus of the Three Waters portion of this Infrastructure Strategy focuses on improving network performance through increased renewals as well as operating and maintenance funding and activities.

There are also two key areas where the SWDC approach is still being developed, the Featherston Wastewater Treatment Plant and the future of the Moroa and Longwood Water Races. This strategy outlines our current understanding, timelines for developing our approach and how we will engage our community on these two areas. Both of these projects are heavily influenced by the new Freshwater Regulations and ongoing Water Reform.

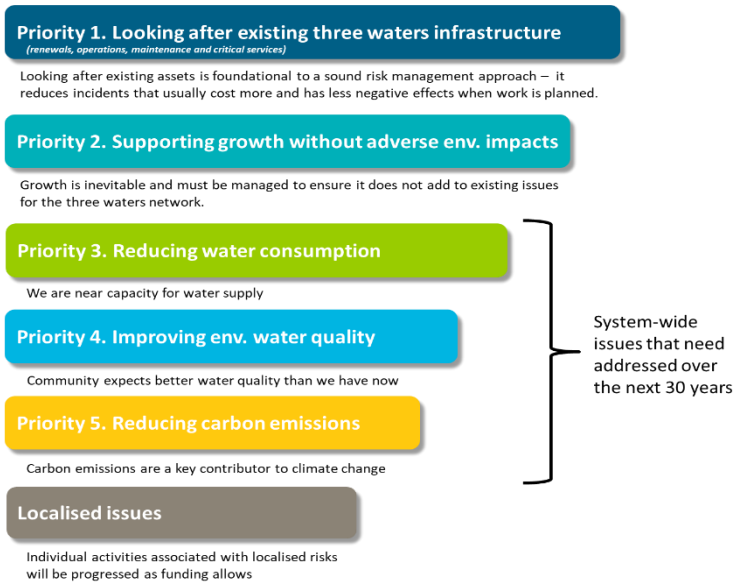
We know some of our infrastructure is not performing optimally, particularly in our drinking and wastewater networks. Undertaking the necessary renewals and replacement will be a significant challenge over the LTP period. Wellington Water is prioritising this work based on criticality and age, starting with our critical assets, such as our water treatment plants. Other assets have been prioritised based on what is known about particular asset types and its age, and investment has been forecasted accordingly.

In parallel, Wellington Water is commencing a programme of work to fully understand the condition of all our assets to provide increased certainty of future investment requirements. Wellington Water has given 3 options to the Council and council made the decision to allocate a lower level of capital expenditure funding to maintain the affordability.

Strategic alignment

Improving Three Waters delivery and environmental quality is a key strategic driver for the Council. This is supplemented by the role that Three Waters assets play in supporting the economic, social and environmental wellbeings that underpin Council activities and also community feedback from the 2020/2021 Council Annual Plan and our pre-LTP engagement that overwhelmingly endorsed water as the priority for Council (80% of respondents supported this).

In conjunction with WWL, the following priorities have been agreed to shape and inform our (and the other WWL shareholding Councils) infrastructure strategy for Three Waters.



Scope and delivery arrangements

In October 2019, Wellington Water (WWL) assumed the management responsibility for our Three Waters assets (ownership of the assets remained with Council). This is the first SWDC Three Waters infrastructure strategy informed by WWL.

Network and Treatment Plant maintenance is undertaken by the WWL network maintenance alliance, which combines WWL and Fulton Hogan staff, and network renewals are designed, managed and delivered by consultant and contractor panels as well as in-house specialists.

The SWDC Three Waters assets, maintained by WWL, comprises:

Drinking Water:

- 118km of pipes
- Four Water Treatment Plants (WTPs):
- Waiohine
- Soldiers' Memorial Park
- Martinborough
- Pirinoa
- 5800 Fittings (i.e. valves, hydrants)
- 11 Reservoirs or Tanks

Wastewater:

- 75km of pipes
- Four Wastewater Treatment Plants:
- Featherston
- Greytown
- Martinborough
- Lake Ferry
- 11 Pump Stations

Stormwater/Drainage:

- 15km of pipes
- 100 Fittings
- 18km of channels
- 2407 culverts
- 574 sumps

The sumps and culverts associated with the wider stormwater network in SWDC are maintained under the Ruamahanga Roads contract.

The following map provides a high level view of the SWDC's three waters assets:

Figure 6: Council's Three Water Assets

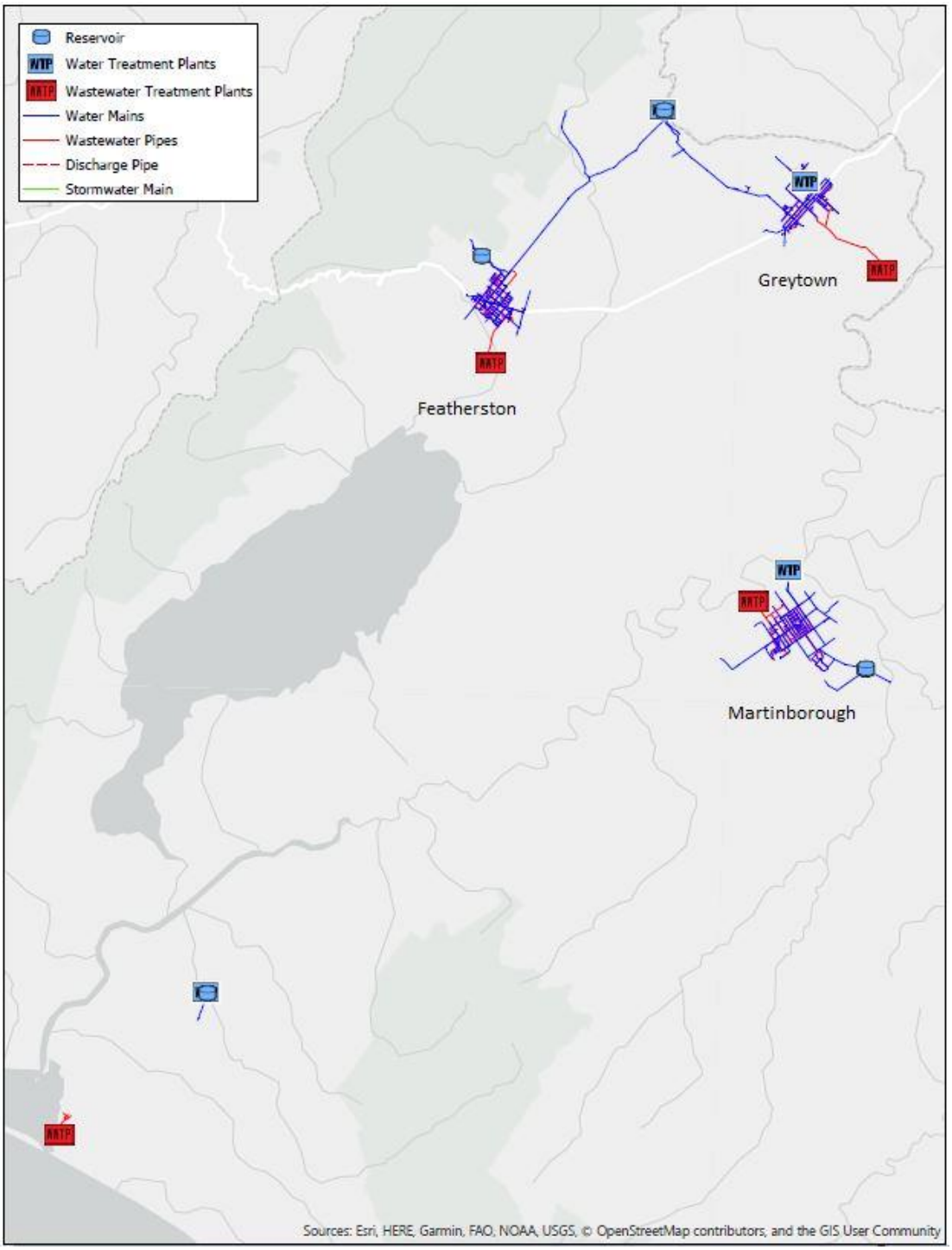
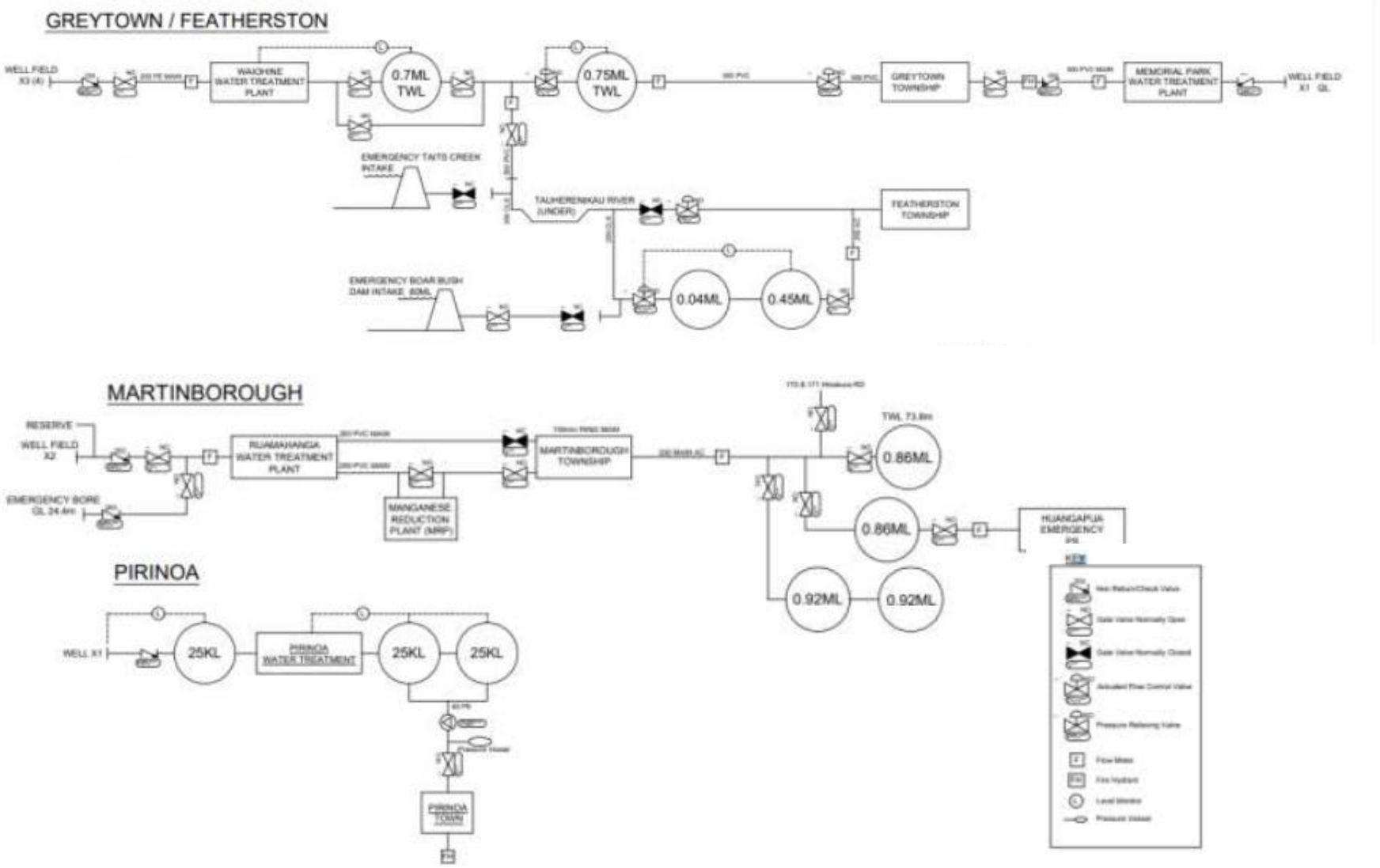


Figure 7: Council's Drinking Water Network

The following diagrams show the Drinking Water network configuration:

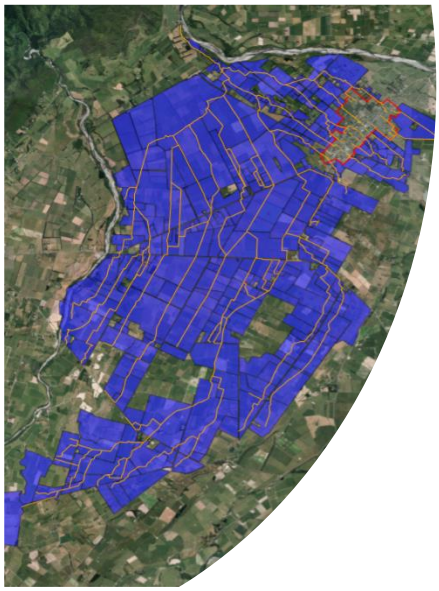


In addition, WWL also operate and maintain two water races on behalf of Council.

Moroa Water Race:

- 240km in total length
- Services approximately 8500ha
- 282 ratepayers serviced
- Water from Waiohine River

Figure 8: Moroa Water Race Network



Longwood Water Race:

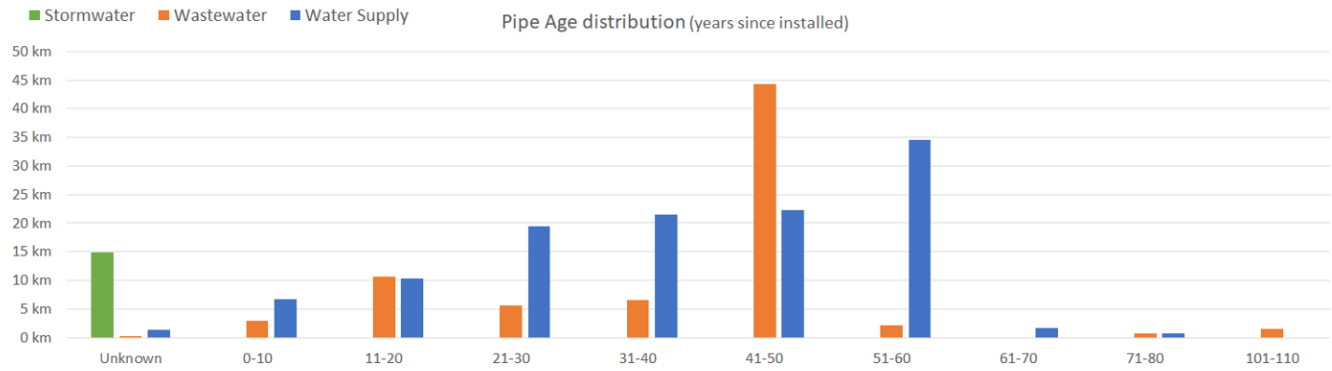
- 40km in total length
- Services approximately 1500ha
- 62 ratepayers serviced
- Water from Tauherenikau River

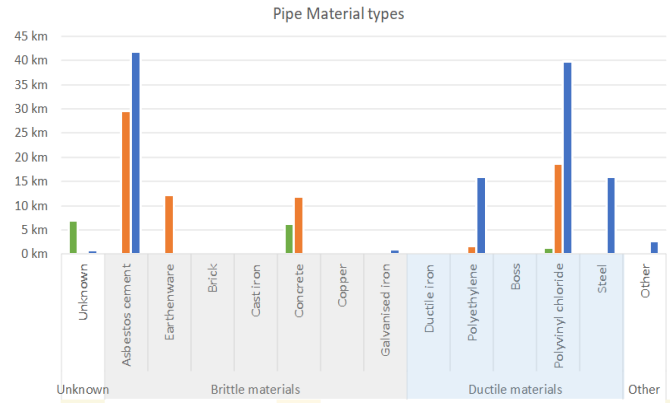
Figure 9: Longwood Water Race Network

Three Waters Asset Profile

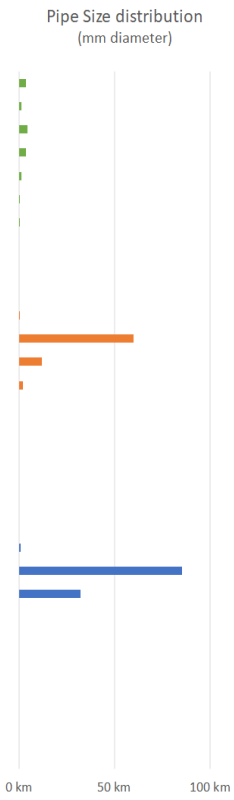
The following tables outline the age distribution, material and size of the SWDC water networks.

Table 9: Three Waters Asset Profile





Note on "Brittle or Ductile" pipes:
This categorisation is with regard to the relative resilience of certain pipe materials when placed under stress from ground movement (eg: in an earthquake) **Brittle** pipes are more likely to fracture in such conditions, while **ductile** pipes are more likley to withstand them.



Stormwater	Unknown	3				1					0		4
	> 0 to 150	0				1					1		1
	> 150 to 300	2				2					1	0	4
	> 300 to 450	2				2					0	0	4
	> 450 to 600	0				1					0		1
	> 600 to 900	0				0					0		1
	> 900 to 1200	0											0
	> 1200 to 1500												
	> 1500												
Stormwater Total		**7**				**6**					**1**	**0**	**15**
Wastewater	Unknown	0							0		0		0
	> 0 to 150	0	27	12		3			1		16	0	0	60
	> 150 to 300		3			7					3	0		12
	> 300 to 450					2								2
	> 450 to 600													
	> 600 to 900													
	> 900 to 1200													
	> 1200 to 1500													
	> 1500													
Wastewater Total		**0**	**30**	**12**		**12**			**2**		**19**	**0**	**0**	**75**
Water Supply	Unknown	1	0								0	0		1
	> 0 to 150	0	32				0	1	15		29	5	3	85
	> 150 to 300		10						1		11	11		32
	> 300 to 450													
	> 450 to 600													
	> 600 to 900													
	> 900 to 1200													
	> 1200 to 1500													
	> 1500													
Water Supply Total		**1**	**42**				**0**	**1**	**16**		**40**	**16**	**3**	**118**
Total		**8**	**71**	**12**		**18**	**0**	**1**	**18**		**60**	**16**	**3**	**208**

From this profile, several observations can be made:

- Almost half of our water supply pipes and almost 60% of wastewater pipes are over 40 years old,
- 70% of the wastewater pipes are made from brittle materials that are more vulnerable to cracking and breaking when subject to ground movement (e.g. earthquakes),
- 35% of the water supply pipes are made from asbestos cement. It is becoming increasingly evident across the District, and the wider Region, that this material is not meeting its expected asset or design life and is failing before expected (probably exacerbated by ground movement, as per above)
- Parts of our wastewater network are likely to be undersized to meet likely growth in the District.

Levels of Service

Below is a sample of the levels of service and key performance indicators for the Water Supply activity. A full list with future year targets can be found in the water supply significant activity section. Note that the last customer survey was carried out in October 2018 and will be carried out again in 2021.

Service Level	Key Performance Indicators	2019/20 Results	Performance Target 2021/22	How it will be measured
Potable water demand	The average consumption of drinking water per day per resident within the territorial authority	558 Lt	<400 Lt	Council records
The Council provides reliable and safe drinking water supplies	Compliance with resource consent conditions/water permit conditions to "mainly complying" or better	100%	100%	Council records
The water provided is safe to drink	Water supply systems comply with Ministry of Health Drinking Water Standards - Bacteriological	MBA: No GTN: No FSTN: No	Yes	Council records
	Water supply systems comply with Ministry of Health Drinking Water Standards - Protozoa	MBA: No GTN: No FSTN: No	Yes	Council records
Customer satisfaction	The total number of complaints received by the local authority about drinking water taste per 1000 connections	0	< 15	Council records
	The total number of complaints received by the local authority about drinking water odour per 1000 connections	0	<15	Council records
Fault response times where the local authority attends a call-out in response to a fault or unplanned interruption to its networked reticulation system	Ratepayers and residents satisfied with level of service for water	69%	65%	Customer survey
	Attendance for urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site: • in < 1 hour • median response time measured	78% Median Time 1.26 hrs	75%	Council records
	Resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption: • in <8 hours	70% Median Time 12.47 hrs	90%	Council records

	• median response time measured			
Maintenance of the reticulation network	The % of real water loss from the local authority's networked reticulation system identified by establishing and measuring night flow	49%	<30%	Council records

Key Risks to the SWDC Three Waters Strategy

This strategy is developed by considering what we know of our current Three Waters environment. There are several key risks that may impact it over time.

Table 7: Key Risks to Three Waters Strategy

Key Risk	Response
Unpredictable nature of climate change	The major risk that faces most asset owners. Climate Change has the potential to impact significantly on Council's Three Waters assets and service delivery. The impacts are likely to include: - Reduced availability of water sources (or poorer quality water requiring increased treatment to meet standards), - Increased demand, - More slips/washouts breaking pipes, - Increased power outages affecting supply. Activities planned to mitigate these impacts include improved network storage, enabling and educating for household resilience and demand management, mobile power generators, more or moving water sources.
Affordability and phasing of activities	Our networks are showing signs of strain and the aspiration would be to rapidly increase network renewals. However, this needs to be balanced against affordability and delivering on our other community outcomes. Changes to our financial position and that of our community (e.g. because of Covid-19 resurgence) may require further phasing (pushing work out) of the renewals work. Network renewals are being phased over a number of years and assessed against other priority issues to improve affordability.
Market capability and resource availability	Many Councils are considering increased water infrastructure investment and the stimulus funding provided, as part of the water reform programme has further increased demand in a tight supply market. Capacity, capability and resources constraints can be mitigated by working with Wellington Water, industry partners and other Territorial Authorities (TAs) to improve resourcing, work scheduling and collaboration. Ongoing innovation, procurement approaches and reducing demand/reusing material, where appropriate, will help mitigate reduced supply of key materials.
Featherston Wastewater Treatment Plant	The investment required to establish a suitable wastewater treatment plant for Featherston is subject to ongoing discussion with the community and other relevant stakeholders and a consenting process. As a significant project for SWDC it has considerable impact on the affordability of other Council projects, including network renewals. Should the cost of this plant exceed estimates or consent not being achieved, it may have an impact on how quickly renewals can be progressed.

Drinking Water

Priority Water Issues

Summary

Over the last few years Council has made significant improvements to the quality of drinking water that has been provided and full compliance with New Zealand Drinking Water Standards will be in place from July 2021. This has required significant investment from ratepayers, through Council, but was always considered an essential and priority deliverable. This work has included the chlorination of Martinborough town supply, which required the delivery of a Manganese Reduction Plant, improved control systems and a higher level of monitoring and testing.

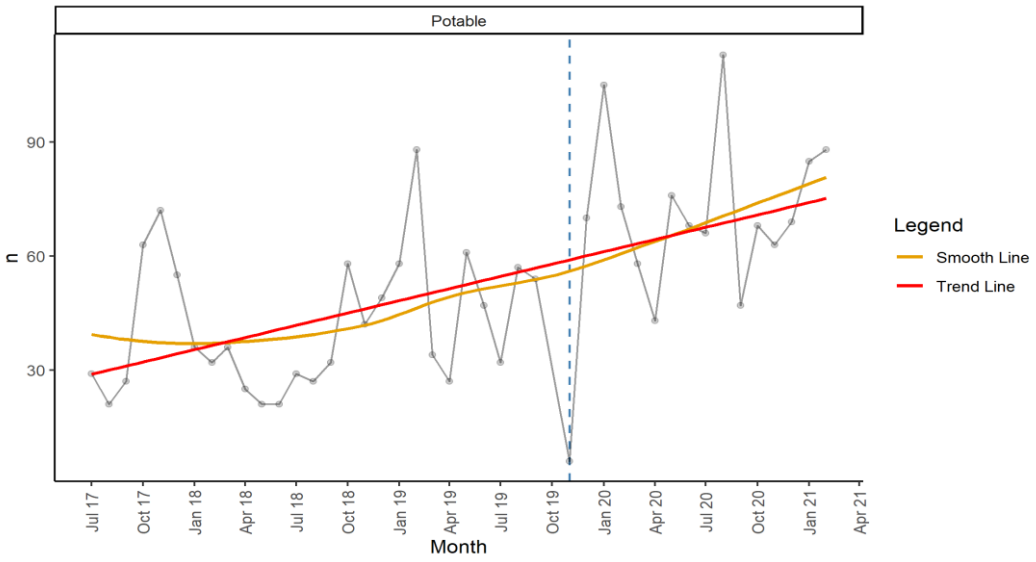
In addition, other significant investment has been made in increasing the resilience of our water supply, including commissioning a fourth bore at the Waiohine plant, introducing treated water storage and implementing back up power supplies for critical infrastructure. These improvements require ongoing maintenance and management to ensure ongoing compliance.

In parallel, Council has continued to invest in the drinking water pipe network, but shown by the increase in reported breakages (see graph, below), it is starting to show signs of deterioration. While some work to pro-actively renew this network has been undertaken, it is clear that if we are provide the service required an increase in pro-active pipe renewal and investment is required. Many of our drinking water assets are made of materials that are not performing as expected or are getting towards the end of their asset lives.

Priority Drinking Water Issue 1: Improving network and treatment plant performance

Having made significant progress in complying with the NZ Drinking Water Standards (as a public health priority) the focus of this Infrastructure Strategy is to improve the maintenance and operation of our network infrastructure. In recent years there has been a significant increase in network issues (leaking pipes, breakages, customer issues).

Figure 10: Improving the Water Network



Source – Wellington Water

While we have increased resourcing to help address this trend, to meet our service levels and community expectations, we will need to increase operational funding to respond effectively to breakages in our ageing network. The cost of each repair has also increased as a result of regulatory compliance, such as Health and Safety, and traffic management.

Also, our Water Treatment Plants are critical pieces of our infrastructure. If one of them were to suffer an outage due to equipment failure, the impact would be considerable. A preventative maintenance programme is therefore followed. Over the previous 18 months, significant upgrades have been made to ensure compliance with NZ Drinking Water Standards and this now requires additional operating budget and operator time to maintain the equipment to the right standard, given its critical nature.

Strategic Alignment

The following table outlines how addressing this issue supports the SWDC strategic drivers and Community Outcomes.

Table 8: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 1)

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	Provision of reliable and safe drinking water is essential for a healthy community
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	Safe and secure water with no adverse environmental impact.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Reliable provision of clean and safe drinking water is a necessity for people to want to visit or considering move to the area and for businesses to operate. Reputational damage if not provided.
Cultural Wellbeing *Strong relationships with iwi, hapū and whānau, celebrating diverse cultural identity, arts and heritage*	Cultural importance of all water to Maori and broader community.
Water Priority 1 *Looking after our existing three waters infrastructure*	A core priority for SWDC investment in this LTP
Water Priority 3 *Reducing water consumption*	Quickly repairing leaks is essential to reduce losses in the network
Climate Change	Reduce power/resource consumption and loss by improving network performance
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Priority Drinking Water Issue 1: Options

The following table identifies the options considered and our preferred option to address this issue.

Table 9: Drinking Water Investment Options (Issue 1)

OPTION	ANALYSIS
Low Investment Option *Continue with 2021 maintenance budget of $1.4M*	This option is to continue with the current budgets (from the 2021 Annual Plan). Given the increase in network breakages in more equipment to maintain in the WTPs, it is considered that this option will not meet community expectations or Levels of Service.
Mid investment Option *Increase O&M budgets by $3.6m over three years*	Increase maintenance and operations budget to help cover increased job volume, preventative maintenance of existing and new infrastructure (including critical infrastructure in WTPs), increased asset condition assessment and planning work for future growth. This increase is more likely to enable Council and WWL to meet community expectations. This option also allows WWL to increase asset condition assessment activities to enable improved investment planning into the future. It is expected that higher investment in renewals (see Issue 2, below) will, over time, reduce the relative need for reactive maintenance on the network.

Preferred Option

Priority Drinking Water Issue 2: Increase renewals funding

The age of our assets is increasing, their condition deteriorating and some pipe materials (primarily asbestos cement (AC)) is not meeting its projected asset life. Some progress has been made throughout Featherston and Greytown (there are fewer AC pipes in Martinborough) in renewing those pipes but to avoid the need for increasing reactive repairs (and its costs), it is proposed to increase funding for Drinking water pipe renewals and replace those vulnerable pipes quicker. There will always be unpredictable breakages requiring reactive repair, but increased renewals will reduce gradually, and this approach smooths the financial impact. Where required, pipe size would be increased to meet future growth requirements.

Strategic alignment

The following table outlines how addressing this issue supports the SWDC strategic drivers.

Table 10: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 2)

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	Provision of reliable drinking water is essential for a healthy community. Also need to avoid ongoing pipe breaks (by increasing renewals), which undermines residents' confidence in Council and WWL operations.
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	Safe and secure water with no adverse environmental impact.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Reliable provision of clean and safe drinking water is a basic necessity for people to want to visit or considering move to the area and for businesses to operate. Reputational damage. Also need to avoid ongoing pipe breaks (by increasing renewals), which undermines residents' and businesses' confidence in Council and WWL operations.

STRATEGY	ACTIVITY ALIGNMENT
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Cultural importance of all water to Maori and broader community.
Water Priority 1 *Looking after our existing three waters infrastructure*	A core priority for SWDC investment in this LTP
Water Priority 3 *Reducing water consumption*	Being proactive in avoiding the need for repair (and its water losses) will reduce overall network consumption.
Climate Change	Reduce power/resource consumption and water loss by improving network performance
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Priority Drinking Water Issue 2: Options

The following table identifies the options considered and our preferred option to address this issue.

Table 11: Drinking Water Investment Options (Issue 2)

OPTION	ANALYSIS	
Mid investment option *Drinking Water renewal budgets - $1.1m*	The mid-level investment option will accelerate the replacement of some known vulnerable pipes. This option will gradually improve network condition and move towards slowly reducing the need for reactive repairs of our Drinking Water network. This would be considered the minimum acceptable option to avoid continued and significant reactive repair costs into the future.	
High Investment option *Increase Drinking Water renewal budgets - $3.2m over three years (a $2.1m increase)*	As per the mid-level investment option but the high investment option will further accelerate the improvement in the network by renewing the water pipes and levelling of reactive repair costs over time. While this is the preferred option from an asset management and infrastructure viewpoint, to address a key community issue, it is considered unaffordable at this time while other infrastructure issues require investment or are unknown at this time (Featherston WWTP). As well as affordability there is some market capacity risk that would need to be addressed through pro-active market engagement. NB – this is subject to community consultation on increasing investment.	**Preferred Option**

Priority Drinking Water Issue 3: Improving water supply resilience

As well as delivering compliance with the Drinking Water Standards, Council has undertaken a range of projects to improve the resilience of those supplies. Based on asset criticality, these have included:

- Introducing a 4th bore and treated water storage at the Waiohine WTP,
- Commissioning treated water storage at Waiohine to improve network buffering,
- Improved power supply at critical infrastructure (e.g. WTPs, pump stations) and
- Increased leak detection and repair (often deeper, bigger, unseen leaks).

However, the wash out of the Boar Bush water main in June 2020 and ongoing asset analysis has further emphasised that our Drinking Water infrastructure remains vulnerable to supply interruptions caused by:

- Climate change risks – washouts, river level drops,
- Seismic activity,
- Excessive usage and undetected leaks, and
- Legacy network layout challenges

To help safeguard continued water supplies it is essential that we take action to mitigate these issues. Given the variability of water source supply caused by climate change this must include minimising network losses and reducing water consumption. There is finite water available for our use and conservation and reducing demand will become an increasingly important part of Council strategy.

Strategic alignment

The following table outlines how addressing this issue supports the SWDC strategic drivers.

Table 12: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 3)

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	Provision of reliable drinking water is essential for a healthy community. Also need to avoid ongoing pipe breaks (by increasing renewals), which undermines residents' confidence in Council and WWL operations.
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	Safe and secure water with no adverse environmental impact.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Reliable provision of clean and safe drinking water is a necessity for people to want to visit or considering move to the area and for businesses to operate. Reputational damage. Also need to avoid ongoing pipe breaks (by increasing renewals), which undermines residents' and businesses' confidence in Council and WWL operations.
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Cultural importance of all water to Maori and broader community.
Water Priority 1 *Looking after our existing three waters infrastructure*	A core priority for SWDC investment in this LTP

STRATEGY	ACTIVITY ALIGNMENT
Water Priority 3 *Reducing water consumption*	Being proactive in avoiding the need for repair (and its water losses) will reduce overall network consumption.
Climate Change	Reduce power/resource consumption and water loss by improving network performance
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Priority Drinking Water Issue 3: Options

The following table identifies the options considered and our preferred option to address this issue.

Table 13: Drinking Water Investment Options (Issue 3)

OPTION	ANALYSIS
Do Nothing	Not taking steps to mitigate known risks to our Drinking Water supplies is not considered a viable option. This option is highly unlikely to meet Levels of Service into the future and expose Council to significant and unquantifiable costs and risks.
Investment option Increase water supply resilience budget by $127k for leak detection and growth; and $3m in capital expenditure for smartmeters	Increasing budgets to deliver on a prioritised mitigation plan that would include: - Seismic assessment of Boar Bush and Waiohine reservoirs, - Rollout of smart metering for ratepayers across the District, - Continue the increased annual leak detection in every town (previously was completed every three years on a rotating cycle), and - Growth impact assessments.

Preferred Option

Priority Drinking Water Issue 4: Security of supply in Martinborough

The water supply approach in Martinborough is not optimal. Raw water is taken from four bores that have varying levels of manganese, which reacts with the chlorine added as part of the multi-barrier treatment process used to help ensure safe drinking water. A Manganese Reduction Plant (MRP) has been installed as a short-term fix to help resolve this. The bores themselves are on private land and are situated at the opposite side of the town from the reservoirs, which can result in increased supply contamination risk and can cause difficulties in maintaining supply resilience.

As a result, it is considered prudent to explore alternative water sources and locations to safeguard Martinborough water supplies over the term of this LTP.

Strategic alignment

The following table outlines how addressing this issue supports the SWDC strategic drivers.

Table 14: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 4)

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	Securing future water supplies for Martinborough will promote social wellbeing. Long term confidence in the supply will improve from previous contamination incidents.
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	Moving the supply point and addressing the potential contamination in the network will help secure sustainable water supply for the town.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Reliable provision of clean and safe drinking water is a necessity for people to want to visit or considering move to the area and for businesses to operate. Avoid reputational damage.
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Cultural importance of all water to Maori and broader community.
Localised Issue	A unique Martinborough issue
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	**Directly delivers this strategic driver for Council**

Priority Drinking Water Issue 4: Options

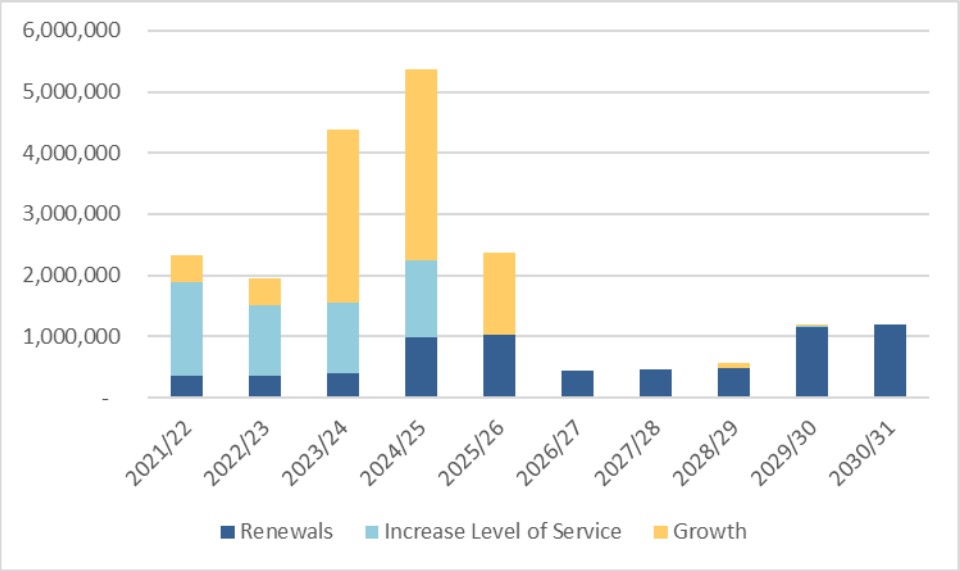
The following table identifies the options considered and our preferred option to address this issue.

Table 15: Drinking Water Investment Options (Issue 4)

OPTION	ANALYSIS	
Do Nothing *Continue as is*	Given the supply risks this would perpetuate this is not our preferred option.	
Investment option *Identify and implement alternative water supplies ($3.5m in Years 1-3, $2.7m in Year 4)*	Continuing with current approach is considered untenable from a water safety and security viewpoint. By relocating the supply and treatment points we can improve how we meet Martinborough's needs into the future.	**Preferred Option**

Funding Approach

Figure 11: 10-Year Water Supply Capital Investment



Note: graph above includes 10-year capital investment profile only.

Table 16: 30-Year Water Supply Investment

YEAR	OPERATING $,000	CAPITAL $,000	TOTAL $,000
2021/22	3,406	2,334	5,740
2022/23	3,858	1,945	5,803
2023/24	4,035	4,384	8,418
2024/25	4,242	5,363	9,605
2025/26	4,831	2,376	7,206
2026/27	5,025	445	5,470
2027/28	5,211	464	5,675
2028/29	5,327	560	5,887
2029/30	5,467	1,191	6,658
2030/31	5,847	1,189	7,036
2031/36	31,504	10,470	41,975
2036/41	35,644	10,298	45,942
2041/46	40,328	10,207	50,537
2046/51	45,627	11,504	57,132

Our Extended View

In addition to the strategy areas outlined above, SWDC are aware of the following broader or longer term issues for Drinking Water:

- **Higher Drinking Water Standards** – the implementation of higher treatment standards by the new water regulator is very possible. They are currently unknown but through Wellington Water will continue to engage with Taumata Arowai on the emerging standards and the investment required to meet them.
- **Growth exceeds expectations** – an issue that would affect most infrastructure areas but higher summer demand when river levels are low already causes restrictions on use makes the impact even greater for the provision of Drinking Water.

Wastewater

Summary

Many of the issues facing our Drinking Water networks are also shared by our Wastewater networks. The pipes are largely made from similarly brittle materials (Asbestos cement, earthenware, and concrete) and the same performance issues exist. However, the effects are different. Breaks in these pipes have the potential to adversely impact our environment but, also, allowing inflow and infiltration (stormwater and groundwater, respectively) into the network increases the influent flows to the Wastewater Treatment Plants (WWTPs). This results in the WWTPs treating water unnecessarily, increasing costs and maintenance requirements.

In some areas, our wastewater pipes will not be big enough to handle our projected growth, particularly in Greytown. We're in the process of increasing some and others may require upgrading in later years of the LTP to account for an increase in demand.

In early 2020, we also had overflows of partially treated wastewater from the Martinborough WWTP. This was not acceptable to us or our community. Since then we have undertaken a programme of upgrades across all our WWTPs (e.g. improved automation to reduce manual interventions, better alarm systems, enhanced operating procedures). Further work is required to reduce the likelihood of future incidents and to improve how our plants operate.

Council will also be looking to Implement an improved system for the management of trade waste. Trade waste has significant impacts on network, wastewater treatment plants and environment, including network blockages causing wastewater to overflow and odour from treatment plants being unable to operate as designed.

Priority Wastewater Issues

Significant Project - Featherston Wastewater Treatment Plant (WWTP)

After requesting the withdrawal of our 2017 consent application for Featherston's wastewater treatment plant, we are currently operating the plant under the 2012 consent. The consent allows Council to discharge treated wastewater into Donald's Creek which then flows down to the Wairarapa Moana. This is not sustainable and we are working closely with Wellington Water, industry wastewater experts, key stakeholders, iwi, and the wider community to progressively identify the best long-term solution for our community and environment.

One of the challenges we face is the evolving regulatory environment which impacts the feasibility of the options we're considering. These changes have included the Climate Change Response (Zero Carbon) Amendment Act, the National Environmental Standards for Freshwater Regulations 2020, possible future national standards for wastewater, along with the new water regulator Taumata Arowai and the ongoing water reform. We are seeking a long-term solution that will take account of these changes while balancing affordability for our ratepayers.

So far, we have developed a long list of options, consulted on them with the wider community, and received valuable feedback that has enabled us to refine the options down to a shortlist to consider in more detail. There is still a lot of work required to fully understand and consider the technical dynamics of the current

options, their feasibility and affordability. This is a lengthy process and when it is complete we will develop a concept design to lodge a new resource consent application with GWRC.

This means that we are not in a position to be able to provide a fully costed solution for this LTP. However, there is still work we can do to improve the current treatment of wastewater to the waterways while progressing the consenting process.

What we have done in this LTP:

- Allocated $16 million in the first five years of this LTP to progress the project, gain consent from GWRC and make the agreed treatment upgrades, and
- Taken a prudent approach to new debt and deferred unnecessary operating and capital expenditure.

The risks we are facing:

- It's likely that the long-term solution for Featherston will cost significantly more than the $16 million allocated in this LTP for treatment improvements and the best solution may not be affordable without taking on further risks or debt, or seeking external funding sources, and
- We are operating under the 2012 consent at the discretion of GWRC and we must ensure that the treatment improvements and long-term solution meet environmental requirements in a timely way.

Strategic alignment of the Featherston WWTP project

Table 17: Strategic Alignment to Council's Strategic Drivers and Community Outcomes

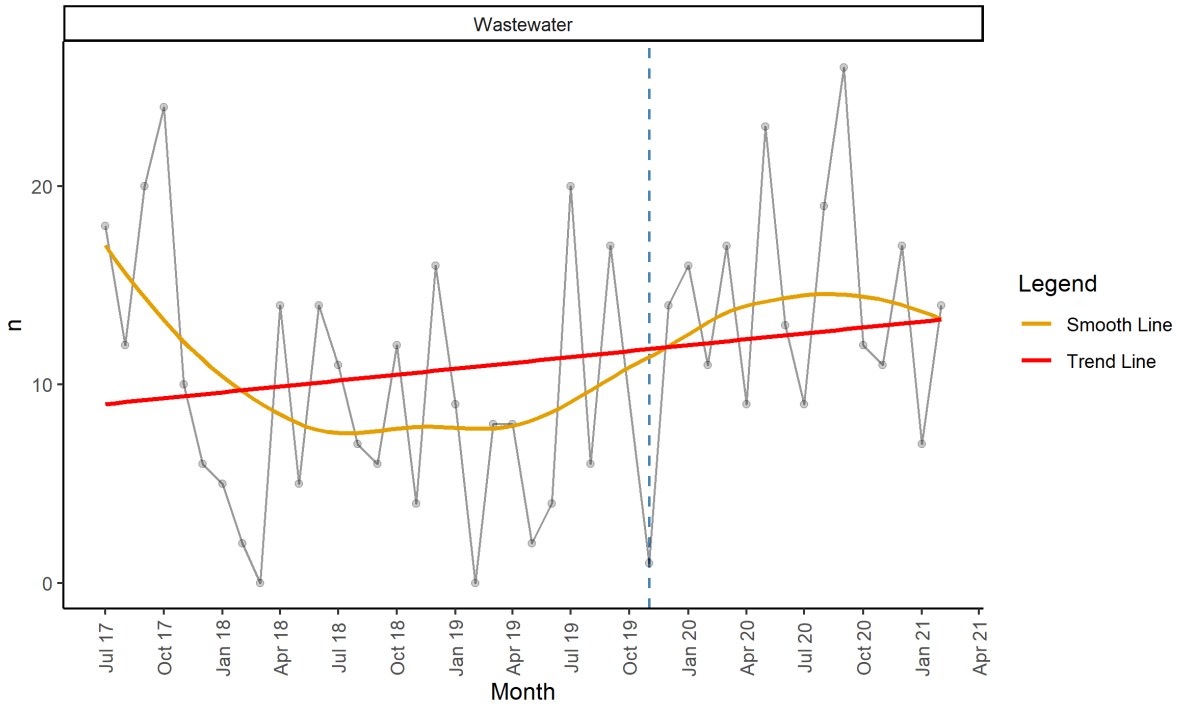
STRATEGY	ACTIVITY ALIGNMENT
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	Improving the treatment of Wastewater in Featherston will improve the local environment by reducing the impact of effluent. Also, an improved system will look to reduce the amount of greenhouse gases produced.
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Addressing the impact of effluent on nearby waterways and Lake Wairarapa is essential to preserve and promote the cultural wellbeing of our district.
Water Priority 2 *Supporting growth without adverse environmental impacts*	Ensure the new WWTP approach has capacity to allow for growth and addresses any environmental effects.
Water Priority 4 *Improving environmental water quality*	Improving the standard of effluent produced and where it is disposed to will help improve environmental water quality.
Water Priority 5 *Reducing carbon emissions*	The current approach is known to produce high levels of greenhouse gases, which needs to be addressed through the project. The Climate Change Bill will likely increase obligations on Council to address this is the short-term.
Localised Issue	A unique Featherston issue.
STRATEGY	**ACTIVITY ALIGNMENT**
Climate Change	The current approach is known to produce high levels of greenhouse gases, which needs to be addressed through the project.

STRATEGY	ACTIVITY ALIGNMENT
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council.

Priority Wastewater Issue 1: Improving Network Performance

Our Wastewater networks are requiring increasing maintenance and repair and, while more pipe renewals will reduce the need for reactive repair in the longer term (Wastewater Issue 2, below), Council needs to continue to respond effectively to the short-term problems experienced in the network to avoid having an adverse impact on our environment and our ratepayers. The increasing demand for repairs is shown below.

Figure 11: Improving Wastewater Network Performance



While we have increased resourcing to help address this trend, to meet our service levels and community expectations, we will need to increase operational funding to respond effectively to breakages in our ageing network. The cost of each repair has also increased as a result of regulatory compliance, such as Health and Safety, and traffic management.

The performance of our wastewater network will also be improved the management of the trade waste issue. The inappropriate disposal of fats, for example, causes blockages and network overflows onto property. Activities planned would include improved access control at dump sites and, site monitoring and compliance checks for equipment like grease traps in restaurants and cafes.

Strategic alignment

Table 18: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 1)

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	If we don't address wastewater leaks quickly the social wellbeing of our residents will be affected through potential health impacts and odour issues.
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	We need to be able to respond quickly and effectively to individual breaks to avoid localised impacts on our environment, including waterways and risks to public health.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Having unrepaired wastewater issues will adversely effect South Wairarapa being a destination area and business growth.
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Similar to the above, wastewater leaks are also not desirable to our cultural wellbeing.
Water Priority 1 *Looking after existing three waters infrastructure*	Increasing investment will help us look after our existing infrastructure more effectively.
Water Priority 4 *Improving environmental water quality*	Fixing leaks quicker will avoid untreated wastewater entering our waterways.
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Priority Wastewater Issue 1: Options

The following table identifies the options considered and our preferred option to address this issue.

Table 19: Wastewater Investment Options (Issue 1)

Option	Analysis
Low Investment Option Continue with 2021 maintenance budget of $1.9m	This option is to continue with the current budgets (from the 2021 Annual Plan). Given the increase in network breakages it is considered that this option will not meet community expectations or Levels of Service.
Mid investment Option Increase O&M budgets by 18% over 3 years	Increase maintenance and operations budget to help cover increased job volume and more preventative maintenance of existing WWTPs.
Higher investment Option Increase O&M budgets by 21%% over 3 years	As per Mid Investment Option, with increased budget for monitoring of overall network and plant performance, and management of trade waste issues. Preferred Option

Priority Wastewater Issue 2: Increasing renewals funding

The age of our wastewater network assets is increasing, their condition deteriorating and the performance of some pipe materials, especially more brittle materials, is not satisfactory and the pipes are not meeting their projected asset life. In our wastewater network this results in increased Inflow and Infiltration (I&I) where groundwater and stormwater enters the system. High levels of I&I means we are then treating water at our WWTPs unnecessarily. This has consequential impacts on the WWTP performance and operation costs and is a particular issue in Featherston. There will always be breakages and an element of I&I in a network but increased renewals will reduce these over time.

Where required, pipe size would be increased at the time of renewal, to meet future growth requirements.

Strategic alignment

Table 20: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 2)

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	We need to progressively reduce the incidence of wastewater pipe breaks by undertaking longer term renewals to avoid the social impacts of breakages and odour issues.
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	We need to be able to proactively renew parts of our network reduce the number of breakages that require repair. Reducing I&I will also help improve the performance of our WWTPs to better treat wastewater and reduce the environmental impact.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Having multiple wastewater issues will adversely effect South Wairarapa being a destination area and business growth.

STRATEGY	ACTIVITY ALIGNMENT
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Similar to the above, wastewater leaks are also not desirable to our cultural wellbeing.
Water Priority 1 *Looking after existing three waters infrastructure*	Increasing investment will help us look after our existing infrastructure more effectively.
Water Priority 4 *Improving environmental water quality*	Avoiding leaks will avoid untreated wastewater entering our waterways.
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Priority Wastewater Issue 2: Options

The following table identifies the options considered and our preferred option to address this issue.

Table 21: Wastewater Investment Options (Issue 2)

OPTION	ANALYSIS	
Low Investment Option Continue with 2018 LTP level - $1.2m over 3 years	This is considered the very minimum. This approach will only allow minimal replacement of wastewater pipes. This option would incur higher maintenance costs over the term of the strategy as more pipes continue to break and reactive repairs are required. This is not considered a suitable approach.	
Mid investment option Increase wastewater renewal budgets - $x2.3m over three years (a $1.1 increase)	The mid-level investment option will accelerate the replacement of known vulnerable pipes. This option will gradually improve network condition and move towards slowly reducing the need for reactive repairs of our wastewater network. This would be considered the minimum acceptable option to avoid continued and significant reactive repair costs into the future.	
High Investment option Increase wastewater renewal budgets - $3.8m over three years (a $1.5m increase)	As per the mid-level investment option but the high investment option will further accelerate the improvement in the network by renewing the wastewater pipes and levelling of reactive repair costs over time. This is the preferred option to address a growing performance issue. The scale of the investment does have the residual risks around affordability for Council/ratepayers and delivery certainty in resource-constrained markets. These issues could be managed through effective scheduling/phasing of activities and market engagement.	**Preferred Option**

Priority Wastewater Issue 3: Upgrades to meet Levels of Service and growth needs

To meet future demand, comply with the next phases of our existing Greytown and Martinborough WWTP consents and improve the performance of our WWTPs, we'll need to invest in the following:

Greytown WWTP upgrades

- Inlet screening,
- Site flood mitigation, and
- Riparian planting.

Martinborough WWTP upgrades

- Waveband and aeration improvements to increase plant capacity,
- Pumps,
- Irrigation equipment, and
- Inlet screening.

Next phase of upgrade to Wastewater main in Greytown

Strategic alignment

Table 22: Strategic Alignment to Council's Strategic Drivers and Community Outcomes (Issue 3)

STRATEGY	ACTIVITY ALIGNMENT
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	Upgrades to plants to allow for future growth and consent compliance will improve the environmental wellbeing of the towns.
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	As above
Water Priority 1 *Looking after existing three waters infrastructure*	Upgrades to existing plants will help ensure the current plants can operate more effectively.
Water Priority 2 *Looking after existing three waters infrastructure*	Upgrades to meet future demand and avoid environmental impacts.
Water Priority 4 *Improving environmental water quality*	Better performing plants and progressive upgrades will improve local water quality over time.
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Priority Wastewater Issue 4: Approach

The following table identifies the options considered and our preferred option to address this issue.

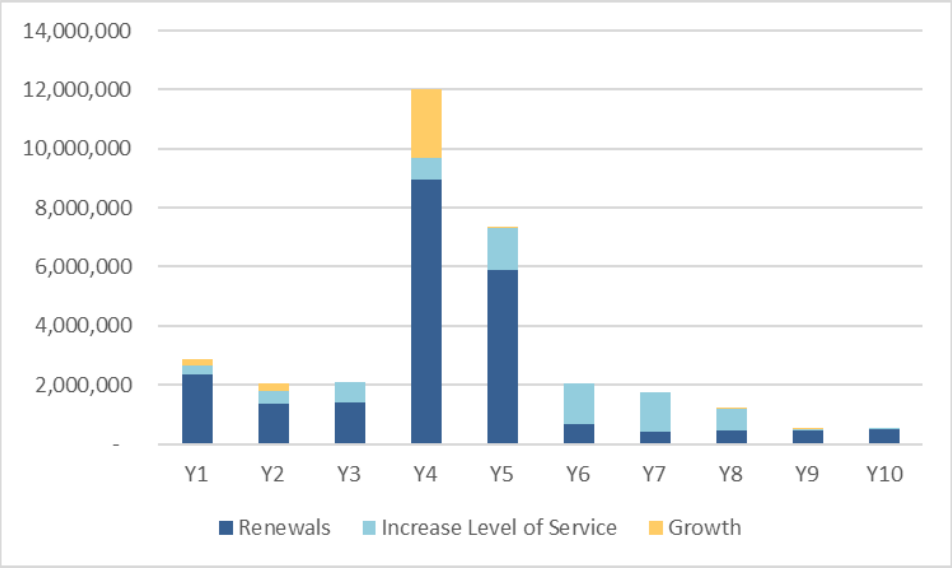
Table 23: Wastewater Investment Options (Issue 4)

OPTION	ANALYSIS
Do Nothing	In order to meet consent requirements and avoid impact on our environment this is not considered a viable option
Do minimum	This would involve doing the least required to ensure compliance with consents. It is unlikely to meet future growth needs at the plants.
Investment Option $1.1m over Years 1-3 of LTP, $4.1m Year 3+	This option allows Council to upgrade the plants to continue consent compliance and upgrade as required to meet growth. The work is phased to allow for affordability, need and deliverability.

Preferred Option

Funding Approach

Figure 12: 10-Year Wastewater Capital Investment



Note: graph above includes 10-year capital investment profile only.

Table 24: 30-Year Wastewater Investment

YEAR	OPERATING $,000	CAPITAL $,000	TOTAL $,000
2021/22	2,130	2,879	5,009
2022/23	2,579	1,989	4,568
2023/24	2,516	2,098	4,614
2024/25	3,380	12,030	15,409
2025/26	3,439	7,305	10,744
2026/27	3,671	2,068	5,739
2027/28	3,829	1,763	5,592
2028/29	3,912	1,192	5,104
2029/30	3,993	505	4,499
2030/31	4,204	514	4,718
2031/36	22,649	13,098	35,747
2036/41	25,626	15,144	40,770
2041/46	28,993	9,959	38,952
2046/51	32,803	11,147	43,950

Levels of Service

Below is a sample of the levels of service and key performance indicators for the Wastewater activity. A full list with future year targets can be found in the wastewater significant activity section. Note that the last customer survey was carried out in October 2018 and will be carried out again in 2021.

SERVICE LEVEL	KEY PERFORMANCE INDICATORS	2019/20 RESULTS	PERFORMANCE TARGET 2021/22	HOW IT WILL BE MEASURED
Council provides wastewater services that effectively collect and dispose of wastewater	Number of blockages per 1000 connections	10.68	<10	Council records
	Ratepayers and residents satisfaction with waste water services	No result	53%	Customer survey
	Attendance time: from notification to arrival on site: • in <1 hr • median response time measured	44% Median time: 0.83 hrs	70%	Council records
	Resolution time: from notification to resolution of fault: • in< 4 hours • median response time measured	89% Median Time: 55.97 hrs	75%	Council records
Wastewater disposal does not create any smells, spill or health issues and causes minimal impact on the natural environment	% of resource consent conditions complied with to mainly complying or better*	100%	90%	Council records
	No. of abatement notices	0	<2	Council records
	No. of infringement notices	0	0	Council records
	No. of complaints per 1000 connections received about sewage odour	0.72 (3)	< 15	Council records
	No. of complaints per 1000 connections received about sewage system faults	2.24 (1)	< 15	Council records
	No. of complaints per 1000 connections received about sewage system blockages	10.68 (45)	< 15	Council records
	No. of complaints per 1000 connections received about the response to issues with sewage	0 (0)	< 15	Council records

Stormwater

Summary

Council has a limited stormwater network mostly comprising kerb and channels associated with our roading network, culverts and sumps.

In SWDC, Stormwater reticulation is managed and maintained by Wellington Water and drainage (sumps/culverts) are maintained under the Roading contract.

Maintenance and Operation

The drainage network is maintained and operational through an ongoing maintenance programme which addresses defects identified through inspections, health and safety, and public complaints. This work can be either planned or responsive maintenance.

The maintenance of drainage facilities includes the following activities:

- Inspections
- Drainage facility maintenance
- Surface water channel maintenance
- Kerb and channel repairs
- Stream cleaning
- High-shoulder maintenance

The renewal strategy for drainage is based on condition rather than age and asset renewal is undertaken when:

- A depression or high point in lineal drainage that prevents flow.
- Deterioration of the pavement adjacent to the kerb and channel.
- Culvert collapse.
- The asset has reached the end of its economic life.

Disposal of stormwater is generally through soak away, which is possible due to local soil type in the District and relatively low-density housing. However, this approach is likely to become increasingly untenable and be impacted by:

- Climate change bringing more intense rainfall events that may overwhelm the limited system,
- Growth potentially increasing housing density across the District, and
- The environmental impact of stormwater run-off and it's environmental effects potentially becoming subject to regulation.

There are also areas across the District where flooding has become an increasing hazard, especially in areas are close to hillsides, such as in Ngawi and Featherston. This is further exacerbated by loose material and scree blocking culverts, and other water courses, limiting the dispersal of the stormwater away from housing and

other infrastructure. Oftentimes the material comes with the rainfall, limiting the ability of Council to pro-actively removed this material, but an improved schedule of preventative maintenance is required.

Strategic alignment

Table 25: Strategic Alignment to Council's Strategic Drivers and Community Outcomes

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	If stormwater impacts community facilities, individual properties and infrastructure, the social wellbeing of our communities will be affected.
Environmental Wellbeing *Sustainable living, safe & secure water and soils, waste minimised, biodiversity enhanced*	To avoid flooding impacting our environment we need to actively mitigate the likelihood of and impact of stormwater. There is also the issue of contaminated run-off affecting our waterways.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Flooding damage to businesses or houses will damage our economy.
Water Priority 1 *Looking after existing three waters infrastructure*	Proactive maintenance of current infrastructure will avoid the above impacts and later, more expensive, replacements.
Water Priority 2 *Supporting growth without adverse environmental impacts*	Increased housing density or development may impact the current approach to stormwater management. Growth needs to be planned with stormwater management in mind.
Water Priority 4 *Improving environmental water quality*	Mitigating impact of run-off and contaminants.
Climate Change	With more intense rainfall events predicted we will need systems that can manage the majority of events to avoid undue impact on our community.
Enhancing 3 waters delivery & environmental quality *Deliver sustainable, clean, clear, safe and secure drinking water* *Design and implement innovative, sustainable, efficient and affordable wastewater and stormwater systems*	Directly delivers this strategic driver for Council

Stormwater: Approach

The following table identifies the options considered and our preferred option to address this issue.

Table 26: Stormwater Investment Options

OPTION	ANALYSIS	
Low Investment Option Continue with current operations budgets ($300k pa)	This will maintain the network at its current standard and will allow for some growth and resilience planning. However, given the incidence of stormwater events and increasing rainfall intensity may not be enough to meet future needs.	
Higher investment option Increase operating budget to $340k pa	This option increases preventative maintenance activities and stormwater investigations to inform future investment strategies and planning. This includes engagement with GWRC on stream management.	Preferred Option

Levels of Service

Below is a sample of the levels of service and key performance indicators for the Stormwater activity. A full list with future year targets can be found in the stormwater significant activity section. Note that the last customer survey was carried out in October 2018 and will be carried out again in 2021.

SERVICE LEVEL	KEY PERFORMANCE INDICATORS	2019/20 RESULTS	PERFORMANCE TARGET 2021/22	HOW IT WILL BE MEASURED
Stormwater drains are well operated and maintained by the Council	% of ratepayers and residents satisfied with stormwater drains	No result	58%	Customer survey
	% of urgent (any blockage causing extensive flooding of buildings or other serious flooding) requests for service responded to within 5 hours	100%	95%	Council records
	No. of flooding events	0	0	Council records
	No. of habitable floors affected per flooding event per 1000 properties connected	0	0	Council records
Consent Compliance	No. of abatements notices	0	0	Council records
	No. of infringement notices	0	0	Council records
	No. of enforcement notices	0	0	Council Records
	No. of convictions	0	0	Council Records
	Median Response time to flooding events (Notification to personnel reaching site in hrs)	0	3	Council Records
	No. of complaints about stormwater per 1000 properties connected	No result	0	Council records

Water Races

Summary

SWDC, in conjunction with Wellington Water, operate two water races in the district, Moroa and Longwood. These races are historically used for stock watering and irrigation purposes. The Moroa water race facilitates the movement of stormwater as it moves through Greytown and is consented through to 2025.

In January 2020, a new consent application was lodged with GWRC for the operation of the Longwood Water Race. It is anticipated that, if granted, this consent would bring the two water races to the same consent timeframes.

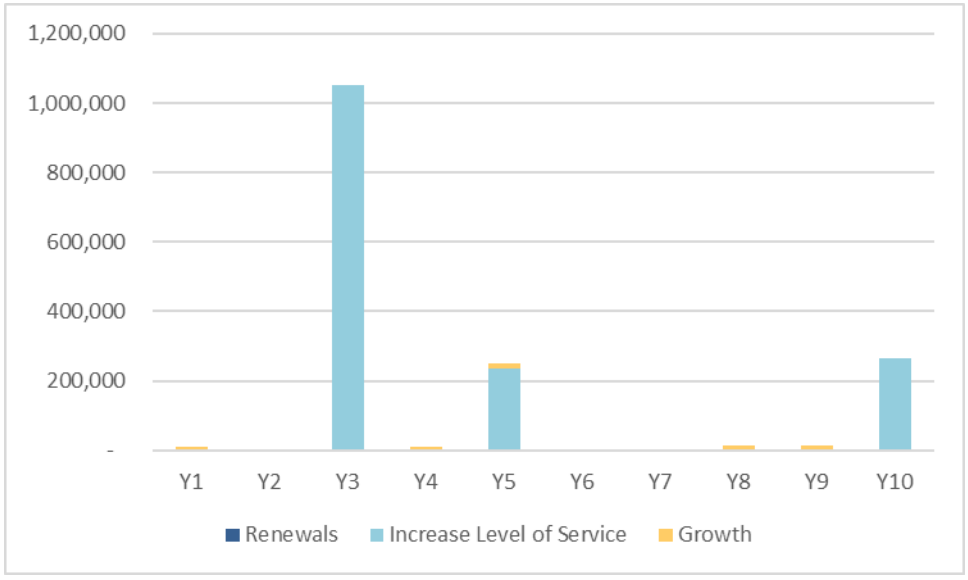
Since the water races were established, the district has changed and so may have the use and benefit of the water races. To understand whether this is the case, over the next year Council will undertake a strategic review of the water races that will be informed by water race user consultation and community engagement.

This emerging strategy will need to consider a changing regulatory landscape that will affect water races, including the Freshwater National Policy Statement 2020 and any requirements for stock exclusion, and other ecological or environmental obligations on Council. The strategy will also consider a full range of factors that includes affordability of any future solution and viability of alternative sources.

Council has allocated $1m in Year 4 of the LTP for implementation of this strategy, to be funded through borrowing.

Funding profile

Figure 13: 10-Year Water Race Capital Investment (includes Stormwater)



Note: graph above includes 10-year capital investment profile only.

Table 27: 30-Year Water Race Investment (includes Stormwater)

YEAR	OPERATING $,000	CAPITAL $,000	TOTAL $,000
2021/22	395	11	406
2022/23	422	0	422
2023/24	433	1,052	1,485
2024/25	510	12	572
2025/26	521	249	769
2026/27	582	0	582
2027/28	612	0	612
2028/29	619	13	632
2029/30	633	13	646
2030/31	674	265	939
2031/36	3,632	447	4,079
2036/41	4,109	523	4,631
2041/46	4,649	592	5,241
2046/51	5,260	649	5,909

Land Transport

Summary and Scope

Our Roading network is a key Council asset that enables social connectedness and economic growth for our region and comprises:

- 662 km of roads
    - 401km of sealed roads and 261km of unsealed roads, or
    - 601kms rural roads and 61km or urban roads
- 133 bridges excluding stock underpasses
- 247 culverts
- 59.4kms footpaths
- 1042 streetlights

State Highways 2 and 53, are managed by Waka Kotahi, New Zealand Transport Agency (NZTA) and are carriageway excluded from this Infrastructure strategy scope.

Funding and Commercial Arrangements

Since July 2019, Roading services in the South Wairarapa District have been provided through Ruamahanga Roads, a shared service arrangement with Carterton District Council (CDC), with Fulton Hogan as our contractor. This contract includes maintenance, renewals and upgrades to both Council networks. The new contract has moved away from lump sum/month items to a true measure and value for all maintenance activity as well updating the RAMM data base where possible during inspections.

This contract was the first time that the works had been tendered for five years and in that time the market had shifted significantly with increased compliance costs and reducing availability of resources and materials increasing prices for roading activity. By taking a shared services approach to the work (increased volume, reduced management overheads), joint activity planning and openly tendering the work, the impact of these market changes were mitigated somewhat, but SWDC still saw a significant increase in unit costs and charges compared to the previous contract.

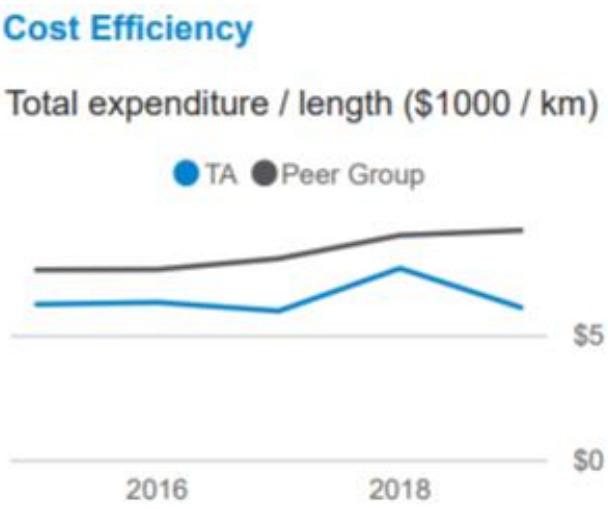


Figure 14: Roading Cost Efficiency

These cost increases and relatively static SWDC roading budgets have resulted in reduced network activity being undertaken and a backlog of work building up. In the 2020 Annual Plan, roading budgets were increased by approximately $600k to help address this but further investment in future years is required to address a backlog of maintenance and renewals activity that has built up. This is further demonstrated by the following

graph from the Waka Kotahi, NZTA Roading Efficiency Group (REG) Report for South Wairarapa[13] that also shows historic lower levels of investment, relative to our rural district peers.

Current Road Condition

In general terms, our roading network has been in relatively good condition. However, as the following chart from the same REG report demonstrates, it is starting to show a diminishing quality of ride quality on South Wairarapa roads, which can be linked to investment and activity not keeping pace with network requirements.

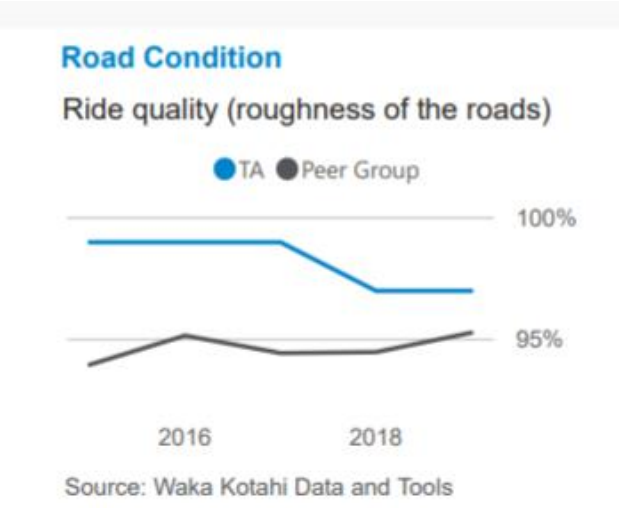
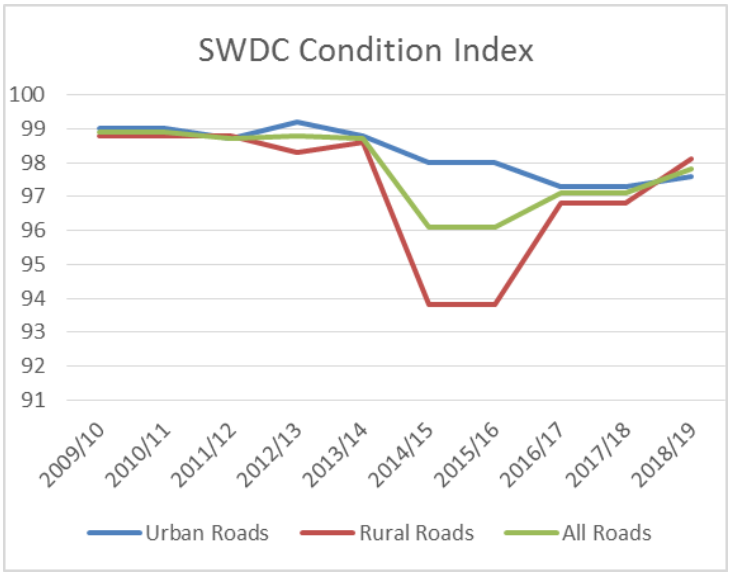


Figure 15: Road Condition Relative to Investment

This trend is further emphasised by the following graph, which includes urban and rural roads and a general downward trend on condition.

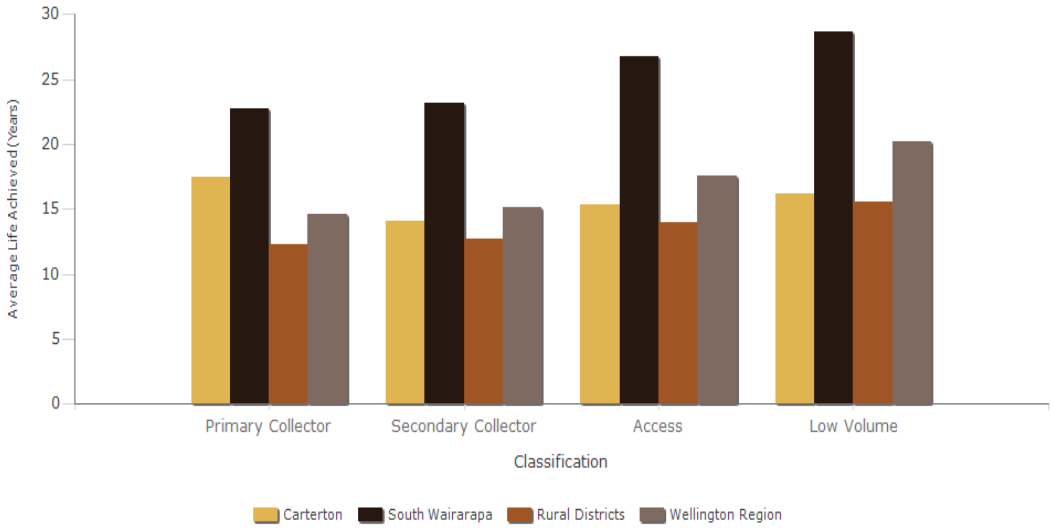
Figure 16: Road Condition Index



Budgetary constraints have reduced the amount of reseal and rehabilitation work being undertaken, which has impacted the relative age of our roading assets, as shown in Figure 17.

[13] https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/rca-reports/2018-19-RCA-Report-South-Wairarapa-District-Council.pdf

Figure 17: Relative Age of our Roading Assets



Funding Arrangements

Waka Kotahi, NZTA, have indicated that the Financial Assistance Rate (FAR) provided to SWDC will reduce from 53% currently, reducing to 52% for the 2022/23 Financial Year (FY) and then 51% for the 2023/24 FY. To provide context for this reduction, 1% change in FAR has a net effect of reducing available funding to SWDC by approximately $40k pa. This reduction in FAR is reflected in our LTP budgets.

For some time, NZTA have signalled a reducing contribution under the Special Purpose Road (SPR) category. This funding is for Cape Palliser Road and will progressively reduce over time. NZTA have signalled that from 2024 the Cape Palliser Road contribution currently funded under a Special Purpose Road (SPR) category will be removed, reducing the contribution to 51%.

In order to mitigate the impact of this reducing funding, SWDC are undertaking a series of renewals and maintenance activities on the Cape Palliser Road over the next three years as well as mitigating the impact of coastal erosion on this stretch of road.

Asset Management in Land Transport

Maintenance Strategy

Pavement (road) maintenance provides for the daily care and attention to the road corridor to ensure its structural integrity and safe serviceability are maintained. It addresses the maintenance needs of all materials within the pavement. Sealed and unsealed roads are considered separately, due to the differing natures and needs.

The maintenance of sealed roads includes the following activities:

- Road Inspections,
- Surface defect repairs,
- Repair of localised pavement failures,
- Repair of edge breaks,
- Pre-seal repair work, and
- Shoulder maintenance, including high shoulder removal.

The maintenance of unsealed roads includes the following activities:

- Road Inspections,
- Grading,
- Surface and shape restoration, and
- Spot maintenance metalling.

The forecast for maintenance expenditure is based on assessments that:

- The overall pavement condition of the roading network will not change significantly over the next 15 years
- Pavement renewal strategies will continue to target road condition and network priorities based on safety, use and function.
- There will be negligible extension to the roading network through the vesting of subdivisions, and road use efficiency improvements through reprioritisation of the transport system. The footpath and cycle way network assets are likely to increase due to the development of trails within the district and connectivity to new subdivision development.
- The level of pavement maintenance required will not increase substantially reflecting an increase in the overall condition of the roading network as a result of maintenance and well targeted asset renewal programmes.

Renewal Strategy

Renewal is the process of restoring an asset to its initial capacity or condition by repairing or replacing certain components which are not functioning. In comparison, maintenance is aimed at slowing the rate of deterioration and does not return the asset to its full capacity or condition.

Renewal activities are undertaken before routine maintenance expenditure becomes uneconomic. On an optimal lifecycle cost basis, renewals should be programmed when the net present value (NPV) of the treatment rises above zero, thus balancing future discounted maintenance costs against the cost of the treatment.

The predominant driver for renewals is to address the decline of an asset's performance; this can be assessed in two ways:

- Level of Service Criteria (asset does not achieve the required condition or performance).
- Economic Criteria (more cost effective to provide the required level of service by replacing the asset rather than repairing it).

Renewals Forecast

The forecast budget for sealed pavement renewals has been determined to achieve an optimal lifecycle cost basis and safe and efficient level of service. The current target lengths will begin to address the maintenance backlog work over the next three years even in light of the slight reduction in the Condition Index (CI). The programmed outputs have been matched to the current Ruamahanga Roads Contract rates to determine funding Forecast.

The forecast budget for unsealed pavement renewals has been determined to achieve an optimal lifecycle cost basis and safe and efficient level of service.

Unsealed resurfacing has the primary aim of restoring the wearing surface which is lost or consumed through the actions of traffic and weather, or the combination of both. The renewal of unsealed surfacing is performed on a reactive basis in conjunction with the maintenance.

Maintenance Strategy - Bridges

In addition, the Roading AMP has identified the need for further preventative maintenance is required on our bridges. These are critical assets for our community and as such require a more pro-active asset management approach.

Bridge and structure preventative maintenance strategy is to ensure the network is accessible, safe, and well maintained by reducing risks to the community and road users, and therefore managing its lifecycle costs. The preventative maintenance strategy addresses progressive deterioration, corrosion, decay, crash damage, public complaints, and defects resulting from the normal use of the structures.

The majority of the maintenance work arises through the inspection regime described below, with maintenance programmes developed from the defects identified. Priority is then given to repairing defects which constitute a risk to public safety, traffic movement, and future deferred costs. The remainder of maintenance work completed is reactive maintenance.

The type of maintenance work undertaken includes:

- Repairing structural defects.
- Repairing or replacing damaged components.
- Restoring protective coatings.
- Maintaining deck drainage
- Clearing waterway obstructions.
- Rectifying degraded and aggraded areas around piers, piles and abutments.

Maintenance is derived through the following inspection programme in accordance with the Transit NZ Bridge Inspection Guide;

- Every year 50% of the bridges undergo a general inspection, and 1/3rd of these have more detailed structural inspection undertaken
- Annual superficial inspections co-ordinated with other routine maintenance work
- General inspections undertaken on a two year cycle
- Full structural inspections of all bridges and culverts undertaken on a six year cycle by a

- Bridge Inspection Engineer, taking into account such factors as structural integrity, defects, safety and appearance
- Special inspections after specific events such as earthquakes, severe floods or instances of overloading.

The forecast budget for Structural maintenance has been derived from outstanding estimate costs for maintenance from the General inspection High to medium risks costs which have been established as being sufficient to carry out these activities and amended as necessary to allow for changes in management activities, practices and contract pricing. The historic outputs have been matched to the current Ruamahanaga Roads Contract rates to determine funding forecast.

Renewal Strategy - Bridges

Structural renewal is undertaken when structures or their components have reached the end of their economic life. Economic justification on the future savings achieved is assessed against the cost of completing the work; this will also include an assessment of the risks associated with earthquakes and floods.

The programme of renewals is driven by the structural inspections, in conjunction with engineering judgement, previous maintenance history, and perceived risk. All anticipated costs over the life of an asset are considered when evaluating designs and construction materials.

Continued implementation of the detailed structural inspection programme may reveal necessary unforeseen works on other bridges. These will be included in future budgets as appropriate.

The required level of renewal will depend on:

- The age profile of the structures.
- The condition profile of structures.
- The level of on-going maintenance.
- The economic life of the materials used.
- Predicted increase in traffic volumes.

If maintenance of a bridge is kept up, it is not uncommon for the actual life of structures to be extended beyond their economic life – i.e. an old bridge is kept in service and the replacement value remains in place. General inspections can be increased to annual to closely monitor deterioration.

Priority Roading Issues

Our Asset Management planning for Roading has identified three key infrastructure issues that provide the focus of our Roading investment within this Infrastructure Strategy.

Priority Roading Issue 1: Addressing deteriorating road condition

As outlined above, the cost of delivering renewal and maintenance activity on the SWDC network has increased significantly and to avoid further reduction in ride quality on the network, an increase in funding is required.

An increase in funding would be used to:

- Increase network renewals undertaken,
- Address the backlog of road maintenance activities that has built up, and
- Undertake more maintenance on bridges.

Strategic alignment

Table 28: Strategic Alignment to Council's Strategic Drivers and Community Outcomes

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	Better quality roads and footpaths will enable better community connectedness.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	Improved roads will enable better logistics and encourage visitors to the area.
Road to Zero strategy	Supports the achievement of NZTA's Road to Zero Strategy
Creating better connections & social wellbeing *Strengthen social connections within the community; Encourage civic pride and participation; Provide universally accessible, safe and diverse spaces to strengthen connection between people and place; Advocate for better transport and technology to improve social and business opportunities*	This is a strategic driver for Council and improving the quality of our roads aligns with its delivery.

Priority Roading Issue 1: Addressing deteriorating road condition options

The following table identifies the options considered and our preferred option to address this issue.

Table 29: Land Transport Investment Options (Issue 1)

OPTION	ANALYSIS	
Do Nothing	Ride quality has already started to reduce significantly and delay in renewal or maintenance will result in considerably higher cost to replace the road surface later, if not undertaken now.	
Re-allocate funding from other budget areas	Moving funding of this scale from another budget area will merely cause accelerated deterioration in other areas. It is not considered prudent asset management to do this for this activity.	
Increase maintenance funding ($80k pa)	Considered necessary to address current backlog of road and bridge maintenance activities and keep assets appropriately maintained.	Preferred Options
Increase renewal funding ($175k in Y1)	Considered necessary to start to reduce the need for reactive maintenance. It is important to note that increasing renewals will reduce future maintenance funding but will take 5+ years to have a substantial effect on maintenance requirements.	

Priority Roading Issue 2: Improving safety on our roads

The safety of all road users is a key issue. Relative to other authorities in the Wellington Region, we have lower overall crash rates, however, the increasing crash rates on our secondary collector roads (as defined in NZTA's One Network Road Classification (ONRC)) are a key concern for Council. Based on NZTA safety network programme analysis, improved speed management could significantly reduce crash rates on our network.

In addition, SWDC has approximately 32.6km of secondary collector roads that are under the recommended width (almost 20% of secondary collector roads in SWDC). It is important that Council take action to improve the safety of our roads and widening these roads is a key step in doing so, as part of a broader programme of activity.

Speed, safety at pedestrian crossings and improving safety features

Strategic alignment

Table 30: Strategic Alignment to Council's Strategic Drivers and Community Outcomes

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	The social impact of road accidents is significant. Anything we can do to reduce their incidence should be done.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	The direct financial impact of accidents is high, as well as the indirect impacts, such as delayed travel, goods movement etc. Also, if South Wairarapa were to gain a reputation as being an area of road accidents, visitor numbers could reduce and people be unlikely to move here.
Cultural Wellbeing *Strong relationships with whānau, hapū and marae, celebrating diverse cultural identity, arts and heritage*	Linked to social impacts, our cultural identity could be undermined if accidents increase.
Road to Zero strategy	Supports the achievement of NZTA's Road to Zero Strategy
Tackling Unsafe Speeds Programme	Supports the achievement of NZTA's Road to Zero Strategy
Creating better connections & social wellbeing *Strengthen social connections within the community; Encourage civic pride and participation; Provide universally accessible, safe and diverse spaces to strengthen connection between people and place; Advocate for better transport and technology to improve social and business opportunities*	This is a strategic driver for Council and improving the safety of our roads is a key way Council can deliver on this.

Priority Roading Issue 2: Options

The following table identifies the options considered and our preferred option to address this issue:

Table 31: Land Transport Investment Options (Issue 2)

OPTION	ANALYSIS	
Do Nothing	Risk to road users and pedestrians will continue to worsen over time. Doing Nothing is not considered acceptable.	
Use funding within the LCLR category	Funding from the Low Cost, Low Risk (LCLR) category to: - Widen secondary collector roads at a cost of $200k pa, - Increase funding for speed management by $50k, - Improve traffic delineation and guard rails at key points by increasing funding by 1% cumulatively each year over the next five years, - Improve pedestrian crossing safety, - Work with Waka Kotahi, NZTA to improve network safety, including State Highway concerns, and - Continue road safety education and enforcement action	Preferred Option
Increase funding	Funding can be shifted from the Low Cost, Low Risk category to cover this work to manage rates increase impact.	

Priority Roading Issue 3: Need to improve network resilience

As with many in NZ, our roading network is exposed to significant risk by the impact of climate change. Climate change is predicted to bring extended dry, hot periods with more intense, localised rain events, which have the potential to increase the frequency and severity of slips blocking roads and bridges being damaged or washed out. Coastal erosion is also a known factor impacting the District's roads and this is very likely to continue and accelerate over the LTP period.

All of these issues have the potential to adversely affect Council meeting its Levels of Service and impact the social and economic wellbeing of our district. While the exact impacts are unknown it is prudent to take action to improve the resilience of our network now.

Strategic alignment

Table 32: Strategic Alignment to Council's Strategic Drivers and Community Outcomes

STRATEGY	ACTIVITY ALIGNMENT
Social Wellbeing *Residents are active, healthy, safe, resilient, optimistic and connected*	Loss of roads and community connections will adversely impact the social wellbeing of our residents through reduced connectedness.
Economic Wellbeing *A place of destination, new business and diverse employment that gives people independence and opportunity*	The direct financial impact on Council of loss of roads or bridges is high, as well as the indirect impacts, such as delayed travel, goods movement etc. Also, if South Wairarapa were to gain a reputation as being an area of ongoing road issues, visitor numbers could reduce and people be unlikely to move here.
Climate Change	Reducing or mitigating the impact of climate change on our roads and transport infrastructure is essential maintain good connections around our community.
Creating better connections & social wellbeing *Strengthen social connections within the community; Encourage civic pride and participation; Provide universally accessible, safe and diverse spaces to strengthen connection between people and place; Advocate for better transport and technology to improve social and business opportunities*	This is a strategic driver for Council and improving the resilience of our roads is a key way Council can deliver on this.

Priority Roading Issue 3: Options

The following table identifies the options considered and our preferred option to address this issue.

Table 33: Land Transport Investment Options (Issue 3)

OPTION	ANALYSIS	
Do Nothing	The increasing incidence of climate change events, the high impact (socially, economically) and cost of re-establishing infrastructure renders this option unfeasible.	
Re-allocate funding from the LCLR category	Fund ($100k) and implement a programme of resilience activity that includes: - Collaborating with Greater Wellington Regional Council (GWRC) to mitigate the impact of flood events at bridge sites, - Implement a road drainage improvement programme, focused on higher flooding risk areas, - The trial of alternative erosion protection and monitoring slip risks to the Cape Palliser Road and other high risk areas.	Preferred Option
Increase funding	Funding can be used from the Low Cost, Low Risk category to cover this work to manage rates increase impact.	

Other issues for action

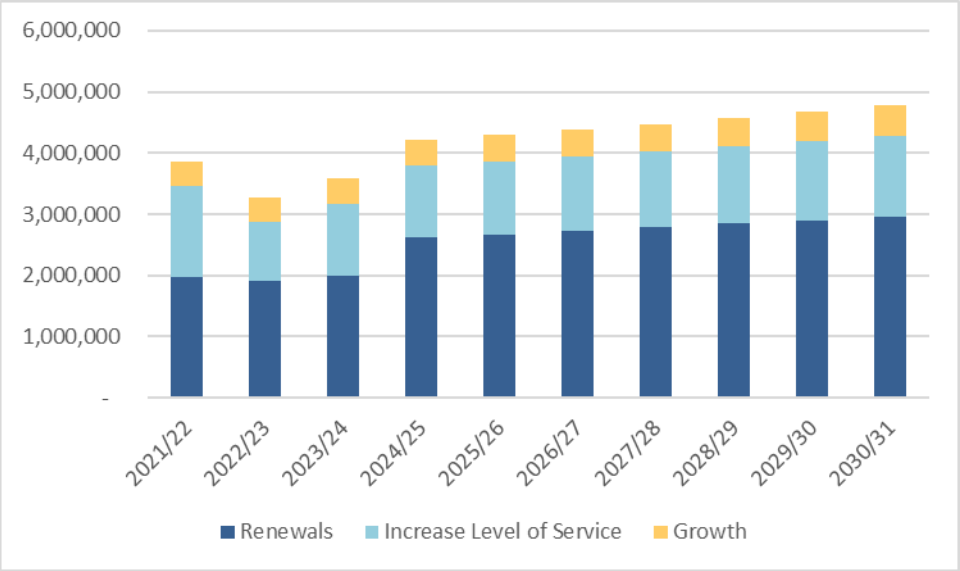
In the first three years of the LTP period, Council will also undertake the following key activities:

Table 34: Land Transport Other issues

ISSUE	ACTIVITY PROPOSED
Growth impact – increased volume, changes in use and new developments	With medium growth predicted for the District we will continue to monitor and undertake works within the works programme to manage growth. Monitoring will inform whether increased activity is required in years 4-10. This will also consider any mode shift (e.g. increased cycling demand). In addition, work will continue on the spatial plan, which will develop master plans for Martinborough and Featherston and accessibility to services and other transit hubs as a focus
Restrictions to travel of High Capacity Vehicles (HCVs)	$50k allocated to determine condition and priority to upgrade the structures to carry 50 tonne max loads. Works will happen outside the current LTP proposed funding.
Negative environmental impact of road run-off	Complete works (e.g. swales) to reduce impact of road run-off along with network resilience activities (Priority issue 3, above).

Funding profile

Figure 18: 10-Year Roading Capital Investment



Note: graph above includes 10-year capital investment profile only.

Table 35: 30-Year Roading Investment

YEAR	OPERATING $,000	CAPITAL $,000	TOTAL $,000
2021/22	5,902	3,866	9,768
2022/23	6,294	3,281	9,575
2023/24	6,691	3,584	10,275
2024/25	7,697	4,215	11,913
2025/26	7,982	4,298	12,280
2026/27	8,319	4,385	12,704
2027/28	8,779	4,476	13,255
2028/29	9,370	4,669	14,039
2029/30	10,056	4,772	14,828
2030/31	10,056	4,772	14,828
2031/36	54,180	34,135	88,315
2036/41	61,300	42,525	103,825
2041/46	69,355	52,679	122,034
2046/51	78,469	64,027	142,496

Levels of Service

Below is a sample of the levels of service and key performance indicators for the Land Transport activity. A full list with future year targets can be found in the Land Transport significant activity section. Note that the last customer survey was carried out in October 2018 and will be carried out again in 2021.

SERVICE LEVEL	KEY PERFORMANCE INDICATORS	2019/20 RESULTS	PERFORMANCE TARGET 2021/22	HOW IT WILL BE MEASURED
The roads are maintained to ensure that they are safe and comfort-able to travel on	Using the RAMM measurement system, average smooth travel exposure on urban roads to be 85% and rural roads 95% with maximum variation of 5%	95% urban 99% rural	95%	Council records
	Ratepayers and residents fairly/very satisfied with the roads	No result	75%	Customer survey
Footpaths can be safely used to get around town	Ratepayers and residents are satisfied with footpaths in the district	No result	65%	Customer survey
	Footpath Condition rating 95% compliant with SWDC AMP Standard	No result	95%	Council records
	The % of customer service requests relating to roads and footpaths responded to within 48 hours	96%	80%	Council records

Key Risks to the SWDC Roading Strategy

This strategy is developed by considering what we know of our Roading environment right now. There are several key risks that may impact it over time.

KEY RISK	RESPONSE
Unpredictable nature of climate change	Use ongoing analysis and associated actions to mitigate predicted impacts. Also continue to build up Road Reserve fund to improve Council's capacity to respond to major events.
Funding from Central Government	Work closely with Waka Kotahi to maintain funding levels to avoid undue burden on SWDC ratepayers and risks to the Cape Palliser Road. Maintain condition assessment activity to inform future needs and secure appropriate funding.
Market capability and resource availability	Reducing capability and resources can be mitigated by working with industry and other Territorial Authorities (TAs) to improve resourcing, work scheduling and collaboration. Ongoing innovation and reducing demand/reusing material, where appropriate, will help mitigate reduced supply of key materials.

Our Wider View

In addition to the strategy areas outlined above, SWDC are aware of the following broader or longer-term issues:

- **Waihenga Bridge (SH53)** – the challenges of the bridge's width and risk of closure from high Ruamahanga River levels are an area of ongoing concern, especially given it is the main route in and out of Martinborough. However, as an NZTA asset, any activity to address this sits with the Agency. Council will continue to engage with NZTA to seek longer term resolution as means to deliver on its strategic driver of advocating for better transport and technology to improve social and business opportunities.
- **Alternative State Highway 2 route** – with increasing traffic volumes and growth, the current route of SH2 through two South Wairarapa towns will become increasingly untenable. Any change would, again, sit with NZTA but would impact longer term SWDC Infrastructure strategies.